Appendix D: Water Supply Plan

DEPARTMENT OF NATURAL RESOURCES - DIVISION OF WATERS and METROPOLITAN COUNCIL
WATER SUPPLY PLANS

DRAFT

These guidelines are divided into four parts. The first three parts, Water Supply System Description and Evaluation, Emergency Response Procedures and Water Conservation Planning apply statewide. Part IV, relates to comprehensive plan requirements that apply only to communities in the Seven-County Twin Cities Metropolitan Area. If you have questions regarding water supply plans, please call (651) 259-5703 or (651) 259-5647 or e-mail your question to wateruse@dnr.state.mn.us. Metro Communities can also direct questions to the Metropolitan Council at watersupply@metc.state.mn.us or (651) 602-1066.

DNR Water Appropriation Permit Number(s)	1974-5168
Name of Water Supplier	City of South St. Paul
Address	125 3rd Avenue North
Contact Person	John Sachi
Title	City Engineer
Phone Number	651-554-3210
E-Mail Address	john.sachi@southstpaul.org

PART I. WATER SUPPLY SYSTEM DESCRIPTION AND EVALUATION

The first step in any water supply analysis is to assess the current status of demand and supplies. Information in Part I, can be used in the development of Emergency Response Procedures and Conservation Plans.

A. ANALYSIS OF WATER DEMAND.

Fill in Table 1 for the past 10 years water demand. If your customer categories are different than the ones listed in Table 1, please note the changes below.
1998-2005 population estimates from US census Bureau website

TABLE 1 Historic Water Demand

Year	Total Population	Population Served	Total Connections	Residential Water Sold (MG)	C/I/I Water Sold (MG)	Wholesale Deliveries (MG)	Total Water Sold (MG)	Total Water Pumped (MG)	Percent Unmetered/ Unaccounted	Average Demand (MGD)	Maximum Demand (MGD)	Residential gallons/ capita/day	Total gallons/ capita/day
2007	20000	19985	6909	501	551	-	1052	1239	15	2.8	5.5	68	168
2006	20024	20009	6962	503	545	-	1048	1200	13	2.9	6.2	69	163
2005	19362	19342	6864	471	498	-	969	1085	11	2.7	6.0	67	153
2004	19442	19422	6822	491	507	-	998	1234	19	2.7	6.0	68	174
2003	19683	19663	6748	523	508	-	1031	1173	12	2.8	5.6	73	163
2002	19886	19866	6748	501	396	-	897	1064	16	2.9	5.0	69	146
2001	20046	20046	6743	490	488	-	978	1171	16	2.7	5.3	67	160
2000	20167	20145	6779	498	506	-	1004	1209	17	2.8	5.2	68	164
1999	20200	20178	6678	500	487	-	987	1129	13	2.7	5.0	68	153
1998	20210	20188	6885	500	490	-	990	1152	14	2.7	5.1	68	155

MG – Million Gallons **MGD** – Million Gallons per Day **C/I/I**- Commercial, Industrial, Institutional

Residential. Water used for normal household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.

Institutional. Hospitals, nursing homes, day care centers, and other facilities that use water for essential domestic requirements. This includes public facilities and public metered uses. You may want to maintain separate institutional water use records for emergency planning and allocation purposes.

Commercial. Water used by motels, hotels, restaurants, office buildings, commercial facilities, both civilian and military.

Industrial. Water used for thermoelectric power (electric utility generation) and other industrial uses such as steel, chemical and allied products, food processing, paper and allied products, mining, and petroleum refining.

Wholesale Deliveries. Bulk water sales to other public water suppliers.

Unaccounted. Unaccounted for water is the volume of water withdrawn from all sources minus the volume sold.

Residential Gallons per Capita per Day = total residential sales in gallons/population served/365 days **Total Gallons per Capita per Day** = total water withdrawals/population served/365 days

NOTE: Non-essential water uses defined by Minnesota Statutes 103G.291, include lawn sprinkling, vehicle washing, golf course and park irrigation and other non-essential uses. Some of the above categories also include non-essential uses of water.

Water Use Trends. Discuss factors that influence trends in water demand (i.e. growth, weather, industry, conservation). If appropriate, include a discussion of other factors that affect daily water use, such as use by non-resident commuter employees or large water consuming industry.
Factors that influence trends in water demand include growth (albeit very little growth in SSP), weather, industrial use and conservation efforts. The population of SSP has remained relatively constant over the last several years and very little indicates that this will change over the next 10 years. As a result of this there has been very little increase, if any, in water demand. Therefore, total water demand, population, services and total water demand per capita have remained consistent. Currently the City of SSP has several large water users. The top 2 businesses use over 28% of the total water usage for the City. Excluding these two users no other businesses use over 4% of the City's total water sold. It should be noted that the 4th highest water user, Central Livestock, has ceased operations as of May 2008. The facilities have been demolished and redeveloped for other more modern industrial uses.

TABLE 2 Large Volume Users - List the top 10 largest users.

Customer	Gallons per year	% of total annual use
Twin City Tanning	179,000,000	17.02
Dakota Premium Foods	148,800,000	11.29
Sanimax	40,910,000	3.89
Central Livestock	26,913,000	2.56
Twin City Hide	12,580,000	1.20
Airgas, Inc.	10,000,000	0.95
Healtheast	9,020,000	0.86
Twin City Bagel	6,528,000	0.62
HRA (2 senior high-rises)	6,520,000	0.62
Schumacher Industries	6,350,000	0.60

B. TREATMENT AND STORAGE CAPACITY.

TABLE 3(A) Water Treatment

Water Treatment Plant Capacity	N/A	Gallons per day
Describe the treatment process used (i.e., softening, chlorination, fluoridation, Fe/Mn removal, reverse osmosis, coagulation, sedimentation, filtration, others). Also, describe the annual amount and method of disposal of treatment residuals, if any.		
Wellhead treatment with flouridation only		

TABLE 3(B) Storage Capacity - List all storage structures and capacities.

Total Storage Capacity	**Average Day Demand** (average of last 5 years)
3.15 million Gallons	2.7 million Gallons per day

Type of Structure	Number of Structures	Gallons
Elevated Storage	2	1.15 MG

Ground Storage	2	2.0 MG
Other:-	-	-

C. **WATER SOURCES.** List all groundwater, surface water and interconnections that supply water to the system. Add or delete lines to the tables as needed.

TABLE 4(A) Total Water Source Capacity for System (excluding emergency connections)

Total Capacity of Sources	10100	Gallons per minute
Firm Capacity (largest pump out of service)	8000	Gallons per minute

TABLE 4(B) Groundwater Sources - Copies of water well records and well maintenance information should be included with the public water supplier's copy of the plan in Attachment A. If there are more wells than space provided or multiple well fields, please use the List of Wells template (see Resources) and include as Attachment .

Well # or name	Unique Well Number	Year Installed	Well & Casing Depth (ft)	Well Diameter (in)	Capacity (GPM)	Geologic Unit	Status
1	200674	1961	404/322	24	1100	CJDN	ACTIVE
2	201153	1973	436/352	24	900	CJDN	EMERGENCY
3	200675	1937	339/243	18	1400	CJDN	ACTIVE
4	208347	1946	342/240	24	2100	OPDCCSTL	ACTIVE
6	200664	1972	484/399	24	1900	CJDNCSTL	EMERGENCY
7	200676	1972	255/176	16	1300	CJDNCSTL	ACTIVE
8	127251	1975	500/412	20	1400	CJDN	ACTIVE

Status: Active use, Emergency, Standby, Seasonal, Peak use, etc. GPM – Gallons per Minute
Geologic Unit: Name of formation(s), which supplies water to the well

TABLE 4(C) Surface Water Sources

Intake ID	Resource name	Capacity (GPM/MGD)
N/A	N/A	N/A

GPM – Gallons per Minute MGD – Million Gallons per Day

TABLE 4(D) Wholesale or Retail Interconnections - List interconnections with neighboring suppliers that are used to supply water on a **regular basis** either wholesale or retail.

Water Supply System	Capacity (GPM/MGD)	Wholesale or retail
None	None	None

GPM – Gallons per Minute MGD – Million Gallons per Day

TABLE 4(E) Emergency Interconnections - List interconnections with neighboring suppliers or private sources that can be used to supply water on an emergency or occasional basis. Suppliers that serve less than 3,300 people can leave this section blank, but must provide this information in Section II C.

Water Supply System	Capacity (GPM/MGD)	Note any limitations on use
City of Inver Grove Heights	3 - 6" connections	Coordinate with IGH
City of St. Paul	2 - 6" connections	Coordinate with SPRWS

GPM – Gallons per Minute MGD – Million Gallons per Day

D. DEMAND PROJECTIONS.

TABLE 5 Ten Year Demand Projections

Year	Population Served	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Projected Demand (MGY)
2008	19900	2.8	5.5	1025
2009	19900	2.8	5.5	1025
2010	19910	2.8	5.5	1025
2011	19930	2.8	5.5	1025
2012	19950	2.8	5.5	1025
2013	19960	2.8	5.5	1025
2014	19970	2.8	5.5	1025
2015	19980	2.8	5.5	1025
2016	19990	2.8	5.5	1025
2017	20000	2.8	5.5	1025

MGD – Million Gallons per Day MGY – Million Gallons per Year

Projection Method. Describe how projections were made, (assumptions for per capita, per household, per acre or other methods used).
Population has stayed level and there are no anticipated major changes in commercial/industrial base. Used averages of Max. Day Demand, Average Day Demand from Table 1 of this report.

E. RESOURCE SUSTAINABILITY

Sustainable water use: use of water to provide for the needs of society, now and in the future, without unacceptable social, economic, or environmental consequences.

Monitoring. Records of water levels should be maintained for all production wells and source water reservoirs/basins. Water level readings should be taken monthly for a production well or observation well that is representative of the wells completed in each water source formation. **If water levels are not currently measured each year, a monitoring plan that includes a schedule for water level readings must be submitted as Attachment N/A.**

Currently, the City does not do any monitoring of the ground water levels of its wells. However, the City's recently renovated SCADA system will allow levels to be monitored once the equipment is installed. The City is planning on monitoring Wells #1, 3 and 4,

which are the 3 most frequently used wells in our system for 2010 and beyond.

TABLE 6 Monitoring Wells - List all wells being measured.

Unique well number	Type of well (production, observation)	Frequency of Measurement (daily, monthly etc.)	Method of Measurement (steel tape, SCADA etc.)
none			

Water Level Data. Summarize water level data including seasonal and long-term trends for each ground and/or surface water source. If water levels are not measured and recorded on a routine basis then provide the static water level (SWL) when the well was constructed and a current water level measurement for each production well. Also include all water level data taken during well and pump maintenance.

No monitoring data currently available (see above)

Attachment : Provide monitoring data (graph or table) for as many years as possible.

Ground Water Level Monitoring – DNR Waters in conjunction with federal and local units of government maintain and measure approximately 750 observation wells around the state. Ground water level data are available online www.dnr.state.mn.us/waters. Information is also available by contacting the Ground Water Level Monitoring Manager, DNR Waters, 500 Lafayette Road, St. Paul, MN 55155-4032 or call (651) 259-5700.

Natural Resource Impacts. Indicate any natural resource features such as calcareous fens, wetlands, trout streams, rivers or surface water basins that are or could be influenced by water withdrawals from municipal production wells. Also indicate if resource protection thresholds have been established and if mitigation measures or management plans have been developed.

Currently there are no natural resource feature in SSP that could be impacted by municipal production well withdrawals. All of the SSP wells are in Prairie Du Chein-Jordan aquifer: the hydrogeology of the Prairie Du Chien-Jordan Aquifer indicates that the Jordan portion of the aquifer is confined within South St. Paul, except at far eastern edge near the Mississippi River (per MN Geological Survey). Therefore, groundwater may influence surface waters. However, a thick layer of glacial sediment covers the bedrock in all parts of SSP except near the river to the east. This inhibits vertical water transmission and makes the Jordan less susceptible to contamination.

Sustainability. Evaluate the adequacy of the resource to sustain current and projected demands.

Describe any modeling conducted to determine impacts of projected demands on the resource.
The Jordan Aquifer has maintained a constant static water level, therefore, indicates there is ample water in the forseeable future to meet projected demands.

Source Water Protection Plans. The emergency procedures in this plan are intended to comply with the contingency plan provisions required in the Minnesota Department of Health's (MDH) Wellhead Protection (WHP) Plan and Surface Water Protection (SWP) Plan.	
Date WHP Plan Adopted:	Part 1 February 2003, Part 2 February 2004
Date for Next WHP Update:	2014
SWP Plan:	☐ In Process ☐ Completed ☒ Not Applicable

F. CAPITAL IMPROVEMENT PLAN (CIP)

Adequacy of Water Supply System. Are water supply installations, treatment facilities and distribution systems adequate to sustain current and projected demands? ☒ Yes ☐ No If no, describe any potential capital improvements over the next ten years and state the reasons for the proposed changes (CIP Attachment).

Proposed Water Sources. Does your current CIP include the addition of new wells or intakes? ☐ Yes ☒ No If yes, list the number of new installations and projected water demands from each for the next ten years. Plans for new production wells must include the geologic source formation, well location, and proposed pumping capacity.

Water Source Alternatives. If new water sources are being proposed, describe alternative

sources that were considered and any possibilities of joint efforts with neighboring communities for development of supplies.
N/A

Preventative Maintenance. Long-term preventative programs and measures will help reduce the risk of emergency situations. Identify sections of the system that are prone to failure due to age, materials or other problems. This information should be used to prioritize capital improvements, preventative maintenance, and to determine the types of materials (pipes, valves, couplings, etc.) to have in stock to reduce repair time.
Routine maintenance is performed by the City staff to ensure proper performance of tanks, well pumps, and the distribution system. Chemical feed system maintenance includes annual servicing of flouride feed storage equipment. High service pump maintenance consists of semi-annual electric motor servicing and vertical tubine pump servicing after 30,000 hours of use. Well pumps are serviced after approximately 1 billion gallons are pumped. Hollow shaft well pump motors are serviced semi-annually and submersible well pump motors are serviced after approximately 1 billion gallons are pumped. Distribution system maintenance includes flushing/exercising of all hydrants each spring. Dead end mains are flushed in both the fall and the spring. The City of South St. Paul's water capital improvement plan includes improvements to improve and maintain system supply as the system ages. This includes watermain replacements for frequently broken lines, replacement of valves, and as leaks are discovered, additions of valves for isolation purposes and extension of mains, as needed, for looping and supply needs.

PART II. EMERGENCY RESPONSE PROCEDURES

Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failures, drought, flooding, and other natural disasters. The purpose of emergency planning is to develop emergency response procedures and to identify actions needed to improve emergency preparedness. In the case of a municipality, these procedures should be in support of, and part of, an all-hazard emergency operations plan. If your community already has written procedures dealing with water emergencies we recommend that you use these guidelines to review and update existing procedures and water supply protection measures.

Federal Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety) requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan. **Community water suppliers that have completed the Federal Emergency Response Plan and submitted the required certification to the U.S. Environmental Protection Agency have satisfied Part II, Sections A, B, and C of these guidelines and need only provide the information below regarding the emergency response plan and source water protection plan and complete Sections D (Allocation and Demand Reduction Procedures), and E (Enforcement).**

Provide the following information regarding your completed Federal Emergency Response Plan:

Emergency Response Plan	Contact Person	Contact Number
Emergency Response Lead	Chief of Police Daniel Vujovich	651.554.3204
Alternate Emergency Response Lead	John Sachi, City Engineer	651.554.3210
Emergency Response Plan Certification Date	December, 2004	

Operational Contingency Plan. An operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures as well as routine maintenance is recommended for all utilities. Check here ☒ if the utility has an operational contingency plan. At a minimum a contact list for contractors and supplies should be included in a water emergency telephone list.

Communities that have completed Federal Emergency Response Plans should skip to Section D.

EMERGENCY RESPONSE PROCEDURES

A. **Emergency Telephone List.** A telephone list of emergency contacts must be included as Attachment A to the plan (complete template or use your own list). The list should include key utility and community personnel, contacts in adjacent communities, and appropriate local, state and federal emergency contacts. Please be sure to verify and update the contacts on the emergency telephone list on a regular basis (once each year recommended). In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the warning point for that community. Responsibilities and services for each contact should be defined.

B. **Current Water Sources and Service Area.** Quick access to concise and detailed information on water sources, water treatment, and the distribution system may be needed in an emergency. System operation, water well and maintenance records should be maintained in a central secured location so that the records are accessible for emergency purposes and preventative maintenance. A detailed map of the system showing the treatment plants, water sources, storage facilities, supply lines, interconnections, and other information that would be useful in an emergency should also be readily available. Check here ☒ if these records and maps exist and staff can access the documents in the event of an emergency.

C. **Procedure for Augmenting Water Supplies.** List all available sources of water that can be used to augment or replace existing sources in an emergency. In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the warning point for that community. Copies of cooperative agreements should be maintained with your copy of the plan and include in Attachment . Be sure to include information on any physical or chemical problems that may limit interconnections to other sources of water. Approvals from the MN Department of Health are required for interconnections and reuse of water.

TABLE 7 (A) Public Water Supply Systems – List interconnections with other public water supply systems that can supply water in an emergency.

Water Supply System	Capacity (GPM/MGD)	Note any limitations on use
City of St. Paul	144 MGD	Emergency use.
City of Inver Grove Heights	10 MGD	Emergency use.

GPM – Gallons per Minute MGD – Million Gallons per Day

TABLE 7 (B) - Private Water Sources – List other sources of water available in an emergency.

Name	Capacity (GPM/MGD)	Note any limitations on use
NONE		

GPM – Gallons per Minute MGD – Million Gallons per Day

D. **Allocation and Demand Reduction Procedures.** The plan must include procedures to

address gradual decreases in water supply as well as emergencies and the sudden loss of water due to line breaks, power failures, sabotage, etc. During periods of limited water supplies public water suppliers are required to allocate water based on the priorities established in Minnesota Statutes 103G.261.

Water Use Priorities (Minnesota Statutes 103G.261)

First Priority. Domestic water supply, excluding industrial and commercial uses of municipal water supply, and use for power production that meets contingency requirements.

NOTE: Domestic use is defined (MN Rules 6115.0630, Subp. 9), as use for general household purposes for human needs such as cooking, cleaning, drinking, washing, and waste disposal, and uses for on-farm livestock watering excluding commercial livestock operations which use more than 10,000 gallons per day or one million gallons per year.

Second Priority. Water uses involving consumption of less than 10,000 gallons per day.

Third Priority. Agricultural irrigation and processing of agricultural products.

Fourth Priority. Power production in excess of the use provided for in the contingency plan under first priority.

Fifth Priority. Uses, other than agricultural irrigation, processing of agricultural products, and power production.

Sixth Priority. Non-essential uses. These uses are defined by Minnesota Statutes 103G.291 as lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses.

List the statutory water use priorities along with any local priorities (hospitals, nursing homes, etc.) in Table 8. Water used for human needs at hospitals, nursing homes and similar types of facilities should be designated as a high priority to be maintained in an emergency. Local allocation priorities will need to address water used for human needs at other types of facilities such as hotels, office buildings, and manufacturing plants. The volume of water and other types of water uses at these facilities must be carefully considered. After reviewing the data, common sense should dictate local allocation priorities to protect domestic requirements over certain types of economic needs. In Table 8, list the priority ranking, average day demand and demand reduction potential for each customer category (modify customer categories if necessary).

Table 8 Water Use Priorities

Customer Category	Allocation Priority	Average Day Demand (GPD)	Demand Reduction Potential (GPD)
Residential	1	1,373,300	274,700
Institutional	1	218,100	5,500
Commercial	2	308,900	11,700
Industrial	3	981,700	57,100
Irrigation	4	unknown	
Wholesale	5	0	0
Non-essential	6	0	0
	TOTALS	2,882,000	349,000

GPD – Gallons per Day

Demand Reduction Potential. The demand reduction potential for residential use will typically be the base

demand during the winter months when water use for non-essential uses such as lawn watering do not occur. The difference between summer and winter demands typically defines the demand reduction that can be achieved by eliminating non-essential uses. In extreme emergency situations lower priority water uses must be restricted or eliminated to protect first priority domestic water requirements. Short-term demand reduction potential should be based on average day demands for customer categories within each priority class.

Triggers for Allocation and Demand Reduction Actions. Triggering levels must be defined for implementing emergency responses, including supply augmentation, demand reduction, and water allocation. Examples of triggers include: water demand >100% of storage, water level in well(s) below a certain elevation, treatment capacity reduced 10% etc. Each trigger should have a quantifiable indicator and actions can have multiple stages such as mild, moderate and severe responses. Check each trigger below that is used for implementing emergency responses and for each trigger indicate the actions to be taken at various levels or stages of severity in Table 9.

- ☒ Water Demand
- ☐ Treatment Capacity
- ☐ Storage Capacity
- ☐ Groundwater Levels
- ☐ Surface Water Flows or Levels
- ☒ Pump, Booster Station or Well Out of Service
- ☒ Governor's Executive Order – Critical Water Deficiency (required by statute)
- ☐ Water Main Break
- ☐ Loss of Production
- ☐ Security Breach
- ☐ Contamination
- ☐ Other (list in Table 9)

Table 9 Demand Reduction Procedures

Condition	Trigger(s)	Actions
Stage 1 (Mild)	Demand > 7.1 MGD = 4940 gpm = 95% of firm well capacity using Wells 1, 3, 4, 7, & 8	Lawn watering ban (odd/even), park irrigation suspended
Stage 2 (Moderate)	Demand > 7,4 MGD = 5148 gons = 99% firm well capacity	Total sprinkling ban (utilize well #6)
Stage 3 (Severe)	Demand > 7.5 MGD Demand > 7.6 MGD	Eliminate 3rd priority Eliminate 2nd priority
Critical Water Deficiency (M.S. 103G.291)	Executive Order by Governor & as provided in above triggers	Stage 1: Restrict lawn watering, vehicle washing, golf course and park irrigation and other nonessential uses Stage 2: Suspend lawn watering, vehicle washing, golf course and park irrigation and other nonessential uses

Note: The potential for water availability problems during the onset of a drought are almost impossible to predict. Significant increases in demand should be balanced with preventative measures to conserve supplies in the event of prolonged drought conditions.

Notification Procedures. List methods that will be used to inform customers regarding

conservation requests, water use restrictions, and suspensions. Customers should be aware of emergency procedures and responses that they may need to implement.
Methods used to inform customers of water use restrictions include billing flyers, local cable media, website, general broadcast & print media, as necessary.

E. Enforcement. Minnesota Statutes require public water supply authorities to adopt and enforce water conservation restrictions during periods of critical water shortages.

Public Water Supply Appropriation During Deficiency.
Minnesota Statutes 103G.291, Subdivision 1.

Declaration and conservation.

(a) If the governor determines and declares by executive order that there is a critical water deficiency, public water supply authorities appropriating water must adopt and enforce water conservation restrictions within their jurisdiction that are consistent with rules adopted by the commissioner.

(b) The restrictions must limit lawn sprinkling, vehicle washing, golf course and park irrigation, and other nonessential uses, and have appropriate penalties for failure to comply with the restrictions.

An ordinance that has been adopted or a draft ordinance that can be quickly adopted to comply with the critical water deficiency declaration must be included in the plan (include with other ordinances in Attachment 7 for Part III, Item 4). Enforcement responsibilities and penalties for non-compliance should be addressed in the critical water deficiency ordinance.
Sample regulations are available at www.dnr.state.mn.us/waters

Authority to Implement Water Emergency Responses. Emergency responses could be delayed if city council or utility board actions are required. Standing authority for utility or city managers to implement water restrictions can improve response times for dealing with emergencies. Who has authority to implement water use restrictions in an emergency?

☐ Utility Manager ☐ City Manager ☐ City Council or Utility Board
☒ Other (describe): City Engineer

Emergency Preparedness. If city or utility managers do not have standing authority to implement water emergency responses, please indicate any intentions to delegate that authority. Also indicate any other measures that are being considered to reduce delays for implementing emergency responses.

PART III. WATER CONSERVATION PLAN

Water conservation programs are intended to reduce demand for water, improve the efficiency in use and reduce losses and waste of water. Long-term conservation measures that improve overall water use efficiencies can help reduce the need for short-term conservation measures. Water conservation is an important part of water resource management and can also help utility managers satisfy the ever-increasing demands being placed on water resources.

Minnesota Statutes 103G.291, requires public water suppliers to implement demand reduction measures before seeking approvals to construct new wells or increases in authorized volumes of water. Minnesota Rules 6115.0770, require water users to employ the best available means and practices to promote the efficient use of water. Conservation programs can be cost effective when compared to the generally higher costs of developing new sources of supply or expanding water and/or wastewater treatment plant capacities.

A. Conservation Goals. The following section establishes goals for various measures of water demand. The programs necessary to achieve the goals will be described in the following section.

Unaccounted Water (calculate five year averages with data from Table 1)		
Average annual volume unaccounted water for the last 5 years	126.6 M	gallons
Average percent unaccounted water for the last 5 years	14	percent
AWWA recommends that unaccounted water not exceed 10%. Describe goals to reduce unaccounted water if the average of the last 5 years exceeds 10%.		
One of the single biggest goals is to meter city-owned facilities. This probably acounts for 3-5% of this amount. Other projects include replacement of large concrete reservoir with leaking problem, replacement of bad valves and leak detection program that is ongoing. Also periodic inspection and testing of meters when requested.		

Residential Gallons Per Capita Demand (GPCD)		
Average residential GPCD use for the last 5 years (use data from Table 1)	69.0	GPCD
In 2002, average residential GPCD use in the Twin Cities Metropolitan Area was 75 GPCD. Describe goals to reduce residential demand if the average for the last 5 years exceeds 75 GPCD.		
N/A		

Total Per Capita Demand: From Table 1, is the trend in overall per capita demand over the past 10 years ☒ increasing or ☐ decreasing? If total GPCD is increasing, describe the goals to lower overall per capita demand or explain the reasons for the increase.
The loss of two major water users in our industrial area will change this trend drastically after 2008.

Peak Demands (calculate average ratio for last five years using data from Table 1)	
Average maximum day to average day ratio	2.11
If peak demands exceed a ratio of 2.6, describe the goals for lowering peak demands.	
N/A	

B. Water Conservation Programs. Describe all short-term conservation measures that are available for use in an emergency and long-term measures to improve water use efficiencies for each of the six conservation program elements listed below. Short-term demand reduction measures must be included in the emergency response procedures and must be in support of, and part of, a community all-hazard emergency operation plan.

1. **Metering.** The American Water Works Association (AWWA) recommends that every water utility meter all water taken into its system and all water distributed from its system at its customer's point of service. An effective metering program relies upon periodic performance testing, repair, repair and maintenance of all meters. AWWA also recommends that utilities conduct regular water audits to ensure accountability. Complete Table 10 (A) regarding the number and maintenance of customer meters.

TABLE 10 (A) Customer Meters

	Number of Connections	Number of Metered Connections	Meter testing schedule (years)	Average age/meter replacement schedule (years)
Residential		6566	Not tested	20 / City replaced all meters in whole system in 1987-1989
Institutional		18	Not tested	/
Commercial		291	Not tested	/
Industrial		4	Not tested	/
Public Facilities		--	Not metered	/
Other		--		/
TOTALS		6879		

Unmetered Systems. Provide an estimate of the cost to install meters and the projected water savings from metering water use. Also indicate any plans to install meters.
NONE

TABLE 10 (B) Water Source Meters

	Number of Meters	Meter testing schedule (years)	Average age/meter replacement schedule (years)
Water Source (wells/intakes)	7	5	/
Treatment Plant	--	--	/

2. **Unaccounted Water.** Water audits are intended to identify, quantify, and verify water and revenue losses. The volume of unaccounted-for water should be evaluated each billing cycle. The AWWA recommends a goal of ten percent or less for unaccounted-for water. Water audit procedures are available from the AWWA and MN Rural Water Association.

Frequency of water audits: ☐ each billing cycle ☒ yearly ☐ other:

Leak detection and survey: ☐ every year ☐ every years ☒ periodic as needed
Year last leak detection survey completed:

Reducing Unaccounted Water. List potential sources and efforts being taken to reduce unaccounted water. If unaccounted water exceeds 10% of total withdrawals, include the timeframe for completing work to reduce unaccounted water to 10% or less.
Year last leak detection: 1998 One of the single biggest goals is to meter city-owned facilities. This probably acounts for 3-5% of this amount. Other projects include replacement of large concrete reservoir with leaking problem, replacement of bad valves and leak detection program that is ongoing. Also periodic inspection and testing of meters when requested.

3. **Conservation Water Rates.** Plans must include the current rate structure for all customers and provide information on any proposed rate changes. Discuss the basis for current price levels and rates, including cost of service data, and the impact current rates have on conservation.

Billing Frequency: ☒ Monthly ☐ Bimonthly ☒ Quarterly
☐ Other (describe):

Volume included in base rate or service charge: 5000gallons or xxxcubic feet

Conservation Rate Structures
- ☒ Increasing block rate: rate per unit increases as water use increases
- ☐ Seasonal rate: higher rates in summer to reduce peak demands
- ☐ Service charge or base fee that does not include a water volume

Conservation Neutral Rate Structure
- ☐ Uniform rate: rate per unit is the same regardless of volume

Non-conserving Rate Structures
- ☐ Service charge or base fee that includes a large volume of water
- ☐ Declining block rate: rate per unit decreases as water use increases
- ☐ Flat rate: one fee regardless of how much water is used (unmetered)

Other (describe):

Water Rates Evaluated: ☒ every year ☐ every years ☐ no schedule
Date of last rate change: 2005

Declining block (the more water used, the cheaper the rate) and flat (one fee for an unlimited volume of water) rates should be phased out and replaced with conservation rates. Incorporating a seasonal rate structure and the benefits of a monthly billing cycle should also be considered along with the development of an emergency rate structure that could be quickly implemented to encourage conservation in an emergency.

Current Water Rates. Include a copy of the actual rate structure in Attachment or list current water rates including base/service fees and volume charges below.
Attachment B

Non-conserving Rate Structures. Provide justification for the rate structure and its impact on reducing demands or indicate intentions including the timeframe for adopting a conservation rate structure.
In 2009 & 2010, the City will be modifying its rate structure using the DNR's model as a basis for the new structure.

4. **Regulation.** Plans should include regulations for short-term reductions in demand and long-term improvements in water efficiencies. Sample regulations are available from DNR Waters. Copies of adopted regulations or proposed restrictions should be included in Attachment B of the plan. Indicate any of the items below that are required by local regulations and also indicate if the requirement is applied each year or just in emergencies.

☒ Time of Day: no watering between am/pm and am/pm
(reduces evaporation) ☒ year around ☐ seasonal ☐ emergency only
☒ Odd/Even: (helps reduce peak demand) ☐ year around ☐ seasonal ☒ emergency only
☐ Water waste prohibited (no runoff from irrigation systems)
Describe ordinance:
☐ Limitations on turf areas for landscaping (reduces high water use turf areas)
Describe ordinance:
☐ Soil preparation (such as 4"-6" of organic soil on new turf areas with sandy soil)
Describe ordinance:
☐ Tree ratios (plant one tree for every square feet to reduce turf evapotranspiration)
Describe ordinance:
☐ Prohibit irrigation of medians or areas less than 8 feet wide
Describe ordinance:
☐ Permit required to fill swimming pool ☐ every year ☐ emergency only

☒ Other (describe): In 2009 & 2010, the City of South St. Paul will be modifying its rate structure and defining sprinkling regulations as checked above.

State and Federal Regulations (mandated)

☒ Rainfall sensors on landscape irrigation systems. Minnesota Statute 103G.298 requires "All automatically operated landscape irrigation systems shall have furnished and installed technology that inhibits or interrupts operation of the landscape irrigation system during periods of sufficient moisture. The technology must be adjustable either by the end user or the professional practitioner of landscape irrigation services."

☒ Water Efficient Plumbing Fixtures. The 1992 Federal Energy Policy Act established manufacturing standards for water efficient plumbing fixtures, including toilets, urinals, faucets, and aerators.

Enforcement. Are ordinances enforced? ☒ Yes ☐ No If yes, indicate how ordinances are enforced along with any penalties for non-compliance.
Enforcement is through City's buidling permit process and building inspections department.

5. **Education and Information Programs.** Customers should be provided information on how to improve water use efficiencies a minimum of two times per year. Information should be provided at appropriate times to address peak demands. Emergency notices and educational materials on how to reduce water use should be available for quick distribution during an emergency. If any of the methods listed in the table below are used to provide water conservation tips, indicate the number of times that information is provided each year and attach a list of education efforts used for the last three years.

Current Education Programs	**Times/Year**
Billing inserts or tips printed on the actual bill	
Consumer Confidence Reports	1
Local news papers	
Community news letters	3
Direct mailings (water audit/retrofit kits, showerheads, brochures)	
Information at utility and public buildings	
Public Service Announcements	ongoing
Cable TV Programs	on going
Demonstration projects (landscaping or plumbing)	
K-12 Education programs (Project Wet, Drinking Water Institute)	
School presentations	
Events (children's water festivals, environmental fairs)	
Community education	
Water Week promotions	
Information provided to groups that tour the water treatment plant	
Website (include address: www.southstpaul.org)	ongoing
Targeted efforts (large volume users, users with large increases)	
Notices of ordinances (include tips with notices)	
Emergency conservation notices (recommended)	
Other:A lot of brochures and information on website	

List education efforts for the last three years in Attachment C of the plan. Be sure to indicate whether educational efforts are on-going and which efforts were initiated as an emergency or drought management effort.

Proposed Education Programs. Describe any additional efforts planned to provide conservation information to customers a minimum of twice per year (required if there are no current efforts).

A packet of conservation tips and information can be obtained by contacting DNR Waters or the Minnesota Rural Water Association (MRWA). The American Water Works Association (AWWA) www.awwa.org or www.waterwiser.org also has excellent materials on water conservation that are available in a number of formats. You can contact the MRWA 800/367-6792, the AWWA bookstore 800/926-7337 or DNR Waters 651/259-5703 for information regarding educational materials and formats that are available.

6. **Retrofitting Programs.** Education and incentive programs aimed at replacing inefficient plumbing fixtures and appliances can help reduce per capita water use as well as energy costs. It is recommended that communities develop a long-term plan to retrofit public buildings with water efficient plumbing fixtures and that the benefits of retrofitting be included in public education programs. You may also want to contact local electric or gas suppliers to see if they are interested in developing a showerhead distribution program for customers in your service area.

A study by the AWWA Research Foundation (Residential End Uses of Water, 1999) found that the average indoor water use for a non-conserving home is 69.3 gallons per capita per day (gpcd). The average indoor water use in a conserving home is 45.2 gpcd and most of the decrease in water use is related to water efficient plumbing fixtures and appliances that can reduce water, sewer and energy costs. In Minnesota, certain electric and gas providers are required (Minnesota Statute 216B.241) to fund programs that will conserve energy resources and some utilities have distributed water efficient showerheads to customers to help reduce energy demands required to supply hot water.

Retrofitting Programs. Describe any education or incentive programs to encourage the retrofitting of inefficient plumbing fixtures (toilets, showerheads, faucets, and aerators) or appliances (washing machines).
NONE

Plan Approval. Water Supply Plans must be approved by the Department of Natural Resources (DNR) every ten years. Please submit plans for approval to the following address:

DNR Waters
Water Permit Programs Supervisor
500 Lafayette Road
St. Paul, MN 55155-4032

or Submit electronically to
wateruse@dnr.state.mn.us.

Adoption of Plan. All DNR plan approvals are contingent on the formal adoption of the plan by the city council or utility board. Please submit a certificate of adoption (example available) or other action adopting the plan.

Metropolitan Area communities are also required to submit these plans to the Metropolitan Council. Please see PART IV. ITEMS FOR METROPOLITAN AREA PUBLIC SUPPLIERS.

METROPOLITAN COUNCIL

PART IV. ITEMS FOR METROPOLITAN AREA PUBLIC SUPPLIERS

Minnesota Statute 473.859 requires water supply plans to be completed for all local units of government in the seven-county Metropolitan Area as part of the local comprehensive planning process. Much of the required information is contained in Parts I-III of these guidelines. However, the following additional information is necessary to make the water supply plans consistent with the Metropolitan Land Use Planning Act upon which local comprehensive plans are based. Communities should use the information collected in the development of their plans to evaluate whether or not their water supplies are being developed consistent with the Council's Water Resources Management Policy Plan.

Policies. Provide a statement(s) on the principles that will dictate operation of the water supply utility: for example, "It is the policy of the city to provide good quality water at an affordable rate, while assuring this use does not have a long-term negative resource impact."
The City of South St. Paul supplies water to all of its residents and businesses. The City is responsible for providing safe drinking water to all of its customers.

Impact on the Local Comprehensive Plan. Identify the impact that the adoption of this water supply plan has on the rest of the local comprehensive plan, including implications for future growth of the community, economic impact on the community and changes to the comprehensive plan that might result.
Very little impact since South St. Paul is almost 100% developed and its water plan will meet the needs of current and future users.

Demand Projections

Year	Total Community Population	Population Served	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Projected Demand (MGY)
2010	19,900	19,900	2.8	5.5	1022
2020	20,000	20,000	2.8	5.0	1022
2030	20,700	20,700	2.8	5.0	1022
Ultimate	20,700	20,700	2.8	5.0	1022

Population projections should be consistent with those in the Metropolitan Council's *2030 Regional Development Framework* or the Communities 2008 Comprehensive Plan update. If population served differs from total population, explain in detail why the difference (i.e., service to other communities, not complete service within community etc.).
City is virtually 100% served by South St. Paul sewer and water. Very little change in population is forecast, therefore no changes in projected demand.

PLAN SUBMITTAL AND REVIEW OF THE PLAN

The plan will be reviewed by the Council according to the sequence outlined in Minnesota Statutes 473.175. **Prior to submittal to the Council, the plan must be submitted to adjacent governmental units for a 60-day review period.** Following submittal, the Council determines if the plan is complete for review within 15 days. If incomplete, the Council will notify the community and request the necessary information. When complete the Council will complete its review within 60 days or a mutually agreed upon extension. The community officially adopts the plan after the Council provides its comments.

Plans can be submitted electronically to the Council; however, the review process will not begin until the Council receives a paper copy of the materials. Electronic submissions can be via a CD, 3 ½" floppy disk or to the email address below. Metropolitan communities should submit their plans to:

Reviews Coordinator
Metropolitan Council
390 Robert St,
St. Paul, MN 55101

electronically to:
watersupply@metc.state.mn.us

ATTACHMENT A
SOUTH ST. PAUL
EMERGENCY TELEPHONE LIST

Title	*Name*	*Home*	*Office*	*Cell*	*E-mail*
Police Chief	Daniel Vujovich		651.554.3304	651.755.0675	dvujovich@southstpaul.org
Police Luietenant	William Messerich		651.554.3302	651.755.0677	bmesserich@southstpaul.org
Fire Chief	John Ehret		651.552.4171	651.248.5249	jehret@southmetrofire.com
City Engineer	John Sachi	651.770.6050	651.554.3210	651.485.7432	jsachi@southstpaul.org
Utility Superintendent	Al Neumann		651.554.3225	651.775.9220	None
Utility Lead Man	Dan Pince	651.455.0803		651.485.7765	None
Street Superintendent	Jerry Goers	651.451.0323	651.554.3225	651.485.7436	None

ATTACHMENT B

Ch. 18, art. XVI	Fuel dealer	10.00	
	Petroleum dealer	50.00 plus 5.00 per pump	
Ch. 18, art. XVII	Trash hauler (residential and commercial)	200.00 plus 5.00 per tag	
Ch. 18, art. XVIII	Investigation fee	500.00	
Ch. 18, art. XIX	Taxicab	75.00 first cab; 5.00 each additional	
Ch. 18, art. XXI	Cigarette and tobacco	100.00	
	Administrative fee for violation of article	50.00	
Ch. 18, art. XXII	Used clothing sales/consignment shop	50.00	
Ch. 18, art. XXIII	Wood processing	50.00	
Ch. 46, art. IV, div. 2	Construction debris disposal facility	0.50 per cubic yard of waste, or its equivalent	
	Same—maximum revenue collected by city	Total capacity multiplied by 0.15 per cubic yard	
Ch. 54, art. I	Public utility excavation	1.75 per square foot	
Ch. 54, art. IV	Courtesy benches (limit 25)	20.00 per bench	
Ch. 58, art. II	Residential parking permit	2.00	
Ch. 62, art. II	*Water system*		
	Fire hydrant use	150.00 per year	
	Water meter tampering	50.00	
	Safe drinking water testing	6.36 per connection per year	
	Service charge, by meter size	*Meter Size (inches)*	*Service charge*
		5/8 and 3/4	7.00
		1	8.50
		1½	12.50
		2	16.00
		3	32.00
		4	50.00
		6	77.50
	Commodity charges		
	Residential, commercial, industrial, irrigation, per 1,000 gallons	Up to 1,000,000 gallons	1.10
		More than 1,000,000 gallons	1.32
	Heavy or wet industry, per 1,000 gallons	Up to 5,000,000 gallons	0.65

		5,000,001—10,000,000 gallons	0.68
		10,000,001—20,000,000 gallons	0.71
		More than 20,000,000 gallons	0.82
	Miscellaneous water rates		
	Tile walks	250 square feet or less	0.10
		All over 250 square feet, per 100 square feet	0.04
	Plastering	per 100 square yards	0.20
		All over 250 square feet, per 100 square yards	0.07
	Brick work, per 1,000 bricks	0.05	
	Concrete per cubic yard	0.02	
	Masonry per cubic yard	0.15	
	Concrete walks, etc., per 100 square feet	0.20	
	Ditch puddling, per lineal foot of ditch	0.15	
	Tank wagons, per load	0.15	
	Portable steam boilers	For first 10 HP, per month, per HP	0.60
		All over 10 HP, per month, per HP	0.30
	Lower limit of cost for permit issuance	1.50	
	Water furnished for sewer flushing through a 2½-inch hose, per hour	0.50	

ARTICLE I. IN GENERAL

Secs. 62-1—62-18. Reserved.

ARTICLE II. WATER SYSTEM

DIVISION 1. GENERALLY

Sec. 62-19. Administration.

The city waterworks system and plumbing and repairing in connection with that system are under the city engineer.
(Code 1992, § 700.01)

Sec. 62-20. Permit to use fire hydrant.

(a) *General rule.* Use of fire hydrants by persons other than the fire department and public works department is prohibited except by special permit issued by the city engineer.

(b) *Permit application.* Application for a permit is made to the city engineer on forms specified by the city. The application will include duration, the location of the hydrant to be used, and estimated water usage. The city engineer will consider public safety, water availability and intended usage, and whether water can be obtained conveniently from other sources.

(c) *Permit term and fee.* Permits will be issued on a calendar year basis and be displayed at the hydrant site any time water is being used. The annual fee is as specified in chapter 26 of this Code.
(Code 1992, § 700.27)

Sec. 62-21. Pollution of water mains.

It is unlawful to encumber, obstruct, interfere with, injure, destroy or damage with intent to destroy, by throwing or depositing or permitting to be thrown or deposited any dirt, paper, stone or any other material or substance whatever, into any water pipe or main for conducting water through and along the streets, avenues, alleys and public grounds of the city.
(Code 1992, § 700.33)

Sec. 62-22. Tapping of water mains.

The tapping of water mains must be done by the city under the supervision of the city engineer. The fee is as established by the city council and is payable when the permit for the plumbing work is issued.
(Code 1992, § 700.37)

Sec. 62-23. Restoration of water service.

When service has been shut off for any purpose, except for repair, a plumber or other person may not turn on the water supply at any stopcock at main or curb, nor allow any other person to do so, until permission to do so is given by the city engineer.
(Code 1992, § 700.39)

Sec. 62-24. Buildings must have separate service.

Each separate building supplied with water must have its own connection with the mains. This does not prohibit separately controlled branches from a common service connection to the street main. Double houses, under the same roof, may be supplied by one street service, providing the original service application carries the owner or agent's signature requesting same, but such houses must be provided with shutoff and drip in cellar from independent riser. Two or more buildings located on the same lot or on contiguous lots owned by the same person and supplied with water and heat from a central point may, subject to the written application of the owner and the consent of the council, be supplied through the same connection during the time that the single ownership continues, providing the owner or agent agrees to pay and does pay the charges for water delivered. Upon change from such single ownership, a new and separate connection must be made immediately to the building or premises theretofore having the indirect connection; provided that in case there is no water main on the street on which the premises abut, the council may permit the connection to remain until a water main is laid on the abutting street.
(Code 1992, § 700.41)

Sec. 62-25. Certification of delinquent accounts.

Notwithstanding the provisions of section 62-55, the certification of delinquent accounts to the county for collection is in accordance with the provisions of section 62-167.
(Code 1992, § 700.51)

Sec. 62-26. Water account.

Monies received from charges and other sources and monies disbursed related to the water system shall be recorded in a separate water account in the utilities fund.
(Code 1992, § 700.52)

Sec. 62-27. Repairs and maintenance.

(a) *Intent and purposes.* The council has determined that when breaks and defects occur in the water service lines and appurtenances thereto, there arise potential hazards to the city's water system and to the city streets under which the water service lines lie. The council has determined that the city's welfare and safety is promoted and maintained by prompt repair of such water service lines and appurtenances thereto in an approved manner. Minn. Stat. § 429.101 authorizes the city to place primary responsibility for such repair upon the property owner or occupant and authorizes the city to impose special charges for such repair on the

property owner or occupant in the event the city makes such repair because of the property owner's or occupant's failure to do so. If such special charges are not paid in a timely fashion, the act authorizes the city to make a special assessment against the property benefited by the repairs. Minn. Stat. § 429.101 authorizes the city to adopt other regulations consistent with that law. It is the intent and purpose of this section to use the authority granted by Minn. Stat § 429.101.

(b) *Owner and occupant responsible for maintenance and repair of service line, etc.*

(1) *Service line and appurtenances serving the premises.* The property owner and occupant are responsible for maintaining and repairing the water service line, corporation cocks, curb stops and curb boxes serving the premises.

(2) *Period of time allowed for repair.* Breaks, leaks or other defects in the water service line, corporation cocks, curb stops and curb boxes serving the premises must be made by the property owner or occupant within 72 hours after discovery thereof.

(3) *Manner of repair.* The repairs or other maintenance made by the owner or occupant must be inspected by the city engineer, and water service will not be restored or continued to the premises unless the city engineer approves the repairs or maintenance performed.

(4) *Specifications for service lines.* Service lines, corporation cocks, curb stops and curb boxes must conform to the specifications promulgated by the city engineer.

(c) *Failure to repair.*

(1) *Notice.* When a break, leak or other defect is discovered in the water service line, corporation cock, curb stop or curb box, the city engineer must notify the occupant of the premises served or the owner thereof that the repair and maintenance must be made within 72 hours and that failure to make the repair and maintenance in a manner approved by the city engineer will result in the city making the repair and maintenance and charging the cost thereof to the owner or occupant.

(2) *City to perform.* If the owner or occupant does not perform the repairs and maintenance within 72 hours or if the owner or occupant does not perform the repairs and maintenance in a manner receiving the city engineer's approval, the city will make the repairs and maintenance and shall charge the cost thereof to the owner or occupant of the premises. Necessary street and sidewalk restoration will be included as part of the repair cost.

(3) *Charges.* A written statement for the repair and maintenance charges must be sent to the owner or occupant, and the charges are due and payable within 30 days after the statement is sent, or such charges with interest at the prevailing rate imposed by the city on unpaid special assessments will be payable over three years in 12 equal installments made together with the regular quarterly water bill payment.

(4) *Assessment.* If the charges are not paid in a timely fashion, the city will levy a special assessment against the property benefited in the manner prescribed by Minn. Stat. § 429.101.

(Code 1992, § 705.01, 705.03, 705.05)

Secs. 62-28—62-46. Reserved.

DIVISION 2. RATES AND CHARGES; BILLING AND COLLECTION PROCEDURES*

Sec. 62-47. Rates for metered water.

(a) *Basic charges.* The charge for water supplied by meter is the sum of the service charge and the commodity charge.

(b) *Service charge.*

(1) The service charge is designed to cover the cost of customer services, meters, and service connections, and is based on the water meter size.

(2) The quarterly service charges shall be as established in chapter 26 of this Code.

(c) *Commodity charge.*

(1) The commodity charge is based on the amount of water consumed and is designed to cover the cost of production and distribution. The users of the waterworks system are classified as either residential, commercial, industrial, and irrigation or heavy or wet industry.

(2) The commodity charges established in chapter 26 of this Code shall be effective as of January 1, 2003.

(d) *Fire protection charge.* The fire protection charge for those properties connected to the water system for standby fire protection shall be as established in chapter 26 of this Code.

(e) *Fee for safe drinking water testing.* An annual fee in the amount established by chapter 26 of this Code is imposed for every water service connection for safe drinking water testing program mandated by federal law. The fee shall be collected quarterly with the water bills effective July 1, 2006.

(f) *Minimum quarterly charge.* The minimum quarterly water charge is the applicable rate multiplied by 5,000 gallons.

(Code 1992, § 700.03; Ord. No. 1171, § 1(700.03), 12-19-2005; Ord. No. 1172, § 4, 2-4-2006)

*__State law reference__—Rates and charges, Minn. Stat. § 444.075.

Sec. 62-48. Elderly, blind, disabled, and public housing.

(a) *Rates.* The rates for metered water for eligible elderly, blind and disabled persons and public housing is the service charge provided in subsection 62-47(b), plus a commodity charge of the amount established in chapter 26 of this Code. The foregoing rate applies only to accounts of record with the city finance department.

(b) *Definitions.* For the purposes of this section, the following words, terms and phrases shall have the meanings herein ascribed to them:

Blind and *disabled* mean a family, the head of which or whose sole member is blind, or is a recipient of supplemental security income for the aged, blind or disabled under 42 USC 1381 to 1383, or is a recipient of social security aid to the disabled under 42 USC 416(i)(l) or 423(d), or is a recipient of workers compensation based on a finding of total and permanent disability, whose gross annual family income is $9,000.00 or less.

Elderly means a family whose head or whose sole member is 65 years of age or older whose gross annual family income is $9,000.00 or less.

Gross annual family income means the annual income from all sources for the calendar year preceding each January 1 of the elderly, blind or disabled person, his or her spouse, and any family members residing in the residence of the elderly, blind or disabled person. On or before February 1 of each year, the city water department will determine the percentage increase in social security benefits with 1979 as the base year. The dollar amounts given in the definitions of "blind and disabled" and "elderly" in this section shall be multiplied by such percentage, and the product of the calculation shall be added to the said dollar amounts to produce the gross family income for that year.

Public housing means housing created and operated pursuant to 42 USC 1437e.

(c) *Application.* To be eligible for the rate provided for in this section, application must be made to the finance department. The application is made on such form and includes such information to verify qualification for the rate herein provided as the finance department prescribes.

(Code 1992, § 700.05; Ord. No. 1171, § 1(700.05), 12-19-2005; Ord. No. 1172, §§ 1, 2, 2-4-2006)

Sec. 62-49. Miscellaneous water rates.

Chapter 26 of this Code establishes miscellaneous rates to be charged for the purposes listed therein.

(Code 1992, § 700.07)

Sec. 62-50. Meter installation and repair.

(a) *Connections.* Service connections must be connected with a meter which may not be less than three-fourths inches. Water will not be turned on, unless to clean pipe, until a meter has been installed. The meter must be so placed that it will be accessible to the city engineer or authorized agent at all times for reading and examination. The meter must be protected so as to prevent freezing.

(b) *Service charge.* Meters will be furnished to the consumer by the city upon payment of a service and maintenance charge equivalent to the cost of the meter to be installed. Meters heretofore installed and paid for by the consumer or predecessors in interest will be accepted by the city in lieu of the service and maintenance charge.

(c) *Replacement.* Meters will be replaced and repairs necessitated by ordinary wear and usage will be made by the water department without additional charge. The cost of repairs necessitated because of freezing, hot water or other carelessness, or negligence on the part of the owner or occupant of the premises or their agents will be charged to and collected from the owner or occupant in the same manner in which water bills are collected.
(Code 1992, § 700.13)

Sec. 62-51. Tampering with meters.

It is unlawful to remove the seal from a sealed water meter except for an employee of the water department; provided, however, that a duly licensed master plumber in an emergency may remove such seal, but upon doing so must notify the city engineer at the earliest possible time. An intentional violation of this privilege by a master plumber is cause for revocation of the plumber's license. Broken seals will constitute tampering. The owner of property from which meters removed for repair show signs of having been tampered with must pay the cost of repairs, plus a service charge established by chapter 26 of this Code.
(Code 1992, § 700.15)

Sec. 62-52. Meter reading; billing; penalty; shutoff.

Meter readings will be made at least four times a year at intervals of three months. Within 30 days following the meter reading, the city will cause a statement to be mailed to each consumer. The statement shall include the quantity of water used, the sewer and water charges stated separately, and all amounts due to the city for sewer and water charges. Heavy industry consumers will be billed monthly, and all other consumers will be billed quarterly. Accounts must be paid within 30 days following billing. Accounts not paid within that time are delinquent accounts. A penalty of five percent will be added to the balance of delinquent accounts. If an account is not paid within 45 days following billing, water service pipes may be shut off without further notice in accordance with section 62-55. Service will not be restored until the charge provided for by the city council is paid. After the shutoff, except for repairs, service will not be commenced unless a written order is given to the water department by the owner or authorized agent and the arrears are paid. Water passing through meters will be charged at regular rates, and no allowance will be made for excessive consumption because of leaks or waste. The owner, lessee and occupant are liable for water charges. The city may require an occupant other than the owner to deposit a reasonable sum with the city to secure the payment of water charges.
(Code 1992, § 700.17)

Sec. 62-53. Testing meters.

(a) *Request.* At the written request of an owner or consumer, the water department will test the meter supplying the premises. A deposit in the amount established by the city council will be required before the meter is disconnected, which will be returned if the meter is not found to be registering correctly within two percent on a flow equal to one-eighth of the diameter of the service, or in favor of the consumer; otherwise, the deposit will be retained by the department to cover the cost of the test. The owner or consumer may, if desired, be present at the time the test is made. The result of the test will be reported to the owner or consumer in every case.

(b) *Charges.* If the testing of a meter shows that it fails to register correctly, the charge to the consumer will be on the basis for the corresponding period of the previous year. If the meter has not been in service for a year, or if for any other reason the charge for the corresponding period of the previous year cannot be justly corrected, the charge will be equitably adjusted by the city engineer. Other adjustments of charges for water supplied through meters are made by resolution of the council.
(Code 1992, § 700.19)

Sec. 62-54. Water for nonresidents; charges.

(a) *Authorization.* The water department may furnish water to locations outside the corporate limits of the city that do not adversely affect the city water supply, under rules and regulations and at no lesser rates than that charged to residents of the city.

(b) *Applications for service.* Applications for water service outside the city must be made to the council and must designate the number and character of the premises for which application is made. Each premises must have a designated house number attached to it.

(c) *Specifications.* Water mains must be installed according to city specifications as to material, construction, testing and disinfection. Installation at a water main is not permitted unless the installation is done while a water department inspector or other authorized inspector is on the job site during installation. Inspection fees are to be paid by the applicant.
(Code 1992, § 700.43)

Sec. 62-55. Discontinuance of water service.

(a) *General rule.* The city engineer may discontinue water service to a consumer for any of the reasons set forth herein.

(1) With a notice and hearing having been afforded the consumer, the city engineer may discontinue water service to a consumer whenever the consumer's water bill is delinquent. The term "water bill" means the amount due for water usage charges and sewage charges. A water bill is delinquent if it has not been paid within the time limits prescribed by section 62-52.

(2) The city engineer may discontinue service to a consumer in the event of unauthorized use of city water equipment by the consumer or in the event of the consumer tampering with the water meter or with any city water equipment.

(3) The city engineer may discontinue service in the event of a condition determined to be hazardous to the consumer, to other consumers of the city waterworks, to the city water equipment, or to the public. No reconnection fee shall be charged by the city to restore service that has been discontinued because of a hazardous condition unless the consumer created the hazard.

(4) With notice, service may be discontinued for failure of the consumer to provide the city reasonable access to the water meter or to other city water equipment.

(5) Service may be discontinued for failure of any consumer to comply with any provisions of this division relative to the installation of water service.

(6) Service may be discontinued when there is fraud or misrepresentation by the consumer or the owner of the premises serviced in connection with an application for service.

(7) Service will be discontinued upon written request of the consumer.

(b) *Conference with consumer.* Service will be discontinued only in conjunction with a personal visit by a representative of the city engineer to the address where the service is rendered. The representative must be capable of receiving payment if nonpayment is the cause of the water shutoff or if the representative is able to certify that the cause of the discontinuance has been remedied by the consumer.

(c) *Notice.* When notice is required before discontinuance of water service, the city engineer must send at least one written notice by certified mail to the consumer and to the owner of the premises serviced if the owner is different than the consumer of the water service. The notice must precede the action to be taken by at least 14 days.

(d) *Personal notice.* If the city engineer is unable to reach the consumer or the owner by certified mail, then the notice must be delivered personally by a representative of the city engineer. A receipt of personally delivered notice must be signed by the consumer or owner or by some other member of the consumer's or owner's family therein residing with the consumer or owner.

(e) *Record of notice.* A record of notices must be kept on file by the city engineer.

(f) *Content of notice.* A notice that water service is to be discontinued must be in writing and contain the following information:

(1) The consumer's account number;

(2) The address of the premises serviced;

(3) The date on which the water bill, presently in arrears, was sent to the consumer;

(4) The date by which said water bill should have been paid;

(5) The amount due and owed;

(6) A separate listing of any penalty charges that have been incurred;

(7) A clear statement that water service will be discontinued 14 days from the date of the notice unless full payment is received within such time period;

(8) The telephone number of the office of the city engineer; and

(9) When a hearing is required, the notice must contain a clear statement that city ordinances afford the consumer a right to appeal the water bill to the city engineer and a right to a hearing before the city council for the purpose of determining whether the amount claimed to be owed is actually due and unpaid, the consumer is liable for the amount due and owing, or there exists any valid reason why water service to the delinquent consumer may not be shut off in accordance with this section; in addition, there must be a statement informing the consumer how an appeal can be made and the time by which an appeal must be made.

(g) *Rules and regulations.* The city engineer may promulgate rules, regulations, and policies for the purpose of implementing the procedural requirements for notice.

(h) *Hearing.* When a hearing is required before discontinuance of water service, the following procedures are followed:

(1) At least 14 days prior to the date specified for discontinuance of water service, the city engineer must give 14 days' written notice to the consumer that the consumer has the right to appeal the water bill and the right to a hearing before the city engineer.

(2) An appeal of the water bill and the demand for a hearing must be made within seven days after mailing of notice.

(3) The appeal and demand for hearing must be made by informing the city engineer orally or in writing.

(4) Within 14 days after receiving the appeal and demand for hearing, the city engineer must send by certified mail a confirmation of the demand for hearing and must also inform the consumer of the time and place for the hearing. The hearing must not be less than 14 days nor more than 21 days after the city engineer has sent notice of the time and place of the hearing to the consumer.

(5) Water service may not be discontinued during the pendency of an appeal to the city engineer.

(6) The city engineer must determine whether the amount claimed to be owed is actually due and owed, whether the consumer is liable for the amount due and owing, and whether there exists a legal reason why water service to the consumer cannot be shut off. The city engineer appears at the hearing on behalf of the city.

(i) *Decision.* The decision of the city engineer shall be sent by certified mail to the consumer. If, as a result of the decision, the city is not prohibited from discontinuing water service, the service may be discontinued seven days from the written decision of the city engineer having been sent by certified mail to the consumer. The decision of the city engineer must clearly inform the consumer of the discontinuance and the reasons therefor.
(Code 1992, § 700.45)

Secs. 62-56—62-83. Reserved.

ARTICLE III. SEWERS AND SEWAGE DISPOSAL

DIVISION 1. GENERALLY

Sec. 62-84. Definitions.

For the purposes of this article, the terms defined in this section shall have the meanings given them:

BOD (denoting *biochemical oxygen demand*) means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees Celsius, expressed in milligrams per liter.

Building drain means that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five feet outside the inner face of the building wall.

Building sewer means the extension from the building drain to the public sewer or other place of disposal.

Bullock, for purposes of estimating sewage strength and waste products from meat packing industries, means that the following ratios shall be utilized; one bullock equals either: one steer; one cow; one bull; three hogs; ten sheep; or five calves.

Combined sewer means a sewer receiving both surface runoff and sewage.

Garbage means solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage, and sale of produce.

Industrial wastes means the liquid wastes from industrial manufacturing processes, trade, or business as distinct from domestic (residential) sewage.

Natural outlet means any outlet into a watercourse, pond, ditch, lake, or other body of surface water or groundwater.

You may be fertilizing more than your grass.

The storm drain in your street is a link to our lakes and rivers. The choices you make when caring for your lawn directly affect water quality.

A common cause of lake and river pollution is phosphorus runoff. In response to this, Minnesota has a law restricting the use of phosphorus lawn fertilizer. Although phosphorus is important for grass growth, many lawns have adequate soil phosphorus and do not need further phosphorus fertilization. If you suspect your lawn is in need of phosphorus, soil test first to make sure before using a phosphorus lawn fertilizer.

Phosphorus turns lakes and rivers green. Phosphorus stimulates the growth of algae in lakes and rivers. This crowds out other water plants and reduces oxygen available to fish. The result is unattractive, foul-smelling water that is bad for fish, wildlife, and humans.

Nitrogen, not phosphorus, greens up grass. Phosphorus-free lawn fertilizer still contains nitrogen, the plant nutrient that greens up grass.

To keep our lakes and rivers healthy, we need to manage phosphorus carefully. Read on to learn how you can reduce phosphorus runoff from lawn fertilizers and other sources!

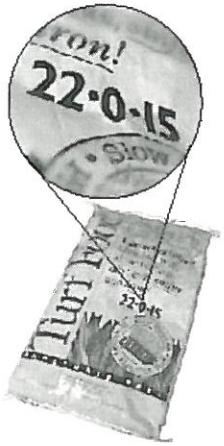
Minnesota Phosphorus Lawn Fertilizer Law – January 1, 2005

Fertilizers containing phosphorus cannot be used on lawns in Minnesota unless the following exceptions apply:

- **A new lawn is being established by seeding or laying sod.**
- **Soil testing shows need for phosphorus fertilization.**
- **Fertilizer is being applied to a golf course by trained staff.**

For soil testing information, contact the University of Minnesota Soil Test Lab at 612-625-3101 or visit them at their http://soiltest.coafes.umn.edu website.

Look for the middle number!
A string of three numbers on a fertilizer bag shows its analysis – the middle number being phosphate (phosphorus) content.
A "zero in the middle" means phosphorus-free fertilizer.



More information on the law is available at the Minnesota Department of Agriculture website www.mda.state.mn.us; click on "Water & Land" then on "Lawn Care & Water Quality."

MINNESOTA WATER
LET'S KEEP IT CLEAN

www.cleanwatermn.org

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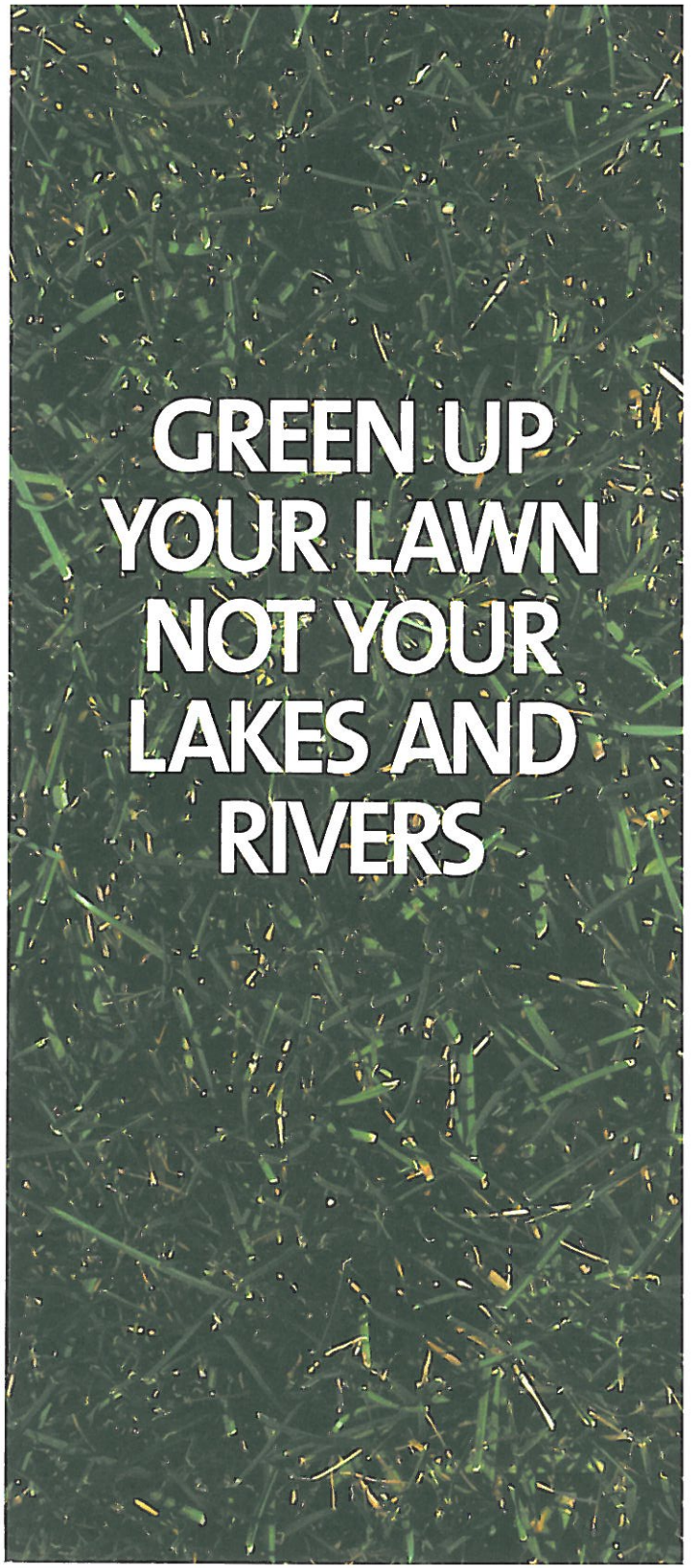


Anything that enters a storm drain goes to a local lake or river.

It does not go to a waste water treatment facility.

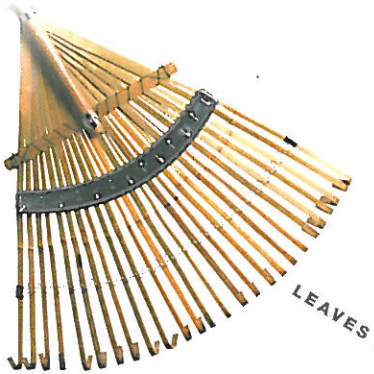
Do you know you live on waterfront property? You do if there is a storm drain nearby! Storm drains carry runoff water to local lakes and rivers. Whatever washes off your yard and street can pollute these waters. That includes lawn fertilizer, grass clippings, pet waste, and tree leaves and seeds—all sources of phosphorus, the plant nutrient that turns lakes and rivers green with algae.

Keep your runoff clean!

Keep our lakes and rivers clean!

REMOVE LEAVES FROM THE STREET

- Rake leaves, seeds and grass clippings out of the street and gutter.
- Compost on site, bag for collection, or take to community compost program.



LEAVES END UP IN THE STORM SEWER.....

PREVENT EROSION

- Phosphorus attaches to soil. Keep soil from washing into the street.

FERTILIZE THE LAWN, NOT THE LAKES AND RIVERS

- Choose a zero-phosphorus fertilizer. Many lawns have adequate soil phosphorus and will remain healthy without adding more.
- If you think your lawn needs phosphorus, test your soil first. For information call INFO-U at 612-624-2200, message 468, or visit *soiltest.coafes.umn.edu*.
- Sweep spilled fertilizer off paved surfaces.
- Remember, compost and manure contain phosphorus too.

ANIMAL WASTES END UP IN THE STORM SEWER.....

GRASS CLIPPINGS END UP IN THE STORM SEWER.....

CLEAN UP AFTER PETS

- Scoop the poop. Pet waste contains phosphorus as well as harmful bacteria.
- Don't feed the geese.

KEEP THE PAVEMENT CLEAN

Sweep up grass clippings, soil and fertilizer from driveways, sidewalks, and streets.

Rainbarrels

Rainbarrels are used to catch stormwater run-off from rooftops that would otherwise flow into our lakes and rivers via storm sewers. This rainwater can be stored for later use to water your lawn and gardens, as well as wash windows and cars. Rainbarrel water is a better source for watering house and garden plants than tap water since it contains no chlorine. The use of rainbarrels can help reduce stormwater run-off which is associated with flooding and erosion problems in areas with large amounts of impervious surface. It can also reduce water consumption during the hot days of summer.

Each rainbarrel can store 55 gallons of water, equal to the run-off volume from 90 square feet of roof after 1" of rain. If more storage capacity is needed, rainbarrels can be connected in series, making them useful for both small and large homes and businesses.

If properly built, rainbarrels won't contribute to the mosquito population. Using a fine mesh screen over the inlet will prevent mosquitoes from laying eggs.

Rainbarrel Installation

- Buy or find a large food-grade barrel. Avoid barrels that contained chemicals as traces of that chemical may show up in the water.
- Using a 1/2" drill bit, make one hole near the bottom of the barrel for your spigot and one hole near the top for your overflow (be sure the overflow is placed below the bottom of your catch basket so you won't have standing water).
- Screw the spigot into the bottom hole and place the rubber and metal washers on the inside on the barrel.
- Screw on the 3/4" adapter behind the washers and tighten.
- Place a rubber and metal washer on the 1/2" male adapter and screw through the upper hole from the inside of the barrel.
- Screw on the hose adapter and tighten.
- Silicone caulk may be applied to make the barrel completely water-tight.
- To connect several barrels together, run a hose between the overflow assemblies. Be sure to add an extra overflow to the final barrel to allow for drainage.
- Using a jig-saw or key-hole saw, cut a 7" diameter hole in the barrel lid. Put a filter sock around the skimmer basket and set in place.
- Place beneath a downspout.
- Clean out the skimmer basket monthly to prevent clogging, and drain the barrel before winter.

Additional Information

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Sol Bijnagte
Restoration Technician
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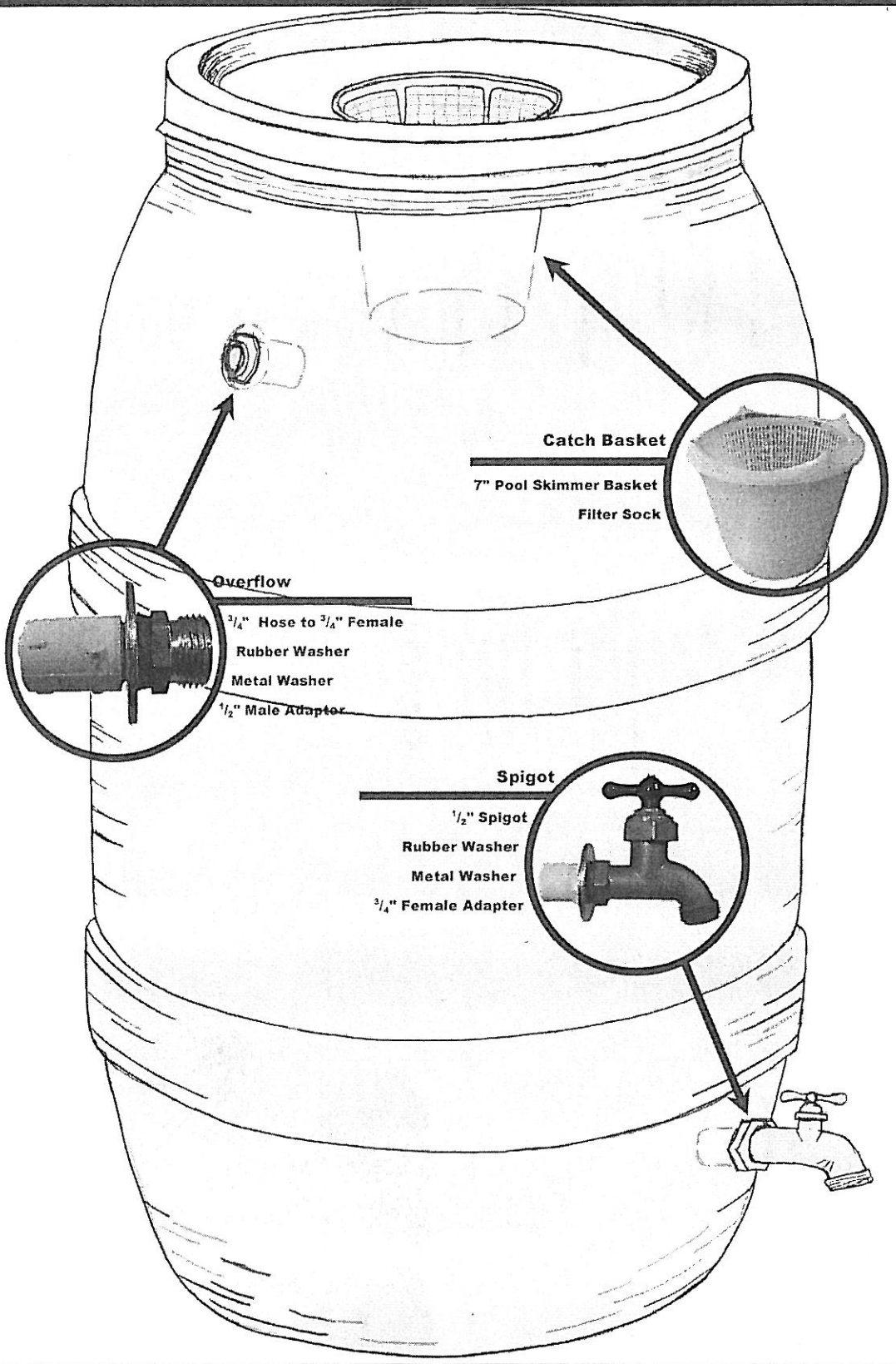
RainBarrels

Reusing Stormwater Runoff

The Association of Metropolitan
Soil and Water Conservation Districts

Anoka - Carver - Dakota - Hennepin
Ramsey - Scott - Washington

Build-A-Barrel



Save Water

Backyard Conservation Fact Sheet

Whether you have a large country lot, a suburban yard, or a tiny plot in the city, you can help protect the environment and add beauty and interest to your surroundings. Backyard conservation refers to a number of different practices you can establish on your property. The practices include native vegetation plantings, buffer strips, wetland restoration, composting, nutrient management, chemical use reduction, erosion control, and water quality protection.

Wildlife Habitat

Planting trees in your yard will improve nesting habitat for birds and save you money on heating and cooling your home if placed strategically. Planting native trees, shrubs, grasses, and plants look great and also provides food for birds, butterflies, mammals, and many other critters. Water is an effective way to draw wildlife to your backyard. A small pond can be a scenic addition that provides habitat to frogs, turtles, birds, fish, and aquatic plants.

Water Quality

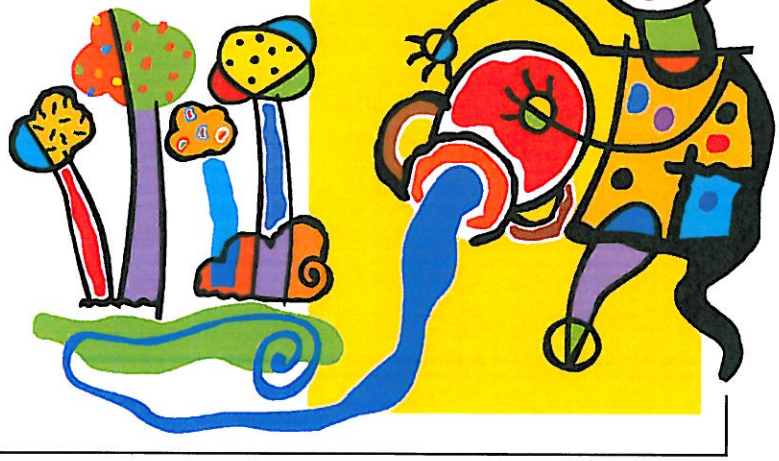
In Minnesota, many backyards border lakes, streams and wetlands. It is important to keep natural buffers around these areas to protect water quality and wildlife habitat. Backyard conservation techniques located adjacent to natural communities will extend areas that wildlife can inhabit. Planting native grasses and plants will increase the rooting depth which may help curb erosion problems on rivers and streams. Controlling erosion and reducing rainwater runoff will decrease the amount of nutrients and sediment entering our lakes and rivers. Keeping leaves and clippings off of pavement will also reduce nutrients entering stormsewers that route rainwater directly to lakes or streams.

Soil Quality

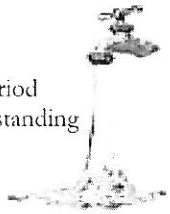
Composting can be done in a small space with little time involved. Composting leaves, plants, and selected domestic wastes is a great way to enhance soil productivity and reduce refuse costs. When the compost is ready, it can be used in flower or vegetable gardens. Mulching leaves or grass clippings into the soil is another alternative to bagging. Soil testing is an essential step to nutrient management. Apply only correct amount of nutrients needed to the soil. If fertilizers are needed, slow-release nitrogen fertilizers should be utilized.

How to Learn More

Call the Dakota County SWCD for more information about backyard conservation. Demonstration sites are accessible to view these pracitces first-hand and cost-share grants are available for qualified projects. The SWCD is working closely with the Minnesota Department of Natural Resources as part of the Neighborhood Wilds program to help landowners practice backyard conservation techniques.



2007 Drinking Water Report



The City of South St. Paul is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2007. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

Results of Monitoring

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2007. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

In 2007, the Minnesota Department of Health (MDH) found low levels of the chemical perfluorobutanoic acid (PFBA) in three of the wells serving the city's water system. It is one of a family of chemicals known as perfluorochemicals (PFCs). PFCs were made by 3M in Cottage Grove and other companies around the world for use in household and industrial products such as: stain repellents, lubricants, fire retardants and suppressants, pesticides, surfactants, and emulsifiers. PFC wastes were disposed of in several landfills in Washington County.

The MDH has evaluated the available information on the toxicity of PFBA, including several studies completed in the past year, and has established a Health-Based Value (HBV) for PFBA of 7 micrograms per liter (ug/L). The HBV is a level that is safe for human consumption, even if the water is consumed daily over a lifetime. These values are even protective for those who may have higher water consumption rates, such as pregnant women, nursing mothers and small children.

The levels, which range from 0.0 to 0.36, of PFBA in the city water supply are well below the HBV, and MDH is not recommending that the city or residents take any additional steps regarding their use of the water.

State and local officials are evaluating long-term solutions to the PFC groundwater contamination in Washington and Dakota Counties. Additional investigations and cleanup actions are planned or are underway at the 3M waste disposal sites and MPCA is investigating other possible sources of PFCs in the environment. We will keep you and other residents informed as this work progresses. For more information on PFCs, including information on common water filtration devices that effectively remove PFCs, please visit the MDH web site at http://www.health.state.mn.us/divs/eh/hazardous/index.html.

Source of Water

The City of South St. Paul provides drinking water to its residents from a groundwater source: three wells ranging from 339 to 404 feet deep, that draw water from the Jordan, Jordan-St. Lawrence, and Prairie Du Chien-Jordan aquifers.

The water provided to customers may meet drinking water standards, but the Minnesota Department of Health has also made a determination as to how vulnerable the source of water may be to future contamination incidents. If you wish to obtain the entire source water assessment regarding your drinking water, please call (651) 201-4700 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it on line at www.health.state.mn.us/divs/eh/water/swp/swa.

Call the City Engineer at (651) 554-3210 if you have questions about the City of South St. Paul drinking water or would like information about opportunities for public participation in decisions that may affect the quality of water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range(2007)	Average/Result*	
Alpha Emitters (pCi/l)	0	15.4	6.2-8.5	7.35	Erosion of natural deposits.
Arsenic (ppb) (02/17/2005)	0	10	N/A	2.58	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm) (02/17/2005)	2	2	N/A	.11	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/l)	0	5.4	2.1-2.2	2.3	Erosion of natural deposits.
Fluoride (ppm)	4	4	.88-1.2	1.2	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen) (ppm)	10	10	nd-2.7	2.7	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Total Coliform Bacteria	0 present	>1 present	N/A	1♥	Naturally present in the environment.

**This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling results from the previous year.*

♥Follow-up sampling showed no contamination present.

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm)	N/A	1.3	.1	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)	N/A	15	3	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of South Saint Paul is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. **When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.**

Some contaminants do not have Maximum Contaminant Levels established for them. These unregulated contaminants are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions. In the table that follows are the unregulated contaminants that were detected:

Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2007)	Average/Result	
Sodium (ppm) (02/17/2005)	N/A	14	Erosion of natural deposits.
Sulfate (ppm) (02/17/2005)	N/A	30	Erosion of natural deposits.

MCLG—Maximum Contaminant Level Goal: Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL—Maximum Contaminant Level: Highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

AL—Action Level: Concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

ppb—Parts per billion, can also be expressed as micrograms per liter (µg/l).

N/A—Not Applicable (does not apply).

90th Percentile Level—Value obtained after disregarding 10% of the samples taken that had the highest levels. *(For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10% of the samples.)* Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

pCi/l—PicoCuries per liter: a measure of radioactivity.

ppm—Parts per million, can also be expressed as milligrams per liter (mg/l).

nd—No Detection.

Drinking Water Regulations

Compliance with National Primary Drinking Water Regulations. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Protecting Water Resources—It's Our Watershed. From your back yard, to the street, to a local wetland, to the Minnesota River, to the Mississippi River, to the Gulf of Mexico—it is our watershed. Any pollutants we create or place in our back yard eventually arrive at the Gulf of Mexico. Thinking on a scale this large may overwhelm us or make us feel powerless in improving our water quality. However, by thinking on a smaller scale, we can affect water quality within our local watershed.

Things you can do now to improve water quality in your watershed:

- Sweep, bag, and/or compost lawn clipping to prevent them from running into wetlands and lakes. Yard waste is one of the largest contributors to degrading water quality.
- Use no phosphorus fertilizers, a middle number of zero (Nitrogen-Phosphorus-Potassium NPK rating).
- Clean up pet waste to prevent it from running into wetlands and lakes.
- Check your car fuel, oil, and antifreeze for leaks, and fix any leaks to prevent these chemicals from entering your local wetland.
- Wash your car on your lawn instead of your driveway to keep pollutants and detergents out of lakes and wetlands.
- Spread the word about water quality protection to friends and neighbors.

City Water FAQs

What is the water hardness in South St. Paul? South St. Paul water typically has 18-20 grains of hardness with a trace of iron.

What causes discolored water? Iron and manganese, harmless minerals that occur naturally in well water can cause discoloration. A malfunctioning water softener may also cause discoloration. Routine hydrant flushing may stir up deposits within the pipes, resulting in rusty/discolored water. This can be cleared by turning on all the cold water faucets at the same time and letting them run for a few minutes.

When and why are hydrants flushed? Hydrants are flushed in the spring and late summer to ensure that water lines are working properly, and to remove mineral deposits from the lines.

South St. Paul 2006 Drinking Water Report

The City of South St. Paul is issuing the results of drinking water monitoring for the period of Jan. 1—Dec. 31, 2006. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

The City of South St. Paul provides drinking water to its residents from a groundwater source: five wells ranging from 339 to 404 feet deep, that draw water from the Jordan and Prairie Du Chien-Jordan aquifers.

The water provided to customers meets drinking water standards but the Minnesota Department of Health has determined that one or more of the sources of water is potentially susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it on line at www.health.state.mn.us/divs/eh/water/swp/swa.

Questions about the SSP drinking water or information about opportunities for public participation in decisions that may affect the quality of water should be directed to John Sachi, City Engineer at 651-554-3210.

Compliance with National Primary Drinking Water Regulations

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- ***Microbial contaminants,*** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- ***Inorganic contaminants,*** such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- ***Pesticides and herbicides,*** which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- ***Organic chemical contaminants,*** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- ***Radioactive contaminants,*** which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Key to abbreviations:

MCLG—Maximum Contaminant Level Goal: Level of contaminant in drinking water below which there is no known/expected risk to health. MCLGs allow for margin of safety.

MCL—Maximum Contaminant Level: Highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

AL—Action Level: Concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

pCi/l—PicoCuries per liter (a measure of radioactivity).

ppm—Parts per million, which can also be expressed as milligrams per liter (mg/l).

ppb—Parts per billion, which can also be expressed as micrograms per liter (µg/l).

nd—No Detection.

N/A—Not Applicable

90th Percentile Level: The value obtained after disregarding 10% of the samples taken that had the highest levels. (i.e., in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10% of the samples.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

Results of Monitoring

The results contained in the following table indicates one element has an exceedance of a federal standard. Some other contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2006. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range (2006)	Avg/ Result*	
Alpha Emitters (pCi/l)	0	15.4	3.5-9.1	9.57	Erosion of natural deposits
Arsenic (ppb) (02/17/05)	0	10	N/A	2.58	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm) (02/17/05)	2	2	N/A	0.11	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/l)	0	5.4	2.1-2.6	2.67	Erosion of natural deposits
Fluoride (ppm)	4	4	1.1-1.3	1.23	State of MN requires municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	10	10	nd-3.4	3.4	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria	0 present	>1 present	N/A	1♥	Naturally present in the environment
Radon (pCi/l) (10/16/02)			N/A	1670	Erosion of natural deposits
Sodium (ppm) (02/17/05)			N/A	14	Erosion of natural deposits.
Sulfate (ppm) (02/17/05)			N/A	30	Erosion of natural deposits.

During the year, SSP had a violation for Alpha Emitters. Our system took the initiative to limit the amount of water being pumped from the ⋆ source(s) with elevated alpha emitters. The MDH and the City have signed a compliance agreement that ensures all residents receive drinking water containing less than 15.4 pCi/L of gross alpha emitters on an annual basis. (Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.)

♥ *Follow-up sampling showed no contamination present.*

**Value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling results from the previous year.*

Radon is a radioactive gas which is naturally occurring in some groundwater. It poses a lung cancer risk when gas is released from water into air (as occurs during showering, bathing, or washing dishes or clothes) and a stomach cancer risk when it is ingested. Because radon in indoor air poses much greater health risks than radon in drinking water, an Alternative Maximum Contaminant Level (AMCL) of 4,000 picoCuries per liter may apply in states that have adopted an Indoor Air Program, which compels citizens, homeowners, schools, and communities to reduce the radon threat from indoor air. For states without such a program, the MCL of 300 pCi/l may apply. Minnesota plans to adopt an Indoor Air Program once the Radon Rule is finalized.

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm) (07/15/04)	N/A	1.3	.23	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb) (07/15/04)	N/A	15	6	1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits

Some contaminants do not have MCLs established for them. These "unregulated contaminants" are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Perfluorobutanoic Acid (PBFA)

Earlier this year, the MN Department of Health (MDH) announced that low levels of the chemical perfluorobutanoic acid (PBFA) had been found in one well (Well #4) serving the city's water system. It is one of a family of chemicals known as perfluorochemicals (PFCs). PFCs were made by 3M in Cottage Grove and other companies around the world for use in household and industrial products such as: stain repellents, lubricants, fire retardants and suppressants, pesticides, surfactants, and emulsifiers. PFBA was made by 3M until 1998 at its Cottage Grove facility for use in photographic film. PFBA wastes were disposed of in several landfills in Washington County.

The MDH has evaluated the limited available information on the toxicity of PFBA and concluded that exposure to PFBA in drinking water at levels at or below 1 part per billion (ppb) is unlikely to be of health concern, even if the water is consumed daily over a lifetime. This is true even for those who may have higher water consumption rates, such as pregnant women, nursing mothers and small children. At levels slightly above 1 ppb, there may be a very small risk of adverse health effects from long-term daily consumption of the water. MDH does not have enough information to quantify the risk at this time, or to establish a specific Health-Based Value (HBV) for PFBA as has been done for PFOS and PFOA, two other PFCs.

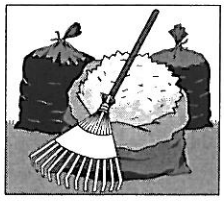
Even though the level (0.2445 ppb) of PFBA in the city water supply is low, there are steps you can take if you wish to reduce your exposure. These include using bottled water for some or all of your drinking or cooking needs, or using an activated carbon filter. These filters, if properly installed, operated and maintained are effective at removing or reducing the level of PFCs in water. It is unlikely that other types of common water treatment systems, such as water softeners, would remove PFBA. Boiling the water will not remove PFBA or other PFCs.

State and local officials are evaluating long-term solutions to the PFC groundwater contamination in Washington and Dakota Counties. Additional investigations and cleanup actions are planned or underway at the 3M waste disposal sites and MPCA is investigating other possible sources of PFCs in the environment. MDH will keep citizens informed as this work progresses, and as more scientific information is received about PFBA. For more information on PFCs, please visit the MDH web site at www.health.state.mn.us/divs/eh/hazardous/index.html.

RECYCLING— YARD WASTE OPTIONS

When discarding yard waste, choose to ....

- Leave grass clippings on the lawn. Clippings return nutrients to your lawn, acting as a fertilizer application.
- Have it picked up by your garbage hauler (usually for a fee). Yard waste must be in compostable bags.
- Bring it to the South St. Paul Compost Site.



South St. Paul Compost Site

(Located off of Hardman and Verderosa Avenue)

Hours Open: June through July 2nd

Friday, Saturday and Monday
9:00 a.m. to 6:00 p.m.

Sunday
1:00 p.m. to 6:00 p.m.

The site is closed on Tuesday, Wednesday and Thursday.

Materials Accepted: Leaves, grass, sod trimmings and garden waste
Fee: $.50 cents per bag or 3 bags for $1.00 *(debagged at site)*

Tree & Shrub Waste: The City is accepting brush, tree and shrub waste clippings on the 1st Saturday of every month from 9:00 a.m. to 2:00 p.m.

City of South St. Paul • 2005 Water Quality Report

The City of South St. Paul is sharing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2005. The purpose of this report is to advance consumers' understanding of drinking water and to heighten awareness of the need to protect precious water resources.

The City of South St. Paul provides drinking water to its residents from a groundwater source: four wells ranging from 339 to 484 feet deep, draw water from the Jordan aquifer and the Prairie Du Chien-Jordan aquifer.

The water provided to customers may meet drinking water standards but the Minnesota Department of Health has determined that one or more of the sources of water is potentially susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4670 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it on line at www.health.state.mn.us/divs/eh/water/swp/swa.

Call the City Engineer's Office at (651) 554-3210 if you have questions about the City of South St. Paul drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

Results of Monitoring

that follows shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2005. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

Key to Abbreviations

MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.
AL	Action Level: The concentration of contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.
pCi/l	PicoCuries per liter (a measure of radioactivity).
ppb	Parts per billion, which can also be expressed as micrograms per liter (ug/l).
ppm	Parts per million, which can also be expressed as milligrams per liter (mg/l)
nd	No detection.
N/A	Not Applicable (does not apply).

90th Percentile Level: This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. (For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

Contaminants (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range (2004)	Average/ Result	
Arsenic (ppb)	0	50	nd-2.58	2.58	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm)	2	2	.0669-.107	.11	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate as Nitrogen (ppm)	10.0	10.0	nd - 2.6	2.6	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride (ppm)	4.0	4.0	1 - 1.3	1.15	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; discharge from fertilizer and aluminum factories.
Alpha Emitters (pCi/l) (1/28/02)	0	15.4	3.2 - 56	49.83*	Erosion of natural deposits.
Combined Radium (pCi/1)	0	5.4	nd - 13.9	13.9**	Erosion of natural deposits.

* During the year, we had a violation of Alpha Emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha rediation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. System studying alternative available for corrective action.

** Four quarterly samples are required to determine an average compliance value for this contaminant. At the end of 2005, there had been only three samples collected from the sample point that was exceeding. As a result, there was not a violation in 2005 for this contaminant.

Contaminants (units)	MCLG	AL	90% Level	# Sites over AL	Typical Source of Contaminant
Lead (ppb) (07/15/2004)	N/A	15	6	1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm) (07/15/2004)	N/A	1.3	.23	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

Some contaminants do not have Maximum Contaminant Levels established for them. These "unregulated contaminants" are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions. **In the table that follows are the unregulated contaminants that were detected.**

Contaminants (units)	Level Found		Typical Source of Contaminant
	Range (2005)	Average/Result*	
Sulfate (ppm)	6.3-30	30	Erosion of natural deposits.
Sodium (ppm)	3.9-14	14	Erosion of natural deposits.
Radon (pCi/1)(10/16/02)	N/A	1670	Erosion of natural deposits.

Radon is a radioactive gas which is naturally occurring in some groundwater. It poses a lung cancer risk when gas is released from water into air (as occurs during showering, bathing, or washing dishes or clothes) and a stomach cancer risk when it is ingested. Because radon in indoor air poses a much greater health risk than radon in drinking water, an Alternative Maximum Contaminant Level (AMCL) of 4,000 picoCuries per liter may apply in states that have adopted an Indoor Air Program, which compels citizens, homeowners, schools, and communities to reduce the radon threat from indoor air. For states without such a program, the Maximum Contaminant Level (MCL) of 300 pCi/1 may apply. Minnesota plans to adopt an Indoor Air Program once the Radon Rule is finalized.

Compliance with National Primary Drinking Water Regulations

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in the source water include:

- *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treament plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants,* such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides,* which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Radioactive contaminants,* which can be naturally-occurring or be the result of oil and gas production and mining activities.
- *Organic chemical contaminants,* including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risks from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 1-800-426-4791.