



8. COMMUNITY INFRASTRUCTURE

Community Services

Public Safety

South St. Paul Police Department

Established in 1887, the South St. Paul Police Department continues a proud tradition of providing excellent public safety for South St. Paul. Today's police department includes 28 officers (including two School Resource Officers), four community service officers, 25 reserves, a Police K-9, and four clerical staff. The 2007 expansion of the City Hall gave the Police Department up-to-date facilities that enable the department to meet all state and federal requirements for a temporary holding facility and improved day-to-day operations. The Police Department entered into a Joint Powers Agreement in 2008, along with all of the other communities in the County, to establish the County-wide 800MHz 911 dispatch center.

South Metro Fire Department

The South St. Paul Fire Department was established in 1888. In 2008, the City entered into a Joint Powers Agreement with the City of West St. Paul to form the South Metro Fire Department. The South Metro Fire Department employs 40 full-time staff, including 33 firefighters, two inspectors, four chief officers and one executive assistant. The department operates out of two stations, one in each city, with the West St. Paul station housing the department's administrative personnel. The Fire Department is tasked with providing an all-hazards response, including fire suppression, special operations and Emergency Medical Services (EMS) first response, with Basic Life Support (BLS) ambulance transport.

WHAT WE HEARD:

When asked about the quality of public services (Police, Fire, Public Works, etc.) provided by the City of South St. Paul, 35.62 percent of community survey respondents rated these services as "excellent" while 51.88 percent rated them "good."

Lifelong Learning

South St. Paul Public Library

The South St. Paul Public Library has a rich history of serving the community for nearly 100 years as a city-funded library. In 1963, the library entered into its first reciprocal borrowing pact with Dakota/Scott County, and in 1975, the Metropolitan Library Service Agency (MELSA) adopted a “Plan of Association” with independent metro libraries. South St. Paul Public Library became an affiliate/associate to the county library system, which ensured total sharing of materials, including interlibrary loans. Through further agreements, the library has participated in shared technology and program funding through the Dakota County Library System.

Currently the library employs five full-time personnel and six part-time personnel who provide over 350 programs annually to promote lifelong learning for users of all ages. The library also actively collaborates with other city personnel, organizations and businesses in bringing the library to the people.

Originally built in 1927, the library was expanded in 1964 to provide better service and to meet the increased demands of the community. The bookmobile garage was converted into a small conference/meeting room in 1999.

Libraries are increasingly becoming community-gathering places for programs, quiet study, lively discussions, and interactive learning. Given the changing function of community libraries, the City hired LSE Architects, Inc. in 2016 to conduct a mechanical needs assessment and space study of the current layout of the library to gauge the ability to meet the community’s changing needs and expectations. New and desirable features were identified, such as private study areas, ADA compliance, a modification of the main service desk and staff work areas, flexibility regarding technology and programming, a larger meeting room, and a dedicated performance space.

Further studies will be conducted regarding a potential renovation of the library with the possibility of collaborating with the neighboring Dakota County Lawshe Memorial Museum, envisioning the library/museum area as a centrally located anchor in the community.

WHAT WE’VE HEARD

“We love our library and the creative and innovative programming they have for both kids and adults.”

Intergovernmental Coordination

The City of South St. Paul is constantly trying to provide the best level of services to its residents by the most efficient means possible. In striving to achieve that goal the City has entered into several partnerships with other governmental agencies.

South Metro Fire Department

In 2008, the cities of South St. Paul and West St. Paul combined their full-time fire departments to form the South Metro Fire Department. The combined fire department retains the same number of fire stations, one in each of the two communities, and fire fighters. South Metro Fire Department is headquartered at the West St. Paul station.

Dakota County Communications Center (DCC) / 800 Megahertz System / CJIIN

In 2008, the City participated with other area communities on the establishment of the Dakota County Communications Center (DCC). The DCC provides dispatch communication for multiple local law enforcement agencies from one location. The City also is participating in the 800 MHz system, which provides better communication between different law enforcement agencies. The South St. Paul Police Department is a member of CJIIN, a county-wide effort relating to records management, CAD, and e-forms.

Dakota County Drug Task Force / Traffic Safety Partnership / Dakota County Police Chiefs Association / Dakota County Electronic Crime Unit/ Internet Crimes Against Children Task Force / Operation Night Cap / Tri-County Investigators

South St. Paul is an active participant in the Dakota County Drug Task Force and Traffic Safety Partnership. The South St. Paul Police Department is a member of the Dakota County Police Chiefs Association, a county-wide effort addressing county-wide concerns. The Dakota County Electronic Crime Unit assists member agencies by working together to provide trained personnel and expertise to analyze data stored on electronic devices in order to assist or investigators with the prosecution of cases involving the use of electronic devices. The Internet Crimes Against Children Task Force is a national network of 61 coordinated task forces representing over 3,500 federal, state, and local law enforcement and prosecutorial agencies. These agencies are continually engaged in proactive and reactive investigations and prosecutions of persons involved in child abuse and exploitation involving the internet. South St. Paul also works on a joint effort with the Minnesota State Patrol known as Operation Night Cap with proactive traffic enforcement operations. The South St. Paul Police Department also participates in Tri-County Investigators, where metro investigators meet once a month to discuss various investigations and share intelligence.

Progress Plus (Economic Development Partnership)

The cities of South St. Paul and Inver Grove Heights, and the local chamber of commerce (River Heights Chamber of Commerce), joined together to form an economic development partnership called Progress Plus. Progress Plus provides joint marketing, developer site selection assistance, and other shared economic development tools for both communities. The partnership allows the two cities to act like one larger city, thereby improving their visibility in the region and increasing economic development opportunities for both cities.

Robert Street Corridor Coalition

The City was part of the Robert Street Corridor Coalition that included Dakota County and most of the other cities in the region. The Coalition examined different possible forms of regional mass transit for the corridor and different alignments. The City will continue to be a part of this discussion, which could secure better regional transit for the residents of South St. Paul and the rest of the north/eastern Dakota County region.

Future Intergovernmental Coordination

The City of South St. Paul will continue to examine opportunities for intergovernmental partnerships and coordination whenever possible.

Public Works

The South St. Paul Public Works Department maintains the City's transportation and utility infrastructure. This includes the plowing and maintaining of the streets and sidewalks, and maintaining the numerous miles of sewers, storm sewers, and water lines. Public Works employees also ensure the maintenance of the City's airport and ice arena. The City has seven deep wells, two water towers and two water reservoir facilities which provide water to City residences and businesses. Additionally, there are several pump stations located throughout the City that are essential to ensure the proper flow of the sewers amongst the often-challenging topography in the City. The City Public Works Department also maintains and operates the City flood protection system, which is a combination of floodwalls, levees, pump stations and closure gates. The Public Works Department is located at the City's maintenance garage on Richmond Street in the south end of the City.

Water Supply

System Description and Evaluation

The City's water supply is provided by seven wells that were drilled between 1937 and 1975; no production wells have been constructed within the last ten years. Four of the wells have undergone significant rehabilitation (#1, #4, #7, and #8) and one has been re-cased and redeveloped. Well number nine (an eighth well) has been taken off line and been disconnected from the system. All ground water is taken from the Jordan aquifer. Each well has its own pumphouse, and water treatment is provided there. Pumphouse five does not have a well, it contains only booster pumps. Total production capacity is approximately 15.6 MGD.

In addition to the seven wells that provide the City with water, there are four storage facilities: 1) two elevated steel tanks, 2) one ground level steel tank, and 3) one ground level concrete tank (Map 20). The total storage capacity of these tanks is 3.15 MG. These tanks are used to store water during low demand and release water during high demand periods, a fire event, or emergency situation.

The City's water supply system is divided into two different pressure zones. There are interconnections with altitude valves between the two pressure zones.

The City has service agreements with the City of St. Paul to provide water service to several properties on the north end of the City (<https://www.southstpaul.org/409/Comprehensive-Plan>).

Future Demand - Water Supply System

As discussed previously, the Metropolitan Council estimates that the City could see an increase in the population of approximately 700 additional persons and an increase in its employment base of approximately 850 jobs. The City has adequate capacity to meet the demand to the year 2040 (Table 8.1).

Note: In 2022 the City's forecasts were revised due to the Grand/Exchange Mixed Use Area Comprehensive Plan Amendment. The following are the new projections. Revisions to projected water demand have not been made.

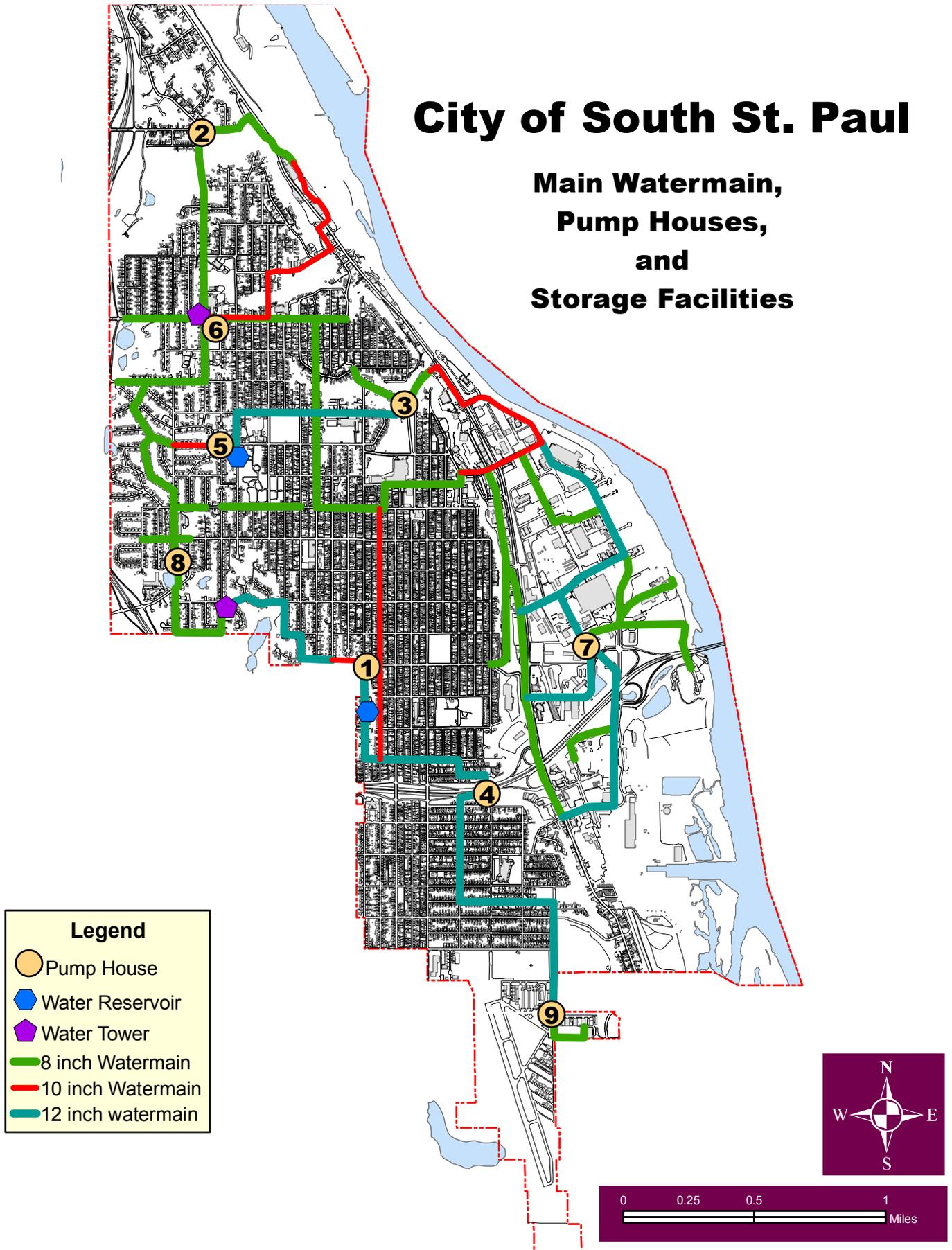
	2020	2030	2040
Population	20,800	21,600	22,000
Households	8,400	8,850	9,100
Employment	5,900	7,000	7,500

Table 8.1: Projected Water Demand

Year	Projected Total Population	Projected Population Served	Projected Total Per Capita Water Demand (GPCD)	Projected Average Daily Demand (MGD)	Projected Maximum Daily Demand (MGD)
2018	20,513	20,498	126.4	2.6	4.5
2020	20,850	20,832	126.4	2.6	4.6
2030	20,900	20,882	126.4	2.6	4.6
2040	21,200	21,182	126.4	2.7	4.6

GPCD - Gallons per Capita per Day MGD - Million Gallons per Day

Figure 8.1: Water Supply System



This calculation was determined by the current production levels and an estimate of the level of conservation measures adopted by the residents of the City since the growth in population from 2020 to 2040 is only about 350 persons (by Metropolitan Council estimate), the system is adequate to handle the City needs until 2040.

Emergency Plan

In 1995, in accordance with Minnesota Statutes, the City prepared an emergency water plan to address threats to a lowered water supply. This plan was prepared by MSA Consulting Engineers and is adopted by reference in this plan. In 2016, that plan has been updated by the City to reflect the current environment.

Key components of the emergency plan include:

1. Emergency telephone list of all Emergency Event Evaluation Team participants. This team includes city staff, and staff from other communities and agencies.
2. Procedures for augmenting City water supplies:
 - › Interconnects with St. Paul and Inver Grove Heights (Interconnects with St. Paul at Annapolis and Waterloo Streets; interconnects with Inver Grove Heights are located at 18th Avenue, Concord Street and 9th Avenue.
 - › Use of surface water from the Mississippi River through the St. Paul interconnections.
3. Demand reduction measures:
 - › Table 8.2 highlights water supply events that trigger an emergency water demand reduction as well as short- and long-term actions taken to reduce and augment water supply.
 - › Methods to inform water supply customers of water conservation requests, restrictions and suspensions are detailed in Table 8.3.
4. Procedures for water allocation.

Table 8.2: Emergency Demand Reduction Conditions, Triggers and Actions

Emergency Triggers	Short-term Actions	Long-term Actions
<ul style="list-style-type: none"> • Contamination • Loss of Production • Infrastructure failure • Executive order by Governor • High Water Demand 	<ul style="list-style-type: none"> • Supply augmentation through emergency back-up wells and interconnections. • Adopt and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. • Meet with large water users to discuss their contingency plan. 	<ul style="list-style-type: none"> • Supply augmentation through emergency back-up wells and interconnections. • Adopt (if not already) and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. • Meet with large water users to discuss their contingency plan.

Water Supply Protection - Water Conservation

The City's water conservation plan was updated as a part of the MnDNR and Metropolitan Council Water Supply Plan template. The MnDNR recommends the following water conservation objectives and strategies:

- » Reduce Unaccounted (Non-Revenue) Water loss to Less than 10%
- » Achieve Less than 75 Residential Gallons per Capita Demand (GPCD)
- » Achieve at least 1.5% annual reduction in non-residential per capita water use
- » Achieve a Decreasing Trend in Total Per Capita Demand
- » Reduce Ratio of Maximum day (peak day) to the Average Day Demand to Less Than 2.6
- » Implement Demand Reduction Measures
- » Utilize additional strategies to Reduce Water Use and Support Wellhead Protection Planning
- » Tracking Success: How will you track or measure success through the next ten years?

The City has implemented an increasing block rate for water consumption. The more water used, the higher the rate for the water. Water utility bills are also reported in gallons to allow for customers to compare their use to average rates. The service charge or base fee on the City utility bills does not include a base charge to cover universal city expenses that are not customer dependent and/or to provide minimal water at a lower rate (e.g., an amount less than the average residential per capita demand for the water supplier for the last 5 years).

Additionally, the City sends out flyers and inserts with utility bills and articles in the local newsletter that stress water conservation techniques. The City has also been active in using the City website to encourage water conservation habits.

Aspect of Sustainability:

» Environment



Table 8.3: Plan to Inform Customers Regarding Conservation Requests, Water Use Restrictions, and Suspensions

Notification Triggers	Methods	Updated Frequency	Partners
Short-term demand reduction declared (<1 year)	<ul style="list-style-type: none"> Website Social media (e.g. Twitter, Facebook) Direct customer mailing Press release (TV, radio, newspaper) Meeting with large water users (>10% of total city use) 	<ul style="list-style-type: none"> Daily - Social Media Weekly - Website and Social Media 	Police, Public Works and Code Enforcement Departments
Long-term Ongoing demand reduction declared	<ul style="list-style-type: none"> Website Social media (e.g. Twitter, Facebook) Direct customer mailing Press release (TV, radio, newspaper) Meeting with large water users (>10% of total city use) 	<ul style="list-style-type: none"> Weekly Monthly 	Police, Public Works and Code Enforcement Departments
Governor's critical water deficiency declared	<ul style="list-style-type: none"> Website Social media (e.g. Twitter, Facebook) Direct customer mailing Press release (TV, radio, newspaper) Meeting with large water users (>10% of total city use) 	<ul style="list-style-type: none"> Daily Weekly Monthly 	Police, Public Works and Code Enforcement Departments, MN DNR, MN Department of Health

This City plans to utilize the following strategies to reduce water use and support wellhead protection.

- » Participate in the GreenStep Cities Program, including implementation of at least one of the 20 "Best Practices" for water – City Resolution to participate adopted in April 2016
- » Prepare a master plan for smart growth (compact urban growth that avoids sprawl)
- » Prepare a comprehensive open space plan (areas for parks, green spaces, natural areas)
- » Adopt a water use restriction ordinance (lawn irrigation, car washing, pools, etc.)
- » Adopt an outdoor lawn irrigation ordinance
- » Adopt a private well ordinance (private wells in a city must comply with water restrictions)
- » Implement a stormwater management program
- » Implement a water conservation outreach program
- » Implement a rebate program for water efficient appliances, fixtures, or outdoor water management

Table 8.4: Lift Station Capacities and Flows

Lift Station	Pumping Capacity (gpm)	Existing Peak Flow (gpm)	Remaining Capacity (gpm)
North Station	300	200	100
Waterous Station	4,200	1,200	3,000

Sanitary Sewer System

History

Until 1986, the City had combined sanitary and storm sewers. In 1986, along with the Cities of Minneapolis and St. Paul, the City embarked on a ten-year sewer separation project. The goal of the project was to eliminate storm water from entering the sanitary sewer system and the Met Council’s treatment facility in St. Paul. The City’s sewer separation program was completed in 1995.

Description

The City is served by a series of sanitary sewer mains that carry sewage from the western part of the City, east to the MCES Sanitary Sewer Lift Station south of I-494. The lift station then directs the sewage through a force main that runs along the eastern side of the City. The main then crosses the Mississippi River to the Metro Treatment Plant in St. Paul. The City’s sewage collection system includes two lift stations and over 77 miles of sanitary sewer mains and laterals. Due to the City’s sewer separation program, and the departure of several large water users (packing plants and stockyards), there is adequate capacity in the system to accommodate future growth, especially in the Bridge Point Business Park. Future industrial growth is proposed to occur in this area, and adequate sewer capacity is key for future businesses.

Table 8.5: Wastewater Flow 2009 - 2016

Year	Flow in Million Gallons	% Change
2009	1,223	N/A
2010	1,253	2.5%
2011	1,427	13.8%
2012	1,283	-10.1%
2013	1,234	-3.8%
2014	1,193	-3.3%
2015	1,104	-7.4%
2016	1,055	-4.4%

Table 8.5 and 8.6 outline the current and projected annual flows, in million gallons, for sanitary sewer within South St. Paul.

As shown in Table 8.7 , all wastewater flow from the City of South St. Paul treated by MCES goes through the L65 lift station which is located south of I-494 and west of the Mississippi River. The City’s sanitary flow gets to the station in two ways. Approximately 10% of the City’s sanitary system connects into MCES interceptor 7111 which runs north from Inver Grove Heights up to I-494 then east to the L65 lift station. It is estimated that in 2040 this portion of the system will serve 899 households and 669 employees.

Table 8.6: Projected Wastewater Flows by MCES Interceptor Meter (Metro WWTP)

MCES Meter	2016 Average Flow (MGD)	2016 Peak Hour Flow (MGD)	2020 Average Flow (MGD)	2020 Peak Hour Flow (MGD)	2030 Average Flow (MGD)	2030 Peak Hour Flow (MGD)	2040 Average Flow (MGD)	2040 Peak Hour Flow (MGD)
M601	2.893	7.81	2.745	7.41	2.565	6.93	2.431	6.56
Total System	2.893	7.81	2.745	7.41	2.565	6.93	2.431	6.56

Note:

1. Projected peak hour flows equal the total average flow multiplied by MCES peaking factors.
2. The sum of the peak hour flows does not equal the sum of the peak discharges from each district since the peaking factor decreases as the average flow increases.
3. Peaking factors were taken from MCES Water Resources Policy Plan factors.
4. Wastewater flows are based on 60 gallons per day (gpd) per person and 15 gpd per employee from new development, and gradual reduction of wastewater flow from existing development.

Figure 8.2: Sanitary Sewer System



Figure 8.3: MCES Sanitary Sewer Areas

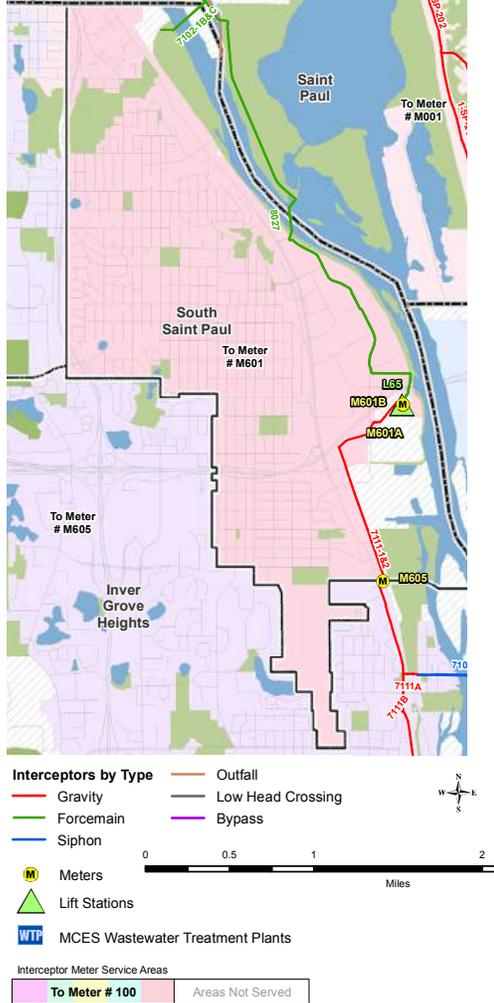


Table 8.8: MCES Flow Variation Factors for Sewer Design

Average Flow (MGD)	Peak Factor
0.00-0.11	4.0
0.12-0.18	3.9
0.19-0.23	3.8
0.24-0.29	3.7
0.30-0.39	3.6
0.40-0.49	3.5
0.50-0.64	3.4
0.65-0.79	3.3
0.80-0.99	3.2
1.00-1.19	3.1
1.20-1.49	3.0
1.50-1.89	2.9
1.90-2.29	2.8
2.30-2.89	2.7
2.90-3.49	2.6

Source: Met. Council 2040 Water Resources Policy Plan

The other 90% of the City’s flow is conveyed through the City’s sanitary sewer system and flows directly into the L65 lift station from an existing trunk line north of I-494. It is estimated that in 2040 this portion of the system will serve 8,096 households and 6,021 employees. The City does not need any new connection points to the MCES system as the City is almost completely developed and the existing connection points are sufficient.

A majority of the City’s sanitary sewer system was originally designed and sized as a combined storm sewer and sanitary sewer. In the late 1980’s and 1990’s projects were undertaken to separate most of the City’s combined system. In nearly all of these projects storm water was removed from the existing system through the installation new storm sewer pipes and the existing pipe network was converted to a sanitary only system. Due to that fact and the developed nature of the community there is sufficient capacity within the existing system to serve the City based on future flow projections without City trunk sewer expansions or new connections to the MCES Interceptor system.

Table 8.7: Flow Conveyance

Flow Conveyance	2040 Household	2040 Employment
L65 through City’s 48” sewer pipe	8,096	6,021
MCES Interceptor 7111	899	669

Table 8.9: Sewer Allocation Forecast (WWTP)

	2010	2020	2030	2040
Sewered				
Population	20,148	20,838	20,888	21,188
Households	8,181	8,395	8,645	8,995
Employment	7,743	5,990	6,190	6,690
Unsewered				
Population	12	12	12	12
Households	5	5	5	5
Employment	814	810	810	810
Total				
Population	20,160	20,850	20,900	21,200
Households	8,186	8,400	8,650	9,000
Employment	8,557	6,800	7,000	7,500

Source: HKGI, Metropolitan Council, South St. Paul (Dec. 2019)

Note: In 2022 the City’s forecasts were revised due to the Grand/Exchange Mixed Use Area Comprehensive Plan Amendment. The following are the new projections. Revisions to projected sanitary sewer flows have not been made.

	2020	2030	2040
Population	20,800	21,600	22,000
Households	8,400	8,850	9,100
Employment	5,900	7,000	7,500

Infiltration and Inflow

Two issues of concern are inflow and infiltration of clean water into the wastewater collection system. Clean water that enters the sewer system from cross connections with storm sewer, sump pumps, roof drains, or manhole covers is considered inflow. Infiltration is clean water that enters the sanitary sewer system through defects in the sewer pipes, joints, manholes, and service lines. This inflow and infiltration (I&I) of water can reduce the capacity of the system and increase the fees charged by the MCES. In extreme cases, the added hydraulic load can cause bypasses or overflows of raw wastewater. As sewer systems age and deteriorate, I&I can become an increasing burden on a City's system. Addressing inflow and infiltration will be focused on the City's existing system as no additional trunk sewer connections are needed since the system has sufficient capacity to serve anticipated redevelopment areas.

Sources, Extent, and Significance of Existing I&I

The possible introduction and sources of I&I in the City are typical of most older cities. **Old System** - Our sanitary system consists of large amounts of vitrified clay pipe and concrete pipe. The pipe joints occur more frequently with these materials and older pipe did not utilize gaskets or seals which makes the joints more susceptible to infiltration. A lot of the original manholes still in place are constructed of block instead of precast manhole sections with gasketed joints. **Service Connections** - Service connections to the mainline are another potential point of water intrusion as in many cases precast wyes were not used and manual connection were made, especially if services were added after the mainline pipe was originally installed. **Private Service Lines** - It is very likely that a large percentage of private services in the City are contributing I&I to the system. The City has completed a sump pump program to address private discharge of clear water into the sanitary system from sump pump discharges, but another likely cause of significant infiltration is from the private service lines itself. The City has no system in-place or sufficient funds to proactively identify and eliminate infiltration from private services. The City was successful in obtaining a grant from the MCES to assist homeowners with

Table 8.10: Age of Residential Housing Stock

Year Built	Number of Units	Percent
Pre 1969	6,388	74%
Post 1970	2,233	26%
Total	8,621	100%

Source: US Census ACS 2012-2016

Table 8.11: Estimated I&I Rate

Service Area	Average Daily Flow (ADF)	Base System Flow (BSF)	Yearly I&I (%)	Peak I&I Flow (MGD)	Peak I&I (%)
2010	3.433	3.179	7%	3.74	15%
2011	3.908	3.300	16%	5.11	35%
2012	3.514	3.140	11%	4.23	26%
2013	3.379	3.023	11%	3.90	22%
2014	3.267	2.937	10%	4.26	31%
2015	3.025	2.803	7%	4.19	33%
2016	2.892	2.648	8%	3.21	17%
2017	2.859	2.607	9%	3.37	23%

Note: 1. Winter Water Usage

addressing/correcting infiltration within private services. This program has had some success, however residents are only utilizing the program when their service flow is severely impeded by a root ball or blockage thereby requiring something be done to restore normal service. We also anticipate this grant funding will expire around 2022 and no other funds have been identified to continue this program. Small Areas of Combined Sewers - Most of the City's sanitary and storm systems were separated in the late 1980's and early 1990's. However there have been small areas that have been identified since that time that are still combined. The I&I issues in these areas are addressed as they are discovered through City projects and redevelopment.

The City's 10 year (1986-1995) sewer separation project served to greatly reduce the amount of inflow in the City's sanitary sewer system. This also served to greatly reduce the financial impact on the City by not having to treat storm water through the MCES-Sanitary Sewer Treatment System. In the mid-1980's, the City was treating over five billion gallons of sewage annually. Now that amount is reduced to about 1.2 billion gallons per year.

I&I REDUCTION ORDINANCES:

From City Code Sec. 62-109 (h):
Stormwater. It is unlawful to make connection of roof downspouts, exterior foundation drains, areaway drains, or other collectors of surface runoff or groundwater, to a building sewer or building drain that in turn is connected directly or indirectly to a public combined sewer or sanitary sewer. Roof downspouts, exterior foundation drains, areaway drains, or other collectors of surface runoff or groundwater now connected to a building sewer or building drain which is in turn is connected directly or indirectly to a public combined sewer or sanitary sewer must be disconnected from the public combined sewer or sanitary sewer and any associated building drainpipes must be suitably plugged or capped.

From City Code Sec. 62-132:
General rule. It is unlawful to discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process to a sanitary sewer.

Requirements and Standards for Minimizing I&I in South St. Paul

As shown in the box to the left, the City Code prohibits the connection of sump pumps, drains, and other surface water to the public sewer system. These regulations will continue to be followed and will be amended within six months of the adoption of this plan if required by the Metropolitan Council.

I&I Reduction Goals and Strategies

- » To minimize or eliminate I&I entering private and public sewer infrastructure
- » To reduce ratepayer costs for transporting and treating wastewater
- » To minimize liability from water pollution and public health risks
- » Policies and strategies for I&I Reduction:
 - » Educate property owners about I&I by posting information on city web site and distributing information via email blasts and community newsletter
 - » Encourage private property owners to proactively inspect and repair or replace older segments of private sanitary sewer connections that are beyond their service life.
 - » Explore grants or other financial assistance programs to provide financial assistance to private property owners wishing to replace or repair private sewer connections to the city main.
 - » Make sure sump pumps and building drains are not connected to the sanitary sewer system. This can be done through educational information and when permits are required for home improvements or expansions.

- » Ensure careful construction, maintenance and rehabilitation practices are followed in all aspects, both public and private, of the sanitary sewer system.

In 2007, the City completed a report on inflow/infiltration (I&I). That report identified a five-year capital plan on reducing I&I in South St. Paul. The plan includes the following:

- » Recommended re-lining projects.
- » Recommended separation in stockyards and other small packing plant areas.
- » Sewer televising program.
- » Sump pump detection and disconnection program.
- » MCES mainline inspection.
- » Continued rehabilitation program on sanitary sewer as part of the street program.

The City has already re-lined a mainline pipe in the south end of the City, which showed significant infiltration. The redevelopment of the stockyards has been largely completed, thus eliminating our 25 acres of open livestock pens that required storm water to flow into the sanitary sewer system. The City is starting discussions with livestock processing facilities in the Hardman triangle area to correct the inflow issues that were identified and to further define the needed improvements and means for their completion. The City will continue its annual program of rebuilding deteriorated sanitary sewers as part of the annual street reconstruction program.

A televising program has been on-going for several years and will continue as an annual expenditure in the sanitary sewer fund budget. A project to further reduce I&I includes the Warner Avenue reconstruction in 2020.

Plan for Preventing and Eliminating Excessive I&I

The City has taken numerous steps to minimize I&I including stringent testing of all new sanitary sewer lines, replacement of manhole covers with concealed pick holes on improvement projects, and proper maintenance of the existing system such as a regular program of manhole leak detection/sealing. The City also prohibits the connection of roof and foundation drains and sumps to the sanitary sewer system.

The City has committed approximately \$400,000 annually for the last several years to the elimination of I&I. The City's strategy moving forward is to complete televising and infiltration inspections on even years to determine the locations to include in lining and/or sealing projects on odd years. This will result in I&I reduction expenditures of around \$400,000 every two years for the foreseeable future.



Aspects of Sustainability:

- » Environment
- » Energy

The city will push out educational information on social media and city newsletters that help educate private homeowners on the value of investigating and preventative care and maintenance to help eliminate excessive I&I. This information will include reminders that connecting sump pumps, roof, or foundation drains to the sanitary sewer system is illegal and that any of these existing connections must be removed.

The City will continue to look for funding assistance, like the One Water Grant program currently underway, to assist residents with the financial burden to address I&I issues in private services.

Subsurface Sewage Treatment Systems (SSTS)

South St. Paul municipal code requires all dwellings and businesses to connect to the City's sanitary sewer system when available and practical. There are approximately five (5) dwelling units, five (5) commercial properties, three (3) hangers at the airport, and a cemetery that still have their own subsurface sewage treatment facilities (SSTS). The City is also investigating two previously identified commercial properties with SSTS to determine those system's status. During street reconstruction projects, the City upgrades water and sewer connections to the City systems, replacing lead services or broken pipes to the curb stop (right-of-way). It is at that time that the City typically requires connection to the sanitary sewer system for older homes that may have been built prior to the City sewer system.

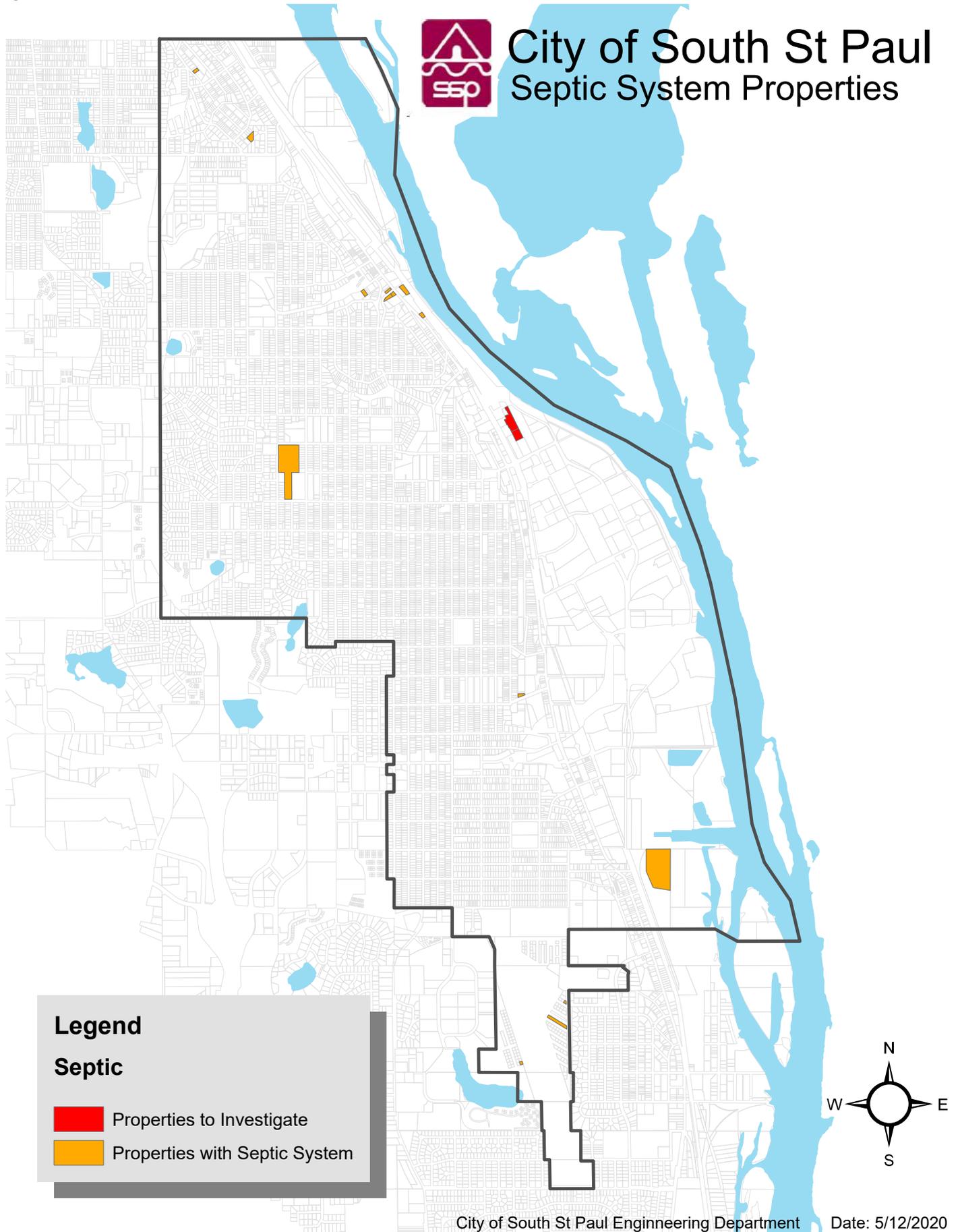
The City has adopted the Dakota County ordinance (<https://www.southstpaul.org/409/Comprehensive-Plan>) regarding the maintenance of SSTS. The County's ordinance establishes the following:

1. MN Departments of Health and Pollution Control Agency jurisdictions.
2. Requirement of watertight septic tanks.
3. Appropriate septic tank sizing.
4. "Time of Sale" inspections.
5. County responsibilities.
6. Municipal responsibilities.

The County ordinance requires immediate repair or replacement of systems that are deemed to be failing and an imminent threat to public health or safety. The City's Time of Sale ordinance includes inspection of any SSTS. The Minnesota Pollution Control Agency (MPCA) adopted new sewage system rules (MPCA 7080) in February of 2008 and has amendments as late as 2016.

There are no public or privately owned Community Wastewater Treatment Systems in operation within the City.

Figure 8.4: SSTS in South St. Paul



Surface Water Management Plan

Executive Summary

In May 2018, the City of South St. Paul adopted their Surface Water Management Plan (SWMP). A copy of this SWMP is made part of this Comprehensive Plan (Appendix B). The entire City of South St. Paul is in the Lower Mississippi River Watershed, which is governed by the Lower Mississippi River Watershed Management Organization (WMO). This WMO was created as a joint power organization in 1985 and was formed to meet the requirements of the Metropolitan Surface Water Management Act of 1982. The WMO includes all or parts of Inver Grove Heights, St. Paul, West St. Paul, Lilydale, Mendota Heights, Sunfish Lake and South St. Paul. The WMO has created a watershed management plan that sets the guiding principles, criteria, and policies through which each of the member communities are governed. Each member community must adopt and approve a SWMP that meets or exceeds the criteria of the WMO plan. The WMO currently is operating under their third-generation plan, which was created and adopted in 2011 and amended in 2015.

Storm Water System

The City's storm water system is comprised mainly of pipes and a few storm water ponds. The City's storm water ponds are at the following locations:

- » Near TH52 and Southview Boulevard (Anderson Pond)
- » Near TH52 and Thompson Avenue (LeVander Pond)
- » Near Hardman Avenue and I-494 north and south of I-494
- » On barge terminal property
- » Simon's Ravine near Concord Street

Treatment ponds or systems are required for all new developments that created more than one acre of new impervious surface. As per the City's SWMP, all construction projects are required to use best management practices such as silt fences, gravel entrances to sites, and other erosion control measures during construction.

Water Resource Management Agreements

The City has entered into water resource-related agreements that govern in part how the City must manage its water resources. These agreements include the joint powers agreement between the City and LMRWMO, agreements between the City and adjoining communities, or agreements it may have with other governmental units or private parties. The City has agreements with the following cities: Inver Grove Heights, Lilydale, Mendota Heights, St. Paul, South St. Paul, Sunfish Lake, and West Saint Paul.

Aspect of Sustainability:

» Environment



Amendment Procedures

No significant changes to the Surface Water Management Plan can be facilitated without the approval of the proposed revisions by the LMRWMO. Significant changes to the local plan shall be made known to the following parties:

1. City Administrator and City Engineer
2. City Council
3. Lower Mississippi River Watershed Management Organization
4. Metropolitan Council
5. Public within the City through a public hearing process
6. Dakota County

Following notification of the above parties, they shall have 60 days to comment on the proposed revisions. Upon receipt of approvals from the LMRWMO, any proposed amendments will be considered approved.

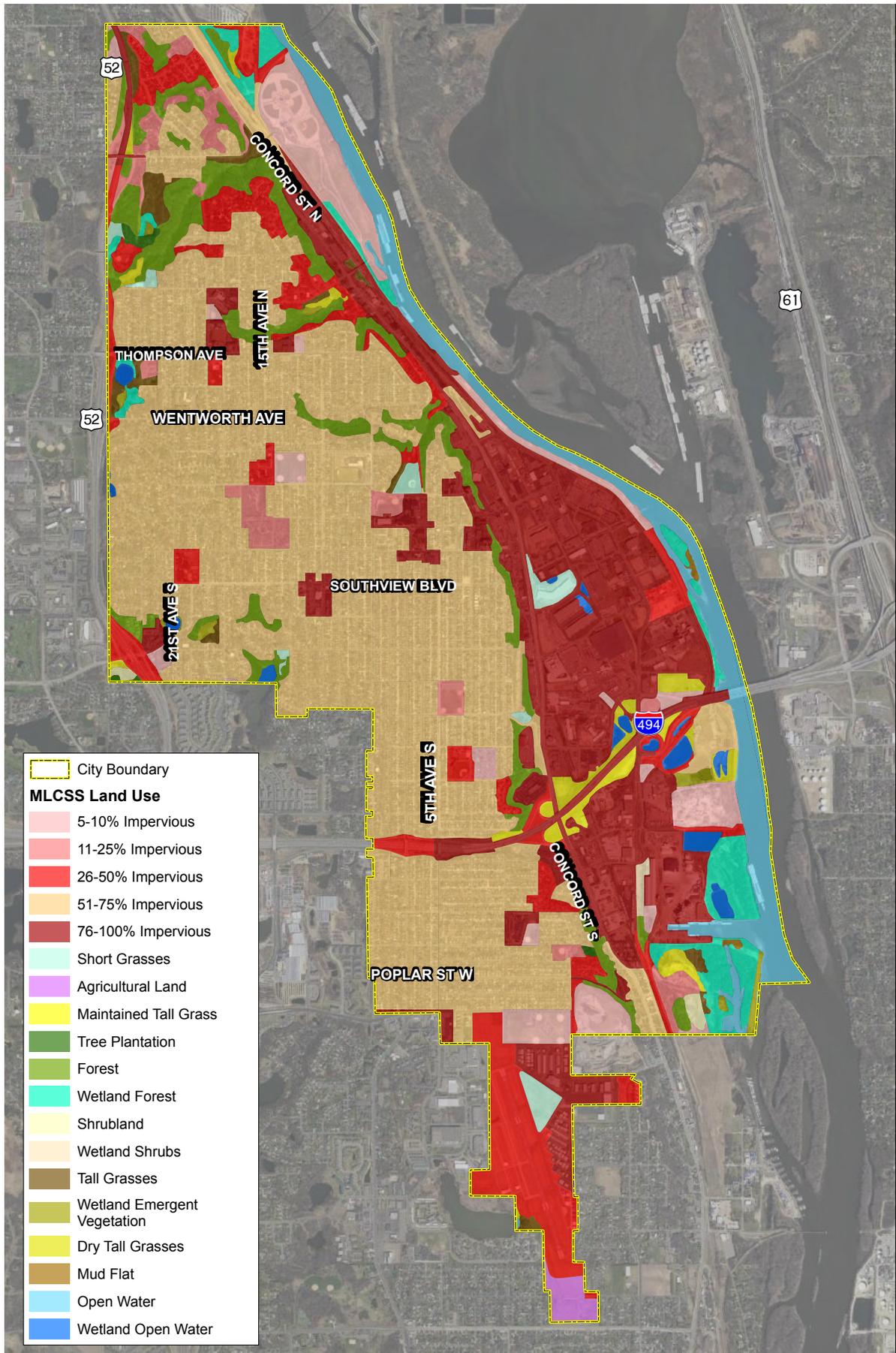
Minor changes to the Plan shall be defined as changes that do not modify the goals, policies, or commitments expressly defined in this plan by the City. Adjustment to subwatershed boundaries will be considered minor changes provided that the change will have no significant impact on the rate or quality in which stormwater runoff is discharged from the City boundaries. Minor changes to this plan can be made by the staff at the City without outside review.

Physical Environment and Land Use

The City of South St. Paul is a fully developed community and the total area within corporate limits is approximately 6.2 square miles. As seen in Figure 8.5, approximately 75% of the land cover falls within the impervious surface Minnesota Land Cover Classification System (MLCCS) categories. Just under 10% of the land cover falls under the water category. The City of South St. Paul land use practices include residential, commercial, industrial, public and private overlay districts, a riverfront development district, and a rail transportation district. Because of the City's fully developed status, existing and future land uses within the City remain similar and can be found in the land use chapter.

The topography of the City can be described as gently rolling, with steeper areas near the Mississippi River. Stormwater runoff from the City of South St. Paul is generally directed from the west to the east into the Mississippi River. The east side of South St. Paul is a narrow, flat stretch of land with an approximate elevation of 700 feet above sea level. This area is part of the Mississippi River floodplain. The low area is separated from the rest of the City by a steep bluff rising 100 feet above the floodplain. The areas west of the bluff are level in the south and central part of the City and hilly in the north part.

Figure 8.5: Land Cover



The highest points of the City are in the west, with areas reaching heights of 950 feet above sea level. The specific drainage patterns, which depict topography for areas within the City, are shown on the subwatershed delineation map on Figure 8.6. As can be observed from the subwatershed delineation map, the City of South St. Paul is divided into many small watersheds. Volumes, rates of flow, and drainage destinations for each of the mapped drainage areas can be found in Table 8.122.

Existing and Potential Water Resource-Related Problems

This section outlines an assessment of existing and potential water resource related problems that are known at this time. These problems have been identified based on an analysis of the land and water resource data collected as part of this local plan preparation and through information collected at the public input meetings.

1. Past and future development in the Seidl's Lake watershed—which includes the cities of Inver Grove Heights, West St. Paul, and South St. Paul—has impacted the water quality in the lake.
2. General water quality concerns of the Mississippi River.
3. Water quality concerns at LeVander Pond.
4. On-going levee and pump station operations and maintenance to reduce risk from Mississippi River flooding.
5. Flooding and drainage issues at the intersection of 7th Avenue and South Street.
6. Street and property flooding concerns near the property of 1320 Poplar Avenue.
7. Flooding and drainage issues near the Cenex building located on Concord Street.
8. Flooding and drainage issues at Villaume Avenue.
9. Flooding and drainage issues on Hardman Avenue near the S&S Tree and Horticultural Specialists property.
10. The four 72-inch pipes running under the railroad tracks near Malden Street consistently get plugged with sediment. These 72-inch pipes connect to a 120-inch pipe which discharges to the Mississippi River.
11. Past and future development within the cities of Inver Grove Heights, West St. Paul, and South St. Paul and climatic events have the potential to increase water elevations in landlocked Seidl's Lake. Increased water elevations may result in loss of vegetation around the lake, flood trails, and flood the observation platforms.
12. Existing storm sewer at Dawn Way and 59th Street East in Inver Grove Heights receives water from South St. Paul airport, which may contribute to manhole covers being blown off manhole structures.

Figure 8.6: Subwatershed Delineation Map

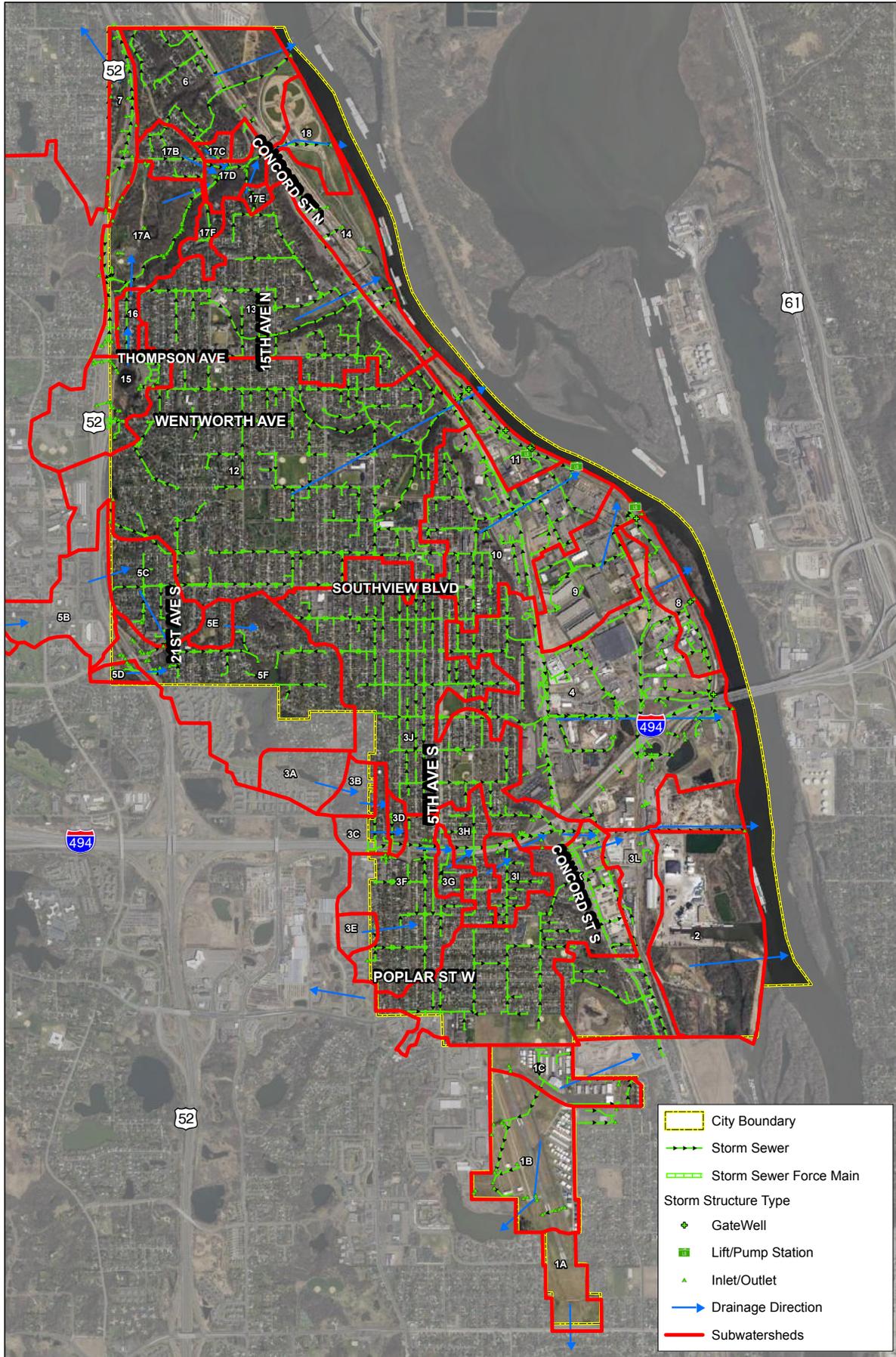


Table 8.12: Drainage Area Flow Rates and Volumes

Subwatershed	Direct Peak Discharge Rate (CFS)		Storage Volume (AF)		Drainage Destination
	10-Year	100-Year	10-Year	100-Year	
1A	80	155	NA	NA	Inver Grove Heights
1B	25	60	NA	NA	Boher Pond
1C	23	55	NA	NA	Inver Grove Heights
2	156	278	NA	NA	Mississippi River
3A	5	5	3.0	6.1	Mississippi River
3B	5	7	1.5	3.0	Mississippi River
3C	52	96	NA	NA	Mississippi River
3D	66	128	NA	NA	Mississippi River
3E	4	6	1.9	2.8	Mississippi River
3F	290	454	NA	NA	Mississippi River
3G	261	494	NA	NA	Mississippi River
3H	313	596	NA	NA	Mississippi River
3I	366	697	NA	NA	Mississippi River
3J	618	1,180	NA	NA	Mississippi River
3K	829	1,573	NA	NA	Mississippi River
3L	31	80	NA	NA	Mississippi River
4	79	484	35.0	64.0	MnDOT Pond
5A	0	4	2.1	3.6	Anderson Pond
5B	20	20	6.0	11.7	Anderson Pond
5C	15	20	3.7	19.3	Anderson Pond
5D	2	2	0.5	1.2	Seidls Lake
5E	1	3	1.0	2.0	Seidls Lake
5F	0	0	65.4	205.3	Seidls Lake
6	186	372	NA	NA	Mississippi River
7	135	246	NA	NA	St. Paul
8	67	139	NA	NA	Mississippi River
9	175	308	NA	NA	Mississippi River
10	240	455	NA	NA	Mississippi River
11	80	155	NA	NA	Mississippi River
12	450	868	NA	NA	Mississippi River
13	305	590	NA	NA	Mississippi River
14	150	286	NA	NA	Mississippi River
15	5	6.8	14.4	909.0	LeVander Pond
16	20	37	NA	NA	Simon's Ravine
17A	154	178	0.0	1.3	Simon's Ravine
17B	29	59	NA	NA	Simon's Ravine
17C	14	21	NA	NA	Simon's Ravine
17D	255	352	0.8	1.2	Mississippi River
17E	10	22	NA	NA	Simon's Ravine
17F	45	85	NA	NA	Simon's Ravine
18	31	76	NA	NA	Mississippi River

13. Water quality in the Mississippi River has impacted fish and wildlife resources.
14. During significant rainfall events, soil erosion has carried sediment to water bodies within the City. Sediment deposits reduce the depth of water and degrade the quality of water within a basin.
15. Addressing erosion and sedimentation along stream banks and lake shores has been identified as a priority by the LMRWMO.
16. On-going erosion issues associated with Simon's Ravine
17. Erosion issues along the banks of the ravine located south of Bryant Avenue.
18. The City of South St. Paul is a fully developed urban city with very limited water resources. The City is directly tributary to the Mississippi River and discharges stormwater directly to the River. In many cases this water is not controlled or treated prior to discharge.
19. The City anticipates that there will be an increased demand to improve the quality of water within the City and the appearance of stormwater retention areas.
20. Increase in accumulation of debris and material on City streets.
21. Increasing prevalence of polycyclic aromatic hydrocarbons (PAHs) and other contaminants in stormwater ponds from runoff of roadways and other surfaces.
22. Increasing prevalence of chloride in stormwater ponds in the metropolitan area from road salt runoff from roadways and other impervious surfaces.
23. Aging storm sewer throughout the City.
24. The majority of the City is served by a sanitary sewer collection system that conveys sanitary sewerage to a treatment plant. However, there are still approximately twenty subsurface sewer treatment systems (SSTSs) within the City. Approximately 16 are located at the airport and serve as holding tanks.
25. The majority of the City has separated sanitary and storm sewer, however there are still two areas within the City with combined sanitary and storm sewer, at Warner Avenue and leaving the Concord Fresh Meats building.

A number of water resource problem areas were identified within the City. Figure 8.7 shows the locations of these water problem areas. These areas were identified through information obtained from City staff and from the public input process.

Figure 8.7: Water Problem Area Locations



Map 8.7: 8/11/2021; Project: Water Problem Areas; Scale: 1:100,000; Date: 8/11/2021

Local Implementation Plan/Program

The City's SWMP outlines a 10-year Capital Improvement Plan (CIP). The CIP for storm water and surface water improvements is funded through the City storm water utility, which was created and implemented starting in 2005. As part of the CIP, the City has performed several projects to improve the storm water system. These include the following:

- » New sump catch basins with 'Don't dump – drains to River' placards on all street projects.
- » Extension of large storm water pipe and creation of settling basin at Simon's Ravine outlet near River.
- » Upgrades to floodwall control system.
- » Repair of inlets for Seidl's Pond and LeVander Pond.

Future Improvements

The City has planned for 2018 – 2027, the following physical improvements:

- » Correct drainage issues at the intersection of 7th Avenue and South Street. (2024)
- » Correct street and property drainage issues near the property of 1320 Poplar Avenue. (2025)
- » Correct drainage issues at Villaume Avenue. (2023)
- » Construct improvements to address sedimentation in four 72-inch pipes running under the railroad tracks. (2021)
- » Construct BMPs upstream of the Mississippi River. (2020)
- » Stabilize ravine south of Bryant Avenue. (2023)
- » Correct drainage issues near S&S Trees on Hardman Avenue. (2026)

Operations and Maintenance items, official controls, and monitoring and study can be found at <https://www.southstpaul.org/409/Comprehensive-Plan>. Also included are detailed project descriptions as well as cost estimates, and funding sources.

Ongoing Measures

The City continues to meet all of the NPDES requirements set forth by the MPCA for all Municipal Separate Storm Sewer Systems (MS4). This is evidenced each year in our annual report to the MPCA for our MS4 Permit.

Community Infrastructure Goals and Policies

Goal 8.1: Continue to provide excellent public services for South St. Paul residents and property owners.

Policy 8.1.1: Continue to provide excellent public services, especially in the area of Police and Fire protection, Public Works, Library, and Parks and Recreation services.

Policy 8.1.2: Utilize the Capital Improvement Program to budget replacement and repairs of existing public facilities and creation of new facilities. Explore opportunities to fund improvements through grants or through partnerships.

Goal 8.2: Continue to ensure there is adequate water supply for South St. Paul residents and property owners.

Policy 8.2.1: Continue to ensure adequate water supply for the City in accordance with and by enforcing the City's Water Supply and Emergency Conservation Plan.

Goal 8.3: Continue to ensure that wastewater is properly treated.

Policy 8.3.1: Continue to ensure adequate wastewater collection and treatment, (treated by the Metropolitan Council Environmental Services (MCES)), by enforcing the City's ordinances.

Goal 8.4: Continue to ensure proper management of surface water, consistent with the City's Comprehensive Storm Water Management Plan, through the enforcement of City ordinances regarding stormwater and erosion control.

Policy 8.4.1: Amend ordinances to allow and encourage landscaping alternatives to manicured lawns.

Policy 8.4.2: Continue public education to reduce homeowner use of lawn care chemicals.

Policy 8.4.3: Require the minimization of direct overland runoff of stormwater and insure the adequate treatment of stormwater runoff through such things as on-site National Urban Run-Off Program (NURP) basins (when possible) and Best Management Practices (BMP's) for stormwater treatment.

Policy 8.4.4: Work with MnDOT and Dakota County to reduce use of salt on roadways for de-icing.

Goal 8.5: Continue to ensure proper treatment of stormwater and minimization of erosion.

Policy 8.5.1: Continue to ensure proper treatment of stormwater and minimization of erosion, consistent with the City's ordinances and Comprehensive Stormwater Management Plan.



Aspect of Sustainability:

» Environment

Aspect of Sustainability:

» Environment



Goal 8.6: Set a high standard of design for new public infrastructure, plan infrastructure that will meet the needs of the 21st century, and explore alternative infrastructure techniques.

Policy 8.6.1: Set a high standard of design for new public infrastructure. Require that new or rebuilt roads or bridges include aesthetic treatments and streetscaping and further the walkability of the city.

Policy 8.6.2: Plan roads and other infrastructure that can meet the needs of the 21st century. Plan for the near and longer term impacts that the development of autonomous vehicles and the need for 5G connectivity will have on infrastructure.

Policy 8.6.3: Explore “green infrastructure” standards and their potential for inclusion in future infrastructure development.

Table 8.13: Community Infrastructure Actions

Action	Time Frame	Same As
<p>Action 8.1: Establish zoning standards for alternative energy installations and establish permitting processes that are predictable, transparent, and documented. Standards should address the following:</p> <ul style="list-style-type: none"> » Allow rooftop solar installations as a permitted accessory use » Exempt rooftop solar installations from height limitations or allow rooftop solar installations to extend 10-15 feet above the maximum height for a building » Establish regulations to require pollinator friendly landscaping for ground-mounted solar gardens or solar farms 	5-10	Action 4.12
Action 8.2: Amend ordinances to allow and encourage landscaping alternatives to manicured lawns.	10+	