VI. Public Facilities and Services

A. INTRODUCTION

This chapter describes the existing public facilities and services used by the residents of Newport. There are two issues regarding public facilities. Are they able to serve existing households and places of employment? Do they have the capacity to handle additional households and businesses, both commercial and industrial?

Management of the region's water supply, protection of the surface water resources, and treatment of its sewage directly affect the health of citizens of all municipalities. For this reason, statutes and Metropolitan Council policies specify exact standards and requirements that must be met in this section of each municipality's comprehensive plan.

Minnesota law requires all municipalities to develop three chapters that constitute their water resources management plan:

- A wastewater and comprehensive sewer plan that specifies areas to be sewered by the municipality's collection system, and sets standards of operation for private systems and identifies areas that are not suitable for public or private systems.
- A surface water management plan that protects water quality and addresses water quantity issues.
- A water supply plan that ensures a safe and sufficient water supply now and in the future.

The development of these three chapters is based upon the Land Use Planning completed by the City's Planning Consultant, TKDA, and upon population and growth projections provided by the Metropolitan Council.

B. CITY BUILDINGS AND CITY SERVICES

1. City Administration

City services are administered from two buildings, City Hall and the Public Works building. Their locations are shown on Figure 6-1.

The City Hall, located at 596 Seventh Avenue, was constructed in the early 1960's. It houses the City's administration and police departments. The existing building and meeting facilities are inadequate and office space is limited. The public's meeting

facilities are inadequate to allow full access to public hearings and planning commission meetings.

Meetings of the City Council and City Commissions are held in the City Council Chambers, which is equipped with cable television facilities. The Mayor and City Council members are elected and serve part-time. Commissioners are appointed by the City Council. City Commissions include the Planning Commission, Parks Commission and the Heritage Preservation Commission.

a. Proposed New City Hall and Community Campus

The City has recently purchased a new site for a future City Hall and Community Campus. The site is located on the east side of Highway 61 on Glen Road, and identified on the Future Land Use map. Figure 6-1 is a conceptual plan for the new Community Campus. The *Revisioning Newport* study identified development of a new City Hall complex as a priority.

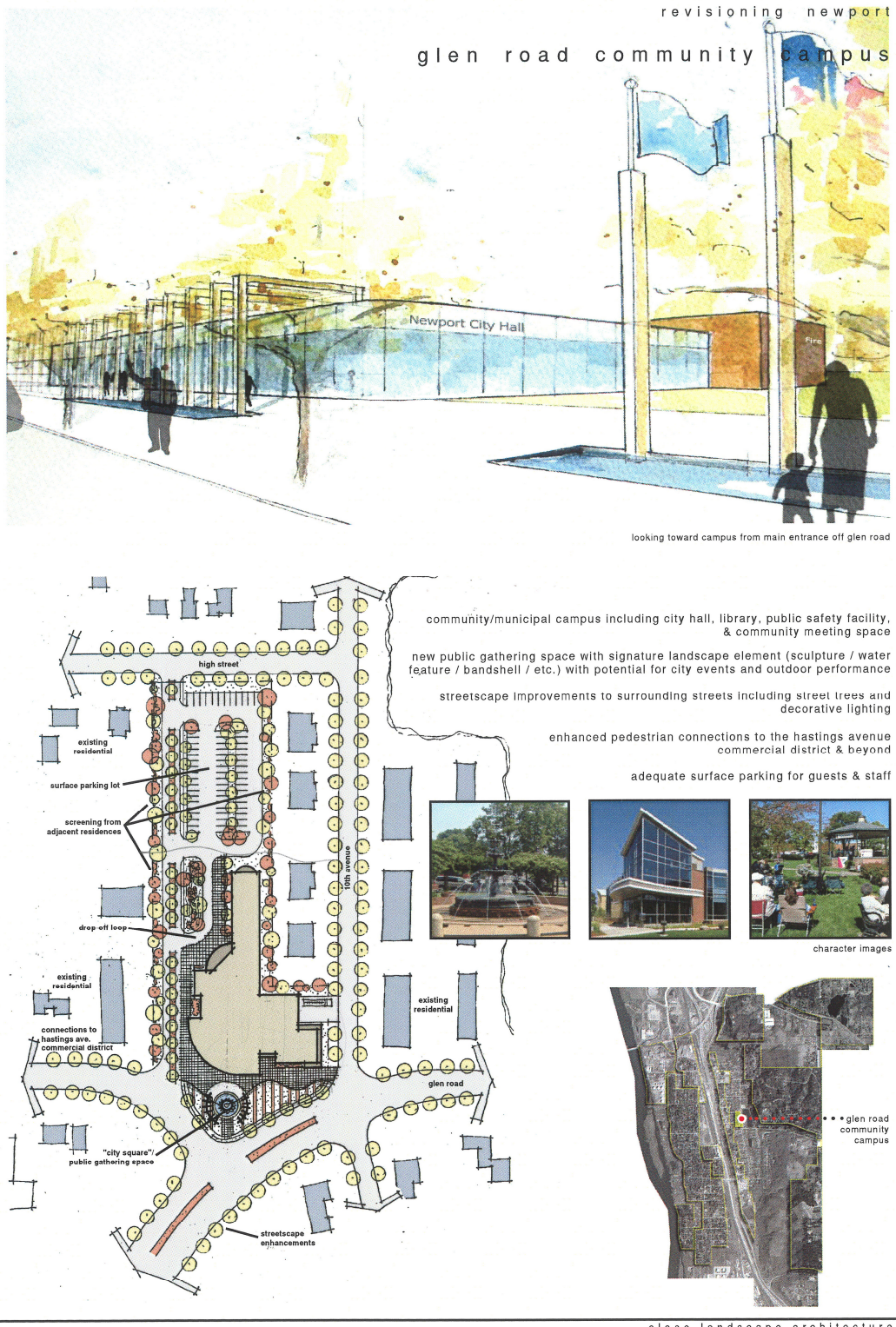
The City Hall and Community Campus is proposed to include the City hall, library, public safety facility, and community meeting space. It will provide a new public gathering space for the community, and provide space for City events. The facility is proposed to include enhanced pedestrian connections to the Hastings Avenue commercial district and City neighborhoods, parking for guests and staff, and streetscape improvements.

The City Hall and Campus will be implemented as resources are available.

b. Public Works Department

The Public Works Department is located at 1100 Bailey Road on the eastside of the TH-61 corridor. The Public Works Department is responsible for road and street systems snow removal, water system, sanitary and storm sewer systems, park and trail system, City vehicle fleet maintenance, emergency and disaster cleanup, and maintenance of City buildings.

Figure 6 - 1:
City Facilities



The City of Newport provides fire and ambulance service with a Volunteer Department that operates from two fire stations. Police protection is provided on a 24-hour round the clock basis by the City's force.

2. Police and Public Safety

Police: The police department is located in the current City hall at 596 7th Avenue on the westside of TH-61. The police department maintains a roster of full-time and part-time officers and provides service on a 24-hour basis.

The state patrol, Washington County Sheriff and the National Guard have aided the public safety mission of the police department during emergencies. Washington County provides lockup, and prosecution is provided by the City's appointed attorney.

Fire: The City presently has two fire stations, one on each side of TH-61. The fire station on the westside is located at 155 20th Street and the fire station on the eastside is located at 825 Glen Road. Two fire stations, one on each side of the highway, are needed to safely serve all areas of the City within a 5 to 10 minute response time.

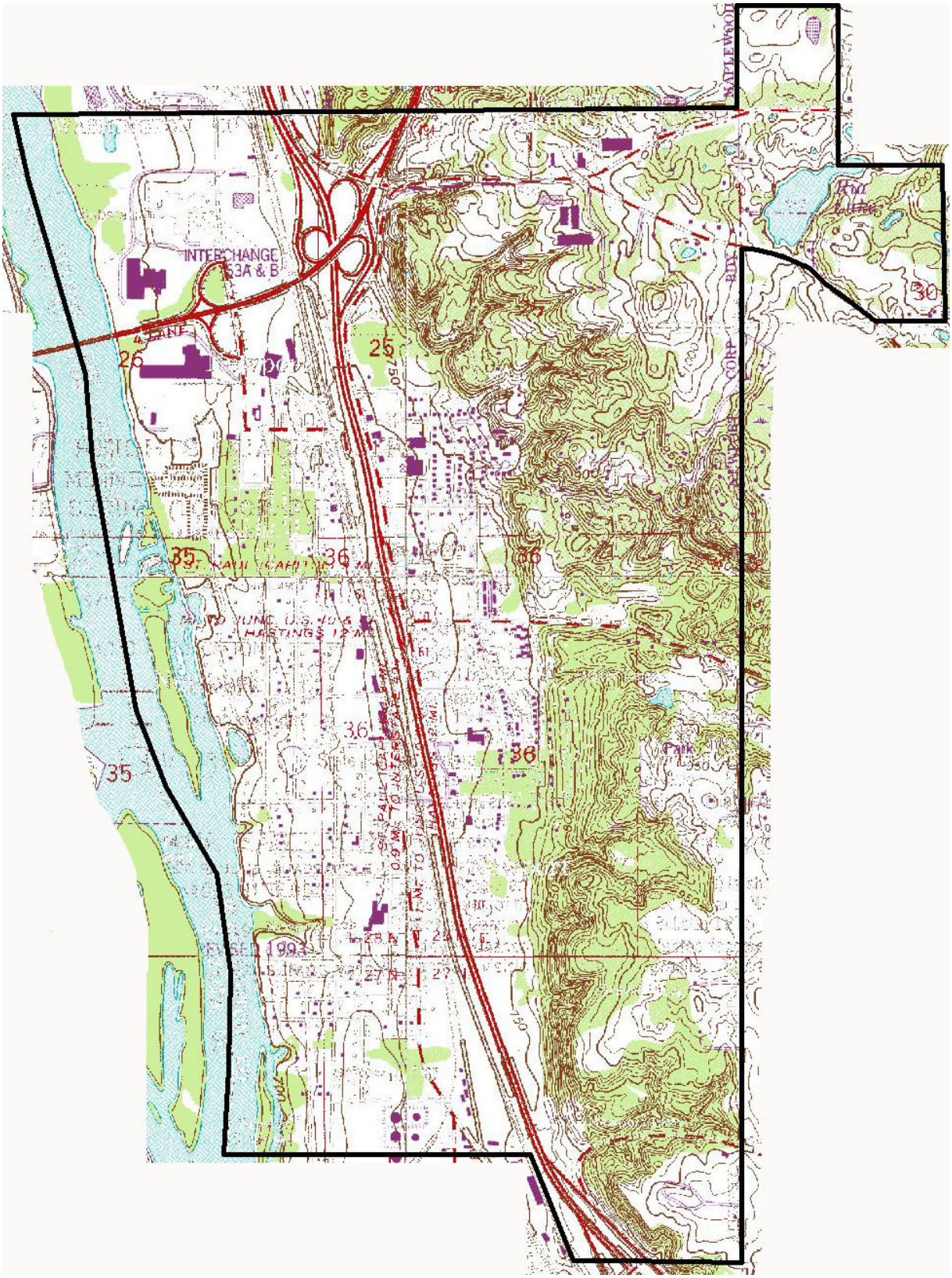
Ambulance: Ambulance is provided by the City of Cottage Grove. Together with the Cities of Cottage Grove and St. Paul Park, the City of Newport operates a fleet of First Responders Ambulances. This service is manned on a 24-hour basis. The vehicles are typically stationed in the City of Cottage Grove.

Public Works Infrastructure: The City of Newport maintains a system of municipal infrastructure consisting of: sanitary sewer system; water supply, storage, and distribution system; and storm sewer system. The distribution of these utilities has been influenced by the topography and underlying geology of the City. Figure 6-2 shows the topography and natural features of the City of Newport.

C. WASTEWATER AND COMPREHENSIVE SEWER PLAN

The City of Newport operates a sanitary sewer collection system, the majority of which was constructed in the early 1960s utilizing 8-inch diameter clay sewer pipes. These utilities must be viewed in the topography and underlying geology of the City. Figure 6-2 shows the topography and natural features of the City of Newport.

Figure 6 - 2:
Topography and Natural Features,
USGS Quadrangle



D. MUNICIPAL SANITARY SEWER SYSTEM

Figure 6-3 shows the City's sanitary sewer system. This system initially constructed in 1963-64 consists of 20 miles of gravity collector sewers, 7-sewage pumping stations and a collection to the Metropolitan Councils Lift Station in the SW corner of the City. The sewer system collects wastewater from 1055 residences and 78 businesses (CII) in the City of Newport plus provides a conduit for a further 67 residences in the City of Woodbury. Wastewater is transported via gravity and forcemain to the Metropolitan Council Lift Station (7102-2) located in the southwest corner of the City of Newport, at 1st Street and 3rd Avenue. The City's wastewater flow is treated at the Metropolitan WWTP located in Saint Paul, served by interceptor 7102.

In a typical year, the City contributes 120 million gallons of wastewater to the Metropolitan Council's Pigs Eye Wastewater Treatment Plant.

As noted, there are seven lift stations on the City's sanitary sewer system. These lift stations are needed, as it is not cost-effective to dig deep sewer trenches in the area bedrock. These lift stations also serve to minimize the length of sewer pipes that lie below the water table and level of the Mississippi River.

Infiltration and Inflow: Two issues related to efficient use of the City's sewer system are "infiltration" and "inflow." Infiltration is the seepage of groundwater into the sewer pipes, usually through cracks in the sewer pipes or through their joints. Inflow is typically water from a single point, such as discharges from a sump pump or stormwater pouring into openings of sewer access covers. Either infiltration or inflow will increase usage of the City's sewer system and the metropolitan wastewater treatment system. A sizable proportion of the wastewater pumped to the Metropolitan Council consists of clear water inflow and infiltration.

The City has several efforts to reduce infiltration and inflow problems. The City has in the past identified and corrected cross connections and overflows between the sanitary and storm sewer systems. The cross connections were eliminated and the bypasses have been fitted with manually operated valves (the MPCA is advised if the valves are operated and wastewater discharged). The City has also required that all homes located below the regulatory flood elevation be equipped with check valves. Sanitary sewer service to these homes is shut off by manually-operated valves on their service lines when the river level increases the amount of clear water infiltration to these service lines that is greater than acceptable limits. There is an ongoing program; of replacing all manhole covers with new seal "pickless," lids

(manufactured without holes), which reduces the potential for inflow of stormwater into the sewers.

To reduce the potential for groundwater seepage into the sewer pipes, the City requires that PVC piping, rather than clay tile, be used in all new construction. Retrofitting existing sewer pipes, however, is considered prohibitively expensive. Newport has an ordinance prohibiting the use of sump pumps to discharge water into the sanitary sewers. The ordinance also includes enforcement provisions in the event of violations.

Wastewater flows into the sewers in 2007, described in Table 6-1, averaged slightly more than 7.6 million gallons each month. During 2007, which, was a year of relatively low river stage and precipitation amounts, the monthly wastewater flows ranged from a high of 9.1 gallons to a low of 6.4 million gallons

During 1997, monthly wastewater flows ranged from a high of 16.9 million gallons to a low of 7.3 million gallons and averaged approximately 10.4 million gallons. The higher flows noted during the months of March and April of 1997 reflected that year's high river levels and flood stage conditions.

The City of Newport has an inter-community agreement with the City of Woodbury to transport wastewater from 67 homes, into the Metropolitan Council's interceptor.

Table 6 - 1:
City of Newport Sewer Usage – 2007

Month	2007 (1) MG	Precipitation (2) Inches
January	7.0	0.75
February	6.4	0.81
March	8.0	2.95
April	9.1	1.76
May	7.3	4.05
June	7.6	1.38
July	7.5	2.97
August	8.6	5.90
September	7.0	5.25
October	8.7	4.76
November	6.7	0.09
December	7.3	1.86
Total	91.2	27.08

Source: Metropolitan Council (1), Minnesota Climatology Working Group (2)

Table 6 - 2:
10 Year Flow Records MG/Yr (1)

Year	Wastewater Flow MG MG/Yr (1)
1998	120
1999	114
2000	106
2001	128
2002	126
2003	103
2004	94
2004	93
2005	
2006	
2007	91.2

Source: Metropolitan Council (1)

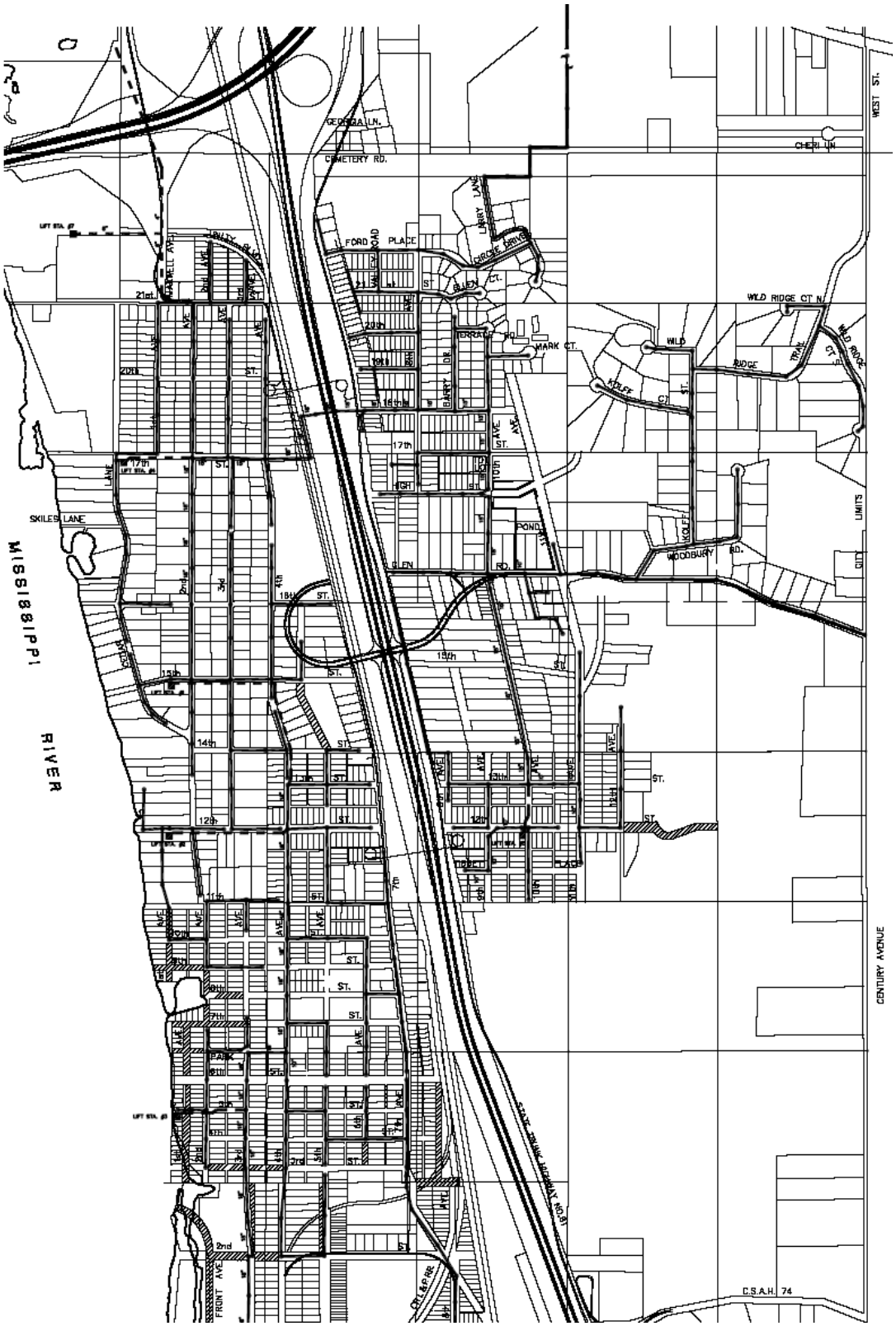
As can be seen from the monthly Sewer Usage table for 2007 there is no direct correlation between precipitation and wastewater pumped by the Metropolitan Council Lift Station, although there does seem to be an increase in flow in the months with high rainfall amounts.

A review of the 10 Year Flow records shows that the volume of wastewater pumped has dropped consistently during this period. With the exception that during years of elevated river stage there is a consistent increase in total wastewater flow pumped.

The City's Public Works Superintendant attributes the drop in total flow during this period to the large amount of storm sewer work that occurred in the community due to the TH-61/I494 highway projects. The constructed storm sewers and detention basins are reducing the "level" of the area's ground water table and are intercepting much of the runoff, which previously infiltrated into the groundwater. The resulting drop in "level" has done much to reduce the amount of infiltration into the sanitary sewer system.

The exception is that as the Mississippi River stage increases above the invert of the sanitary sewers constructed in the bed rock on the lowest river bench, the increased level of ground water can infiltrate significant quantities of clear water into the sanitary sewer system. The City is cognizant that a study to consider the cost effectiveness of slip lining the sanitary sewer mains and service lines located below historic river stage levels must be accomplished.

Figure 6 - 3:
Sanitary Sewer System



E. FUTURE WASTEWATER NEEDS AND SERVICES

1. Regional Estimates

The Metropolitan Council's forecasts, in part, reflect the capacity of the region's wastewater treatment plants. The Metropolitan Council's growth forecasts, discussed in Chapter V Land Use, will result in Year 2020 wastewater flows in Newport as described as follows.

Table 6 - 3:
City of Newport Sewer Usage Forecasts, 2000-2030
(Metropolitan Council)

	1990	2000*	2010	2020	2030	Change 2000-2030
Total Population	3720	3715	3800	4400	4890	1170
Sewered	3487	3500	3668	4293	4821	1321
Unsewered	233	215	132	107	69	-146
Total Households	1323	1418	1580	1850	2130	712
Sewered	N/A	1340	1525	1805	2100	760
Unsewered	83	78	55	45	30	-48
Total Employment	1939	2368	3900	5200	6500	4561
Sewered	1904	2238	3808	5124	6450	4546
Unsewered	35	130	92	76	50	15

*Source: Metropolitan Council & City Engineer**

2. Expansions of Newport's Sewer Service Area

The City of Newport's Year 2030 growth forecasts result from consideration of the potential for redevelopment of existing land uses over the next twenty years. The actual sewage flow from these redevelopments is very dependent on the types of redevelopment resulting from the secondary development potential of the reconstruction of TH61. Since the highway project has only been recently completed and the existing market conditions are slow, the impetus for redevelopment within the community has not as yet begun to materialize.

Positive impacts of the highway project could encourage redevelopment of properties along the TH61 and I-494 corridors to a higher quality land use that would return a better tax base for the City. Negative impacts that resulted from the State's acquisition of $5 million dollars of taxable property in the City

and a resulting $500,000.00 cost to the local economy per year could seriously impairs the community's ability to accomplish the actions needed to foster and encourage any significant growth or improvement.

The scenarios developed in Chapter V provide a measure of the variance in this potential for growth. These scenarios take into account the impacts of TH61 reconstruction and provide for a range of philosophies in directing the future land use controls within the City. The City's projections of wastewater flows are described in Table 6-3, and locations of the areas, which require extensions of the City's sewer system service area, are shown by Figure 6-4. These forecasts anticipate a range of growth; the "*low projections"* reflect a continuation of the rural low-density development that is presently ongoing in the remaining vacant lands of the community. Alternatively, the "*high projections"* of wastewater flow represent a denser and more planned approach to development of these vacant lands.

The proposed development areas will be connected to the existing sanitary sewer system and will involve expansion of the systems collection facilities. Additional wastewater flows will flow through sanitary sewer connected to the existing system from the following locations:

a. <u>South East Business Park</u>

Located in the southeastern quadrant of the City just east of TH-61 are several parcels of vacant land that are presently managed as agricultural. The approximately 40 acres along this routing does not presently have access to municipal sewer and water utilities. The bedrock in this area is 12"-36" below grade. The construction of a frontage road from the Saint Paul Park overpass connecting to Hastings Avenue, will service these properties and will lead to the development of these lands into a Business Park use. As shown on Figure 6-4 gravity sewer is available 150LF north of this property on 10th Avenue. A 10" trunk main provides adequate water service, which is also located on 10th Avenue. The off site cost to extend connections to these utilities is estimated to be $260,000.00 for sanitary and $250,000.00 for municipal water service. It is expected that these costs would accrue to the developers of the Business Park.

b. Century Avenue Residential Development

Located atop the bluff line in the southeastern quadrant of the City these parcels contain approximately 99 acres, shown by Figure 6-4, and are presently managed agriculturally by Bailey Nurseries. The City of Cottage Grove continues to expand its residential land uses immediately east of Century Avenue, which will eventually leave these properties surrounded by homes. The development of these lands could take the form of single family residential estate or a series of PUD developments that would respect the community's need to protect its bluff line habitat area. Gravity sewer (City of Woodbury) is available 200 LF north of this area. Municipal water service is available a further 1200LF south on Glen Road. The off site cost of extending connections to these properties is estimated to be $100,000.00 for sanitary and $550,000.00 for municipal water services. It is expected that these costs would accrue to the developers of the residential subdivisions.

c. Bailey/Military Road Residential and Business Park Developments

As noted in Chapter VII the traffic volumes are anticipated to increase on Bailey Road. The approximately 160 acres shown by Figure 6-4 are presently vacant lands that at times in the past have been farmed but now are presently lying fallow. The ongoing pressure towards infilling in the metropolitan area will make this acreage prime developable property. As previously noted, the City has constructed a new public works facility at the site of the Compose Site off Bailey Road. This building expansion project extended sewer and water utilities north from Larry Lane to within 100LF of Bailey Road. A further 1,320 LF extension of utilities from Cemetery Road serves lands down grade of the public works site. The off site cost of extending connections, from the Public Work Garage Site, to these properties is estimated to be $420,000.00 for sanitary and $390,000.00 for municipal water services. It is expected that these costs would accrue to the developers of the Business Park and residential subdivisions.

d. NSP North/Star Steel General Industrial Site

The TH-61 and I494 improvements consisted of the construction of a northerly ring road at the intersection of these two freeways. This construction has improved access

to the City of Saint Paul's Ameristeel Industrial Park, which immediately abuts the northerly corporate boundary of Newport. Utility services are immediately available to the developable property and service could be extended at little cost to the City. This development is dependent upon the completion of the I494/Wakota Bridge, which will occur in 2012.

F. NEWPORT'S WASTEWATER FLOW PROJECTIONS

The land use projections developed in Chapter V have been compared with the existing flows and water usage in the City of Newport to forecast the year 2010, 2020 and 2030 annual sewage usage in Table 6-4.

The existing MCES Interceptor will handle the flow generated by these developments

Table 6 - 4:
City of Newport Sewer Usage Based on City Forecasts, 2000-2030

	2000		2010		2015		2020		2025		2030	
Sewered Population	3500		3668		3980		4293		4557		4821	
Sewered Households	1340		1525		1665		1805		1953		2100	
Sewered Employment	2238		3830		3810		5130		5790		6450	
Projected Flow	125		139		156		180		194		208	
Range of Estimates	**low**	**High**	**low**	**High**	**low**	**high**	**Low**	**high**	**Low**	**high**	**low**	**high**
Millions Gallons/Yr	**125**	**135**	**140**	**150**	**160**	**175**	**180**	**190**	**195**	**205**	**208**	**218**

Source: City Engineer

The projected wastewater flows in Table 6-4 are based on the following assumptions:

- Residential flows will average 60 gallons per day, per person (historic average).
- Sewered Employment as per Metropolitan Council Estimates
- CII flows will average 35 gallons per day per employee (historic average).
- Inflow and Infiltration will average 20 MG/year.

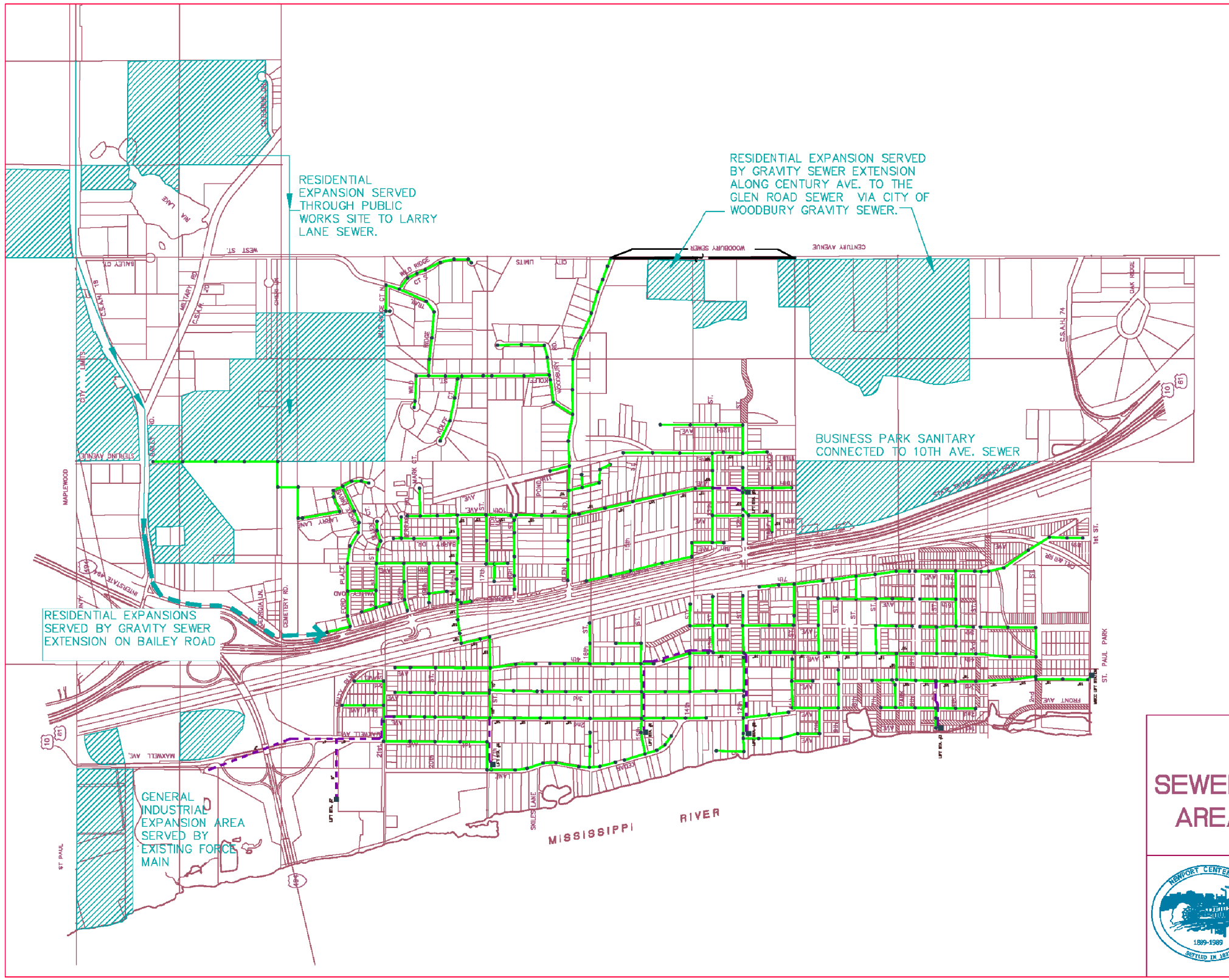
The wastewater flows described in Table 6-4 are within the design capacities of the City sewage transportation system and are within the capacity of the Metropolitan Council's interceptor # 7102-2.

G. ON-SITE SEWAGE SYSTEMS:

There are 78 on-site sewage systems in the City. The locations of on-site systems are marked on Figure 6-5. Most, but not all, of the septic tanks are in the bluff area in the eastern area of the City, where the housing density is to low and the lot sizes so large that the installation of sewers for single-family housing has not been feasible because of the high cost.

Minnesota statutes require that each community with on-site sewage systems include in the comprehensive plan (a) a program for managing their operation and (b) standards for issuing permits for new on-site systems. Newport does not have a management program for its on-site systems. Newport has adopted Washington County's standards for issuing permits for upgrading existing or for construction of new on site systems. The City contracts with Washington County, which conducts inspections and monitors pumping of septage from these systems.

City of Newport
Future Sanitary Sewer Service Expansion Areas
Comprehensive Plan - Draft



FUTURE SEWER SERVICE EXPANSION AREAS 2008 COMP PLAN

City of NEWPORT

FIGURE XX

Data sources include the City Engineer, City of Newport, and Metropolitan Council.

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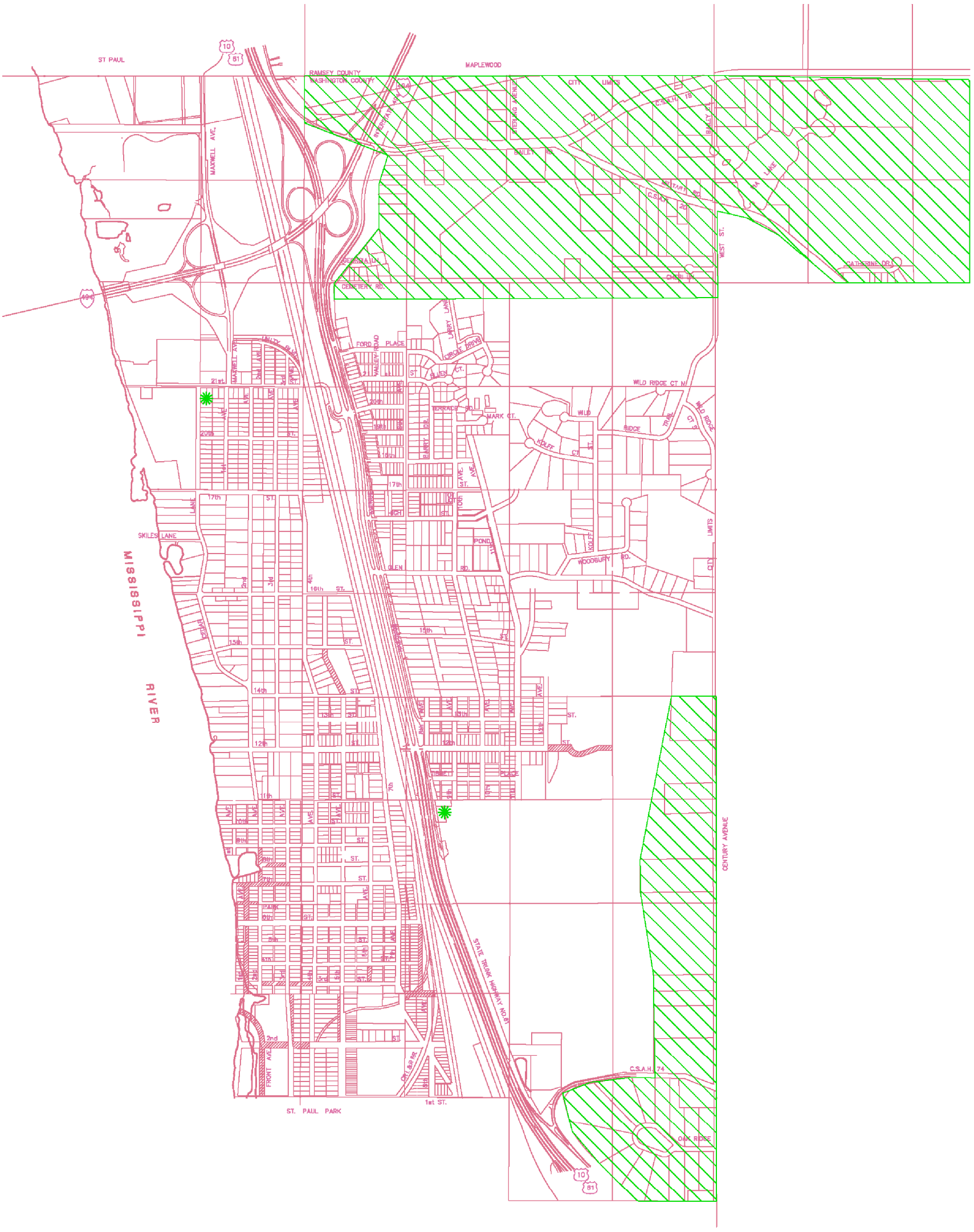
City of Newport
Existing On-Site Sewers
Comprehensive Plan - Draft



Data sources include the City Engineer, City of Newport, and Metropolitan Council.

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H. MUNICIPAL WATER SYSTEM

Figure 6-6 shows the City municipal water system. This system, constructed between 1963-2008, consists of 4, 6, 8, and 10-inch diameter distribution piping, two deep wells, a high pressure zone supply and fire flow booster station (serving the upper pressure zone), and 2 ground storage reservoirs. The City water distribution system is divided into two pressure zones. The City system provides a total storage volume of 750,000 gallons of water for fire flow and potable use. The water system serves 933 residential and business customers. Average water pumpage is 120 million gallons per year. The maximum monthly water use is typically recorded in June. The maximum monthly pumpage was recorded to be 18 million gallons.

The City water supply plan, as required by Minnesota statutes, was prepared in December of 1995 and was approved by the Metropolitan Council. The City completed its Well Head Protection Plan in 2001. A map showing the City's Drinking Water Supply Management Area (DWSMA) is included in the Appendix.

There are four key parts to the water supply plan. They are briefly summarized in this section; the approved water supply plan, available at City offices and on file with the Metropolitan Council, is incorporated by reference.

Water Supply and Distribution: Residences in the City comprise the largest number of water system connections and the greatest number of water users. Table 6-5 details the number of water system connections in 2007 and the usage by various types of customers.

Table 6 - 5:
City of Newport Pumped Water Usage 1997 -2007

Year	Total Pumpage MG/Yr	Total Sales MG/Yr	Water Lost MG/Yr	Population	Losses As a Percent of Total Pumpage	Per Capita Water Use GPC/Day	Per Capita Use Inc Loss GPC/Day
1997	116.5	105.30	11.20	3450	10%	62.58	92.52
1998	118.5	110.30	8.20	3456	7%	65.08	93.94
1999	124.5	112.60	11.90	3456	10%	66.43	98.70
2000	121.0	106.80	14.20	3456	12%	63.10	95.92
2001	120.0	108.90	11.10	3456	9%	63.34	95.13
2002	134.8	108.60	26.20	3400	19%	62.53	108.62
2003	115.0	101.90	13.10	3400	11%	58.18	92.67
2004	111.6	101.80	9.80	3400	9%	59.63	89.93
2005	120.0	98.90	21.10	3400	18%	59.55	96.70
2006	120.1	96.40	23.70	3400	20%	62.58	96.78
2007	116.5	105.30	11.20	3450	11%	65.08	92.52

Source: Newport Utility Records

Table 6 - 6:
Type of User and Water Usage

Type of User	% Water Sold 2007
Residential	52%
Senior Citizen	6%
Multi-Family	16%
Commercial	13%
Industrial	12%
Institutions	1%
Total Users (hookups)	**1,095**

Source: Newport Billing Account Records

Table 6-6 describes the daily demand for water, including the annual average daily demand and the maximum daily demand, for 1985-2007. The annual average daily demand reflects seasonal usage; water usage in summer typically is higher than in winter.

Residential water use averages about 75 percent of total water use. The amount of water used by each resident averages 65 gallons a day without losses and 95 gallons a day if losses are included. Nationally, residential water use typically averages 50-80 gallons a day for each person. The 1994 Plan noted that 20% - 29% of the water pumped is not billed out to users. Actions taken by the City of Newport's public works department have reduced the non-billed portion of water usage to 7% to 20%. The annual rate of loss is dependent upon how quickly the City discovers a leak in the distribution system. Mains in the bottom 2 river benches are extremely susceptible to longitudinal fracture caused by stresses caused by "shifting" bed rock. In the past 2 years cast iron pipes on 4th Avenue have been replaced by new DIP watermain, even with this newer stronger pipe there have been 2 pipe fractures that have leaked enough to have been discovered and repaired.

The water supply plan also analyzed demand for each year through 2020. Calculations of projected water use demand for 2010 indicate 0.41 million gallons (average daily demand) will be needed to supply a served population of 3,668, by extrapolation to the Metropolitan Council's 2030 forecast for Newport shows that an average daily demand of 0.58 million gallons per day will be required.

No new facilities, such as new wells and expansion of water tower capacity, are needed to meet that demand. Should a significant development occur in the City's High Service Zone there will be a need to increase water storage capacity at a higher elevation and additional City pumpage will be required, conversely a secondary connection as might be provided by an interconnect with the City of Woodbury would also solve the higher pressure demand. Any costs associated with this

public improvement would be recovered through assessment of Water Access Charges (WAC) passed along to the developing land owners.

The City's water is pumped from two wells. Both wells tap into the Prairie Du Chien-Jordon aquifer system. The aquifer can produce water at the rate of approximately 1000 to 2000 gallons a minute; the City wells operate at a rate of 950 to 1000 gallons a minute. The total daily capacity of the well system is approximately 2.00 MG/Day (16 hours pumpage with both pumps in service), for short period an emergency rate of daily pumpage equal to 1 MG/Day can be maintained (lowest producing pump in service for 20 hours/day).

Whereas the average daily and peak monthly demands projected for 2030 can be satisfied by the existing supply and storage facilities, (0,58 MG/Day and 1.46 MG/Day of a supply capacity of 2.0 MG/Day), the 2030 peak daily demand could potentially be 2.04 MG/Day, which exceeds the supply capacity of the existing system with one well out of service. To plan for this contingency the City should:

- Structure an emergency response action to control water use should there be a failure of one of the wells, or if peak daily demand exceeds 2.0MG/Day.
- An inter-community connection should be pursued to meet the emergency needs of the City.
- The City should consider developing a 3rd well field when the peak daily flow demand exceeds 1.75MG/Day.

Once pumped from the wells, the water is stored in two ground storage reservoirs and a hydro pneumatic tank. These storage facilities, which are used to equalize water demand and pumping rates and to furnish emergency supplies, have sufficient capacity to meet more than twice the average daily demand for water. A hydro pneumatic tank and booster pump serves 60 – 80 users located in the City's High Service Zone.

The water main system and the storage facilities are depicted on Figure 6-6. The City does not have a water treatment plant. Water in the wells is treated with fluoride for dental prophylaxis.

Table 6 - 7:
City of Newport Annual Average Daily Water Demand, 1985-2007

Year	*Annual Average Daily Demand MGD.*	*Maximum Daily Demand MGD.*	*Peaking Factor*
1985	0.340	0.904	2.7
1986	0.342	0.766	2.2
1987	0.438	1.368	3.1
1988	0.401	0.929	2.3
1989	0.368	0.971	2.6
1990	0.357	0.760	2.1
1991	0.332	0.594	1.8
1992	0.400	0.792	2.0
1993	0.339	1.156	3.4
1994	0.450	1.137	2.5
1995	0.317	0.493	1.6
1996	0.322	0.437	1.4
1997	0.313	0.596	1.9
1998	0.32	0.574	1.8
1999	0.32	0.574	1.8
2000	0.34	0.650	1.9
2001	0.33	*0.650*	2.0
2002	0.33	*0.650*	2.0
2003	0.37	*0.650*	1.8
2004	0.32	*0.650*	2.0
2005	0.31	*0.650*	2.1
2006	0.33	*0.660*	2.0
2007	0.32	*0.680*	1.9
Average	*0.35*	*0.75*	2.13

Source: Newport Water Supply Plan Updated, through 2007

Table 6 - 8:
Planned Water Supply

Year	Pumpage MG/Y	Average demand MG/D	Peak Monthly MG/D	Max Daily Pumpage MG/Day
2000	124.5	0.34	0.65	
2010	149.0	0.41	0.82	1.43
2015	165.7	0.45	1.02	1.59
2020	182.3	0.50	1.25	1.75
2025	198.9	0.54	1.36	1.91
2030	212.9	0.58	1.46	2.04

Max Daily pumpage based on record peak flow factor of 3.5 times average demand

Water Conservation: Conservation is defined as reducing water use without changing the level of service. Conservation efforts can have two results - reducing the amount of water used and reducing the costs both for the water user and for the City to operate and maintain the water system.

To be most effective, conservation efforts focus on seasonal demands and on year-round usage. Newport has five water conservation programs:

- Metering. All water users are metered and all meters are read quarterly. Metering enables the City to monitor water usage, to detect leaks and to charge users accurately.
- Water audits and leak detection. An audit can account for all water in the distribution system, specifically the amount entering the system and the amount supplied to water users. The remainder, the "unaccounted-for water," includes authorized uses (hydrant sales, for example) and illegal connections. The City unaccounted-for water is 7 to 20 percent of the total in the distribution system, which is that which is typically found in municipal distribution systems. Leaks are repaired when they are detected.
- Water rates. The City water and sewer use rate schedule covers the costs of operating and maintaining the system. The base rate for all categories of users, except for senior citizens, is calculated on the ranges of gallons used, with increments for every additional 10,000 gallons used. Senior citizens pay a 50% reduced rate. The rate is progressive. The greater the water use, the higher the cost per gallon. The 2008 water and sewer rate is as follows:

Table 6 - 9:
2008 Water and Sewer Rates

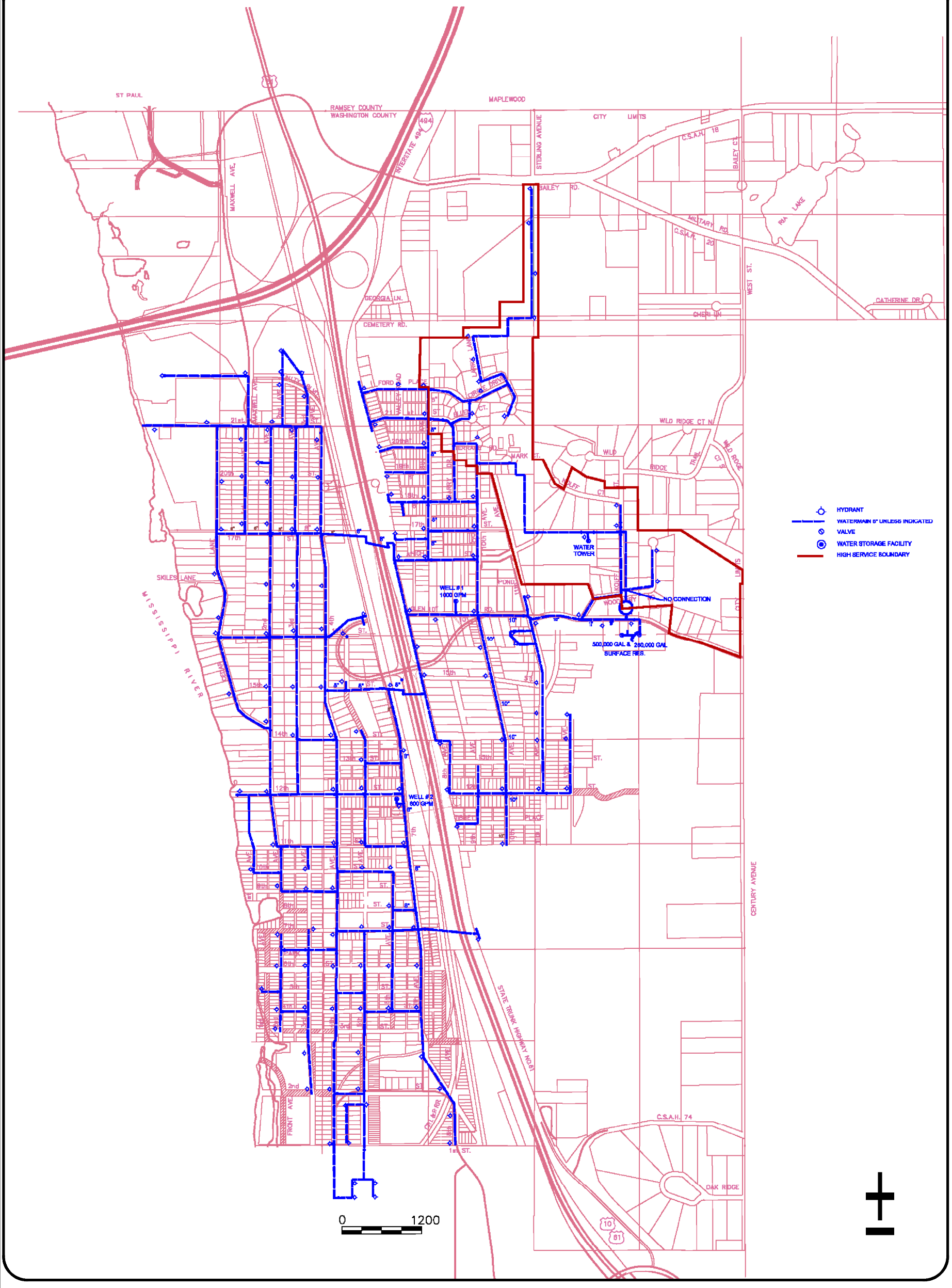
GALLONS USED	TOTAL COST	
0-10,000 (SENIORS)	$ 24.48	
(All other users)		
0-10,000	$ 48.95	
10-20,000	$ 48.95	Plus $1.96 FOR EACH 500 GALLONS USED OVER 10,000
20-30,000	$ 88.12	Plus $1.99 FOR EACH 500 GALLONS USED OVER 20,000
30-40,000	$ 127.80	Plus $2.02 FOR EACH 500 GALLONS USED OVER 30,000
40-50,000	$ 168.02	Plus $2.04 FOR EACH 500 GALLONS USED OVER 40,000
50,000+	$ 208.75	Plus $2.06 FOR EACH 500 GALLONS USED OVER 50,000

- Regulation. Federal regulations require that only low-flow showerheads and 1.6-gallon flush toilets be used in new residential construction. In addition, the City has adopted the Minnesota State Building Code and the Uniform Building Code, which require that only plumbing fixtures which reduce water usage be used in new construction and remodeling projects.
- Education and information programs. Information is disseminated in the weekly newspaper, the Washington County Bulletin, and the City's newsletter, which is distributed to all residents four times each year.

Two additional conservation methods are retrofitting older plumbing and water pressure reduction. Neither is currently being used. A retrofit kit typically includes water-saving devices for toilets and showers, toilet leak detectors and water conservation information; in many cities, they are purchased in quantity and distributed to water users at minimal or no cost. Reducing the water pressure is an effective conservation method only if the existing distribution system operates with high water pressures; that is not the situation in Newport.

City of Newport Existing Water System (2008)

Comprehensive Plan - Draft



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Data sources include the Heritage Preservation Committee,
City of Newport, Metropolitan Council and TKDA.

Emergency Planning: There are two categories of emergencies that impact a water distribution system -- natural disasters and those caused by human actions. Natural disasters are floods, tornadoes, lightning fire and drought. Disasters caused by people are vehicular accidents, vandalism, chemical spills, fire, employee strikes, industrial contamination, pollution, mechanical problems, terroristic actions, and power failures.

The trigger for instituting emergency procedures is defined as "the well pump firm capacity or the capacity of the water system with the largest well out of service." For the City, the well pump firm capacity is 1.15 million gallons a day. As water demand approaches this capacity, demand reduction procedures will be used. During the 20-year period analyzed in the City water plan, the maximum daily demand was approximately 88 percent of the firm capacity of 1.15 million gallons a day.

Emergency procedures include:

- *Obtaining water from alternate sources.* The City does not have inter-community agreements, or connections with adjacent jurisdictions to obtain water if its supplies are not available or cannot be used.
- *Combining surface water and groundwater.* The fire department is equipped to use surface water for firefighting. However, treating surface water to meet water quality standards is prohibitively expensive.
- *Demand reduction.* Demand reduction measures focus on residents and involve a lawn sprinkling ban and requests for voluntary reductions. The City currently has no other policies or procedures to reduce water demand during an emergency.

I. FUTURE WATER SYSTEM NEEDS

As noted, storage and supply needs that will occur as a result of growth in the City are accommodated by the existing municipal water system, except for providing service to additional units in the High service zones atop the bluffline. A change in land use proposed in Chapter V will require improvements to the pumping system serving the high service zone or developing a cooperative agreement with the City of Woodbury. These improvements are estimated to cost $500,000 and would be funded through the City's water availability charge system fees, which are collected when building permits are applied for.

J. STORMWATER AND SURFACE WATER PLAN

The City has completed a Local Stormwater Management Plan. It is located in the Appendix of this Plan.

K. PUBLIC SCHOOLS

Newport is part of Independent School District #833, which also includes the communities of Woodbury, Cottage Grove, Saint Paul Park and Grey Cloud Island. One of the district's schools, Newport Elementary, is located in the City at 851 Sixth Avenue. Newport's enrollment at the district's schools during the 1997-98 school year included 638 school-age children, including 338 elementary, 150 junior high and 150 high school students.

L. LIBRARIES

The Newport Public Library is a branch of the Washington County Library System and is located at 405 Seventh Avenue. The historic Newport Library was founded in 1889 and housed in the old Baptist Church. The City owns the historic building and the library within is operated as part of the County library system.

M. RUBBISH COLLECTION

Newport has no municipal rubbish collection service. Residents and businesses contract with private firms for the collection of rubbish.

N. PUBLIC FACILITIES AND SERVICES GOALS

1. Goals

The goals for the public facilities and services of Newport are:

- To serve existing uses and new development with quality public facilities including sewer, water and stormwater collection.
- To protect the health, safety and welfare of the existing and future residents.
- Facilities to be constructed will be consistent with the Metropolitan Council's Regional Blueprint and the regional systems plans.
- Protect surface waters, ground water and natural resources from degradation.

2. Policies

To provide public facilities and services, it is the policy of Newport to:

- Prohibit the installation of new on-site sewer systems, except in Residential Estate Zones located atop the bluffline.
- Encourage property owners with existing on-site sewer systems to connect to the sanitary sewer system.
- Adopt Minnesota Pollution Control Agency rules 7080 by reference and join the management program established by Washington County to provide for the inspection and maintenance of existing on-site systems.
- Encourage new development that is consistent with the capacity of the sanitary sewer water main systems.
- Implement the goals and policies of the City Local Surface Water Management Plan, in cooperation with the South Washington Watershed District and other organizations.
- Adopt a program to minimize infiltration and inflow.
- Initiate adoption of ordinance and enforcement actions prohibiting the connection of sump pumps into the sanitary sewer system.

O. PARKS, OPEN SPACE AND TRAILS PLAN

The City of Newport supports a variety of park, open space and recreation facilities. The City manages a relatively large area of parks and open space for a community of its size. The parks include significant natural areas and provide protection and access to the Mississippi River and woodland communities on the bluffs. The City parks and river overlooks also celebrate and interpret its history.

The City also maintains a trail network within its parks and along some of its major streets. The completion of improvements to Highway 61 added three new trail connections over the highway, improving the connections between the eastern and western areas of the community.

1. Existing Parks Inventory

The City of Newport maintains five parks within its Municipal Boundaries, and three overlook areas on the Mississippi River. Table 6-10 describes the size and types of facilities offered by the City's Park system.

Table 6 - 10:
Existing Park Facilities

City Park	Facilities Offered	Size
Bailey Park	Interpretive Trails	80 Acres
Busy Beaver Park	Playground facilities	0.35 Acres
Loveland Park	Tennis, 1 baseball field, 1 softball field, hockey and recreational ice rinks, trails, picnic facilities, play equipment	87 Acres
Lions Park	Play area, hockey and recreational ice rinks, 1 baseball and T-ball field	2.5 Acres
Pioneer Park	Picnic pavilion, play area, activities field/events area, volleyball, picnicking facilities	5 Acres
Mississippi River Overlooks/Access	4 overlooks with seating areas and plantings	1.5 Acres
	Total Park Land	176.35 Acres

Source: City Engineer

Lions Park and Pioneer Park and the river overlooks are located on the westside of TH61. Loveland and Bailey Parks and Busy Beaver Park are located on the eastside of TH61.

Existing parks in Newport fall into three categories: *neighborhood parks, community parks* and *tot lot*. The neighborhood parks include Pioneer Park and Lions Park. These parks are smaller in size and have more limited facilities. The community parks are much larger in scale and include more intensive uses such as organized ball games. These parks include Loveland and Bailey. Community parks typically draw from an area greater than the neighborhood while neighborhood parks get more use from individuals in the adjacent residential neighborhoods. The tot lot is a small fenced park called Busy Beaver Park and is designed as a play area for younger children. While small in size, it is intensively used by the surrounding neighborhood.

The Newport Elementary School also includes active recreation areas, including softball fields, and a soccer field and lacrosse field. The City provides some maintenance for the fields in exchange for citizen use, based on an agreement with the School District. The Newport Athletic Association schedules events at the school fields and City fields.

2. Newport Park Needs through 2030 - Comparison to Typical Planning Standards

The City of Newport compared the level of parks and open space provided in the City with typical standards used in the Metro Area for planning purposes. Some "rules of thumb" that many communities use include the following:

- 10 acres total parks per 1,000 people
- 2-3 acres of the 10 total park acres are developed for "active recreation" space per 1,000 people
- Total acreage is better for long-term planning than specific numbers of fields or facilities - these change with demographics and recreation trends

Table 6 - 11:
Park Needs

Newport Population	Total City Park Acres	Total Park Need Based on Population Standard	Active City Recreation Acres	Rec. Standard Based on Population
3,715 (year 2000)	175 acres	40 acres	33 acres	8-12 Acres
3,800 (year 2010)	175 acres	40 acres	33 acres	8-12 Acres
4,400 (year 2020)	175 acres	50 acres	33 acres	9-13.5 Acres
4,890 (year 2030	175 acres	50 acres	33 acres	10-15 acres

The table indicates that the City has acquired enough park land to meet planning standards well beyond 2030. The City is not under pressure to add parks or open space areas based on the community's anticipated population through 2030. The City is currently reviewing the facilities provided at City parks, and may make some changes in the types and numbers of fields or other facilities provided, based on current and anticipated demand.

The table below compares the recreation facilities provided by Newport with some typical numbers of facilities provided by communities in the Metro Area based on population. In most cases, the facilities offered in Newport are comparable to those provided in other communities.

Table 6 - 12:
Facility Comparisons with Typical Service Levels
for Communities in the Metro Area

Facility Type	Standard or Range Fields/Population	Newport Actual	Standard
Baseball/Softball Fields--all types	1 field/1,000-1/1,200	4 fields	3-4 fields
Regulation Baseball (90' base paths, 310'+ outfield from home plate	1 field/6,000	1 field	1 field
Soccer Fields	1 field/2,000	1 soccer and lacrosse field at elementary school	2 fields
Regulation soccer/football/lacrosse field	1 field/5,000		1 field
Hockey	1 rink/5,000 Range from 1/3,000 to 1/8,000	2 rinks	1 rink
Ice skating (pleasure skating)	1 rink/3,000-1/5,000	1-2 rinks	1 rink
Tennis	1 court/1,000-1/2,000	3 courts	3-4 courts
Basketball	1 court/2,500	3 half courts	1-2 courts

The City is currently updating its Master Plans for Pioneer, Lions and Loveland Parks. The Master Plans will consider the typical facility levels used by other communities in the Metro Area, and adapt them to needs in Newport. The Master Plans will be designed to be adaptable as the population and recreation interests change over the next twenty years.

3. Existing Trails Inventory

Until recently, the City had a limited number of trails within the community, and most were focused within Bailey Park. However, the Highway 61 improvements have added trails running north and south along both sides of the highway, a trail running east along Glen Road, and three pedestrian links over Highway 61. There are also bike lanes along 7th and 4th Avenues. In other City neighborhoods, residents walk on streets when walking within the community. The existing trail system is shown on Figure 6-7.

4. Park and Trail System Adequacy

Based on a common planning standard to provide 1 acre of parkland per 1,000 population, the City of Newport has an adequate amount of public parkland to meet its current needs and its projected needs through 2030. There is a possibility that the City may acquire additional land for a passive park along the Mississippi River if an old dike is breached or torn down.

5. Park and Trail System through 2030

The following additions to the Newport Park and Trail System will be studied and considered:

A riverfront park: The Mississippi Riverfront is predominantly privately owned offering little opportunity for the community as a whole to experience the nature, wildlife and activities of a major water course. The three river overlooks offer limited access and are likely to be used primarily by individuals in adjacent neighborhoods.

The City is considering development of a new park or open space at the northwest corner of the community, along the riverfront. Much of the area is currently behind a dike which is in poor repair. The City will discuss options for purchase of property in this area, removal of the dike, and creation of a park with other agencies such as the Mississippi National River Recreation Area (MNRRA) and Minnesota DNR, to determine whether a partnership is possible to create a park in this location. The adjacent, undeveloped islands in the Mississippi could become part of the park. Because of its location, the area will be subject to periodic flooding without the dike, and is therefore not suitable for residential, business or industrial use.

A comprehensive trail system: Trail connections should continue to be established to create better connections between residential neighborhoods and local parks. The trail system has begun to take advantage of the new pedestrian crossings of Highway 61. The trail running along the eastside of Highway 61 will be enhanced by the proposed Main Street improvements on Hastings Avenue. The City will consider standards for trail design and for signage for the trail system.

There is one planned regional trail within the City, the Washington County Mississippi River regional trail, generally running along the Highway 61 corridor. Washington County will conduct a master planning process to determine a final alignment.

The following goals and policies will guide decision-making for the Newport Park and Trail System through 2030:

6. Goals

a. Create social and recreational opportunities for current and future generations.

b. Provide opportunities for public involvement in developing the City's park and trail system.

c. Provide park, trail and open space facilities within easy walking distance of every resident.

d. Maintain a park system that can respond to the changing demographics of the community.

e. Preserve and enhance sensitive environments and the aesthetic qualities of parks, trails and open space areas.

f. Provide connections to historic sites, natural areas, and other amenities in Newport and the region.

g. Provide opportunities for the public to enjoy the Mississippi River and understand the City's connections to the River.

h. Provide environmental education about the parks' resources and about ways that residents can manage their properties, including controlling exotic species, to preserve the community's natural resources.

i. Build a shared sense of community ownership by promoting citizen volunteers to help with park and trail system maintenance.

7. Policies

a. Coordinate planning efforts with Washington County, St. Paul Park, St. Paul, and Ramsey County in implementing the regional trail corridor as part of the Mississippi National River Recreation Area (MNRRA) program.

b. Work with other organizations to plan future public park spaces along the Mississippi River.

c. Work with residents, churches, schools and businesses to implement a comprehensive community trail plan.

d. Work with neighboring communities to plan trail connections.

e. Require future development and redevelopment to incorporate trail and sidewalk connections to the City's overall trail system.

f. Design trail corridors and park facilities to avoid impact on sensitive environmental areas, natural communities, or rare-species.

g. Periodically review park facilities and programs to meet needs of a changing demographic profile.

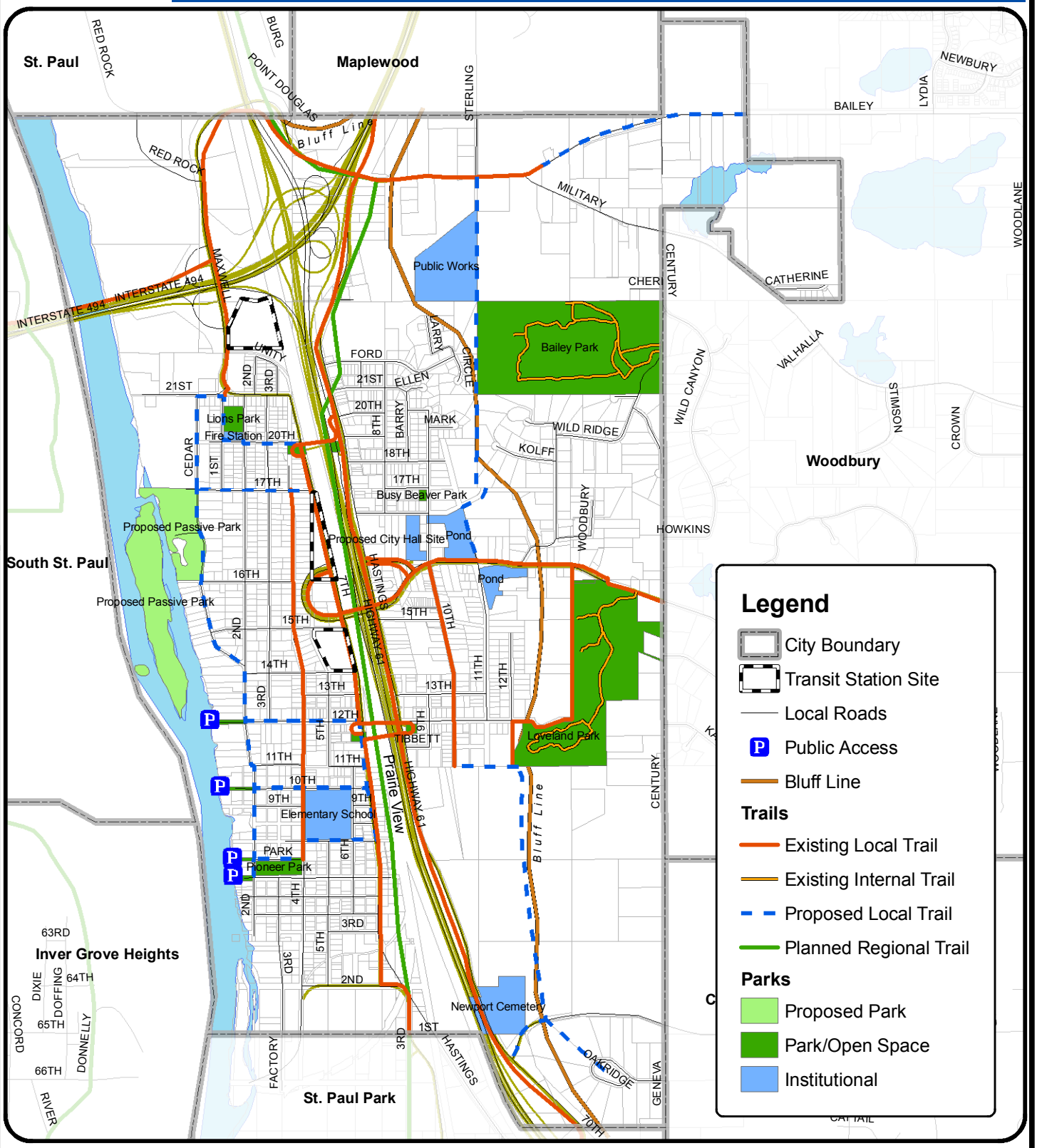
h. Study the need for neighborhood parks and trails in areas of new residential development.

i. Review and update the City's Park Dedication Ordinance to ensure that adequate resources are available as needed to expand parks and trails as the community grows.

Figure 6-7 represents a concept plan for the future Newport Park and Trail System.

City of Newport City-wide Parks and Trails

Comprehensive Plan



TKDA
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Data sources include the MN Department of Natural Resources, City of Newport, Metropolitan Council and TKDA.

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