5.4 WASTEWATER

SEWER SERVICE, 1999

All development within the 1999 City limits was connected to sewer service as of 1999. The City also provides sewer service to the Sonoma State University (SSU) campus, located east of the 1999 City limits. Residential development in Canon Manor, located outside the 1999 City limits but within its SOI, is served by septic systems, not City sewers. Sewer mains collect wastewater and transport it to the Rohnert Park Pumping Station. As of 1999, the wastewater mains were adequate in size to serve the area within the 1999 City limits. A 24-inch interceptor sewer main extends westward from the pumping station to the treatment plant.

SUBREGIONAL WASTEWATER DISPOSAL SYSTEM

Rohnert Park is a partner in the subregional wastewater disposal system, which also serves Santa Rosa, Sebastopol, and Cotati. The City of Santa Rosa is the managing partner and has a contractual obligation to meet the wastewater treatment and disposal needs of the other partners. Wastewater from the subregional system is treated at the Laguna Water Reclamation Treatment Plant (LWRTP), located about two miles northwest of Rohnert Park.

The LWRTP provides primary, secondary, and tertiary treatment. Agricultural and urban irrigation is the primary method used to dispose of tertiary wastewater, and river discharge is used only as necessary during wet weather. After treatment, tertiary water is stored in containment ponds. Water levels in the ponds are monitored, and when they reach maximum capacity, water is discharged into the Russian River, which empties into the Pacific Ocean. Based on the City of Santa Rosa's NPDES permit for the treatment plan, discharged water cannot exceed 5 percent of the river flow.

The City of Rohnert Park is currently allotted a capacity of 3.22 million gallons per day (mgd) in the subregional system, including 0.10 for SSU. Estimated 1999 wastewater flows are shown in Table 5.4-1. The City of Cotati funnels wastewater through the Rohnert Park system, but has been developing its own connection to the LWRTP and will no longer direct wastewater through Rohnert Park as of fall 1999. Cotati has an allocation of 0.62 mgd.

Table 5.4-1:
Wastewater Treatment Flows, 1999[1]

Average Dry Weather Flow (mgd)	3.50
Average Annual Flow (mgd)	4.09

1. Includes flows from Rohnert Park, SSU, and Cotati.

Source: City of Rohnert Park

Geysers Recharge Project

In the early 1990s, the City of Santa Rosa initiated the Subregional Long Term Wastewater Project to bring the subregional system into compliance with the needs of partner cities through 2010. The wastewater project included expansion of treatment capacity at the LWRTP from 18 to 21.2 mgd and an increase in reclaimed water storage and distribution capacity.

Several alternatives were considered for the wastewater project, including a reclaimed water reservoir south of Rohnert Park. The Geysers Recharge alternative was selected in February 1997 as the preferred alternative. This project will enable the Laguna Water Reclamation Treatment Plan to treat the higher capacity of wastewater, because the Plant is constrained by the amount of available online storage, rather than by the amount of water it can physically treat. The City of Santa Rosa has opened bids on the first phase of the construction project, and the pipeline is projected to become operational by 2002[4].

The City of Santa Rosa has a National Pollution Discharge Elimination System (NPDES) permit to release treated wastewater from the treatment plant. On March 1, 2000, the State Board approved an incremental capacity increase for the Subregional System, increasing the permitted amount of released water from 18 mgd to 19.2 mgd. The allocation of this increased capacity has yet to be negotiated. On March 15, 2000, the State Board approved an additional capacity increase for the Subregional System to 21.2 mgd, pending completion of the Geysers Recharge project.

Storage Pond Expansion

Because the Geysers Recharge project was developed over many years, starting in the early 1990s, the City of Santa Rosa initiated and has now completed an interim project to meet wastewater needs throughout the county. Online pond storage is the major constraint on wastewater treatment capacity, because no wastewater can be directly discharged into the Russian River. A storage pond has been completed northwest of Rohnert Park, and the State Board has approved an incremental capacity increase for the Subregional System, as described in the previous section.

TREATMENT CAPACITY NEEDS

In 1999, average dry weather wastewater flow from Rohnert Park, SSU, and Cotati was 3.50 mgd. In 1998 however, Rohnert Park, SSU, and Cotati exceeded their combined 1999 allocation capacity of 3.84 mgd with an average dry weather wastewater flow of 3.93 mgd, although Cotati was actually under capacity. Rohnert Park uses the excess capacity of other subregional system partners, and pays its proportionate share of operation and maintenance

[4] Email correspondence with Joe Gaffney, City Engineer, City of Rohnert Park, April 12, 2000.

[5] Email correspondence with Scott Stinebaugh, Deputy Director, Utilities Department of the City of Santa Rosa, April 26, 2000.

costs based on its actual flow, not on its allocation. Rohnert Park is the only subregional partner over its allocation.

For the purpose of the wastewater project, the wastewater needs of partner cities were based on adopted General Plans that were current when the wastewater project was being planned. Buildout of the 1995 Rohnert Park General Plan warranted an increase in capacity from 3.22 to 3.81 mgd for Rohnert Park and SSU (or from 3.84 to 4.65 mgd, including Cotati). As shown in Table 5.4-2, additional capacity is needed to accommodate buildout of this General Plan. This finding implies that another wastewater capacity expansion project will be required to meet Rohnert Park's needs, after the Geysers Recharge project.

Table 5.4-2:
Estimated Wastewater Flows in Rohnert Park, Under General Plan Buildout

	Average Daily Dry Weather Flows (mgd) [1]
Rohnert Park	4.83
Sonoma State University	0.321[2]
Total	5.151
Capacity Allocation with Geysers Recharge	3.81[3]
Storage Pond Capacity Allocation	0.50[4]
Additional Capacity Need	0.841 + contingencies

1. Based on City of Santa Rosa wastewater generation rates: 192.8 gallons/day/ dwelling; 30.8 gallons/day/employee; 19.8 gallons/day/student.
2. Based on Master Plan buildout of 10,000 FTE students.
3. Expected to be on line in 2002.
4. Pending State Board approval.

Sources: Dyett & Bhatia; City of Santa Rosa, Santa Rosa Subregional Long Term Wastewater Project: Wastewater Flow Projections, July 1996; Sonoma State Universty Master Plan Revision: Draft Environmental Impact Report, November 1999.

Table 5.4-2 provides an estimate of when additional capacity may be needed. Rohnert Park's increased capacity allotment from the Geysers Recharge project would be adequate to accommodate an additional 2,751 dwelling units and about 2.53 million square feet of non-residential development, assuming balanced residential/non-residential use development, sufficient for residential development to about 2012-13.

If Canon Manor hook-ups are not provided, additional capacity will not be needed until 2014-15, and about 3,155 units could be accommodated. A more detailed analysis will need to be prepared in order to determine wastewater needs and timing with greater precision.

Table 5.4-3:
Use of Rohnert Park's Geysers Recharge Capacity Allocation (mgd)

	With Sewer Provision in Canon Manor	*W/out Sewer Provision in Canon Manor*
Capacity Allocation with Geysers Recharge	3.81	
Storage Point Capacity Allocation	0.50	
Total Capacity Allocation	4.31	
1998 Average Dry Weather Flow (July-October)	3.36[1]	
Excess Capacity	0.95	
Less Contingency	0.05	
Less Amount reserved for Pipeline Projects and SSU Expansion	0.12[2]	
Less Canon Manor Sewer Provision	0.10[3]	0.00
Net Capacity Available for New Development	0.68	0.78
Supportable Housing Units[4]	2,751	3,155
Supportable Non-Residential Space (million s.f.)	2.53	2.90
Year when additional capacity is expected to be needed[5]	2012-13	2014-15

1. Dry weather flow for Rohnert Park, SSU and Cotati was 3.93 mgd; Cotati flow of 0.57 mgd is subtracted out. Cotati 1998 flow is estimated using City of Santa Rosa wastewater generation rates: 192.8 gallons/day/ dwelling; 30.8 gallons/day/employee; 19.8 gallons/day/student; 1998 DOF population estimate; and 2000 ABAG employment projection.
2. Includes Wilfred-Dowdell, all non-residential infill development within the 1999 City limits, and 72 infill residential units. 3. Based on General Plan Diagram and City of Santa Rosa wastewater generation rate of 192.8 gallons/day/ dwelling. Under General Plan buildout, the Canon Manor, which is designated for Estate Residential and Low Density Residential uses, would have about 540 housing units at buildout.
4. Assumes residential uses will use up 80 percent of capacity, consistent with projected flows.
5. Assuming 225 units per year.

Sources: Dyett & Bhatia; City of Santa Rosa, Santa Rosa Subregional Long Term Wastewater Project: Wastewater Flow Projections, July 1996; Letter from Linda Spiro to Miles Ferris, August 17, 1997, Attachments A and B.

PUMPING CAPACITY NEEDS

The capacity of Rohnert Park's pumping station is 26 mgd, whereas pumping needs under buildout of the General Plan are expected to be 21.9 mgd.[6] Thus, no additional pumping station capacity is needed.

GOALS: WASTEWATER

PF-D Ensure that adequate wastewater facilities and services are available to meet the needs of existing and new development.

POLICIES: WASTEWATER

PF-7 Continue participation in the planning, financing, and construction of wastewater treatment capacity expansions of the Subregional Wastewater Disposal System. Explore opportunities for increasing reclaimed water use and decreasing potable water demand.

PF-8 Undertake a detailed evaluation of the wastewater capacity needs associated with General Plan buildout. Seek from the City of Santa Rosa an increase in Rohnert Park's wastewater treatment capacity allocation that would become available in time to serve anticipated growth. Re-examine General Plan growth projections and development approval processes if additional capacity does not become available by 2012.

The background analysis in this section provides a preliminary estimate of wastewater needs and indicates that additional treatment capacity may be needed by about 2012-13, if Canon Manor's needs are also included.

PF-9 Require developers to install or pay for new sewer lines and other sewer improvements needed to accommodate new development.

Sewer mains on both the eastside and westside will need to be expanded in order to accommodate new development. Developers shall be required not only to install on-site sewers, but also to contribute to the cost of improvements to sewer mains. Chapter 2: Land Use and Growth Management includes specific policies for assessing costs and prioritizing and implementing infrastructure improvements.

PF-10 Continue to work with residents in Canon Manor to coordinate the provision and timing of wastewater services and facilities.

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[6] Pumping capacity must be greater than average dry weather flows and must be sufficient to pump peak hour wet weather wastewater flows. Pumping needs are estimated by multiplying total estimated wastewater flows (5.04 mgd) by 1.45 to estimate peak day wet weather flows and by 3.0 to estimate peak hour wet weather flow.