4.13 UTILITIES AND SERVICE SYSTEMS

4.13.1 Issues

Buildout of the planning area will increase the volume of wastewater collected and treated. Incremental upgrades, expansions, or replacements of wastewater collection infrastructure may be required as parcels are subdivided or consolidated, or as uses change. The implementation of the DSP will also increase demand for other utilities and service systems. Upgrades, expansions, or replacements of utility infrastructure may have environmental impacts.

This section addresses the following utilities: wastewater, power/energy, and solid waste. Stormwater is addressed in Section 4.7 Hydrology and Water Quality, and water supply/service is addressed in Section 4.14 Water Supply and Service Systems.

4.13.2 Setting

Wastewater
Wastewater in the planning area is collected by City-owned collection infrastructure and conveyed to the City of Santa Rosa-owned Laguna Treatment Plant located at the south end of Santa Rosa. The City of Cotati is responsible for installation, maintenance, and repair of collection infrastructure within the City limits. The City of Santa Rosa Utilities Department is responsible for managing the Subregional Wastewater Treatment and Reclamation system, which handles the wastewater for the City of Cotati.[1] The City owns and operates a collection system that provides service to approximately 1,200 acres in and around the city limits. It is comprised of four lift stations, 140,300 lineal feet of collection piping ranging from 6 to 24 inches, and a 24-inch transfer interceptor which conveys the wastewater to the Laguna Plant.[2] Existing wastewater generation of the DSP area is shown in Table 4.13-1.

The Laguna Wastewater Treatment Plant is a tertiary-level treatment facility with the capacity to process 21.34 million gallons per day (mgd).[3] According to the Treatment Plant utility overview website, average daily dry weather flow is 17.5 million gallons, using about 82% of the plant's permitted capacity. The total estimated effluent from existing development in the planning area is 50,365 gallons per day (gpd) (see Table 4.13-1).

Treated water from the Laguna Treatment Plant is either discharged into the Russian River via the Laguna de Santa Rosa, or recycled for one of four uses: agricultural irrigation, supply water for human-made and natural wetlands, urban irrigation, or the Geysers Recharge Project.[4] In 2005, 8.1 billion gallons of wastewater were recycled.[5]

[1] http://ci.santa-rosa.ca.us/default.aspx?PageId=2012 accessed 6/21/07
[2] 2002 Sanitary Sewer System Master Plan, p. 2-1.
[3] City of Santa Rosa 2007 Update to the Recycled Water Master Plan, p. S-2.
[4] Source: http://ci.santa-rosa.ca.us/default.aspx?PageId=2137 accessed 6/21/07
[5] Source: 2005 Annual Report: The Santa Rosa Subregional Water Reuse System, p. 4.

Table 4.13-1: Existing Wastewater Generation of the DSP Area			
Land Use Category	**Wastewater Generation Factor**	**Existing Units/sf**	**Existing Wastewater Generation (gpd)**
Residential	203 gpd	119 units	24,157
Civic/Commercial	72 gpd/employee	182,000 sf	26,208
Total	**--**	--	**50,365**

Source: Units derived from the Project Description, p. 3.0; wastewater generation factors from 2002 Sanitary Sewer System Master Plan, p. 3-3.
gpd = gallons per day
sf = square feet

Subregional Agreement. In 1975, the City of Santa Rosa executed an Agreement with the cities of Rohnert Park, Sebastopol and the South Park County Sanitation District for treatment of wastewater at the Laguna Treatment Plant. At that time, Cotati's wastewater flowed through Rohnert Park's collection system and the combined flow continued to the Laguna Treatment Plant. In 1994, Cotati's wastewater flow was segregated from Rohnert Park; Cotati executed the Third Amended Agreement and became a "Subregional" partner with the cities of Santa Rosa, Rohnert Park and the South Park County Sanitation District. Currently, all wastewater from Cotati flows directly to the Laguna Treatment Plant via Cotati's Helman Lane 24-inch trunkline. The Third Amended Agreement assigned a flow allocation of 0.624 million gallons per day (mgd) to Cotati. In 2002, under the Fourth Amended Agreement, Cotati's flow allocation was increased to 0.76 mgd to incrementally meet treatment capacity needs for its General Plan buildout. According to the 2002 Sewer Master Plan, the 2020 flow is projected to be 0.92 mgd and the City will need to apply for an incremental increase to its flow allocation with the Subregional partners. The City of Santa Rosa, as the operator of the Laguna Treatment Plant, has indicated that once Cotati's General Plan is updated beyond the current General Plan horizon of 2010, Cotati can apply to the Subregional partners for an increase to its future allocation.

Sewer Flow. In 2006, Cotati's average dry weather flow was 0.42 mgd. Table 4.13-2 shows wastewater flow for the DSP area, by land use category. The existing sewer flow is approximately 0.05 mgd.

Power and Energy

Electricity and gas are provided to the planning area by PG&E.

Solid Waste

The City of Cotati is a member of the Sonoma County Waste Management Agency (SCWMA), a joint powers authority for the nine cities and County of Sonoma.[6] Solid waste pickup is currently provided by Waste Management Inc. According to the SCWMA,[7] solid waste generated in the City of Cotati is routed to one of five transfer stations within the County. The County of Sonoma currently owns all the transfer

[6] Source: http://www.recyclenow.org/o_agency.html, accessed 6/26/07.
[7] Patrick Carter, Sonoma County Waste Management Agency, personal communication, 7/10/07.

stations in the County and is responsible for contractual agreements for out-of-county disposal. Currently, all solid waste generated by the members of SCWMA is transferred to private landfills outside Sonoma County. The County has contracted adequate capacity for Cotati through 2010 and intends to continue to provide solid waste disposal for the foreseeable future.

The State of California mandates a 50% diversion rate for solid waste. From 1995 through 1999, the SCWMA averaged a 38% diversion rate, but preliminary estimates show steady improvements from 2000 to the present, where it achieved diversion in the mid 50th percentile. In 2005, Cotati contributed approximately 5,400 (about 1%) of the 521,000 tons of solid waste disposed of through the SCWMA.

4.13.3 Regulatory Setting

Uniform Building Code (UBC)/Uniform Plumbing Code (UPC)
The UBC/UPC establish requirements for sanitary sewage facilities in structures, including pipe size. The City of Cotati has adopted these codes in their Municipal Code.[8] In order to obtain final occupancy approval, a project must be deemed compliant with the UBC and UPC by City Building Inspectors. In addition to the UBC and UPC, the City utilizes the California Plumbing Code, which accompanies the 2001 version of the UPC.

Health Code
The State Health and Safety Code sets forth requirements for the disposal and treatment of sanitary wastes.

Industrial Wastes/Materials Handling
The disposal of industrial, laboratory, automotive, and other wastes into the ordinary wastewater collection system is strictly controlled or prohibited.

Cotati General Plan
The Cotati General Plan contains the following goals, policies, and objectives related to utilities.

Goal 8 Maintain adequate public and personal services and facilities that meet the medical, scholastic, recreational, water, and sewage needs of Cotati.

Policy 8.2.1 The City shall work with the Santa Rosa Sub-regional wastewater system and neighboring cities to assist in the maintenance of an adequate sewage treatment and disposal system for the region.

Policy 8.2.2 Ensure sewage system capacity is adequate to match the rate of development.

Policy 8.4.1 The City shall approve development only in those areas where adequate city facilities are available or will be provided by the development.
Objective 9.2 Land use design features shall maximize energy conservation.

[8] The City of Cotati Municipal Code can be found at:
http://municipalcodes.lexisnexis.com/codes/cotati/index.htm

Solid Waste
The California Integrated Waste Management Act changed the approach of waste management from a reliance on landfills to a reliance on waste reduction methods. The Act set diversion rates for cities and counties at 25% by 1995 and 50% by 2000. Assembly Bill 2707 (1990) required the preparation of a separate "household hazardous waste element" as part of the integrated waste management plan.

4.13.4 Methodology

The Sanitary Sewer System Master Plan prepared by Winzler & Kelly in 2002 provides the basis for analysis of the sewer infrastructure in the planning area. Additional analysis has been completed by Winzler & Kelly for this EIR and is incorporated below.

4.13.5 Significance Thresholds

A project would result in a significant impact to utilities and services if it would have any of the following effects:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could have significant environmental effects.

   Impacts related to storm drainage are discussed in Section 4.7 Hydrology and Water Quality.

d. Does not have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements necessary.

   Impacts related to water supply are discussed in Section 4.14 Water Supply.

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

f. Is not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

g. Does not comply with federal, state, and local statutes and regulations related to solid waste.

h. Require or result in the construction of new power or gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

4.13.6 Impacts and Mitigation Measures

Less than Significant Impacts
The project will not affect wastewater discharges such that applicable regulatory requirements are exceeded (threshold a).

With regard to wastewater treatment facilities and conveyance capacity (thresholds b and e), development accommodated by the DSP will increase wastewater flows through the existing collection system. The increase of population and the increase in commercial land uses under the DSP buildout will require extension of new collection laterals and will require an increase in the size of existing sewer mains, pumps, and other infrastructure, as determined by Winzler & Kelly, Cotati city engineers. New collection laterals will need to be extended as new lots are created and as street infrastructure changes. Main collection lines will need to accommodate the different flow volume and pattern as the area transitions from lower intensity to higher intensity uses.

The 2002 Sanitary Sewer System Master Plan gives wastewater flows per dwelling unit (136 gpd), commercial sewer connection (805 gpd), and per employee, as an alternative rate to commercial connections (72 gpd). Based on these rates, the DSP would produce 101,924 gpd (see Table 4.13-2). The existing plant, according to the 2005 Annual Report of the Santa Rosa Subregional Water Reuse System, has an average daily dry weather flow of 17.5 mgd, with a capacity of 21.34 mgd (at 82% capacity). The additional volume needing treatment would only amount to an increase of 0.6%, well within the range of plant capacity. However, Cotati is only allocated 0.76 mgd of wastewater treatment. In 2006, the flow (based on average dry weather conditions) was 0.42 mgd.[9] With the addition of 0.1 mgd, it would bring the amount requiring treatment to 0.52 mgd.

Table 4.13-2: Total New Wastewater Generation at Buildout of the Proposed Downtown Specific Plan*

Land Use Category	Wastewater Generation Factor	Net Change in Units/SF (factors in replacement)	Net New Wastewater Generation (gpd)	Wastewater Generation Including Existing in Planning Area (gpd)
Residential	203gpd	418 units	61,028	66,430
Commercial	72gpd/ employee	284,000sf	40,896	45,720
Total	**--**	--	101,924	112,150

Source: Units derived from the Project Description, p. 3.0; wastewater generation factors from 2002 Sanitary Sewer System Master Plan, p. 3-3.
*__Note__: The numbers above factor in the replacement of some existing units and commercial space.

[9] 2002 Sanitary Sewer System Master Plan, p. 6-1.

The 2002 study identified several necessary sewer upgrades in the downtown area (Figure 3.0-11). These accounted for current deficiencies in the system, as well as those that would occur under future development conditions. Because the modeled analysis depicted a "realistic worst case" under the existing General Plan, and the General Plan potential development exceeds that of the DSP, the Winzler & Kelly analysis is considered adequate to determine the potential for environmental impacts resulting from installing new and/or replacement infrastructure in the wastewater system.

In 2007, Winzler & Kelly completed an analysis of the sewer system in the DSP and adjacent area as a result of the need to replace aging sewer pipeline. The analysis was conducted to determine the sizing and phasing for the replacement of the existing 12 to 18-inch sewer main along the Laguna de Santa Rosa from Commerce Avenue to East Cotati Avenue. As a result of the analysis, various sewer upgrade projects in the downtown area identified in the 2002 study were no longer needed, provided the Laguna sewer main replacement project is implemented. The Laguna sewer main replacement project is broken into three phases and consists of replacing the Laguna sewer main with a new sewer main and a sewer pump station. This project is currently being analyzed from an engineering and environmental perspective. The phasing of the replacement project would need to be coordinated with infrastructure improvements in the DSP so that sewer collection capacity is met and there is orderly and systematic construction in the area.

Prior to permit approval for any specific project, the developer will obtain verification of adequate collection and treatment capacity from the City and the Santa Rosa Subregional System, and will pay the appropriate level of development impact fees, if any. Fees, if exacted, will pay for the development's fair share of infrastructure improvements necessary to serve that new development and will ensure that potential shortfalls are addressed prior to or concurrent with new development.

The DSP identifies the wastewater improvements necessary to accommodate the plan's development, and these improvements are incorporated into its implementation program. Improvements include the replacement of existing 6-inch with new 8-inch sewer pipeline along the Old Redwood Highway south of La Plaza and along West Sierra Avenue. Improvements also include (as part of the Laguna sewer main replacement project) the installation of a new pump station and 18- to 24-inch sewer trunk, starting on East Cotati Avenue, then north on Arthur Street, west on George Street, then north again on Old Redwood Highway to the end of the planning area. Impacts related to these improvements are primarily construction impacts and are discussed in other sections of this EIR (noise, air quality, cultural resources, traffic, water quality, biological resources, etc.).

Construction impacts are of a relatively short duration and are localized. In the DSP area, all of the installation will occur in established roadways through developed area, and all construction will be required to comply with applicable standards and guidelines. Implementation of standard construction mitigation measures identified in other chapters would reduce impacts to a less than significant level, and no further mitigation is required.

With regard to solid waste (thresholds f and g), implementation of the project will increase the total amount of solid waste reaching out-of-county landfills. According

to the jurisdictional waste generation profile for the SCWMA,[10] the Agency had a per capita solid waste generation rate of 4 pounds per resident per day and 4.8 pounds per employee per day. The DSP may result in a population growth of 925, along with an additional 474 employees.[11] Solid waste generation, based on these inputs, is outlined in Table 4.13-3. Based on the DSP proposal, 1,017 net new tons of solid waste will be generated each year for a total of 6,417 tons generated per year by the City, an increase of approximately 19%. However, buildout of the DSP will occur over the next 20 years and is not considered to significantly increase demand for total disposal capacity for the SCWMA. The Agency has stated that it has contracted adequate capacity for Cotati through 2010 and intends to continue to fulfill this service for the foreseeable future.[12] Therefore, this impact is considered less than significant.

Table 4.13-3. Annual Solid Waste Generation for Net New DSP and City of Cotati

Type	Number	Rate	Total lbs/day	Total tons per year
Residents	825	4.0	3,300	602
Employees	474	4.8	2,275	415
Net New Solid Waste Generation – Project Buildout			5,575	1,017
Current Total City Generation (2005)				5,400
New Total Generation				6,417

Source: Patrick Carter, Sonoma County Waste Management Agency, personal communication, 7/10/07.

[10] Source: http://www.ciwmb.ca.gov (accessed 5/18/06).
[11] Note: Projection based on 2.55 persons per household (US Census 2000) and one employee per 500 square feet of commercial space. The Specific Plan proposes 418 new dwellings and 237,000 new square feet of commercial space.
[12] Patrick Carter, Sonoma County Waste Management Agency, personal communication, 7/10/07.

With regard to power and gas (threshold h), development under the DSP will increase the structures, residents, and employees requiring power and gas and, therefore, increase the requirements on existing distribution systems. The construction effects of power and gas facilities will be primarily limited to temporary traffic interruptions. There are no major power supply sources within the planning area that would be directly impacted by buildout under the DSP. The Project will not result in construction of new energy/power facilities because there is adequate power supply available to the project. Therefore, this impact is considered less than significant.

4.13.7 Cumulative Impacts

Implementation of the DSP would not make a cumulatively considerable contribution to any significant cumulative utility or service system impacts in the region. The existing cumulative impact is not significant. This conclusion is based in part on the conclusion in the EIR for the current Cotati General Plan. The General Plan EIR concluded that there would not be significant impacts to these resources.

The DSP's impacts are less than significant and it does not result in a significant cumulative impact. Specifically, the impact of the project will not make a cumulatively considerable contribution to the significant cumulative impact. Development accommodated by the DSP will increase cumulative demand for wastewater treatment. As development continues within the Laguna Treatment Plant's service area, improvements to the capacity of both collection and treatment facilities will be required.

According to the 2007 Update to the Incremental Recycled Water Plan, the Laguna Treatment Plant will be expanding total permitted treatment capacity from 21.34 mgd to 25.9 mgd. The plan states that, at the earliest, total 2020 projected flow demand will be 25.89 mgd.[13] According to Cotati's Sewer Master Plan, future agency capacity requirements will be based on approved General Plans or General Plan updates. Since Cotati has yet to approve an updated General Plan reflecting 2020 growth, the City's capacity allocation remains at 0.76 mgd. The Sewer Master Plan states that 2020 growth would require an allocation of 0.92 mgd in order to meet projected flows. The total 2020 demand including .92 mgd from Cotati would not exceed total capacity of 25.9 mgd for Laguna Treatment Plant. At the time of this writing, this allocation has not been made. Note that while the buildout year for the DSP is 2025, all of its requirements could be met within the 2020 projections of the Sewer Master Plan. However, since it would be well within expected increased capacity of the treatment plant, cumulative impacts are considered less than significant.

[13] City of Santa Rosa, 2007 Update to the Recycled Water Master Plan, p. 1-11.

4.13.8 References

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