

Facility Capacity Component

4.8 FACILITY CAPACITY COMPONENT

The purpose of the Facility Capacity Component is to review the disposal capacity available to Sonoma County residents and businesses at permitted solid waste disposal facilities. The goal is to ensure that adequate landfill capacity is allocated for disposing of solid waste that cannot be diverted through source reduction, recycling, or composting activities. Non-recyclable wastes, residue from materials recovery operations, and non-processible materials and residue from incineration/transformation operations are wastes that will not be diverted from the landfills. A projection of solid waste disposal facility needs has been calculated by estimating the disposal capacity required to accommodate the total solid waste that will be generated in Sonoma County during the next 15-year period (2003 to 2018).

This section includes a description of existing permitted solid waste landfills located in Sonoma County and a projection of the county's solid waste disposal facility needs. (There are no transformation facilities located in Sonoma County.) Also included is a discussion of solid waste facilities that are to be phased out or closed, expanded, or that are newly established, and plans to import or export wastes out of Sonoma County.

4.8.1 SOLID WASTE MANAGEMENT SYSTEM

Over the years, Sonoma County has developed a comprehensive solid waste management infrastructure utilizing local transfer stations and disposal facilities. The following discussion summarizes local collection practices for both refuse and recyclables; waste generation, diversion, and disposal amounts; and transportation and storage procedures for all materials collected in Sonoma County.

4.8.1.1 Collection Practices

All municipal solid waste collected in Sonoma County is hauled by licensed commercial haulers. Table 4-37 lists these firms, their service areas, and their operating status as of 2002. Figure 4.1 shows a map of the haulers' territories.

Refuse collection service within the cities of Sonoma County is franchised via a competitive bid process. In return, the Cities receive a franchise fee from the franchised hauler serving their jurisdictions based upon the gross revenues. The County provides collection services in the unincorporated areas through commercial haulers operating in individual territories under license from the Sonoma County Department of Transportation and Public Works (DTPW). Table 4-37 summarizes the refuse collection areas franchise status for all haulers operating in Sonoma County.

4.8.1.2 Total Waste Generation

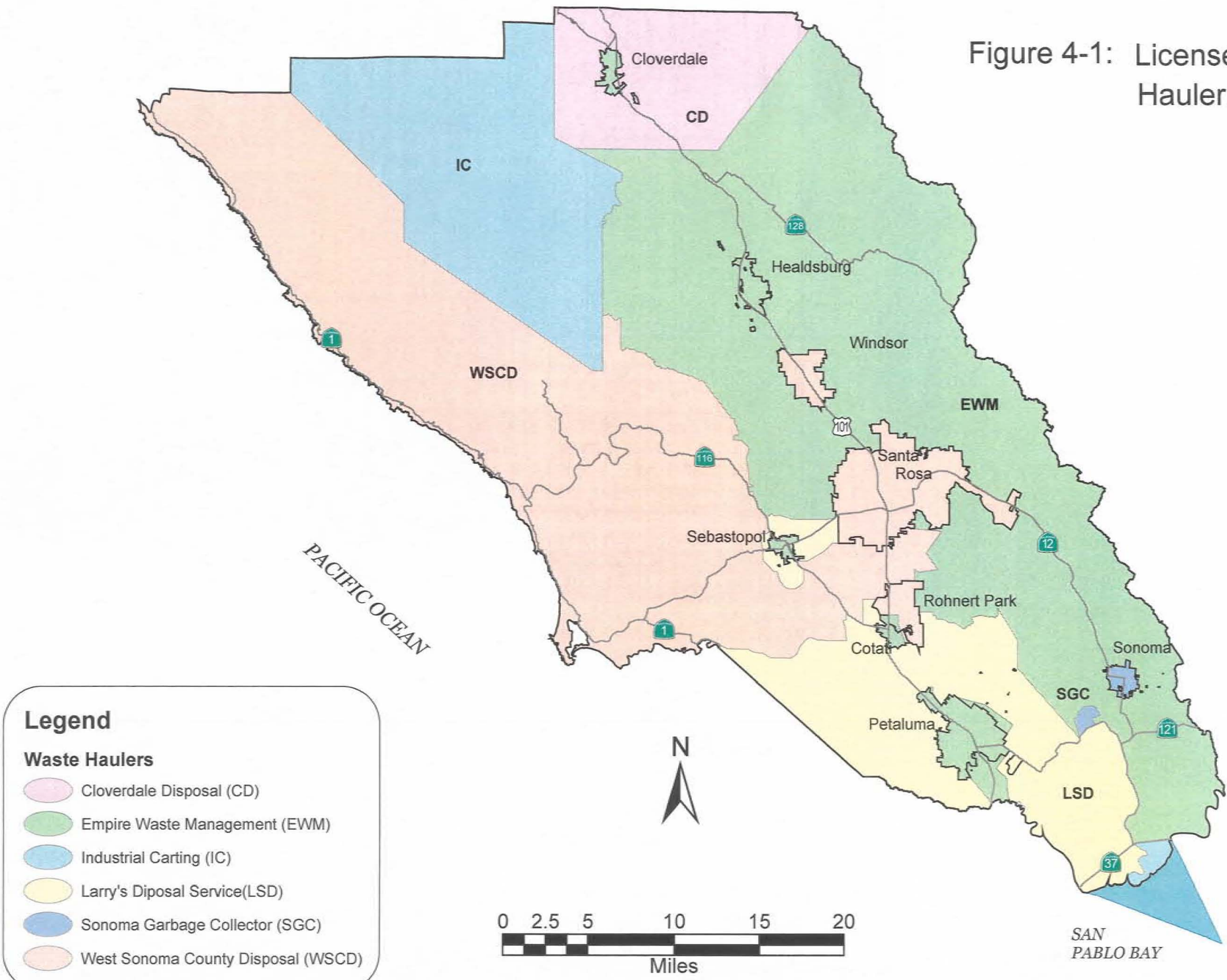
The 1992 Solid Waste Generation Studies (SWGS) and the 1995/96 Waste Characterization Study support all solid waste diversion and disposal projections. The SWGS for each jurisdiction quantify and track the flow of materials collected for both diversion and disposal by local haulers. By definition, waste diversion (source reduction, recycling, and composting) plus waste disposal by landfilling equals waste generation, or hypothetically, the amount of waste "collected" by local haulers. However, source reduction efforts, which reduce the amount of waste collected, were not separated from other diversion programs in the SWGS. Hence, waste diversion estimates presented on the following pages are slightly over estimated due to the inclusion of source reduction efforts in the calculations.

4.8.1.3 Transportation and Storage of Collected Materials

In 1985, there were five municipal solid waste landfills operating in Sonoma County. These sites were geographically dispersed throughout the county, allowing refuse collection trucks to also serve as disposal vehicles. With the closure of all of these disposal sites except the Central Landfill, a series of transfer stations have been built by the County to facilitate economical disposal of refuse generated in the

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Figure 4-1: Licensed Waste Hauler Territories



county. The Annapolis, Guerneville, Sonoma, Healdsburg, and Occidental Transfer Stations are all located at sites which once served as landfills. Refuse destined for disposal is delivered to these facilities in refuse collection trucks and then loaded into 100 cubic yard long-haul vehicles for transfer to the Central Landfill. Nearly all waste collected in the county is disposed of at the Central Landfill. In addition, a small quantity of debris box waste generated in Sonoma County is disposed at the Redwood Sanitary Landfill in Marin County.

Recyclable materials collected by local haulers, drop-off/buy-back operations, and the material reuse/recovery program operating in the county are consolidated at private yards for shipment to secondary materials processors and end-users. Waste Management, Inc. and West Sonoma County Disposal process recyclable materials at their Intermediate Processing Centers in Santa Rosa. Processed materials are then marketed through secondary materials brokers and internal staff. Reusable materials collected at the Garbage Reincarnation, Inc. (GRI) Material Reuse/Recovery Centers (Central Disposal Site and Healdsburg Transfer Station) and the Sonoma Transfer Station Material Reuse/Recovery Center are stored on-site for resale to the general public.

Table 4-37: Refuse Collection Areas and Franchise Status of Sonoma County Commercial Haulers (as of 2002)		
Jurisdiction	Hauler	Current Franchise or Permit Status
Cloverdale	Cloverdale Disposal (WMI Subsidiary)	Ten year franchise with an evergreen clause and annual rate reviews.
Cotati	Larry's Sanitary Service (WMI Subsidiary)	Ten year franchise with an evergreen clause and periodic rate reviews at haulers request. Contract will terminate in 2005.
Healdsburg	Empire Waste Management (EWM)	Seven year franchise with annual rate reviews. Contract will terminate in 2002.
Petaluma	EWM	Five year franchise with annual rate reviews. Contract will terminate in 2004.
Rohnert Park	Rohnert Park Disposal Company	Ten year franchise with periodic rate reviews. Contract will terminate in 2008.
Santa Rosa	EWM	Ten year franchise with periodic rate reviews. Franchise will terminate in 2006.
Sebastopol	Larry's Sanitary Service (WMI Subsidiary)	Ten year franchise with annual rate reviews. Contract will terminate in 2009.
Sonoma	Sonoma Garbage Collector	Ten year franchise with periodic rate reviews at haulers request. Contract will terminate in 2013.
Unincorporated County	Cloverdale Disposal EWM Industrial Carting Larry's Sanitary Service Pacific Coast Disposal Sonoma Garbage Collector Sunrise Garbage Service West Sonoma County Disposal	Ten year license expires 2011. Ten year license expires 2011. Ten year license expires 2011. Ten year license expires 2011. Ten year license expires 2011. Ten year license expires 2011. Ten year license expires 2011.
Windsor	West Sonoma County Disposal	Ten year franchise with annual rate reviews. Contract will terminate in 2007.

Table 4-38: Solid Waste Disposed, Diverted and Generated (1990) (Sonoma County, Including Incorporated Cities)						
Waste Category	Diverted		Disposed		Generated	
	Tons	%*	Tons	%*	Tons	%*
Paper	37,035	5.8	141,760	22.2	178,795	28.0
Plastics	236	0.0	37,508	5.9	37,744	5.9
Glass	4,540	0.7	15,505	2.4	20,045	3.1
Metals	34,124	5.3	43,408	6.8	77,532	12.1
Yard Waste	1,960	0.3	83,976	13.2	85,936	13.5
Other Organics	5,000	0.8	174,916	27.4	179,916	28.2
Other Wastes	14,089	2.2	37,858	5.9	51,947	8.1
Special Wastes	11	0.0	6,576	1.0	6,588	1.0
Totals **	96,996	15.1	541,406	84.8	638,502	100.0
* Percent of total waste stream. ** Numbers may not add due to rounding.						

Table 4-39: Solid Waste Disposed, Diverted and Generated (1995/96) (Sonoma County, Including Incorporated Cities)						
Waste Category	Diverted		Disposed		Generated	
	Tons	%*	Tons	%*	Tons	%*
Paper	73,089	10.7	111,047	16.2	184,136	26.9
Plastics	21,342	3.1	32,051	4.7	53,393	7.8
Glass	9,800	1.4	14,843	2.2	24,643	3.6
Metals	20,961	3.1	31,747	4.6	52,708	7.7
Yard Waste	18,363	2.7	27,500	4.0	45,863	6.7
Other Organics	94,652	13.8	144,246	21.2	158,809	23.2
Other Wastes	28,063	4.1	42,443	6.2	67,768	9.9
Special Wastes	5,722	0.8	8,653	1.3	14,375	2.1
Totals **	271,991	39.7	412,530	60.3	684,521	100.0
* Percent of total waste stream. ** Numbers may not add due to rounding.						
The 1995/96 Waste Characterization Study is included in Appendix C.						

4.8.2 SOLID WASTE MANAGEMENT FACILITIES

Several facilities are currently in use to consolidate, transfer, and dispose of solid waste in the county. The following sections discuss these facilities and the functions they serve within the county's solid waste management infrastructure.

4.8.2.1 Permitted Facilities

Currently, there are two permitted disposal sites (one for MSW) and six permitted transfer stations (five with public access) operating in Sonoma County. These sites, which are shown in Figure 4-2, are as follows:

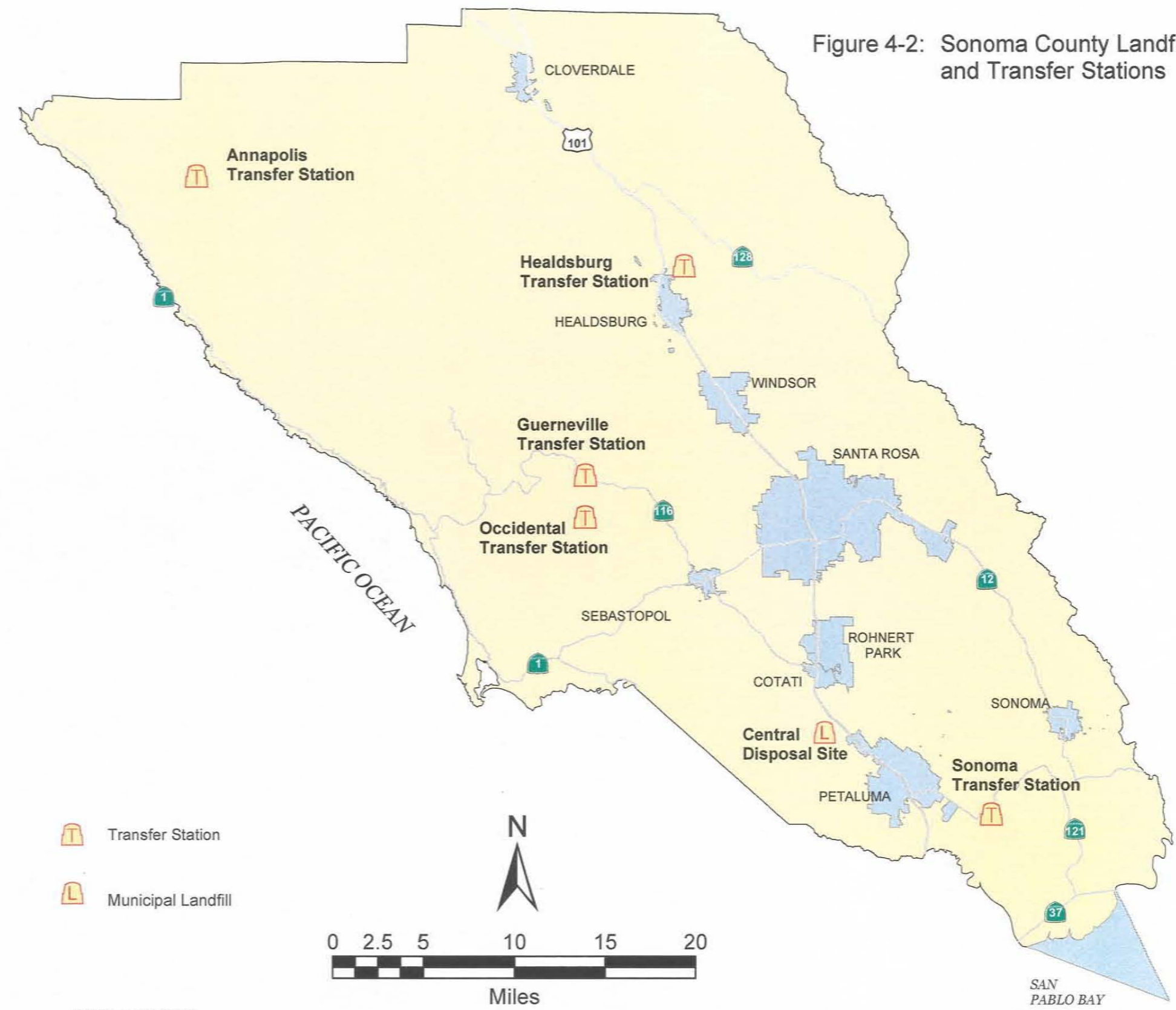
<u>Disposal Facilities</u>	<u>Transfer Stations</u>
<ul style="list-style-type: none">• Central Landfill• Santa Rosa Geothermal WMU Disposal Site	<ul style="list-style-type: none">• Occidental Transfer Station• West College Transfer Station• Guerneville Transfer Station• Sonoma Transfer Station• Healdsburg Transfer Station• Annapolis Transfer Station

Transfer stations within the county have drop-off and floor-sort operations to separate recyclable materials remaining in the waste stream and consolidate refuse for transport to the Central Landfill for disposal.

A description of all permitted solid waste management facilities in the county is presented on the following pages. Each description briefly presents information regarding operations at the site, including disposal capacity, permitted capacity, permit constraints, and site characteristics, as required by Section 18744(a). Figure 4-2 shows the location of the five transfer stations and the Central Disposal Site. Table 4-40 lists the permitted facilities, the date permits were issued, and permit review dates.

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Figure 4-2: Sonoma County Landfill and Transfer Stations



DISPOSAL SITES**Central Disposal Site**

Name: Central Disposal Site

Address: 500 Meham Road, Petaluma, CA 94952

Location: 2.8 miles southwest of the City of Cotati, in Sections 4 & 9, T5N, R8W, MDB&M

Assessor Parcel No.: 024-080-19 & 24-080-018

SWIS No.: 49-AA-0001

Permitted Area: 398.5 acres

Waste Types Accepted: All non-hazardous wastes consisting of household and commercial wastes, agricultural and demolition wastes, sludge from wastewater treatment plants (as per Title 23, Subchapter 15, Section 2523[c]).

Average Daily Loading: 1,461 tons per day; 2,435 cubic yards per day

Permitted Daily Capacity: 2,500 tons per day; 4,167 cubic yards per day

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Operator: County of Sonoma, Department of Transportation and Public Works, Integrated Waste Division

Santa Rosa Geothermal WMU Disposal Site

Name: Santa Rosa Geothermal WMU

Address: 1 Ridge Road
The Geysers

Location: SE 1/4, Section 34, T11N, R8W, MDB&M

Assessor Parcel No.: 141-04-11 & 12

SWIS No.: 49-AA-0148

Permitted Area: 7 acres

Waste Types Accepted: Geothermal drilling muds

Average Daily Loading: Not Available

Permitted Daily Capacity: 130 tons per day

Site Owner: U.S. Department of the Interior

Site Operator: Cal-Pine, Inc.

TRANSFER STATIONS

Name: Annapolis Transfer Station

Address: 33551 Annapolis Road, Annapolis, CA 95412

Location: Annapolis Road, southwest of the community of Annapolis

Assessor Parcel No.: 123-040-04

SWIS No.: 49-AA-0364

Permitted Area: 1.8 acres

Waste Types Accepted: MSW and inert solid wastes.

Average Daily Loading: 21.2 tons per day

Permitted Daily Capacity: 50 tons per day

Quantity of Waste Received from September 1999 to August 2000:

- 2,890 tons per year
- 12.6 tons per day (based on 228 operating days per year)
- 33 tons/day (average annual peak day tonnage)

Projection over 5-year period based on 2% per year growth rate and including Mendocino County waste):

Estimated average annual loading after five years (2005):

- 6,183 tons per year
- 22.1 tons per day average (based on 280 operating days per year)
- 36.4 tons per day peak (projected highest peak tonnage of year)

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Operator: County of Sonoma, Department of Transportation and Public Works,
Integrated Waste Division

Name: **Guerneville Transfer Station**

Address: 13450 Pocket Drive, Guerneville, CA 95446

Location: Approximately 3/4 mile from State Highway 116, 3 miles east of Guerneville and 5½ miles west of Forestville (SE1/4, SEC 34, T8N, R10W, MDB&M)

Assessor Parcel No.: 085 090-02,03 & 085-100-01

SWIS No.: 49-AA-0139

Permitted Area: 1.52 acres of a 90-acre parcel

Waste Types Accepted: MSW, including municipal, agricultural, construction and demolition wastes. Hazardous wastes are not accepted at this facility.

Average Daily Loading: 64.3 tons per day

Permitted Daily Capacity: 160 tons per day

Quantity of Waste Received in 2000:

- 23,083 tons per year
- 64.3 tons per day (based on 359 operating days per year)

Projection over 5-year period based on 2% per year growth rate:
Estimated average annual loading after five years (2005)

- 25,485 tons per year
- 71 tons per day average (based on 359 operating days per year)

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Contract Operator: West Sonoma County Disposal

Name: **Healdsburg Transfer Station**

Address: 166 Alexander Valley Road, Healdsburg, CA 95446

Location: Off Alexander Valley Road, 1/4 mile east of Healdsburg Avenue, north of the City of Healdsburg

Assessor Parcel No.: 091-070-22,24,32,37 & 38

SWIS No.: 49-AA-0245

Permitted Area: 1.74 acres

Waste Types Accepted: MSW and inert solid wastes

Average Daily Loading: 206 tons per day

Permitted Daily Capacity: 435 tons per day; 1740 cubic yards per day

Quantity of Waste Received in 2000:

- 65,759 tons per year
- 184 tons per day (average based on 359 operating days per year)
- 402 tons per day (highest peak day tonnage of year)

Projection over 5-year period based on 4% per year growth rate:
Estimated average annual loading after five years (2001):

- 83,206 tons per year
- 232 tons per day (average based on 359 operating days per year)

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Contract Operator: West Sonoma County Disposal

Name: **Occidental Transfer Station**

Address: 4985 Stoetz Lane, Sebastopol, CA 95472

Location: 15 miles northwest of Interstate Highway 101, on Highway 116, west 3 miles on Green Valley Road, south 1 mile on Harrison Grade Road, and ½ mile northwest on Stoetz Lane to the Transfer Station boundary; 6½ miles northwest of the City of Sebastopol.

Assessor Parcel No.: 075-010-06

SWIS No.: 49-AA-0006

Permitted Area: 0.62 Acres

Waste Types Accepted: MSW and inert solid wastes.

Average Daily Loading: 17 tons per day; 100 cubic yards per day

Permitted Daily Capacity: 60 tons per day; 240 cubic yards per day

Quantity of Waste Received in 2000:

- 27,10 tons per year
- 10.5 tons per day (based on 257 operating days per year)

Projection over 5-year period based on 2% per year growth rate:
Estimated average annual loading after five years (2005)

- 2,992 tons per year
- 11.6 tons per day average (based on 257 operating days per year)

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Contract Operator: West Sonoma County Disposal

Name: **Sonoma Transfer Station**

Address: 4376 Stage Gulch Road, Sonoma, CA 95476

Location: 7.5 miles from Interstate Highway 101, southeast on Lakeville Highway, northeast to Stage Gulch Road to the Transfer Station entrance road; 5 miles southwest of the City of Sonoma

Assessor Parcel No.: 142-051-20

SWIS No.: 49-AA-0144

Permitted Area: 4.96 acres

Waste Types Accepted: MSW and inert solid wastes.

Average Daily Loading: 247 tons per day

Permitted Daily Capacity: 760 tons per day

Permitted Yearly Capacity: Not Applicable in Sonoma County

Quantity of Waste Received in 2000

- 88,696 tons per year
- 247 tons per day (based on 359 operating days per year)
- 447 tons per day (highest peak day tonnage of year)

Projection over 5-year period based on 2% per year growth rate:

Estimated average annual loading after five years (2005):

- 97,927 tons per year
- 273 tons per day average (based on 359 operating days per year)
- 493 tons per day peak (projected highest peak tonnage of year)

Site Owner: County of Sonoma, Department of Transportation and Public Works

Site Contract Operator: West Sonoma County Disposal

RSI: Dated September, 2000

Name: **West College Transfer Station**
Address: 35 Stony Point Road, #A, Santa Rosa, CA 95401
Location: College & Stony Point Roads, Santa Rosa
Assessor Parcel No.: Not available
SWIS No.: 49-AA-0007
Permitted Area: Temporary storage - 10,000 sq. ft.
Waste Types Accepted: Green waste
Average Daily Loading: Not Available
Permitted Daily Capacity: 10 tons per day; 80 cubic yards per day
Site Owner: City of Santa Rosa
Site Operator: City of Santa Rosa

Table 4-40: Permit Issuance and Review Dates for Solid Waste Facilities Located in Sonoma County

Facility Name	Permit Issued	Permit Review
Central Disposal Site	06/27/00	06/27/06
Santa Rosa Geothermal WMU Disposal Site	11/21/91	11/21/96
Annapolis Transfer Station	12/01/00	12/01/05
Guerneville Transfer Station	06/05/01	06/05/06
Healdsburg Transfer Station	04/14/97	04/14/02
Occidental Transfer Station	08/09/01	08/09/06
Sonoma Transfer Station	09/05/01	09/05/06
West College Transfer Station	8/18/98	8/18/03

4.8.2.2 Facilities Exempt From Permit Requirements

Because of the size and/or type of waste handles, several facilities have been granted exemptions from the requirement to obtain a solid waste facility permit, but are, nonetheless, subject to Local Enforcement Agency inspections. The following is a brief description of these operations.

Aidlin A-2: Exemption. Non-hazardous geothermal drilling mud and well cuttings only disposal sump. 4,000 cubic yards site capacity. Privately owned; operated by Calpine Corporation.

Aidlin B: Exemption. Non-hazardous geothermal drilling mud and well cuttings only disposal sump. 12,000 cubic yards site capacity. Privately owned; operated by Calpine Corporation.

Aidlin C: Exemption. Non-hazardous geothermal drilling mud and well cuttings only disposal sump. 12,000 cubic yards site capacity. Privately owned; operated by Calpine Corporation.

CCPA 2-3.3: Exemption. Non-hazardous geothermal drilling mud and well cuttings only disposal sump. 26,000 cubic yards site capacity. Privately owned; operated by Coldwater Creek Power Authority.

Cloverdale II: Inactive permitted wood waste disposal site. Estimated in-place volume of wood waste is 400,000 cubic yards. Clean closure of this site has been proposed. Owned and operated by Valley Construction and Development Corporation.

Howarth Park: Notification. Limited Quantity Transfer Station. Primarily landscape/yard waste debris generated from City of Santa Rosa Parks and Recreation Department. May accept up to 60 cubic yards or 15 tons per operating day. Owned and operated by the City of Santa Rosa.

Korbel: Exemption. Inert debris only from roadside slides and other County Roads Division maintenance activities. Privately owned; operated by Sonoma County Department of Transportation and Public Works.

Santa Rosa Biosolids North: Exemption. Agricultural land application of municipal biosolids on 450 acres. Owned and operated by the City of Santa Rosa.

Santa Rosa Biosolids South: Exemption. Agricultural land application of municipal biosolids on 670 acres. Owned and operated by the City of Santa Rosa.

Synagro: Exemption. Agricultural land application of municipal biosolids on 3,000 acres. Privately owned; operated by Synagro West, Inc.

Santa Rosa Geysers Pipeline: Notification. Non-hazardous petroleum contaminated soil storage/processing site. Approximately 800 cubic yard site capacity. Site owned by County of Sonoma and operated by City of Santa Rosa.

Tubbs Island: Exemption. Agricultural land application of municipal biosolids on 1,400 acres. Owned and operated by the Vallejo Sanitation and Flood Control District.

Unocal WMU: Exemption. Non-hazardous geothermal drilling mud and well cuttings only disposal sump. 15,530 cubic yard site capacity. Privately owned; operated by Calpine Corporation.

4.8.2.3 Illegal Disposal Activities

Illegal disposal in outlying areas and illegal importation of waste into the county are ongoing issues for DTPW staff. DTPW, Road Division, maintains the public right-of-way along county roads. A community cleanup program is operated by DTPW staff to assist communities with recycling and solid waste disposal of material illegally dumped onto public property.

Other illegal activities taking place in the county are the creation of small scale transfer stations. Illegal transfer stations are commonly operated by private construction, landscaping, and roofing companies which use their yards to consolidate materials prior to disposal. These sites create a public health nuisance for surrounding residential and commercial property owners, and as such, are reported to the Department of Health Services, Environmental Health Division for closure.

4.8.3 FUTURE DISPOSAL CAPACITY NEEDS

The projection of solid waste disposal facility needs provides an estimate of the available disposal capacity each year through 2018. The disposal needs projection anticipates future solid waste generation over that period. As a planning tool, the needs projection is calculated using certain reasonable assumptions about waste management practices and trends over the next 15 years. The actual capacity needs may vary if these assumptions do not hold true over the 15-year period. The projection of disposal capacity needs will require periodic revision to reflect future diversion rates and the evolving solid waste management environment.

4.8.3.1 Determining Disposal Capacity Needs

The projection of disposal capacity needs for the 15-year planning period from 2003 to 2018 is based on the solid waste generation projection conducted in accordance with the 1992 Solid Waste Generation Study (SWGS), as set forth in Section 18722, Article 6.1. The disposal capacity needs projection is calculated using the additional capacity equation defined in Section 18744, Article 6.2. Table 4-41 contains the additional capacity equation and definitions of its terms. Each term used in the equation was defined according to local conditions and current and future solid waste management activities.

Table 4-41: Determining Disposal Capacity Needs		
Capacity Needs Equation		
For Year n: $\text{Additional Capacity} = [(G + I) - (D + TC + LF + E)]$		
Definition of Terms		
G =		The amount of solid waste projected to be generated in the Sonoma County.
I =		The amount of solid waste that is expected to be imported to the Sonoma County and disposed of in permitted solid waste disposal facilities through agreement(s) with other cities or counties, or through agreements with solid waste enterprises, as defined in Section 40193 of Public Resources Code.
D =		The amount diverted through successful implementation of proposed source reduction, recycling, and composting programs.
TC =		The amount of volume reduction occurring through available, permitted transformation facilities.
LF =		The amount of permitted solid waste disposal capacity that is available for disposal in Sonoma County, of solid waste generated in Sonoma County.
E =		The amount of solid waste generated in Sonoma County that is exported to solid waste disposal facilities through agreement(s) with other cities or counties, or through agreements with solid waste enterprises, as defined in Section 40193 of Public Resources Code.
n =		Each year of a 15-year period commencing in 1991.

Solid Waste Generated

The amount of solid waste generated (G) for each year in the planning period was obtained by using the CIWMB Diversion Rate Measurement Calculation Worksheet (Worksheet). The Worksheet allows changes to the reporting-year disposal tons and four input factors (population, taxable sales, employment and the consumer price index). When these changes are made to the Worksheet, it automatically computes the estimated generation rate for the reporting-year.

Solid Waste Imported

There is no solid waste imported (I) into Sonoma County. In addition to waste generated in the Unincorporated County, the Central Landfill receives all solid waste generated by the incorporated cities (Sonoma, Santa Rosa, Rohnert Park, Cotati, Petaluma, Sebastopol, Healdsburg, Cloverdale, and Windsor) of Sonoma County with the exception of a fraction, which goes to the Redwood Sanitary Landfill.

Solid Waste Diverted

The amount of solid waste diverted (D) through successful implementation of proposed source reduction, recycling, and composting programs was obtained by using the CIWMB Diversion Rate Measurement Calculation Worksheet (Worksheet). The Worksheet allows changes to the reporting-year disposal tons and four input factors (population, taxable sales, employment and the consumer price index). When these changes are made to the Worksheet, it automatically computes the estimated generation rate for the reporting-year. Subtracting the projected disposal tons from the estimated generation rate provides the estimated diversion tons.

Transformation Facility Reduction

The amount of transformation facility reduction (TC) is zero throughout the planning period. No transformation facilities exist or are planned for Sonoma County.

Permitted Disposal Capacity

The permitted disposal capacity (LF) available is the permitted disposal capacity (in cubic yards) of the Central Landfill.

Solid Waste Exported

For the years 2000 and 2001, the amount of solid waste exported (E) from Sonoma County is the actual tonnage reported to the CIWMB by the facilities who accepted waste generated in Sonoma County. A six-year average of actual tonnages reported to the CIWMB (1995 to 2000) was calculated to be 25,000 tons which is used as the estimated solid waste exported for the years 2002 to 2018.

4.8.3.2 Projecting Disposal Capacity Needs

Title 14 CCR, Section 18744 requires that the solid waste disposal facility needs projection begin with 1991. Results from the disposal capacity needs projection for the period 1990 to 2005 are shown in Table 4-42. Table 4-43 shows the needs projection for the period 2000 to 2018. Impacts of closed, new, or expanded facilities have been accounted for in the projection. All values are given in compacted, in-place cubic yards of solid waste using an estimated average compacted density of 1,200 pounds per cubic yard.

Table 4-42: Summary of 1996 Disposal Capacity Requirements (in cubic yards) for Sonoma County																	
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
G	Total Waste Generated *	406,343	414,470	422,579	431,214	439,839	448,636	457,609	466,760	476,096	485,617	495,329	505,236	515,340	525,647	536,160	546,883
G1	Information from SWGS	369,227	376,612	384,143	398,127	399,663	407,657	415,810	424,125	432,608	441,260	450,085	459,087	468,268	477,633	487,187	496,930
G2	Information from Private Landfills	37,116	37,858	38,615	39,388	40,176	40,979	41,799	42,635	43,487	44,357	45,244	46,149	47,072	48,014	48,974	49,953
I	Solid Waste Imported **	568,067	558,626	546,032	529,788	508,919	434,966	470,521	453,570	433,807	410,901	377,625	383,777	390,064	396,499	403,075	410,005
D	Solid Waste Diverted ***	38,533	50,479	66,127	86,626	113,481	149,202	167,106	187,159	209,618	234,772	266,450	271,779	277,215	282,759	288,414	294,182
TC	Transformation Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LF	Available Permitted Disposal Capacity	9,649,417	8,713,543	7,790,926	6,888,264	6,013,982	5,178,707	4,394,310	3,633,286	2,900,118	2,199,833	1,538,088	931,585	314,353	0	0	0
E	Solid Waste Exported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AC	Additional Disposal Capacity Required	-8,713,543	-7,790,926	-6,888,264	-6,013,982	-5,178,707	-4,394,310	-3,633,286	-2,900,118	-2,199,833	-1,538,088	-931,585	-314,353	313,837	639,387	650,821	662,504

* Total Waste Generated: The total solid waste generated by the unincorporated county.

** Solid Waste Imported: The total solid waste disposed by the incorporated cities at the Central Landfill.

*** Solid Waste Diverted: The total solid waste diverted by the unincorporated county from disposal.

Note: This chart summarizes the information contained in the 1996 Source Reduction and Recycling Elements for the nine jurisdictions in Sonoma County. When prepared, Windsor residents were part of the unincorporated county.

Table 4-43 Disposal Capacity Requirements (in cubic yards and tons) for the SCWMA (2000 to 2018)																			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
E	Solid Waste Disposed at Central Landfill (tons)	494843	497990	495000	485000	460000	465000	469700	474400	479200	484000	488900	493800	498800	503800	508900	514000	519200	524400
	Solid Waste Disposed at Central Landfill (cubic yards)	824738	829983	825000	808333	766667	775000	782833	790667	798667	806667	814833	823000	831333	839667	848167	856667	865333	874000
	Solid Waste Exported (Out of County Disposal) (tons)	36607	47182	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
I	Solid Waste Imported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL DISPOSAL (tons) ¹	531450	545172	520000	510000	485000	490000	494700	499400	504200	509000	513900	518800	523800	528800	533900	539000	544200	549400
	TOTAL DISPOSAL (cubic yards) ¹	885750	908620	866667	850000	808333	816667	824500	832333	840333	848333	856500	864667	873000	881333	889667	898333	907000	915667
D	Solid Waste Diverted (tons)	345984	360161	411824	449073	502369	526470	551435	577317	604322	632084	661041	690488	721265	752997	785908	820223	854458	889140
	Solid Waste Diverted (cubic yards)	576640	600268	686373	748455	837282	877450	919058	962195	1007203	1053473	1101735	1150813	1202108	1254995	1309847	1367038	1424097	1485333
	Transformation Reduction (tons) ²	2889	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200
TC	Transformation Reduction (cubic yards) ²	4815	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333	5333
	TOTAL DIVERSION (tons)	348873	363361	415024	452273	505569	529670	554635	580517	607522	635284	664241	693688	724465	756197	789108	823423	857658	893440
	TOTAL DIVERSION (cubic yards)	581455	605602	691707	753788	842615	882783	924392	967528	1012537	1058807	1107068	1156147	1207442	1260328	1315180	1372372	1429430	1490567
	TOTAL DIVERSION (percent) ⁴	40%	42%	44%	47%	51%	52%	53%	54%	55%	56%	56%	57%	58%	59%	60%	60%	63%	64%
G	TOTAL WASTE GENERATED (tons)	880323	908533	935024	962273	990569	1019670	1049335	1079917	1111722	1144284	1178141	1212488	1248265	1284997	1323008	1362423	1401856	1443740
	TOTAL WASTE GENERATED (cubic yards)	1467205	1514222	1558373	1603788	1650948	1699450	1748892	1799862	1852870	1907140	1963568	2020813	2080442	2141662	2205013	2270705	2338430	2406293
LF	Available Permitted Disposal Capacity (cubic yards) ³	14024860	13200122	12338684	11497017	10672017	9888684	9097017	8297517	7490184	6674851	5851518	5020018	4180351	3332351	2476018	1611185	11737852	10855852
	Available Permitted Disposal Capacity (tons)	8429559	7934716	7436726	6941726	6456726	5996726	5531726	5062026	4587626	4108426	3624426	3135526	2641726	2142926	1639126	1130226	7216226	6697026
	Additional Disposal Capacity Required (tons) ⁵	(7905430)	(7403210)	(6898210)	(6403210)	(5933210)	(5458210)	(4978510)	(4494110)	(4004910)	(3510911)	(3012011)	(2508211)	(1999411)	(1485611)	(966711)	(442711)	(5513511)	(3979111)
AC	Additional Disposal Capacity Required (cubic yards) ⁵	(13175717)	(12338684)	(11497017)	(10672017)	(9888684)	(9097017)	(8297517)	(7490184)	(6674851)	(5851518)	(5020018)	(4180351)	(3332351)	(2476018)	(1611185)	(737852)	(19855852)	(9665185)

1. Projected numbers using factors (population, taxable sales, employment, and CPI) and CIWMB diversion rate calculation worksheet.
2. Transformation Reduction is the estimated amount of wood chips shipped to fuel markets by Sonoma Compost Company.
3. Available Permitted Disposal Capacity (cy) for the years 2000 and 2001 are actual numbers reported to the CIWMB for the Central Landfill.
4. Diversion Rate calculated using CIWMB Diversion Rate Measurement Calculation Worksheet. Adjustment factors for 2001 to 2015 include annual growth projections of 7% for taxable sales; 2% for employment, 3% for CPI; and CDF population projections (based on the 2000 census).
5. For Additional Disposal Capacity a negative number represents sufficient disposal capacity to meet the disposal needs for Sonoma County.
6. Calculations for years 2016, 2017, and 2018 (shaded) assume additional capacity identified in the Central Landfill Expansion Capacity Study Phase I, August 1992.

4.8.4 PLANNED DISPOSAL FACILITY CLOSURES

The Central Landfill was expanded in 2001 to provide sufficient capacity for solid waste disposal through 2015. The *Solid Waste Management Alternatives Analysis* (Analysis) adopted by the Board of Supervisors on February 6, 2001 recommends using the existing landfill to its fullest extent. The earliest estimated date of closure for Central Landfill is 2015. However, if the facility is expanded as recommended in the Analysis, there is potential for closure to be postponed further into the future.

4.8.5 NEW OR EXPANDED DISPOSAL FACILITIES

The Central Landfill, which will reach permitted capacity in 2015 with the expansion of the east canyon, is adjacent to a west canyon that has the potential of providing additional landfill capacity. If the west canyon is expanded it would provide capacity through the year 2017. The Analysis recommends siting a new landfill in Sonoma County once the Central Landfill has reached capacity.

4.8.6 EXPORT/IMPORT OF SOLID WASTE IN SONOMA COUNTY

Some municipal solid waste is exported from Sonoma County, and the majority of it consists of waste collected in debris boxes by Waste Management, Inc. However, Group I wastes, which consist of or contain toxic substances or other substances which could significantly impair the quality of the environment, are exported to out-of-county disposal/recycling facilities. In 2000, most Group I wastes generated in Sonoma County were taken to the Forward Landfill in Solano County. Currently, these wastes are still being shipped to out-of-county facilities for proper treatment and disposal.

Geothermal drilling muds and sewage sludge are the only other waste types known to be exported from the county. A small portion of the drilling muds generated in Sonoma County are transported to Lake County for landfill disposal. Most of this material, however, is kept at the drilling site and is used to reinforce the bore hole, with the remainder deposited into clay lined sumps. Similarly, a small fraction of the sewage sludge generated in the county is transported to Marin County for landfill disposal. The exact quantity and contractual terms for removal of all exported wastes, including hazardous wastes, is unknown.

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