CHAPTER SIX

SITING ELEMENT

CHAPTER 6

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Pursuant to the California Code of Regulations (CCR), Title 14, Division 7, Article 6.5, the Siting Element presents an integrated strategy to ensure the provision of long-term disposal capacity in Sonoma County. The County will demonstrate its ability to provide 15 years of combined permitted disposal capacity from the submission date of this document. The goals, objectives, and policies established for the Siting Element will be used in conjunction with siting criteria developed by County staff, the Local Task Force (LTF), and the general public to guide the development of additional disposal capacity, either through the expansion of existing and/or the construction of new solid waste disposal facilities. Procedural mechanisms to assure use of the established siting criteria and documentation from local jurisdictions agreeing to use procedures specified are presented. The final product is a blueprint for the long-term provision of solid waste disposal capacity.

6.1 GOALS, OBJECTIVES, AND POLICIES

The Sonoma County Waste Management Agency (SCWMA), in cooperation with the County of Sonoma, incorporated Cities and the LTF have developed a number of goals, objectives, and policies designed to encourage a high level of public involvement in solid waste facility siting processes. These goals and objectives will serve as benchmarks to evaluate and monitor the effectiveness of local policies and selected diversion programs over the short- (2003 to 2008) and medium-term (2009 to 2018) planning periods. Under legislation enacted in 1992, non-disposal facilities (transfer stations, recycling facilities, and composting projects) are not subject to the goals, objectives, policies, and siting criteria in the Siting Element. Discussion of these facilities can be found in the Non-Disposal Facility Element (NDFE) (see Chapter 7). Non-disposal facilities are mentioned in the following goals, objectives and policies only as needed for clarification.

6.1.1 Goals for the Safe Handling and Disposal of Solid Waste

The following goals are general statements regarding the siting and operating of solid waste disposal facilities.

- In order to help ensure the sustainability of our communities and to conserve natural resources and landfill capacity, the Sonoma County Waste Management Agency (SCWMA), County and the Cities will continue to improve their municipal solid waste management system through emphasis on the solid waste management hierarchy of waste prevention (source reduction), reuse, recycling, composting and disposal.

- The solid waste management system in Sonoma County will be planned and operated in a manner to protect public health, safety and the environment.

- The County's solid waste disposal facilities will be sited and operated in a manner to minimize energy use, conserve natural and financial resources, and protect prime agricultural lands and other environmentally sensitive or culturally sensitive areas.

- The County will develop disposal capacity for solid waste not handled by other elements of the management hierarchy for a 50-year horizon.

- The County may purchase properties adjoining the solid waste disposal operations to provide physical and visual buffer zones for surrounding residents and land uses and provide land for potential environmental mitigations. The purchase(s) may be made as funds and properties are available.

6.1.2 Objectives and Associated Programs for Achievement of Goals

The following objectives are intended to provide measurable events to document the County's progress in meeting the goals established above.

Short-Term Planning Period (2003 to 2008) Objectives

- The County will use objective and consistent siting criteria and policies for the siting of solid waste disposal facilities.
- The County will document the siting process and provide the public with information on a regular basis to ensure that the public and decision-makers are fully informed. Procedures for making siting decisions will be described in addition to the reasons for selection or elimination of potential sites.
- The County will estimate the need for countywide disposal capacity for the municipal solid waste stream after all feasible diversion programs are implemented and initiate efforts to establish sufficient landfill capacity to allow for achievement of the County's policy to provide approximately 50 years of disposal capacity.

Medium-Term Planning Period (2009 to 2018) Objectives

- The County will implement the siting process and provide public information to ensure that the public and decision-makers are fully informed. Procedures for making siting decisions will be described in addition to the reasons for selection or elimination of potential sites.

6.1.3 Policies to Facilitate Siting of Solid Waste Facilities

The following policy statements illustrate the intent and/or actions to be taken by the County and/or the Cities to achieve the goals and objectives of the Siting Element.

- The County and/or the Cities will provide solid waste disposal facilities or transfer facilities within reasonable distances of the county's population centers. This policy will provide a means for achieving the goal of conservation of natural resources and energy and minimizing the cost of disposal.
- The County and/or the Cities will formalize the long standing practice in the County of permitting only public ownership of solid waste disposal facilities located in the county which accept any segment of the municipal waste stream.
- The County will maintain at least one of its landfills as a public access, multi-use facility providing solid waste disposal and other waste management activities.
- The County will cooperate with adjacent counties, considering their solid waste management planning and waste disposal needs. This includes possible export/import, as approved by the Board of Supervisors, of solid waste and encourages joint resolution of emergency problems.

6.2 DESCRIPTION OF EXISTING SOLID WASTE DISPOSAL FACILITIES

All jurisdictions within the county currently dispose of their solid waste at the Central Disposal Site located approximately 2.8 miles southwest of Cotati (see Figure 4-2). The facility does not landfill

hazardous wastes, major appliances, tires or liquids. Additional landfill bans adopted by the County of Sonoma Board of Supervisors include cardboard, scrap metal, yard debris, and wood waste. Figure 6-1 shows the boundaries of the Central Disposal Site and the surrounding land use designations.

The Santa Rosa Geothermal WMU Disposal Site, a Class III drilling muds disposal site owned and operated by Cal-Pine Operating Plant Services, is currently the only other landfill operating in Sonoma County. This privately-owned landfill does not accept municipal solid waste. Therefore, disposal capacity projections and expansion plans focus solely on the Central Landfill.

6.2.1 Description of the Central Disposal Site

The Central Disposal Site includes the Central Landfill, a Class III landfill. The following description briefly presents information regarding the Central Disposal Site, including disposal capacity, permitted capacity, permit constraints, and site characteristics:

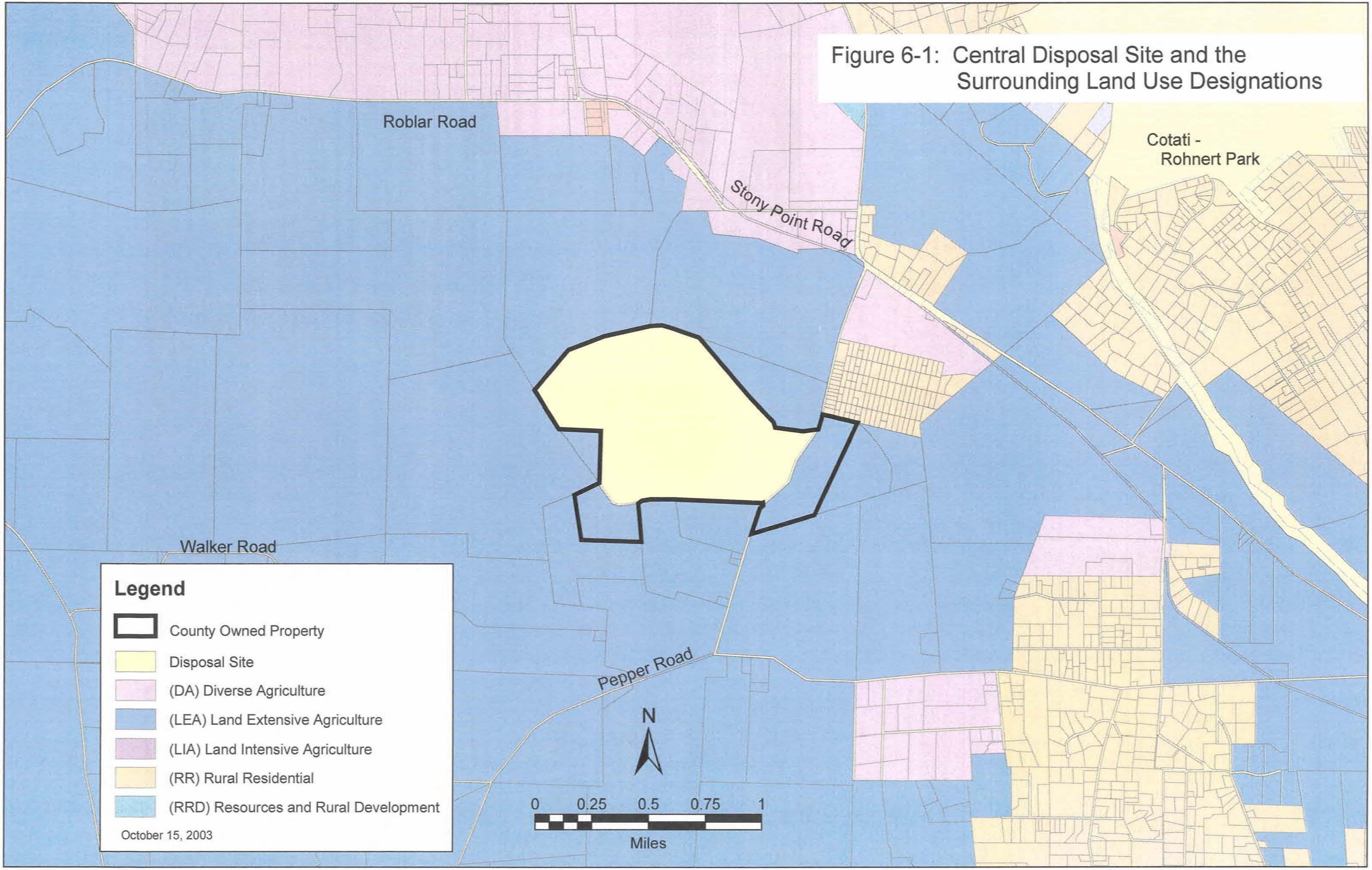
Name:	Central Disposal Site
Address:	500 Mecham Road, Petaluma, CA 94952
Location:	2.8 miles southwest of the City of Cotati, in Sections 4 & 9, T5N, R8W, MDB&M
Assessor Parcel No.:	024-080-19 & 24-080-018
SWIS No.:	49-AA-0001
Permitted Area:	398.5 acres
Waste Types Landfilled:	All non-hazardous wastes 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 (in 2002)
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

6.2.2 Facility Function Within County Solid Waste Management System

The Central Disposal Site is the only municipal solid waste disposal site in the county. Operational improvements completed in 2002 include an expanded recycling, material reuse and recovery center, a tipping building, and expansion into the east canyon for additional capacity. In 2003, a construction and demolition debris sorting program and permanent household toxics facility also began operation.

Following approval of the 2003 CoIWMP, the County will proceed with plans to further expand the Central Landfill. The process for siting a new landfill in the county will begin after that expansion has been approved and permits have been issued. The siting criteria described previously will be further developed with numeric values during a Siting Study, as described in Section 3.0, and used to locate potential new landfill sites.

Figure 6-1: Central Disposal Site and the Surrounding Land Use Designations



As part of the county's integrated waste management system, source reduction, recycling, composting, special waste, and household hazardous waste diversion strategies will extend existing landfill capacity by diverting these materials to secondary materials markets for reuse, secondary processing, remanufacturing, or proper disposal. Waste diversion strategies to be implemented are described in Chapter 4 and listed in Section 4.10.1.

6.3 DISPOSAL CAPACITY REQUIREMENTS

The following sections describe the existing countywide disposal capacity, and the anticipated disposal capacity needs for a minimum 15-year planning period. Table 6-1 details the historic and existing disposal capacity in cubic yards and tons as required by regulations.

6.3.1 Existing Countywide Disposal Capacity

Table 6-2 reflects the anticipated impacts on the amount of disposal capacity available in Sonoma County from 2000 to 2018, which includes the 15 years required by Section 18755.3(c)(3) of the CCR. Estimated disposal capacity impacts are shown in both tons and cubic yards. Waste generation, diversion, and disposal rates were derived assuming the programs in the SRRE are implemented.

In 1992, the DTPW authorized an independent engineering study to redefine the configuration of the Central Landfill and provide updated estimates of remaining disposal capacity at the site. This study, entitled "Central Landfill Expansion Capacity Study Phase I, August 1992" (1992 Study), was produced by EBA Wastechnologies (Appendix D). Among other findings, the 1992 Study determined that as of January 1992, remaining Central Landfill capacity was 11.5 million cubic yards.

Six different scenarios, identifying a potential additional capacity from 2,838,600 to 11,304,600 tons (5,700,000 to 22,700,000 cubic yards), were analyzed in the 1992 Study. The County of Sonoma Board of Supervisors selected the East and West Canyon Expansion scenario with an additional capacity estimated at 3,336,600 tons (6,700,000 cubic yards). The permit for construction of the East Canyon Expansion was approved in 2000 and the expansion area began accepting solid waste in 2002. Disposal capacity provided by this expansion has been included in the projections necessary to provide capacity through the year 2015 (Table 6-2). As of 2003, the remaining capacity of the Central Disposal Site is 6,941,726 tons (11,569,544 cubic yards).

6.3.2 Anticipated Countywide Disposal Capacity Needs

In order to address solid waste disposal once expanded or new facilities are no longer available, the County of Sonoma and the AB 939 Local Task Force undertook a 12-month planning process that

Table 6-1: Disposal Capacity for the Central Disposal Site.

As of	Waste Management Unit	Cubic Yards	Tons
1990	Central Landfill	11,527,736	6,916,642
1996	Central Landfill	6,284,421	3,770,653
2003	Central Landfill with East Canyon	11,569,544*	6,941,726*

* Estimated

Sources: Central Landfill Expansion Capacity Study Phase I, August 1992
2002 Financial Assurance Balances for Closure, Postclosure and Corrective Action (Sonoma County DTPW, IWD)

Table 6-2: 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[6]	2017[6]	2018[6]
	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	529644
	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	882740
E	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	25000
I	Solid Waste Imported	0	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	554644
	TOTAL DISPOSAL (cubic yards)[1]	885750	908620	866667	850000	808333	816667	824500	832333	840333	848333	856500	864667	873000	881333	889833	898333	907000	915667	924407
	Solid Waste Diverted (tons)	345984	360161	411824	449073	502369	526470	551435	577317	604322	632084	661041	690488	721265	752997	785908	820223	854458	891140	929040
D	Solid Waste Diverted (cubic yards)	576640	600268	686373	748455	837282	877450	919058	962195	1007203	1053473	1101735	1150813	1202108	1254995	1309847	1367038	1424097	1485233	1548400
	Transformation Reduction (tons)[2]	2889	3200	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	5333
	TOTAL DIVERSION (tons)	348873	363361	415024	452273	505569	529670	554635	580517	607522	635284	664241	693688	724465	756197	789108	823423	857658	894340	932240
	TOTAL DIVERSION (cubic yards)	581455	605602	691707	753788	842615	882783	924392	967528	1012537	1058807	1107068	1156147	1207442	1260328	1315180	1372372	1429430	1490567	1553733
	TOTAL DIVERSION (percent)[4]	40%	42%	44%	47%	51%	52%	53%	54%	55%	56%	56%	57%	58%	59%	60%	60%	63%	64%	64%
	TOTAL WASTE GENERATED (tons)	880323	908533	935024	962273	990569	1019670	1049335	1079917	1111722	1144284	1178141	1212488	1248265	1284997	1323008	1362423	1401858	1443740	1486884
G	TOTAL WASTE GENERATED (cubic yards)	1467205	1514222	1558373	1603788	1650948	1699450	1748892	1799862	1852870	1907140	1963568	2020813	2080442	2141662	2205013	2270705	2336430	2406233	2478140
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	9965185
	Available Permitted Disposal Capacity (tons)	8429559	7934716	7436726	6941726	6456726	5996726	5531726	5062026	4587626	4108426	3624426	3135526	2641726	2142926	1639126	1130226	7216226	6697026	6172626
	Additional Disposal Capacity Required (tons)[5]	(7905430)	(7403210)	(6898210)	(6403210)	(5933210)	(5458210)	(4978510)	(4494110)	(4004910)	(3510911)	(3012011)	(2508211)	(1999411)	(1485611)	(966711)	(442711)	(6513511)	(5979111)	(5439467)
AC	Additional Disposal Capacity Required (cubic yards)[5]	(13175717)	(12338684)	(11497017)	(10672017)	(9888684)	(9097017)	(8297517)	(7490184)	(6674851)	(5851518)	(5020018)	(4180351)	(3332351)	(2476018)	(1611185)	(737852)	(10855852)	(9965185)	(9065778)

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.

evaluated the existing solid waste management system to develop a long range solid waste disposal strategy. The Sonoma County Solid Waste Management Alternatives Analysis Project Final Report (December, 2000) ("Analysis") recommended a strategy that would include:

1. Fully utilizing the existing waste management resources/infrastructure in both the public and private sectors. Strategy elements include Central Landfill expansion, a flow control policy, and a mandatory recycling policy.

2. Maximizing waste diversion and resource utilization at a reasonable cost based on generator responsibility which will extend the useful life of an expanded Central Landfill and minimize the size necessary for a new landfill in the County. Strategy elements include mandatory recycling and an integrated resource management facility that could include organic processing and green waste processing (see Chapter 4, Section 4.5).

3. Complementing and enhancing existing and planned operations for collection/processing of refuse and recyclables, recognizing the historically accepted private sector role fulfilled through franchise agreements.

The Sonoma County Board of Supervisors and the Sonoma County Waste Management Agency accepted these recommendations and directed staff to take the necessary actions to implement them. Pursuant to this direction, the programs included in the above recommendations are described throughout Chapter 4 of this CoIWMP.

Implementation of this long-term strategy would provide landfill capacity at least to the year 2050. Table 11 of the Analysis (Appendix B) describes the selected strategy and the various scenarios considered along with the advantages and disadvantages of each.

No specific project for expansion of the Central Disposal Site has been selected by this Siting Element. In order to implement any potential scenario, a final design must be developed and a project level EIR must be completed, along with permit approval from the CIWMB and the RWQCB.

6.4 CRITERIA FOR ESTABLISHING NEW OR EXPANDING EXISTING SOLID WASTE FACILITIES

The siting criteria included in this section are based on federal, state, and local laws and policies regarding solid waste facilities. Siting criteria were developed according to Title 14, Chapter 9, Article 6.5 for preparing the Siting Element of the County Integrated Waste Management Plan (CoIWMP). The state guidelines outline specific categories of criteria to be used for establishing new, or expanding existing, solid waste facilities for ultimate disposal (landfills and transformation or incineration facilities). Several criteria were based on federal (Environmental Protection Agency) landfill locational restrictions (40 CFR 258), which are generally exclusionary in nature. *(It should be noted that exclusionary criteria do not necessarily exclude an entire site from consideration, but may only pertain to portions of a site.)*

6.4.1 Siting Criteria Development

The 1985 CoSWMP stated that public acceptance is the primary practical consideration in siting solid waste disposal facilities. The County actively sought to involve the public in the development of the siting criteria. An initial list of siting criteria was developed and presented to the public in a series of ten public workshops, five held in November, 1992 and five in February, 1993. The Sonoma County Permit Resource Management Department (PRMD) then reviewed and commented on the draft siting criteria. Based on PRMD comments and input from the LTF, the process for developing the siting criteria was revised to provide for a greater opportunity for public input into the development of the criteria. The

expanded process will involve subjecting the criteria to more extensive public review during identification of specific landfill locations, an effort that was not undertaken during development of the Siting Element. The expanded effort, part of a Siting Study that is anticipated to begin after all necessary permits for expansion of the Central Landfill are issued, will also include more extensive development of the numeric system for comparing sites.

The siting criteria in this Siting Element reflect the community's interests, based on the public workshops conducted, as well as regulatory and technical considerations. The siting criteria listed provide a sound foundation for moving forward with a public process through the Siting Study and associated California Environmental Quality Act (CEQA) activities to locate new landfill site capacity.

6.4.2 Siting Criteria and Their Application

Siting criteria can be categorically defined as either exclusionary or comparative. Exclusionary criteria are generally regulatory land use restrictions created at the federal, state, or local level. Exclusionary criteria are designed to detect and eliminate clearly inappropriate sites from further consideration before undertaking the more costly and time consuming process of applying comparative criteria.

The exclusionary criteria define parameters that need to be satisfied for a piece of land to be considered for a landfill site. For example, a parcel that is located entirely in a flood plain would be excluded from further consideration as a candidate landfill site. The exclusionary criteria do not restrict development of a parcel as a landfill if only a portion of the parcel is excluded. If the land located in a flood plain included other property that would be suitable for a landfill, the portion in the flood plain could be used as landfill buffer. As a result, a property could have a portion that is excluded and not used for landfill and the remainder potentially suitable as a landfill site.

The exclusionary criteria will be applied to the entire county to identify those broad areas of the county that are not suitable for siting a new landfill prior to beginning the CEQA process. After completion of the 2003 CoIWMP and Siting Element, and the volume of additional capacity is established at the Central Landfill, the County will conduct a Siting Study to accomplish the following:

- Review the means that are available for achieving the County's goal of providing 50 years of disposal capacity.
- Provide for extensive public participation in the landfill siting process.
- Refine the comparative criteria to reflect the public's considerations.
- Adopt the final comparative siting criteria by the Board of Supervisors at a public hearing before the criteria are used to identify potential sites.
- Seek nominations from property owners for land to be considered as a potential site.
- Apply the comparative criteria to each of the sites nominated or identified through review by the County. Rank the sites to identify the best ones to be evaluated in a process to comply with CEQA.

The development of comparative criteria is the primary mechanism available to local constituents to influence site selection prior to the public hearing process. It is essential that local citizens be included in the process of defining local comparative criteria to minimize protracted conflict over various sites as different projects arise. The comparative criteria in this Siting Element were developed through such a public process – input received from the public at workshops, input from the LTF, and review at the public hearings conducted to adopt the 1996 CoIWMP. Comparative criteria will be further structured

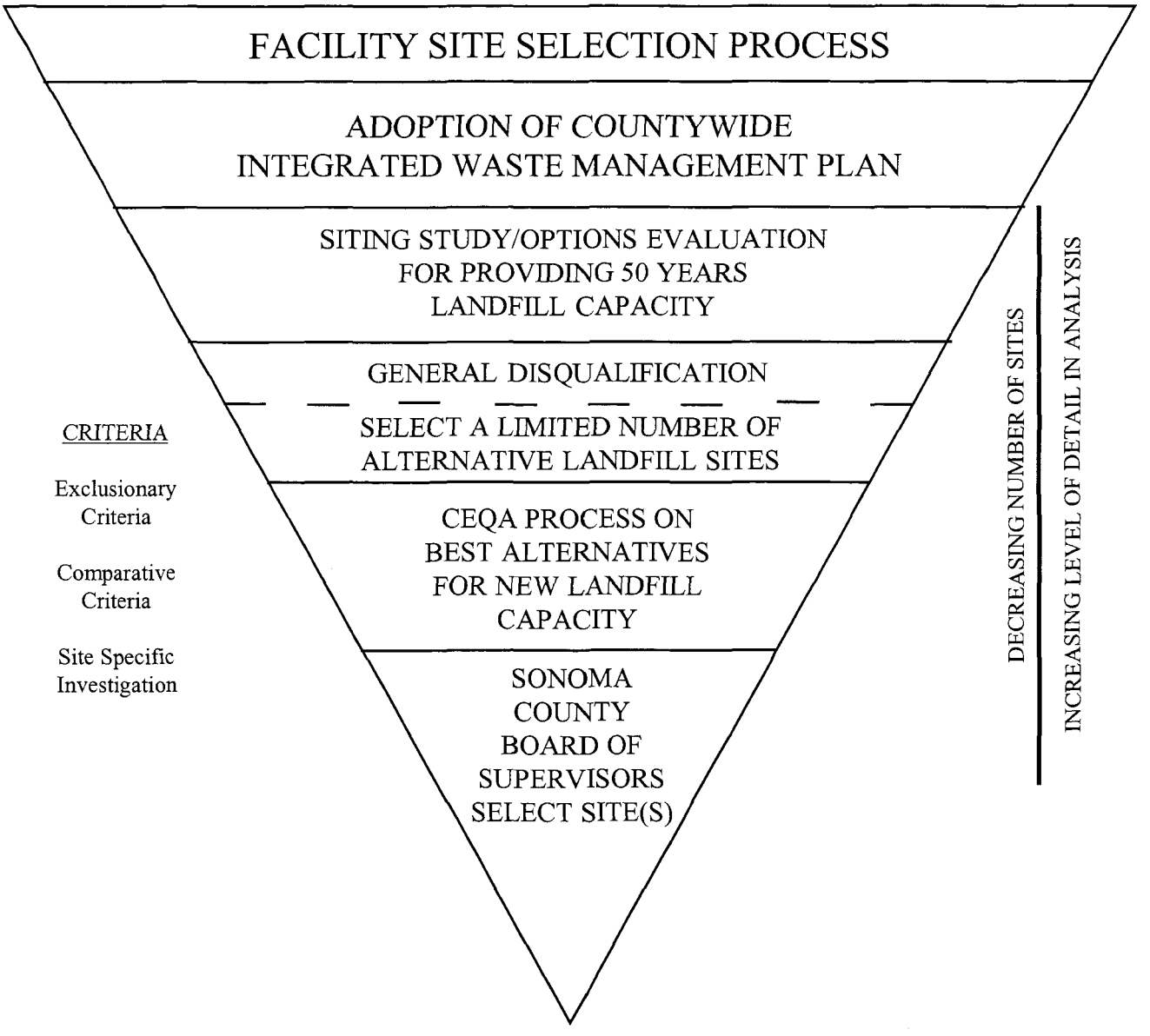
with numeric values and modified, as needed, in the Siting Study prior to the evaluation of any proposed landfill site.

The comparative criteria, further refined into environmental, community, economic, engineering, and administrative categories, are described in more detail in the following discussion. The accompanying framework for identification of additional landfill capacity (Figure 6-2) graphically depicts the process envisioned for siting landfill capacity in Sonoma County.

6.4.2.1 Exclusionary Criteria

The first set of criteria are the exclusionary criteria. These criteria identify constraints that make the siting of a landfill so difficult that further analysis or evaluation would be unproductive. The criteria are useful in the initial screening to identify general areas of the county which may have potentially suitable sites. The following list contains the exclusionary criteria selected by Sonoma County or required by local, state, and federal laws and regulations. Figure 6-3 is a map showing the areas of the county remaining after application of the exclusionary criteria which are reflected as the shaded portions of the county.

- Lands within 10,000 feet of a runway used by jet aircraft, or 5,000 feet of a runway used by propeller-driven aircraft
- Lands within a FEMA designated 100-year flood plain
- Lands restricted by State and Federal regulatory requirements over earthquake fault zones.
- Lands within channels of USGS designated perennial streams
- Lands outside of Sonoma County
- Lands within the urban boundary of an incorporated city
- Lands within designated Community Separators
- Lands within designated Critical Habitat
- Lands within the Coastal Zone
- Lands designated with the following land use in the County General Plan
    - Urban Residential
    - Rural Residential
    - General or Limited Commercial
    - Recreation and Visitor Serving Commercial
    - General and Limited Industrial
    - Public/Quasi-Public (unless the designation is applied to accommodate a landfill)



FRAMEWORK FOR IDENTIFICATION OF ADDITIONAL LANDFILL CAPACITY	FIGURE 6-2

Figure 6-3: Exclusionary Criteria for Potential Landfill Sites

Pacific Ocean

N

Legend

- Airfield Buffer
- Stream Buffer
- Fema Flood Zone
- Cities
- Coastal Buffer

0 5 10 20

Miles

October 15, 2003

6.4.2.2 Comparative Criteria

The comparative criteria would be used to evaluate sites which are not located in exclusionary areas and that are suitable based on their physical attributes. These criteria would be used to evaluate across a wide spectrum of environmental, engineering, socio-political, and economic factors. These Comparative Criteria, with the Exclusionary Criteria, form the basis of the Siting Study. During the Siting Study these Comparative Criteria will be modified, new criteria added, and a ranking and weighting system developed.

Environmental

1.	Groundwater Flow System:	Objective RC-3.1 of the County General Plan states that watersheds and groundwater basins should be preserved by avoiding the placement of potential pollution sources in areas with high percolation rates. Therefore, sites located outside of recharge areas are the most desirable for landfill construction and operation.
2.	Proximity to Surface Water:	The proximity of a site to surface water and existing or beneficial uses of the surface water is of obvious importance. A candidate site which is far from a surface water body would be a highly rated site. A poorly rated site would be one that is near a surface water body.
3.	Depth to Groundwater:	The water table depth in the underlying sediments is important for both landfill operational considerations (such as placement of groundwater monitoring wells) and also from a standpoint of potential groundwater contamination.
4.	Existence of Wetlands:	Federal regulations for siting landfills (40 CFR 258) prohibit the location of landfills in wetlands unless the construction and operation of the landfill will not cause or contribute to violations of state water quality standards, violate toxic effluent standards under the Clean Water Act, violate the Marine Protection Act, jeopardize endangered species, or cause degradation of wetlands. Data sources to be evaluated will include those from the California Department of Fish and Game, California Native Plant Society, and the Corps of Engineers.
5.	Air Quality - Non-Attainment for Particulates:	This criterion will measure whether an area is in attainment for PM_{10} and ozone. A site in a non-attainment area would be less desirable than one in an attainment or unclassified area. Wind direction and distance to nearby sensitive receptors will also be considered in evaluating this criterion.
6.	Proximity to Threatened or Endangered Species - Animals:	In accordance with federal regulations the operation of a landfill at a site which would cause or contribute to the taking of any endangered species of plant, fish, or wildlife could constitute a fatal flaw. Similarly, the facility or operation cannot result in the destruction of critical habitat of endangered or threatened species. Data sources to be evaluated will include the State Department of Fish and Game, Federal Fish and Wildlife Service, and General Plan Open Space Element, Critical Habitat designations.

7.	Proximity to Threatened and Endangered Species - Plants:	This criterion is similar to the criterion above, except that it covers threatened or endangered plant species. Data sources to be evaluated will include the State Department of Fish and Game, California Native Plant Society, and General Plan Open Space Element, Critical Habitat designations.

Community

1.	Population Density Near Site:	This criterion is used as one measure of the proposed landfill's potential impact on people.
2.	Compatibility with Adjacent Land Uses:	Existing and proposed land uses are considered. Also considered is the site's potential for impact mitigation.
3.	Residents Along Access Routes/Road Safety:	This criterion reflects the number of residents being affected by haul traffic to a potential site.
4.	Schools and Hospitals Along Access Routes:	This criterion measures the impact of solid waste truck haul traffic, including noise, traffic congestion, and safety considerations, on sensitive receptors such as schools and hospitals.
5.	Proximity to Parks or Resource Lands:	Landfills would generally be excluded from locations within a Federal Recreation Area, State Park, Department of Natural Resources – Natural Resources Conservation Area, County Park, etc. Sites valued for their pristine environment or held in reserve for use at a future time and are incompatible with a landfill.
6.	Presence of Cultural, Historic, or Archaeological Resources:	Goal OS-9 of the County General Plan is to "preserve significant archaeological or historical sites which represent the ethnic, cultural and economic groups that have lived and worked in Sonoma County" and to "preserve unique or historically significant heritage or landmark trees." These resources include sites on the National and State Historic Register, areas identified as being of archaeological importance to Native Americans, and those sites/buildings/trees that have been identified as significant by the County Landmarks Commission.
7.	Visual Impacts of Site:	The magnitude of the landfill visual impacts relates to the location and topography of the site and to the availability of buffers to screen the operations. Aesthetics impacts are also important to consider.
8.	Proximity to Major Transportation Corridors:	This criterion considers the effects of landfill traffic on local roads, as well as the costs of hauling waste to a landfill. Those sites that are close to major transportation corridors will be less likely to impact local roads and residents (traffic congestion, noise, safety concerns, etc.) than sites located farther from major roads. Those sites closer to major transportation corridors would require less fuel to reach; this would help meet the county's goal of conserving energy.

Engineering

1. Soil Suitability: A more highly rated site would have both fine- and coarse-grained soils which could provide bottom soil liner, final soil cover and intermittent soil cover during operation. The use of on-site soils can reduce the cost of landfill construction and the impacts of importing off-site materials.

2. Geology: This criterion is a measure of the permeability/transmissivity of materials underlying a proposed site. The geologic materials that have been identified in Sonoma County can be generally divided up into two groups: (1) unconsolidated deposits and (2) semi-consolidated to consolidated rocks. The permeability and transmissivity of materials within these general groups can be an indication of site security in terms of leachate and gas containment and as an indication of barriers to groundwater movement.

3. Fault Areas: Proximity to active fault areas is an important criteria in terms of maintaining the integrity of the landfill control structures (such as leachate and gas collection) and the engineering measures that would be needed to prevent damage from seismic movements. State and Federal regulatory requirements for earthquake fault zones will be followed to evaluate potential landfill sites.

4. Unstable Areas: Locating landfills on sites that have unstable geological conditions is generally undesirable. Unstable areas are defined as those locations that are susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of those landfill structural components that are responsible for preventing releases to the environment (such as leachate or gas control structures). Criteria categories are:

   - Category A – Areas of greatest relative stability due to low slope inclination – dominantly less than 15%.
   - Category B – Areas of relatively stable rock and soil units on slopes greater than 15% containing few landslides
   - Category Bf – Locally level areas within hilly terrain - may be underlain or bounded by unstable or potentially unstable rock materials
   - Category C – Areas of relatively unstable rock and soil units on slopes greater than 15% containing abundant landslides
   - Landslide Area – Areas of lowest relative slope stability; failure and downslope movement of rock and soil has occurred or may occur

5.	Flood Hazard, 100-year Flood Plains:	Federal regulations (40 CFR 258) prohibit the placement of a landfill within a 100-year flood plain. The hazard from floods is due primarily to potential erosion, washout of waste from the site and restrictions on reducing the water storage capacity of a watershed basin.
6.	Seismic Impact Zones:	Federal regulations for siting landfills (40 CFR 258) prohibit development of a landfill in seismic impact zones unless it can be proven that all containment structures (leachate collection system, surface water collection system, etc.) have been designed to resist the maximum horizontal acceleration of the earth beneath the site.
7.	Annual Precipitation:	This criterion measures how much water will need to be contained on the landfill site, both on the surface of the landfill property as runoff and within the landfill as leachate.
8.	Erosion Potential:	Soil characteristics, slope, and surrounding topography may create conditions that are particularly susceptible to erosion (from rainfall). Erosion results in stormwater runoff having high levels of sediment with the potential for impacting water quality in surface waters. Extensive and costly engineering controls may be required to prevent stormwater runoff, and siltation and sedimentation impacts to nearby surface water.

Administrative

1.	Site Capacity/Site Life:	Sonoma County has established a policy to provide landfill capacity.
2.	Agricultural Land:	The General Plan recognizes the importance of agricultural land in the county stating that lands containing agricultural and productive woodland soils should be preserved, and conversion of this land to incompatible residential, commercial, or industrial uses be avoided.
3.	Proximity to Existing Uses of Groundwater:	Landfill operations have the potential for contamination of groundwater. Therefore, it is important to protect beneficial uses as much as possible by choosing sites located further from these areas.
4.	Airport Safety:	Federal Aviation Administration Order 5200.5 prohibits the development of landfills within 5,000 feet from a runway used by propeller-driven aircraft and 10,000 from a runway used by jet aircraft.
5.	Site Parcel Assemblage:	This category compares the various sites as to the ease (availability of information, communications, ease of acquisitions and mitigation) with which the required parcels for the landfill site could be assembled.
6.	Ownership/Acquisition Potential:	This category compares sites based upon the potential ease with which a selected property might be acquired.

Economic

1.	Total Operating Costs:	A number of elements would be combined for the total operation costs, including: (1) landfill operation costs (cost of daily and intermediate cover, and operation and maintenance of all landfill access roads and environmental monitoring systems), +(2) leachate treatment and control, (3) gas control, and (4) post-closure costs (maintaining the final cover, surface water management systems, gas control facilities, environmental monitoring facilities and the leachate treatment facilities). For all of these elements, planning level costs for labor, equipment and materials should be estimated and daily operational costs should be considered for a 50-year site life period.
2.	Site Development Costs:	These are the capital expenditures at the site including the cost of building the landfill, equipment to begin operations, and other costs of opening a landfill.
3.	Transportation Costs:	Based upon engineering and economic analysis, the cost of solid waste transport to each site would be estimated. The estimate for each site would include operation and maintenance costs incurred by the County, municipal haulers, and private/ commercial haulers for transport and transfer of solid waste.
4.	Parcel Costs:	Using the assessed valuations maintained by the county and review of other county records, the purchase price for each potential site will be estimated.

6.4.3 Procedural Mechanisms To Assure Use Of Criteria In Siting Solid Waste Disposal Facilities

The preliminary Siting Criteria were adopted by the County and incorporated Cities when they approved the 1996 CoIWMP. In adopting the Siting Criteria in the 2003 CoIWMP, the County and Cities confirmed the procedural mechanisms described here that will be used for siting a new landfill. These procedural mechanisms include a Siting Study, which will refine the siting criteria and provide weighting and ranking factors for the comparative siting criteria with input from the LTF and public. These siting criteria will be adopted by the Board of Supervisors at a public hearing before initiation of the search for a new landfill site. The Siting Criteria will be applied as shown in Figure 6-1 and discussed in this section to identify the sites equally suitable from the technical perspective as a prelude to the full CEQA analysis. Once into the CEQA process, the Siting Criteria may also have a role in identification and evaluation of alternatives to the proposed project.

6.4.4 Local Jurisdiction Compliance Agreements

Appendix F of the CoIWMP contains the local resolutions approved by all jurisdictions in the county specifying their commitment to apply all siting criteria and procedures established in the Siting Element.

6.5 PROPOSED SOLID WASTE FACILITIES

With further expansion, disposal capacity at the existing Central Landfill is available to last at least through the end of the medium-term planning period, 2018, assuming full implementation of all selected diversion programs. Therefore, Sonoma County's immediate disposal capacity strategy to achieve the goals and objectives is the expansion of the Central Landfill and subsequently identifying another disposal site as recommended by the Analysis.

The County has established a goal of identifying and developing 50 years of landfill capacity. Following the completion of the 2003 CoIWMP, and once additional capacity at the Central Landfill is permitted, the County plans to begin a Siting Study to identify possible new disposal sites. The public's input into the Siting Study is expected to be instrumental in applying the siting criteria, evaluating the options for providing 50-years' capacity, evaluating economic considerations of each option, and identifying key issues that need to be resolved. Several public workshops will be conducted to facilitate receiving input from the public prior to the hearings. The goal of the Siting Study would be to produce a list of sites from which the Board of Supervisors may choose one or more landfill sites. Prior to approval of any new or expanded disposal site, the County will conduct all analyses necessary under CEQA to evaluate the potential significant environmental impacts of the County's options, including consideration of alternative sites.

6.6 CONSISTENCY WITH COUNTY GENERAL PLAN

Expansion of the Central Landfill to provide disposal capacity through the year 2018 is consistent with Section LU-4d of the Land Use Element and Section 3.4 of the Public Facilities Element of the current County General Plan.

6.6.1 Sites Reserved For Solid Waste Disposal or Transformation Facilities

The Central Disposal Site is currently the only site with a landfill reserved for solid waste disposal in Sonoma County.

6.6.2 Sites Tentatively Reserved For Solid Waste Disposal or Transformation Facilities

There are no sites tentatively reserved for solid waste disposal or transformation facilities in Sonoma County.

6.7 STRATEGIES FOR DISPOSING OF SOLID WASTE IN EXCESS OF CAPACITY WHEN NEW OR EXPANDED SITES ARE NOT AVAILABLE

Sonoma County will have sufficient disposal capacity to last in excess of 15 years at the expanded Central Disposal Site. Therefore, this section will be addressed in future five-year reviews when it is clear that the Central Disposal Site has reached full capacity, and there are no new sites available for establishing new disposal or transformation capacity.

6.8 SITING ELEMENT IMPLEMENTATION

6.8.1 Responsible Agencies

Since all solid waste facilities in Sonoma County are owned by the County of Sonoma, the Board of Supervisors is the responsible agency for implementing the Siting Element. DTPW will implement the Board's policies by working with the SCWMA, PRMD, LEA, and LTF.

6.8.2 Implementation Tasks

Sonoma County has established a policy to provide landfill capacity for county residents through the year 2050. The following task list summarizes the process for achieving the goal of 50-years' disposal capacity.

Task 1. Siting Study/Options Evaluations

a. Siting Study will include the Board of Supervisors adopting the refined Siting Criteria and an environmental and economic consideration of various long-term disposal options.

b. Screen county for candidate sites and request public nomination of sites.

c. Apply first round siting criteria to candidate sites, develop ranking, and review criteria application.

d. Complete first round ranking of sites. It is expected that 8 to 13 sites may be identified at this step.

e. Second round of screening of sites with field confirmation of significant siting criteria.

f. Rank sites and recommend 3 to 5 sites as final candidates in report to Board of Supervisors. Board accepts report and gives direction to staff to proceed with preliminary design and CEQA.

Task 2. Preliminary Design

a. Issue RFP, hold interviews and execute contract for investigation of the final candidate sites. Work will include geotechnical and hydrogeotechnical research and biological reconnaissance of the sites.

b. Prepare preliminary design including geotechnical and hydrogeotechnical investigation and biological reconnaissance.

c. Review of preliminary design report and recommendation for selected site.

d. Prepare final preliminary design report and recommendation for selected site.

Task 3. CEQA

a. Issue RFP, hold interviews and execute contract for preparation of project level EIR for candidate site(s) and selected alternatives.

b. Prepare Initial Study, present to the Environmental Review Committee, issue Notice of Preparation (NOP), meet with regulatory agencies, and hold public meetings for input for the EIR.

c. Prepare Draft EIR (DEIR).

d. Issue and circulate Notice of Completion (NOC) to open public review period.

e. Planning Commission holds hearings on DEIR and Final EIR (FEIR).

f. Board of Supervisors certifies FEIR and adopts the project selecting the best site.

Task 4. Final Design

a. Prepare final design plans and specifications for first phase improvements.

b. Bid first phase improvements and award contract.

c. Complete first phase improvements.

Task 5. General Plan Amendment

To run concurrent with design and construction. Process general plan amendment to have scheduled site zoned Public/Quasi-Public or other appropriate zoning. Includes hearing before the Planning Commission and Board of Supervisors.

Task 6. Permits

To run concurrent with design and construction. Permitting agencies include the California Integrated Waste Management Board (CIWMB), Regional Water Quality Control Board, Air Quality Management District, and Sonoma County PRMD. Documents submitted to the CIWMB will include a Joint Technical Document, including a Report of Disposal Site Information, Preliminary Closure Plan, and Preliminary Post Closure Maintenance Plan.

6.8.3 Implementation Schedule

Exhibit 6 of the Sonoma County Solid Waste Management Alternatives Analysis Project Final Report (December, 2000) (Appendix B) contains a general timeline for implementation of those projects necessary to provide 50 years of disposal capacity.

6.8.4 Revenue Sources

Implementation of the Sonoma County Siting Element and all facility siting programs and procedures will be funded through the County's Solid Waste Enterprise Fund. All revenues for this fund are derived from tipping fees levied at County-owned solid waste facilities.