REACHING THE LIMIT

AN INTERIM REPORT ON LANDFILL CAPACITY IN CALIFORNIA

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A COMPILATION OF COUNTY LOCAL TASK FORCE FINDINGS AS OF JANUARY 1, 1990

APRIL 29, 1992

STATE OF CALIFORNIA

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Trucks in line at landfill gate: 5:30 am, Puente Hills, California.

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EXECUTIVE SUMMARY

PURPOSE OF REPORT

The California Integrated Waste Management Act of 1989 (Act), as specified in Public Resources Code (PRC) Section 41701(b), requires that each county prepare a Countywide Siting Element to be part of a Countywide Integrated Waste Management Plan. This Element shall include "an estimate of the total transformation or disposal capacity in cubic yards that will be needed for a 15-year period to safely handle solid wastes generated within the county that cannot be reduced, recycled, or composted."

This report ***begins*** an effort to examine the adequacy of remaining permitted landfill disposal capacity in California, and the problems associated with the development of additional capacity to dispose of the waste which cannot be reduced, recycled, or composted. This initial effort will be continued in 1992 and 1993 under a contract to be awarded by the California Integrated Waste Management Board (Board).

This report identifies those areas of the state which may now have a critical shortage of remaining capacity. It also provides a preliminary indication of the extent of need for permitted landfill disposal capacity, in each county and for the state as a whole. These estimates are based on each county's own assessment of its remaining capacity.

As a ***snapshot*** of remaining permitted landfill disposal capacity in each county as of January 1, 1990, this report provides a preliminary benchmark which coincides with the beginning of the Countywide Integrated Waste Management planning process. This report will also serve as the foundation for the Board's more extensive future analyses conducted under contract and its long-term monitoring of landfill capacity.

SCOPE OF REPORT

At the request of the Board's Policy, Research and Technical Assistance Committee, the Board approved a workplan on October 30, 1991, "to develop an ***interim*** report to document the remaining countywide permitted disposal capacity, using ***. . . January 1, 1990 information supplied by (each) County Local Task Force (LTF)"*** (Agenda Item #18, October 30, 1991 Board Meeting Agenda).

To quickly estimate the extent of need for landfill capacity throughout the state, the scope of this report, as described in the approved workplan, was primarily limited to the existing county data that were available in Board files. The data compiled and presented in this report are the most current data available for all the counties in California. These data are based upon "official findings" of remaining permitted landfill disposal capacity, in years, as required of each County Local Task Force by the California Integrated Waste Management Act of 1989.

This report represents an interim view of landfill disposal capacity in that a more extensive data-gathering and analysis effort is currently being initiated by the Board. The Board's pending 1992/1993 Landfill Disposal Capacity Contract will refine and verify the data, findings, and conclusions presented here. It will also discuss problems that delay or prevent the development of new landfill capacity and strategies for overcoming these problems. Furthermore, as acknowledged in the adopted

workplan for this report, "a more detailed report" will be possible once Countywide Integrated Waste Management Plans are submitted by each county.

Methodology and Limitations

This report simply compiles, organizes, and totals the "official findings" of remaining permitted landfill disposal capacity submitted to the Board by each county as of January 1, 1990. It is important to note that this report does not verify the validity or accuracy of these findings. It also does not compare these data with information in the Board's Solid Waste Information System (SWIS). These issues will be addressed in the 1992/1993 contract mentioned previously.

The accuracy of the data submitted by the counties and presented in this report depends upon the methodologies employed by each county. Counties differ in many ways (e.g., in terms of policy, programs, operations, technology, climate, demographics, economics, environment, geography, politics, and social structure). It is, therefore, not surprising that the methodologies used by counties to determine remaining permitted landfill disposal capacity as of January 1, 1990, were different in many cases. Counties were not required to characterize methodologies for the Board. Therefore, this report does not document every methodology used in the estimation of remaining capacity. However, examples of some of the methodologies employed by counties are illustrated in the introduction to this report.

Although the accuracy of the data submitted by counties has not been verified, the data are useful in identifying those counties that have indicated a potentially critical shortage of remaining permitted landfill disposal capacity. It is also useful in gaining a sense of the magnitude of remaining permitted capacity, statewide. As additional information is received by the Board, in the form of final Source Reduction and Recycling Elements, Countywide Siting Elements, and Countywide Integrated Waste Management Plans, the estimates of remaining permitted landfill disposal capacity can be refined.

Summary of Findings

Statewide

Daily Disposal

The amount of solid waste disposed in California each day was 7.9 lbs. per person as of January 1, 1990. This compares with 7.4 lbs. disposed as of June, 1985, according to the Board report, "A Comprehensive Plan for Management of Nonhazardous Waste in California." The available data, however, provide no evidence to project a future trend in per capita waste disposal.

Annual Disposal

The total amount of solid waste disposed annually in California as of January 1, 1990, was approximately 42.5 million tons. From January 1, 1987, to January 1, 1990, annual disposal grew by almost 5.5 million tons or 9.18 million cubic yards. This was about nine percent more than expected in the previous Board report of landfill capacity entitled, "Report on Remaining Disposal Capacities for Counties and the State as of January 1987."

Remaining Permitted Landfill Disposal Capacity

As reported by the counties, the total amount of remaining permitted landfill disposal capacity in California as of January 1, 1990, was 669,060,000 tons or 1.12 billion cubic yards. This compares with almost 587 million tons or 985 million cubic yards, as of January 1, 1987, according to the Board report, "Report on Remaining Disposal Capacities for Counties and the State as of January 1987." In three years, estimated capacity increased 82 million tons or 138 million cubic yards.

By Region

Remaining Permitted Landfill Disposal Capacity

- The need for landfill capacity as of January 1, 1990, affected both urban and rural regions, and was not an isolated phenomenon (see Table 1 on page viii).

- Remaining landfill capacity was distributed regionally as shown in Figure 1 (see page ix).

By County

Remaining Permitted Landfill Disposal Capacity

- There were ten counties that reported less than five years of permitted landfill disposal capacity as of January 1, 1990 (see Table 2 on page x). This was 18 percent of the state's counties.
- There was only one county that reported five to eight years of remaining capacity as of January 1, 1990 (see Table 2).
- There were 18 counties that reported 9 to 15 years of remaining capacity as of January 1, 1990 (see Table 2). This represents 31 percent of the state's counties.
- In total, 29 counties or 50 percent of the state's counties reported 15 years or less of capacity as of January 1, 1990 (see Table 2).
- About 70 percent of the residents of California lived in a county reporting 15 years or less of permitted landfill disposal capacity as of January 1, 1990 (see Figure 2 on page ix).

Summary of Conclusions

The following are preliminary conclusions based upon the data provided by counties as required by the California Integrated Waste Management Act of 1989.

- Counties representing approximately 70 percent of the state's population indicated they will be facing a landfill capacity shortage within the next 15 years, if conditions as of January 1, 1990, remain the same. More importantly, almost 40 percent of the state's population resides in ten counties that indicated less than five years remaining landfill disposal capacity.

By applying specific assumptions about the achievement of diversion goals and the growth rate of waste disposal, the following preliminary conclusions are suggested:

- Remaining permitted landfill disposal capacity statewide, as of January 1, 1990, might be approximately 13 to 18 years.
- Achievement of diversion goals as required by the Act may extend California's remaining landfill capacity as of January 1, 1990, by approximately five years.

Remaining Permitted Landfill Disposal Capacity by Region

Region	Population	Percent of State Population	Percent of Statewide Remaining Capacity
Region 1 – Northern California	2,298,680	7.8%	10%
Region 2 – Bay Area	5,997,200	20.0%	13%
Region 3 – Central California	4,177,250	14.2%	19%
Region 4 – Southern California	17,027,100	58.0%	58%

TABLE 1: REMAINING PERMITTED LANDFILL DISPOSAL CAPACITY OF COUNTIES BY REGION AS OF JANUARY 1, 1990

REGION 1: NORTHERN CALIFORNIA

Alpine	— [1]
Amador	32 years
Butte	15 years
Colusa	100 years
Del Norte	2 years
El Dorado	5 years
Glenn	32 years
Humboldt	9 years
Lake	45 years
Lassen	20 years
Mendocino	9 years
Modoc	19 years
Nevada	0 years
Placer	11 years
Plumas	13 years
Sacramento	11 years
Shasta	30 years
Sierra	15 years
Siskiyou	23 years
Sutter/Yuba	12 years
Tehama	30 years
Trinity	36 years
Yolo	40 years

REGION 2: BAY AREA

Alameda	15 years
Contra Costa	3 years
Marin	12 years
Napa	4 years
San Francisco	— [1]
San Mateo	4 years
Santa Clara	29 years
Solano	30 years
Sonoma	13 years

REGION 3: CENTRAL CALIFORNIA

Calaveras	43 years
Fresno	36 years
Inyo	17 years
Kern	9 years
Kings	2 years
Madera	1 years
Mariposa	126 years
Merced	4 years
Mono	55 years
Monterey	50 years
San Benito	18 years
San Joaquin	25 years
San Luis Obispo	10 years
Santa Barbara	30 years
Santa Cruz	12 years
Stanislaus	9 years
Tulare	30 years
Tuolumne	3 years

REGION 4: SOUTHERN CALIFORNIA

Imperial	35 years
Los Angeles	4 years
Orange	20 years
Riverside	21 years
San Bernardino	11 years
San Diego	10 years
Ventura	11 years

[1] 100% of Waste Exported

Figure 1: Remaining Landfill Capacity in Tons by Region as of January 1, 1990

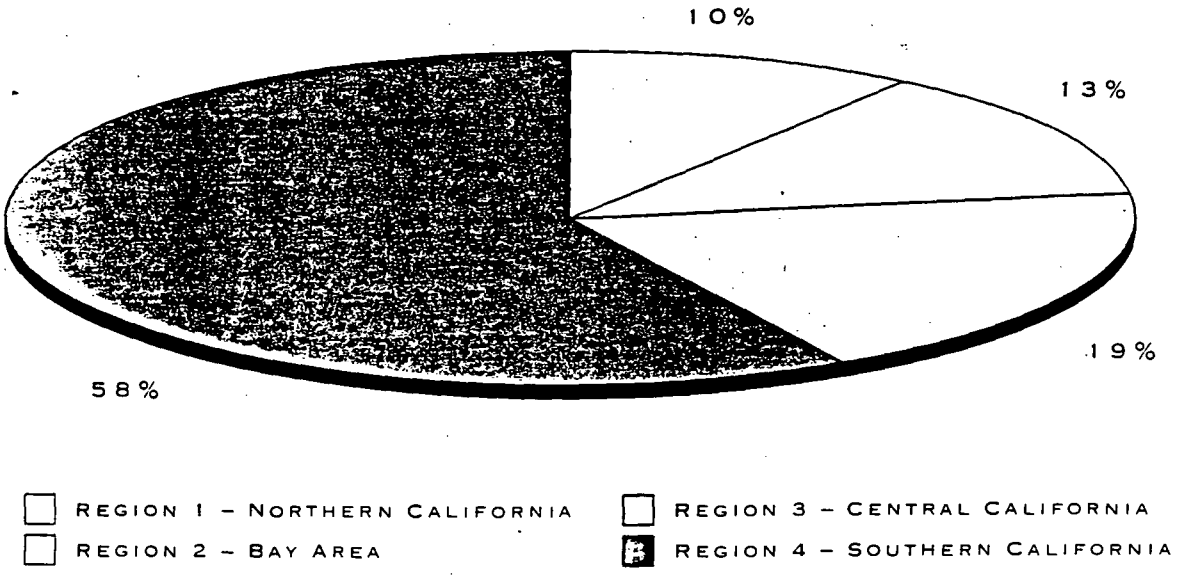


Figure 2: Percentage of California's Population by Remaining Landfill Capacity as of January 1, 1990

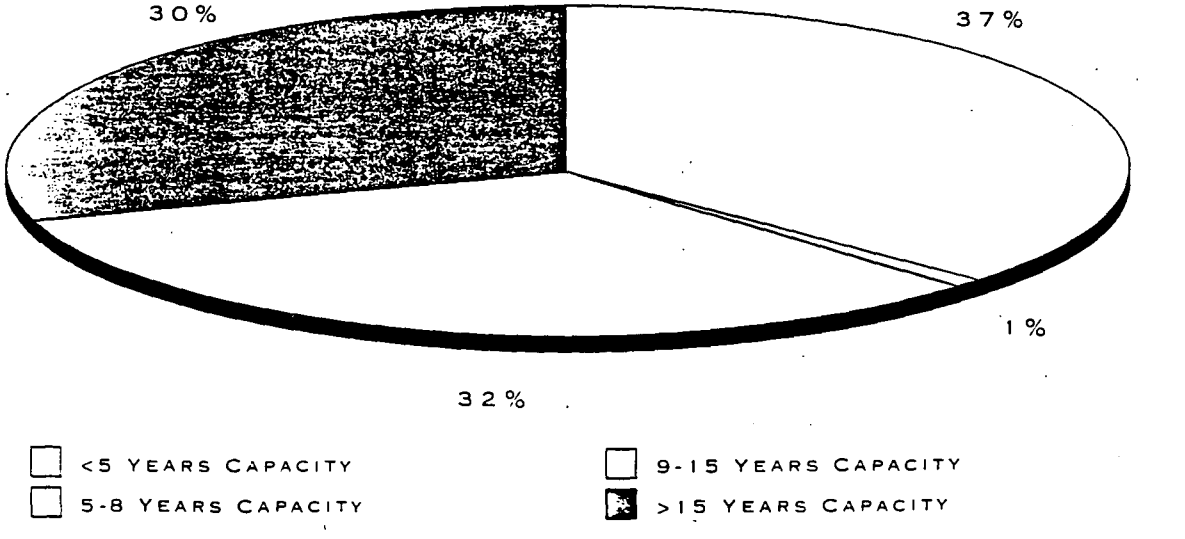


TABLE 2: RANKING OF COUNTIES WITH 15 YEARS OR LESS REMAINING CAPACITY AS OF JANUARY 1, 1990

		ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
COUNTY	1990 POPULATION	TONS	CUBIC YARDS	TONS	CUBIC YDS	YEARS REMAIN[1]
Nevada	77,500	55,000	110,000	421,000	842,000	0
Madera	86,400	42,000	70,000	42,000	70,000	1
Del Norte	21,650	NA	NA	NA	NA	2
Kings	100,800	81,000	203,000	84,000	414,000	2
Contra Costa	797,600	308,000	615,000	914,000	1,800,000	3
Tuolumne	48,000	64,000	107,000	164,000	272,000	3
Los Angeles	8,832,500	13,500,000	22,500,000	100,000,000	165,000,000	4
Merced	176,300	198,000	450,000	1,300,000	2,800,000	4
Napa	109,900	244,000	405,000	1,100,000	1,800,000	4
San Mateo	647,400	886,000	984,000	3,500,000	3,900,000	4
El Dorado	123,900	167,000	334,000	550,000	1,100,000	5
Humboldt	118,400	133,800	223,000	1,100,000	1,700,000	9
Kern	537,300	938,000	1,500,000	8,200,000	13,800,000	9
Mendocino	79,700	244,000	364,000	2,000,000	3,000,000	9
Stanislaus	365,100	386,000	643,000	4,000,000	6,900,000	9
San Diego	2,480,100	4,000,000	6,700,000	43,600,000	72,700,000	10
San Luis Obispo	215,000	340,000	560,000	3,500,000	5,800,000	10
Placer	170,100	196,000	356,000	7,500,000	13,400,000	11
Sacramento	1,031,500	1,350,000	2,250,000	10,950,000	17,520,000	11
San Bernardino	1,396,600	2,000,000	3,400,000	23,400,000	39,000,000	11
Ventura	666,800	1,270,000	2,110,000	14,000,000	23,000,000	11
Marin	229,900	255,000	638,000	3,900,000	8,200,000	12
Santa Cruz	228,700	380,000	760,000	5,000,000	10,600,000	12
Sutter/Yuba	63,700	115,000	192,000	1,600,000	2,700,000	12
Plumas	19,600	12,000	33,000	154,000	441,000	13
Sonoma	384,700	536,700	891,000	5,790,000	9,649,000	13
Alameda	1,274,700	3,000,000	4,000,000	32,400,000	45,700,000	15
Butte	180,400	142,000	237,000	3,200,000	5,300,000	15
Sierra	3,280	11,300	22,500	171,000	342,000	15
Totals	20,467,530	30,854,800	50,657,500	278,540,000	457,750,000	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variation among county methodologies (see Pages 2 & 3, Methodologies & Limitations).

located in Article 8.0 (Procedures for Preparing and Revising Countywide Siting Elements and Countywide Integrated Waste Management Plans), specifies the role of the Local Task Force. It requires each LTF to determine and verify the remaining permitted combined disposal capacity of existing solid waste facilities in its county. Such findings were to be calculated as of January 1, 1990, the effective date of the Act.

This report represents an interim view of landfill capacity in that a more extensive data-gathering and analysis effort is currently being initiated by the Board. The Board's 1992/1993 Landfill Disposal Capacity Contract will refine and verify the data, findings, and conclusions presented here. It will also discuss problems that delay or prevent the development of new landfill capacity and strategies for overcoming these problems. Furthermore, as acknowledged in the adopted workplan for this report, "a more detailed report" will be possible once Countywide Integrated Waste Management Plans are submitted by each county.

At the request of the Policy, Research and Technical Assistance Committee, the Board approved a workplan on October 30, 1991, "to develop an *interim* report to present remaining countywide permitted disposal capacity, using . . . ***January 1, 1990 information supplied by (each) County Local Task Force (LTF)***" (Agenda Item #18, October 30, 1991, Board Meeting Agenda). This report was prepared pursuant to the approved workplan.

METHODOLOGY AND LIMITATIONS

Pursuant to its responsibility to oversee the development and implementation of local integrated waste management plans, the California Integrated Waste Management Board requested each county to provide information about the establishment of their integrated waste management planning process. Among other requirements, each county Local Task Force was required to submit a written statement to the Board documenting in years each county's remaining permitted combined disposal capacity.

To facilitate county compliance with this requirement, the Board sent each county a standard letter requesting a determination and verification of the county's remaining permitted combined landfill disposal capacity, in years, as of January 1, 1990 (see Appendix A). In response, each county submitted an "official finding" of remaining capacity, in years. Although not required, some counties provided additional information on capacity.

If additional information was not voluntarily submitted by a county or was not readily available in the existing Board files for the county, gaps were filled by calling county officials or converting existing county data into the desired form. For example, if a county indicated its annual disposal in tons, but did not provide a figure for annual disposal in cubic yards, the annual disposal in tons was converted to cubic yards by using the county's compaction rate or a standard conversion factor of 1200 pounds per cubic yard.

To catalog this information for easy reference, tables were designed that list annual disposal in tons and cubic yards and remaining permitted disposal capacity in tons, cubic yards, and years. Table 3 (see page 6) summarizes data for each county and for the state as a whole. It is important to note that this table, and other similar tables throughout the report, were designed to catalog data rather than provide readers with all of the information necessary to compute a county's remaining capacity in years.

In fact, remaining capacity in years cannot be calculated by simply dividing the amount of permitted landfill space (i.e., remaining permitted capacity) by the amount of waste disposed annually (i.e., annual disposal). Many other factors influence a county's determination of remaining capacity in years (e.g., assumptions about growth in the amount of waste disposed or the amount of waste diverted). The specific methodologies used by counties are not documented in this report because the counties were not required to provide this information to the Board.

The accuracy of the data submitted by the counties and presented in this report depends upon the methodologies employed by each county. It is important to note that this report does ***not*** verify the validity or accuracy of the data submitted by counties. It also does ***not*** verify county data by comparing it with the Board's Solid Waste Information System (SWIS).

Counties differ in many ways (e.g., in terms of policy, programs, operations, technology, climate, demographics, economics, environment, geography, politics, and social structure). It is, therefore, not surprising that the methodologies used by counties to determine remaining permitted landfill disposal capacity as of January 1, 1990, were different in many cases. Although all of the methodologies employed by the counties are not documented here, some examples of the way in which counties conveyed findings to the Board are illustrated below.

County of Lake

The County of Lake provided the following information about how it estimated the "Life Expectancy" of its landfill. The remaining landfill capacity of its landfill was based upon:

a. The "design capacity calculated in the Development Plan."

b. "Measured refuse volume data - 1985, 1986 and 1987."

c. "Assumed annual demand increase of 4.1%, the same as the U.S. Department of Commerce forecasted (sic) annual Lake County population growth rate of 4.1%."

d. Aerial Photogrammetry to determine the calculations of waste volume disposed during the year and the capacity remaining at year end.

County of Los Angeles

A letter dated March 28, 1991, was submitted to the Executive Director of the Board. In that letter, the County indicated that its landfill capacity would be "mathematically exhausted" by the year 1999. According to the County, this capacity assumed a 1990 average disposal rate and operation of landfills an average of six days per week. The County, however, cautioned that this figure was misleading, since a number of landfills were operating under restrictions "which significantly impact their operations." Based upon the restrictions in effect, and assuming a diversion rate of 25 percent, the letter estimated that Los Angeles County "will experience daily disposal capacity shortfalls within five years."

County of Santa Clara

The County of Santa Clara provided the following information to the Board in a letter dated September 12, 1990. The County indicated that the estimate of remaining capacity in years was "taken from the 1989 County Solid Waste Management Plan. It allows for a 1.1 percent annual growth rate (based upon Association of Bay Area Governments population estimates for the San Francisco Bay Area) and a 25 percent reduction in the waste stream by 1995. It does not include expansions" at several landfills. "Nor does it take into account the state-mandated goal to reduce the waste stream by 50 percent by the year 2000."

County of San Joaquin

The County of San Joaquin divided the total annual tonnage disposed in 1989 for its six landfills by the capacity remaining in tons for those same landfills to obtain an average "current capacity for the county" of 25.6 years.

Lastly, it is important to note that remaining permitted capacity for Alpine and San Francisco Counties has been omitted from the report because both counties export all of their waste. The Alpine County Local Task Force finding indicated that the County had more than eight years of remaining capacity. San Francisco County was not required by the California Integrated Waste Management Act to establish a Local Task Force. It was under no obligation, therefore, to prepare findings of remaining capacity for the Board. Alameda County, however, includes the capacity that is used and needed by San Francisco County.

DEFINITIONS

The following terms are used throughout this report when discussing landfill disposal capacity:

REMAINING PERMITTED DISPOSAL CAPACITY

As used in this report, the term "Remaining Permitted Disposal Capacity" can have two different meanings. It can refer to the total amount of remaining landfill ***space*** of all permitted solid waste facilities in a county, as of January 1, 1990, if expressed in cubic yards or weight in tons. It can also refer to the ***ability*** of a county to continue to dispose of solid waste, if expressed in number of years.

EXTENT OF NEED

The extent of need for landfill capacity is defined in this report in terms of years of remaining capacity. To facilitate a determination of the extent of need for additional permitted landfill capacity in each county and statewide, the following criteria were employed to aggregate the "findings" of each county.

- Less than five years of remaining capacity
- Five to eight years of remaining capacity
- Nine to 15 years of remaining capacity
- More than 15 years of remaining capacity

These categories coincide with the Public Resources Code (PRC) Section 41791 of the PRC requires counties to prepare and submit Countywide Integrated Waste Management Plans (CIWMP) to the Board according to their remaining landfill capacity. Any county that had less than five years remaining capacity as of January 1, 1990, must submit its plan by January 1, 1992. Any county that had between five and eight years capacity as of January 1, 1990, must submit its plan by January 1, 1993. Any county that had over eight years of capacity as of January 1, 1990, must submit its plan by January 1, 1994.

These categories also coincide with PRC Section 41701, which requires each county to estimate the total transformation or disposal capacity that will be needed for a 15-year period to safely handle the solid wastes generated within the county that cannot be reduced, recycled, or composted. When a county's remaining capacity in years is viewed in light of the time it typically takes to develop a new landfill, or expand an existing landfill, these time categories provide an indication of severity or extent of need for additional landfill capacity.

SOLID WASTE

Nonhazardous municipal, industrial, and commercial non-liquid waste.

CHAPTER 2: FINDINGS

STATEWIDE

ANNUAL DISPOSAL

The amount of solid waste disposed annually in California can be characterized by volume and weight. By volume, the amount of waste disposed annually in California was 71.9 million cubic yards, as of January 1, 1990. This was 197,000 cubic yards per day. By weight, the amount of solid waste disposed annually by each county resulted in 42.5 million tons statewide disposal, as of January 1, 1990 (see Table 3 on page 6). This equates to 116,534 tons per day or 7.9 lbs. per person per day. This per capita figure was derived by dividing statewide annual disposal by the total population (1990 population).

The revenue received by the Board from landfill tipping fees fluctuates over time with the amount of waste disposed. According to counties, the per capita rate of disposal increased during the late 1980's. In contrast, according to testimony by Tom Wright, representing Orange County, before the Policy, Research and Technical Assistance Committee at the Landfill Capacity Workshop held on February 20, 1992, some landfills are receiving less waste per capita now than expected.

With respect to total annual waste disposal, it was projected in a February, 1987, staff report to the Board entitled "Update on Remaining Disposal Capacities for the Counties and State" that the state's annual disposal in 1991 would be 39 million tons. Annual disposal, however, as of January 1, 1990, exceeded that by 3.5 million tons or 9 percent according to the compilation of data submitted by each county Local Task Force.

In 1988, 38 million tons of waste were disposed, according to a statement in Public Resources Code, Section 40000(a). Two years earlier, in 1986, 37 million tons of waste were disposed in California, according to the February 26, 1987, report to the Board. Based upon 1982 data, which was updated by Board staff in 1984 and 1985 and presented in "A Comprehensive Plan for Management of Nonhazardous Waste in California" 30 million tons were being disposed annually as of June, 1985.

A summary of available information on past annual disposal is presented below.

REMAINING PERMITTED CAPACITY

Based upon data provided by each county, there was a collective capacity in California to dispose of 669 million tons of solid waste as of January 1, 1990 (see Table 3). This was the equivalent of more than one billion cubic yards.

SUMMARY OF ANNUAL WASTE DISPOSAL

PERIOD	WASTE DISPOSAL IN MILLION TONS
1989 (January 1, 1990)	42.5
1988	38.0
1987	Not available (NA)
1986	37.0
1985 (June 1985)	30.0

TABLE 3: EXISTING CONDITIONS STATEWIDE AS OF JAN. 1, 1990

REGION	COUNTY	1990 POPULATION	ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
			TONS	CUBIC YARDS	TONS	CUBIC YARDS	YEARS REMAIN[1]
2	Alameda	1,274,700	3,000,000	4,000,000	32,400,000	45,700,000	15
1	Alpine	1,100	14,700	24,500	— 100% Exported[2] —		
1	Amador	29,600	123,000	155,000	4,100,000	5,200,000	32
1	Butte	180,400	142,000	237,000	3,200,000	5,300,000	15
3	Calaveras	31,550	41,000	82,000	3,800,000	7,600,000	43
1	Colusa	16,150	17,900	44,600	1,800,000	4,400,000	100
2	Contra Costa	797,600	308,000	615,000	914,000	1,800,000	3
1	Del Norte	21,650	NA	NA	NA	NA	2
1	El Dorado	123,900	167,000	334,000	550,000	1,100,000	5
3	Fresno	661,400	927,000	1,500,000	24,000,000	40,200,000	36
1	Glenn	24,550	22,700	37,700	1,000,000	1,700,000	32
1	Humboldt	118,400	133,800	223,000	1,100,000	1,700,000	9
4	Imperial	108,300	99,000	297,000	4,500,000	13,500,000	35
3	Inyo	18,200	31,800	53,000	1,200,000	2,000,000	17
3	Kern	537,300	938,000	1,500,000	8,200,000	13,800,000	9
3	Kings	100,800	81,000	203,000	84,000	414,000	2
1	Lake	50,200	28,000	47,000	3,500,000	5,900,000	45
1	Lassen	27,000	13,600	65,000	406,000	1,500,000	20
4	Los Angeles	8,832,500	13,500,000	22,500,000	100,000,000	165,000,000	4
3	Madera	86,400	42,000	70,000	42,000	70,000	1
2	Marin	229,900	255,000	638,000	3,900,000	8,200,000	12
3	Mariposa	14,050	11,000	18,500	1,400,000	2,300,000	126
1	Mendocino	79,700	244,000	364,000	2,000,000	3,000,000	9
3	Merced	176,300	198,000	450,000	1,300,000	2,800,000	4
1	Modoc	9,600	2,302	NA	NA	NA	19
3	Mono	9,750	13,700	36,400	756,000	2,000,000	55
3	Monterey	353,400	477,000	694,000	31,900,000	46,300,000	50
2	Napa	109,900	244,000	405,000	1,100,000	1,800,000	4
1	Nevada	77,500	55,000	110,000	421,000	842,000	0
4	Orange	2,398,400	4,000,000	8,100,000	122,500,000	203,400,000	20
1	Placer	170,100	196,000	356,000	7,500,000	13,400,000	11

TABLE 3: EXISTING CONDITIONS STATEWIDE AS OF JAN. 1, 1990

REGION	COUNTY	1990 POPULATION	ANNUAL DISPOSAL TONS	ANNUAL DISPOSAL CUBIC YARDS	REMAINING PERMITTED CAPACITY TONS	REMAINING PERMITTED CAPACITY CUBIC YARDS	YEARS REMAIN[1]
1	Plumas	19,600	12,000	33,000	154,000	441,000	13
4	Riverside	1,144,400	1,900,000	3,500,000	74,800,000	136,000,000	21
1	Sacramento	1,031,500	1,350,000	2,250,000	10,950,000	17,520,000	11
3	San Benito	36,400	17,900	47,700	750,000	2,000,000	18
4	San Bernardino	1,396,600	2,000,000	3,400,000	23,400,000	39,000,000	11
4	San Diego	2,480,100	4,000,000	6,700,000	43,600,000	72,700,000	10
2	San Francisco	724,000	NA	NA	—— 100% Exported[2] ——		
3	San Joaquin	477,700	555,000	832,000	14,200,000	21,300,000	25
3	San Luis Obispo	215,000	340,000	560,000	3,500,000	5,800,000	10
2	San Mateo	647,400	886,000	984,000	3,500,000	3,900,000	4
3	Santa Barbara	368,000	675,000	1,079,000	17,691,000	28,306,000	30
2	Santa Clara	1,493,800	1,870,000	3,100,000	42,000,000	70,000,000	29
3	Santa Cruz	228,700	380,000	760,000	5,000,000	10,600,000	12
1	Shasta	145,300	231,000	463,000	9,427,000	18,854,000	30
1	Sierra	3,280	11,300	22,500	171,000	342,000	15
1	Siskiyou	43,300	39,000	77,400	1,500,000	2,950,000	23
2	Solano	335,200	13,500	22,400	402,000	667,000	30
2	Sonoma	384,700	536,700	891,000	5,790,000	9,649,000	13
3	Stanislaus	365,100	386,000	643,000	4,000,000	6,900,000	9
1	Sutter/Yuba	63,700	115,000	192,000	1,600,000	2,700,000	12
1	Tehama	49,100	33,000	62,500	931,000	1,760,000	30
1	Trinity	13,050	10,200	62,000	357,000	2,170,000	36
3	Tulare	309,200	317,000	635,000	9,000,000	18,000,000	30
3	Tuolumne	48,000	64,000	107,000	164,000	272,000	3
4	Ventura	666,800	1,270,000	2,110,000	14,000,000	23,000,000	11
1	Yolo	140,000	196,000	294,000	18,600,000	28,000,000	40
California Total		29,500,230	42,535,102	71,987,200	669,060,000	1,123,757,000(page 26)	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variation among county methodologies (see Pages 2 & 3, Methodology & Limitations).

[2] Long-term export agreement.

TABLE 4: EXISTING CONDITIONS FOR NORTHERN CALIFORNIA (REGION 1) AS OF JANUARY 1, 1990

		ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
COUNTY	1990 POPULATION	TONS	CUBIC YARDS	TONS	CUBIC YDS	YEARS REMAIN[1]
Alpine	1,100	14,700	24,500	— 100% Exported —		
Amador	29,600	123,000	155,000	4,100,000	5,200,000	32
Butte	180,400	142,000	237,000	3,200,000	5,300,000	15
Colusa	16,150	17,900	44,600	1,800,000	4,400,000	100
Del Norte	21,650	NA	NA	NA	NA	2
El Dorado	123,900	167,000	334,000	550,000	1,100,000	5
Glenn	24,550	22,700	37,700	1,000,000	1,700,000	32
Humboldt	118,400	133,800	223,000	1,100,000	1,700,000	9
Lake	50,200	28,000	47,000	3,500,000	5,900,000	45
Lassen	27,000	13,600	65,000	406,000	1,500,000	20
Mendocino	79,700	244,000	364,000	2,000,000	3,000,000	9
Modoc	9,600	2,302	NA	NA	NA	19
Nevada	77,500	55,000	110,000	421,000	842,000	0
Placer	170,100	196,000	356,000	7,500,000	13,400,000	11
Plumas	19,600	12,000	33,000	154,000	441,000	13
Sacramento	1,031,500	1,350,000	2,250,000	10,950,000	17,520,000	11
Shasta	145,300	231,000	463,000	9,427,000	18,854,000	30
Sierra	3,280	11,300	22,500	171,000	342,000	15
Siskiyou	43,300	39,000	77,400	1,500,000	2,950,000	23
Sutter/Yuba	63,700	115,000	192,000	1,600,000	2,700,000	12
Tehama	49,100	33,000	62,500	931,000	1,760,000	30
Trinity	13,050	10,200	62,000	357,000	2,170,000	36
Yolo	140,000	196,000	294,000	18,600,000	28,000,000	40
Regional Totals	2,438,680	3,157,502	5,454,200	69,267,000	118,779,000	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variations among county methodologies (see Pages 2 & 3, Methodology & Limitations).

BY REGION

For the purposes of regional analysis, and to be consistent with previous Board studies, the state was divided into four regions: Northern California, the Bay Area, Central California, and Southern California. Annual disposal and remaining permitted disposal capacity for each region are presented below.

REGION ONE: NORTHERN CALIFORNIA

(SEE TABLE 4, PAGE 8)

ANNUAL DISPOSAL: In Region One, 3,157,502 tons or 5,454,200 cubic yards of solid waste were disposed annually.

REMAINING PERMITTED CAPACITY: The remaining permitted capacity for this region was about 69 million tons or 119 million cubic yards.

REGION TWO: BAY AREA

(SEE TABLE 5, PAGE 9)

ANNUAL DISPOSAL: In Region Two, 7,113,200 tons or 10,655,400 cubic yards of solid waste were disposed annually.

REMAINING PERMITTED CAPACITY: The remaining permitted capacity for this region was 90 million tons or 142 million cubic yards.

REGION THREE: CENTRAL CALIFORNIA

(SEE TABLE 6, PAGE 10)

ANNUAL DISPOSAL: In Region Three, 5,495,400 tons or 9,270,600 cubic yards of solid waste were disposed annually as of January 1, 1990.

REMAINING PERMITTED CAPACITY: The remaining permitted capacity of this region was about 127 million tons or 211 million cubic yards.

TABLE 5: EXISTING CONDITIONS FOR THE BAY AREA (REGION 2) AS OF JANUARY 1, 1990

		ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
COUNTY	1990 POPULATION	TONS	CUBIC YARDS	TONS	CUBIC YDS	YEARS REMAIN[1]
Alameda	1,274,700	3,000,000	4,000,000	32,400,000	45,700,000	15
Contra Costa	797,600	308,000	615,000	914,000	1,800,000	3
Marin	229,900	255,000	638,000	3,900,000	8,200,000	12
Napa	109,900	244,000	405,000	1,100,000	1,800,000	4
San Francisco	724,000	NA	NA	— 100% Exported —		
San Mateo	647,400	886,000	984,000	3,500,000	3,900,000	4
Santa Clara	1,493,800	1,870,000	3,100,000	42,000,000	70,000,000	29
Solano	335,200	13,500	22,400	402,000	667,000	30
Sonoma	384,700	536,700	891,000	5,790,000	9,649,000	13
Regional Totals	5,997,200	7,113,200	10,655,400	90,006,000	141,716,000	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variations among county methodologies (see Pages 2 & 3, Methodology & Limitations).

TABLE 6: EXISTING CONDITIONS FOR CENTRAL CALIFORNIA (REGION 3) AS OF JANUARY 1, 1990

		ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
COUNTY	1990 POPULATION	TONS	CUBIC YARDS	TONS	CUBIC YDS	YEARS REMAIN[1]
Calaveras	31,550	41,000	82,000	3,800,000	7,600,000	43
Fresno	661,400	927,000	1,500,000	24,000,000	40,200,000	36
Inyo	18,200	31,800	53,000	1,200,000	2,000,000	17
Kern	537,300	938,000	1,500,000	8,200,000	13,800,000	9
Kings	100,800	81,000	203,000	84,000	414,000	2
Madera	86,400	42,000	70,000	42,000	70,000	1
Mariposa	14,050	11,000	18,500	1,400,000	2,300,000	126
Merced	176,300	198,000	450,000	1,300,000	2,800,000	4
Mono	9,750	13,700	36,400	756,000	2,000,000	55
Monterey	353,400	477,000	694,000	31,900,000	46,300,000	50
San Benito	36,400	17,900	47,700	750,000	2,000,000	18
San Joaquin	477,700	555,000	832,000	14,200,000	21,300,000	25
San Luis Obispo	215,000	340,000	560,000	3,500,000	5,800,000	10
Santa Barbara	368,000	675,000	1,079,000	17,691,000	28,306,000	30
Santa Cruz	228,700	380,000	760,000	5,000,000	10,600,000	12
Stanislaus	365,100	386,000	643,000	4,000,000	6,900,000	9
Tulare	309,200	317,000	635,000	9,000,000	18,000,000	30
Tuolumne	48,000	64,000	107,000	164,000	272,000	3
Regional Totals	4,037,250	5,495,400	9,270,600	126,987,000	210,662,000	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variations among county methodologies (see Pages 2 & 3, Methodology & Limitations).

REGION FOUR: SOUTHERN CALIFORNIA

(SEE TABLE 7, PAGE 11)

ANNUAL DISPOSAL: In Region Four, 26,769,000 tons or 46,607,000 cubic yards of solid waste were disposed annually as of January 1, 1990. This amount represents almost five times the amount deposited for any other region.

REMAINING PERMITTED CAPACITY: The remaining permitted capacity of this region was about 383 million tons or 653 million cubic yards of waste.

TABLE 7: EXISTING CONDITIONS FOR SOUTHERN CALIFORNIA (REGION 4) AS OF JANUARY 1, 1990

		ANNUAL DISPOSAL		REMAINING PERMITTED CAPACITY		
COUNTY	1990 POPULATION	TONS	CUBIC YARDS	TONS	CUBIC YDS	YEARS REMAIN[1]
Imperial	108,300	99,000	297,000	4,500,000	13,500,000	35
Los Angeles	8,832,500	13,500,000	22,500,000	100,000,000	165,000,000	4
Orange	2,398,400	4,000,000	8,100,000	122,500,000	203,400,000	20
Riverside	1,144,400	1,900,000	3,500,000	74,800,000	136,000,000	21
San Bernardino	1,396,600	2,000,000	3,400,000	23,400,000	39,000,000	11
San Diego	2,480,100	4,000,000	6,700,000	43,600,000	72,700,000	10
Ventura	666,800	1,270,000	2,110,000	14,000,000	23,000,000	11
Regional Totals	17,027,100	26,769,000	46,607,000	382,800,000	652,600,000	

[1] Years remaining by county cannot be determined by simply dividing remaining cubic yards or tons by annual disposal due to variations among county methodologies (see Pages 2 & 3, Methodology & Limitations).

Each region contained counties that indicated less than eight years of remaining capacity. As shown on Figure 1, Southern California had 58 percent of the remaining statewide capacity in tons. Central California had 19 percent of the state's remaining capacity in tons. Northern California and the Bay Area combined also had about 23 percent of overall capacity in tons.

BY COUNTY

Table 8 and Map 1 present annual disposal and remaining permitted capacity data for each county in California.

There are ten counties within the state that indicated less than five years of remaining landfill capacity (see Map 2 on page 15). This represents about 18 percent of all counties. One county indicated five to eight years of remaining capacity, which represents less than one percent of all counties (see Map 2). Combined, these two categories comprise about 19 percent of all counties and 11 million people or 38 percent of the state's total population.

There were 28 counties that indicated more than 15 years of remaining capacity (see Map 4 on page 17). An alphabetical listing of all counties and their corresponding remaining landfill capacity is presented in Table 9. A ranking of counties with less than 15 years capacity, ranked from least years remaining to most years remaining, can be found in Table 10. This table includes all of the counties in the "less than 5," "5 to 8" and "9 to 15" year categories.

Fourteen of the 29 counties that indicated 15 years or less of remaining capacity are rural. According to the County Supervisors Association of California, a "rural" county is defined as one with less than 200,000 population. However, two of the most

TABLE 8: EXTENT OF NEED BY COUNTY AS OF JANUARY 1, 1990

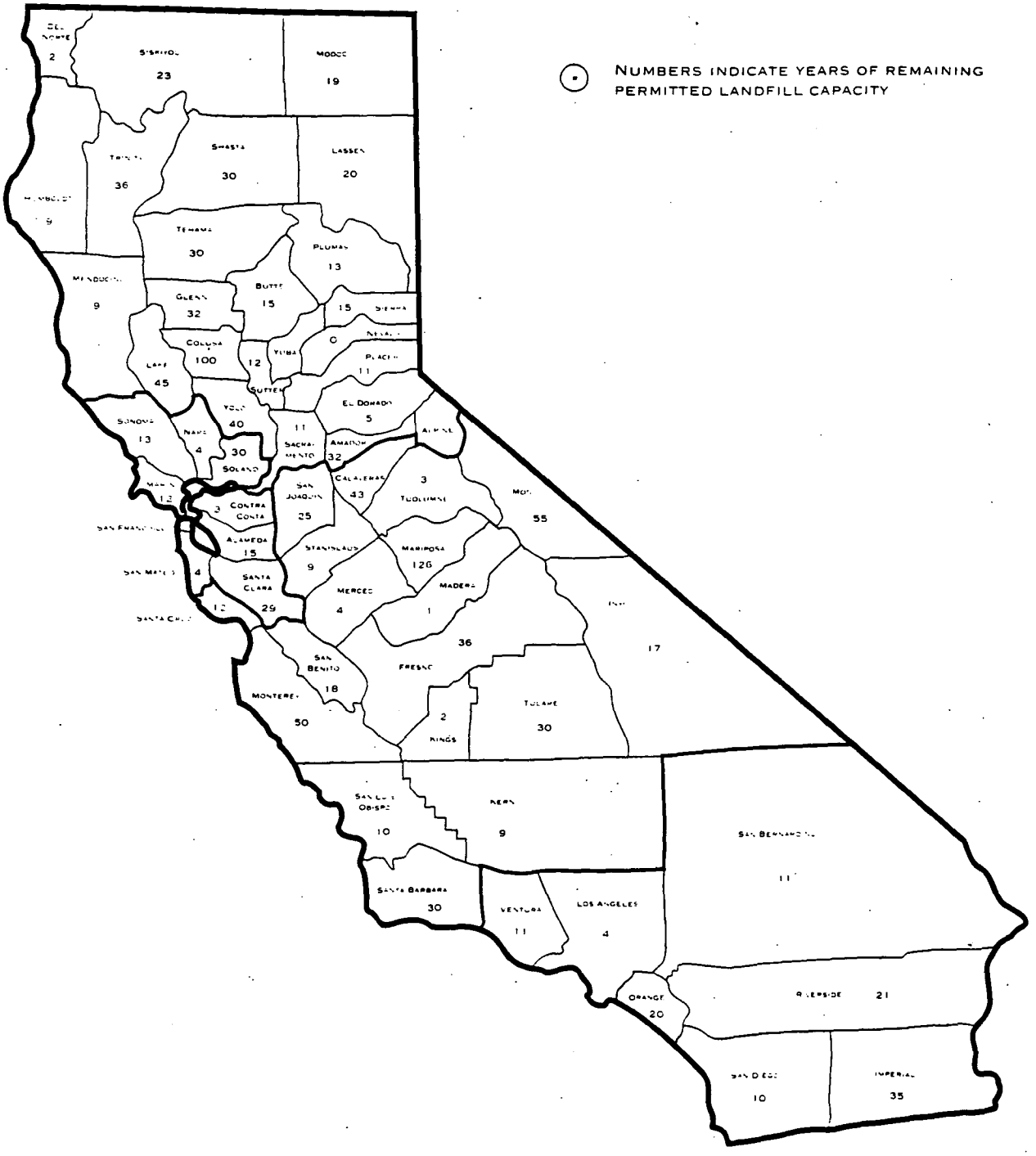
COUNTY	1990 POPULATION	YEARS REMAIN	EXTENT OF NEED			
			<5 YEARS	5–8 YEARS	9–15 YEARS	>15 YEARS
Alameda	1,274,700	15			●	
Alpine	1,100			— 100% Exported —		
Amador	29,600	32				●
Butte	180,400	15			●	
Calaveras	31,550	43				●
Colusa	16,150	100				●
Contra Costa	797,600	3	●			
Del Norte	21,650	2	●			
El Dorado	123,900	5		●		
Fresno	661,400	36				●
Glenn	24,550	32				●
Humboldt	118,400	9			●	
Imperial	108,300	35				●
Inyo	18,200	17				●
Kern	537,300	9			●	
Kings	100,800	2	●			
Lake	50,200	45				●
Lassen	27,000	20				●
Los Angeles	8,832,500	4	●			
Madera	86,400	1	●			
Marin	229,900	12			●	
Mariposa	14,050	126				●
Mendocino	79,700	9			●	
Merced	176,300	4	●			
Modoc	9,600	19				●
Mono	9,750	55				●
Monterey	353,400	50				●
Napa	109,900	4	●			
Nevada	77,500	0	●			

TABLE 8: EXTENT OF NEED BY COUNTY AS OF JANUARY 1, 1990

COUNTY	1990 POPULATION	YEARS REMAIN	EXTENT OF NEED			
			<5 YEARS	5–8 YEARS	9–15 YEARS	>15 YEARS
Orange	2,398,400	20				●
Placer	170,100	11			●	
Plumas	19,600	13			●	
Riverside	1,144,400	21				●
Sacramento	1,031,500	11			●	
San Benito	36,400	18		— 100% Exported —		●
San Bernardino	1,396,600	11			●	
San Diego	2,480,100	10			●	
San Francisco	724,000					
San Joaquin	477,700	25				●
San Luis Obispo	215,000	10			●	
San Mateo	647,400	4	●			
Santa Barbara	368,000	30				●
Santa Clara	1,493,800	29				●
Santa Cruz	228,700	12			●	
Shasta	145,300	30				●
Sierra	3,280	15			●	
Siskiyou	43,300	23				●
Solano	335,200	30				●
Sonoma	384,700	13			●	
Stanislaus	365,100	9			●	
Sutter/Yuba	63,700	12			●	
Tehama	49,100	30				●
Trinity	13,050	36				●
Tulare	309,200	30				●
Tuolumne	48,000	3	●			
Ventura	666,800	11			●	
Yolo	140,000	40				●
California Total	29,500,230		10	1	18	26

MAP ONE

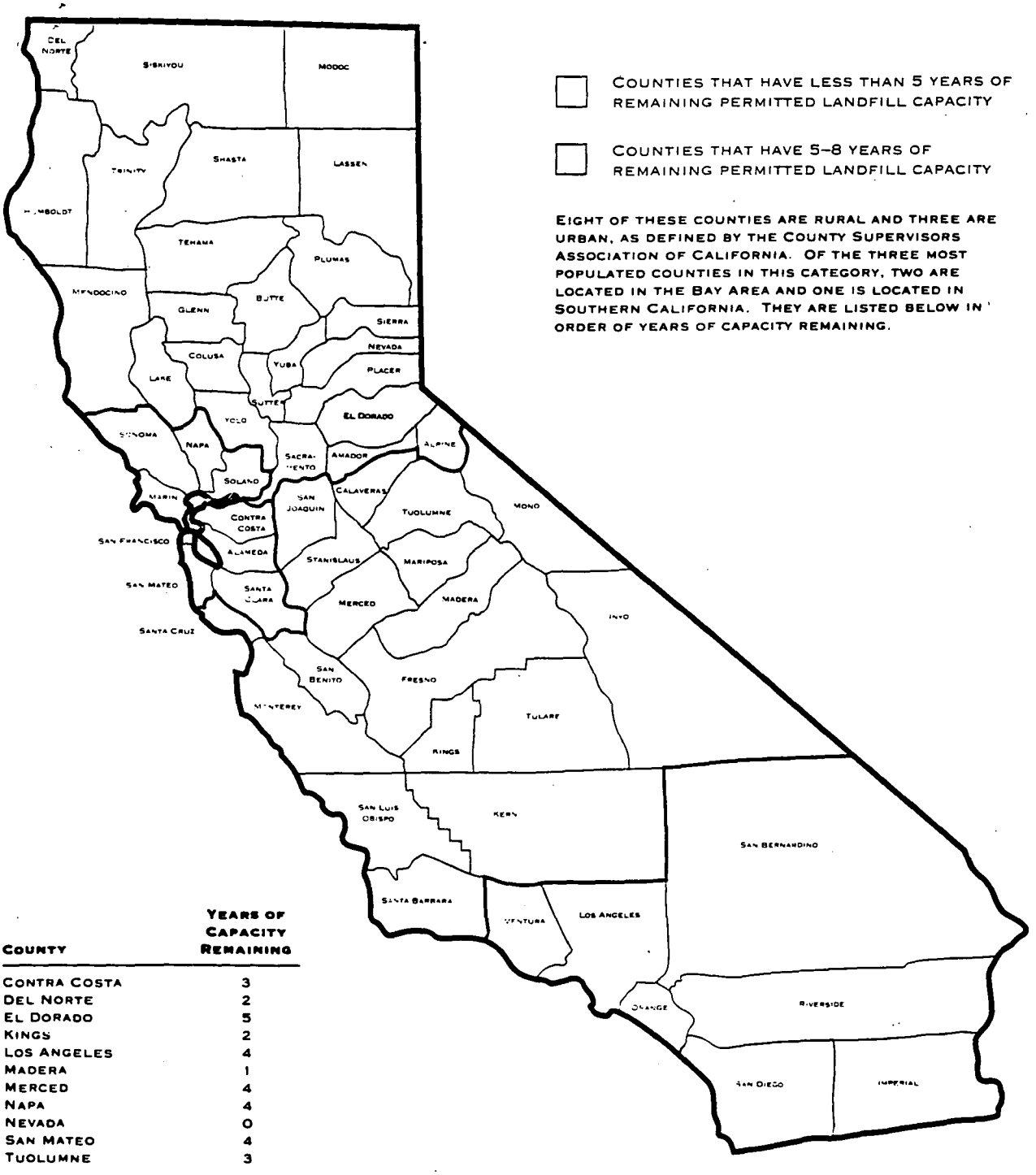
LANDFILL CAPACITY STATUS FOR ALL COUNTIES



DATA CURRENT AS OF JANUARY 1, 1990 SOURCE: LOCAL TASK FORCE DATA FOR EACH COUNTY

MAP TWO

COUNTIES WITH LESS THAN FIVE YEARS REMAINING LANDFILL CAPACITY AND COUNTIES WITH FIVE TO EIGHT YEARS REMAINING LANDFILL CAPACITY



COUNTIES THAT HAVE LESS THAN 5 YEARS OF REMAINING PERMITTED LANDFILL CAPACITY

COUNTIES THAT HAVE 5–8 YEARS OF REMAINING PERMITTED LANDFILL CAPACITY

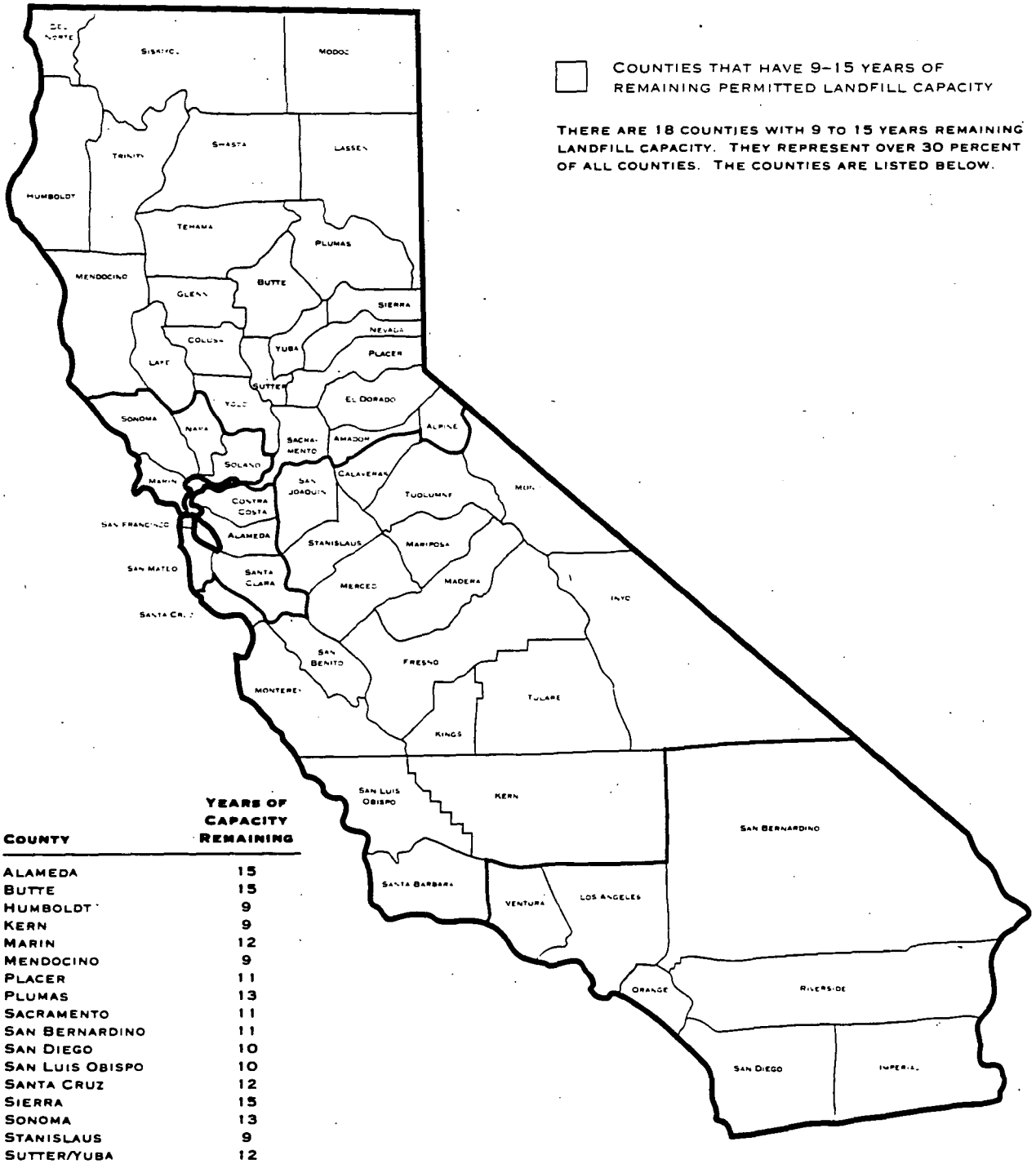
EIGHT OF THESE COUNTIES ARE RURAL AND THREE ARE URBAN, AS DEFINED BY THE COUNTY SUPERVISORS ASSOCIATION OF CALIFORNIA. OF THE THREE MOST POPULATED COUNTIES IN THIS CATEGORY, TWO ARE LOCATED IN THE BAY AREA AND ONE IS LOCATED IN SOUTHERN CALIFORNIA. THEY ARE LISTED BELOW IN ORDER OF YEARS OF CAPACITY REMAINING.

COUNTY	YEARS OF CAPACITY REMAINING
CONTRA COSTA	3
DEL NORTE	2
EL DORADO	5
KINGS	2
LOS ANGELES	4
MADERA	1
MERCED	4
NAPA	4
NEVADA	0
SAN MATEO	4
TUOLUMNE	3

DATA CURRENT AS OF JANUARY 1, 1990 SOURCE: LOCAL TASK FORCE DATA FOR EACH COUNTY

MAP THREE

COUNTIES WITH 9 TO 15 YEARS REMAINING LANDFILL CAPACITY



COUNTIES THAT HAVE 9–15 YEARS OF REMAINING PERMITTED LANDFILL CAPACITY

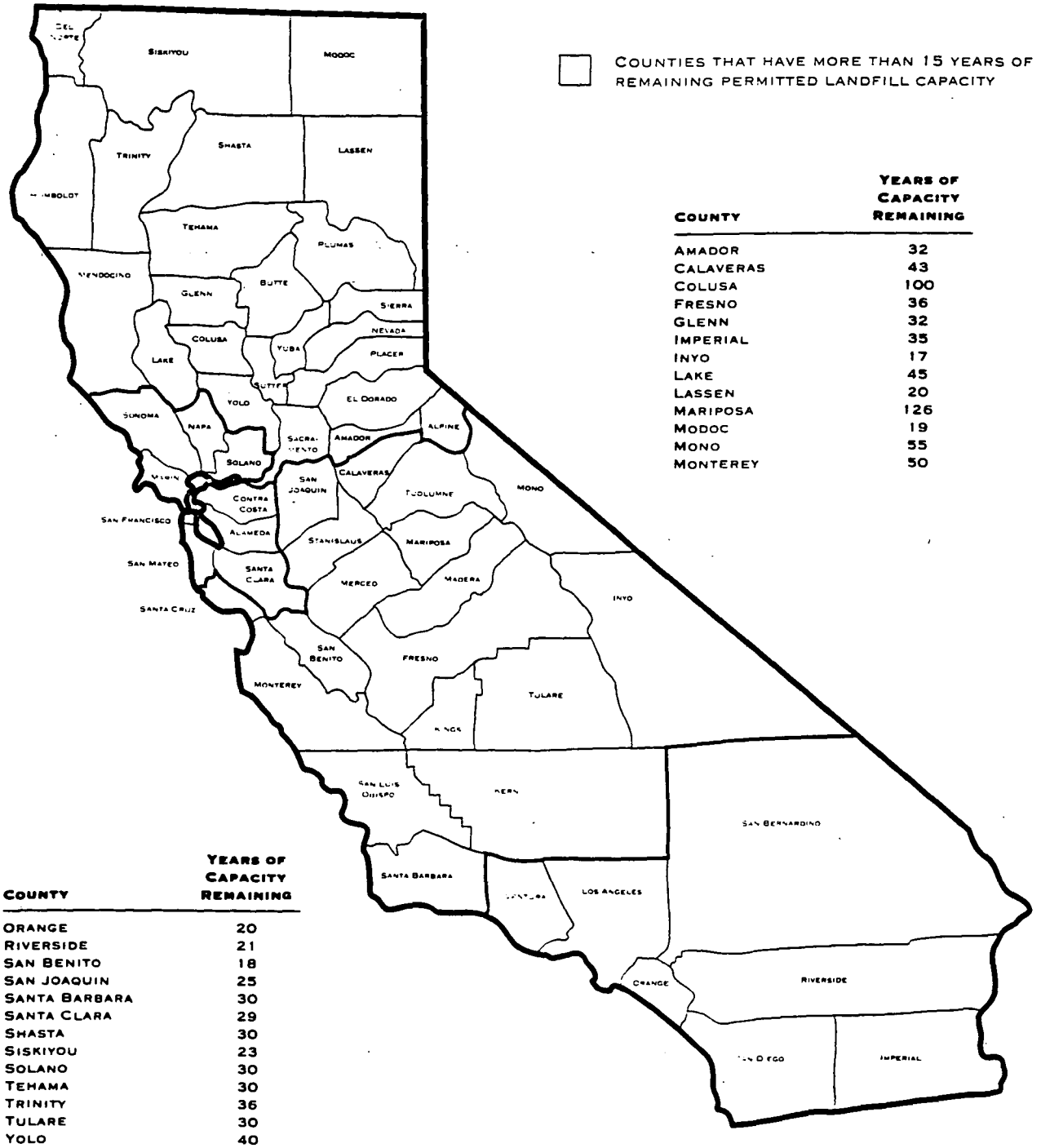
THERE ARE 18 COUNTIES WITH 9 TO 15 YEARS REMAINING LANDFILL CAPACITY. THEY REPRESENT OVER 30 PERCENT OF ALL COUNTIES. THE COUNTIES ARE LISTED BELOW.

COUNTY	YEARS OF CAPACITY REMAINING
ALAMEDA	15
BUTTE	15
HUMBOLDT	9
KERN	9
MARIN	12
MENDOCINO	9
PLACER	11
PLUMAS	13
SACRAMENTO	11
SAN BERNARDINO	11
SAN DIEGO	10
SAN LUIS OBISPO	10
SANTA CRUZ	12
SIERRA	15
SONOMA	13
STANISLAUS	9
SUTTER/YUBA	12
VENTURA	11

DATA CURRENT AS OF JANUARY 1, 1990 SOURCE: LOCAL TASK FORCE DATA FOR EACH COUNTY

MAP FOUR

COUNTIES WITH GREATER THAN 15 YEARS REMAINING LANDFILL CAPACITY



COUNTY	YEARS OF CAPACITY REMAINING
AMADOR	32
CALAVERAS	43
COLUSA	100
FRESNO	36
GLENN	32
IMPERIAL	35
INYO	17
LAKE	45
LASSEN	20
MARIPOSA	126
MODOC	19
MONO	55
MONTEREY	50

COUNTY	YEARS OF CAPACITY REMAINING
ORANGE	20
RIVERSIDE	21
SAN BENITO	18
SAN JOAQUIN	25
SANTA BARBARA	30
SANTA CLARA	29
SHASTA	30
SISKIYOU	23
SOLANO	30
TEHAMA	30
TRINITY	36
TULARE	30
YOLO	40

DATA CURRENT AS OF JANUARY 1, 1990 SOURCE: LOCAL TASK FORCE DATA FOR EACH COUNTY

populated counties in California (Contra Costa and Los Angeles) are ranked five and seven, respectively.

Almost 19.5 million people or 70 percent of California's population today reside in counties that indicated as of January 1, 1990, capacity of 15 years or less. Although a majority of those residents today live in counties within a major metropolitan area, many rural counties also indicated 15 years or less capacity. As the maps illustrate, there are counties located throughout California with only a few years of capacity remaining.

CHAPTER 3: CONCLUSIONS

Each county in California submitted to the Board official findings of remaining permitted landfill disposal capacity in years, as of January 1, 1990. These findings were based upon a "determination" and "verification" performed by each county, as required by the regulations adopted pursuant to the Act.

The most recent landfill siting experience of a number of counties indicates that it can take many years. As recounted by staff of Calaveras, Contra Costa, Kern, Los Angeles, Orange, and San Joaquin Counties, siting a new disposal facility can take as long as 14 years. Two of the most recently sited landfills include Bee Canyon in Orange County and Rock Creek in Calaveras County. It took 14 years for the County of Orange to obtain all of the permits required for the Bee Canyon facility. The Rock Creek facility was permitted in about ten years. Contra Costa County, on the other hand, is continuing its efforts to site a new landfill after more than ten years.

Also, it is estimated that it would take between five and eight years to expand an existing landfill. This is based upon information related to the permits processed by Board staff during the past five years.

As of January 1, 1990, about half of the state's counties indicated less than 15 years of remaining disposal capacity. These counties contained 70 percent of the state's population. Based upon this information, and the most recent siting experience of a number of counties, one might conclude that the state will face a serious shortage of landfill disposal capacity within the next 15 years, if capacity is not expanded through waste diversion and landfill development.

However, the extent of need for additional landfill capacity may moderate over the next eight years, if planned diversion programs are effective at meeting the statewide diversion goals of 25 percent by 1995 and 50 percent by the year 2000. Since counties were not required to describe the methodologies employed in determining and verifying official findings of remaining capacity, it is unknown to what degree diversion programs increase or decrease the yearly estimates of remaining landfill disposal capacity. So, to provide a sense of the potential impact of diversion resulting from the implementation of AB 939 on the future need for landfill capacity, three different scenarios were developed.

Each of these scenarios assumes a base diversion rate of 11 percent as of January 1, 1990. This is the average diversion rate of more than 80 percent of the state's jurisdictions as determined by the Board's ongoing Interim Database Project as of April 9, 1992. It is also consistent with the Board's March, 1992, policy decision regarding requirements for counting so-called "special wastes," such as inert materials, for diversion credit.

The first scenario (#1) assumes a constant diversion rate of 11 percent, with a two percent annual growth in waste generation. The second scenario (#2) assumes the same base rate of diversion (11 percent) and two percent growth in waste generation, but also assumes achievement of the 1995 diversion goal of 25 percent. The third scenario (#3) assumes the same base rate of waste diversion and two percent growth in waste generation, but also assumes achievement of the waste diversion goal of 50 percent by the year 2000.

SCENARIO 1: 1990 DIVERSION REMAINS CONSTANT

YEAR	WASTE GENERATED[1]	WASTE DISPOSED[1]	WASTE DIVERTED[1]	% DIVERSION[2]	REMAINING CAPACITY[1]	YEARS REMAINING
1990	50.80	42.50	5.59	11	669	13
1991	51.82	46.12	5.70	11	627	12
1992	52.85	47.04	5.81	11	580	11
1993	53.91	47.98	5.93	11	533	10
1994	54.99	48.94	6.05	11	485	9
1995	56.09	49.92	6.17	11	436	8
1996	57.21	50.92	6.29	11	387	7
1997	58.35	51.93	6.42	11	336	6
1998	59.52	52.97	6.55	11	284	5
1999	60.71	54.03	6.68	11	231	4
2000	61.92	55.11	6.81	11	177	3
2001	63.16	56.22	6.95	11	122	2
2002	64.43	57.34	7.09	11	65	1
2003	65.72	58.49	7.23	11	8	<1

Assumption — Waste Generation Increases 2% per Year

[1] Amounts are given in millions of tons.

[2] 1990 Diversion Rate assumed to be 11%

Scenario 2: Achievement of 25% Diversion by 1995 Then Diversion Remains Constant

Year	Waste Generated[1]	Waste Disposed[1]	Waste Diverted[1]	% Diversion[2]	Remaining Capacity[1]	Years Remaining
1990	50.80	42.50	5.59	11	669	14
1991	51.82	44.56	7.25	14	627	13
1992	52.85	43.87	8.98	17	582	12
1993	53.91	43.13	10.78	20	538	11
1994	54.99	42.18	12.81	23	495	10
1995	56.09	42.07	14.02	25	453	9
1996	57.21	42.91	14.30	25	411	8
1997	58.35	43.76	14.59	25	368	7
1998	59.52	44.64	14.88	25	324	6
1999	60.71	45.53	15.18	25	279	6
2000	61.92	46.44	15.48	25	234	5
2001	63.16	47.37	15.79	25	187	4
2002	64.43	48.32	16.11	25	140	3
2003	65.72	49.29	16.43	25	92	2
2004	67.03	50.27	16.76	25	42	<1

Assumption — Waste Generation Increases 2% per Year

[1] Amounts are given in millions of tons.

[2] 1990 Diversion Rate assumed to be 11%

SCENARIO 3: ACHIEVEMENT OF WASTE DIVERSION GOALS (25% BY 1995, 50% BY 2000)

YEAR	WASTE GENERATED[1]	WASTE DISPOSED[1]	WASTE DIVERTED[1]	PERCENT DIVERSION[2]	REMAINING CAPACITY[1]	YEARS REMAINING
1990	50.80	42.50	5.59	11	669	18
1991	51.82	44.56	7.25	14	627	17
1992	52.85	43.87	8.98	17	582	16
1993	53.91	43.13	10.78	20	538	15
1994	54.99	42.18	12.81	23	495	14
1995	56.09	42.07	14.02	**25**	453	13
1996	57.21	39.93	17.28	30	411	12
1997	58.35	37.93	20.42	35	371	11
1998	59.52	35.71	23.81	40	333	10
1999	60.71	33.21	27.50	45	297	9
2000	61.92	30.96	30.96	**50**	264	8
2001	63.16	31.58	31.58	50	233	7
2002	64.43	32.21	32.21	50	169	6
2003	65.72	32.86	32.86	50	8	5
2004	67.03	33.51	33.51	50	136	4
2005	68.37	34.19	34.19	50	103	3
2006	69.74	34.87	34.87	50	69	2
2007	71.13	35.57	35.57	50	34	1
2008	72.55	36.28	36.28	50	–2	<1

Assumption — Waste Generation Increases 2% per Year

[1] Amounts are given in millions of tons.

[2] 1990 Diversion Rate assumed to be 11%

SCENARIO	WASTE DIVERSION RATE	REMAINING CAPACITY
1	11% Baseline, Remains constant	13 years
2	11% Baseline, Achievement of 25% Diversion	14 years
3	11% Baseline, Achievement of 50% Diversion	18 years

According to these three scenarios, California would have had between 13 and 18 years of capacity remaining, as of January 1, 1990 (see above chart).

In conclusion, based upon the findings presented in Chapter 2, as of January 1, 1990, almost 40 percent of the state's population resided in 11 counties that reported five or fewer years of disposal capacity remaining. This is approximately one-half to one-third the time it took to develop the most recently sited landfills. Furthermore, as indicated by counties, a majority of California's population will experience a shortage of capacity by the year 2005.

For the state as a whole, it appears that total remaining statewide landfill disposal capacity was 13 years, as of January 1, 1990, based upon county estimates of remaining capacity and assuming a base diversion rate of 11 percent, no further increase in diversion, and two percent annual growth in waste generation. The achievement of the 25 percent and 50 percent diversion goals appears to extend statewide landfill capacity remaining as of January 1, 1990, by approximately five years, assuming that waste generation grows by two percent per year. However, projecting remaining capacity for the state as a whole will not reflect critical capacity shortfalls in certain counties or regions of the state.

As a means to further investigate this issue, the Board's 1992/1993 Landfill Disposal Capacity Contract will continue the study of landfill disposal capacity, which the Policy, Research and Technical Assistance Committee began in this report. The contract provides for the verification of the findings presented here and the organization of county and regional data into a statewide computer database for future reference. It also requires the definition of the term "critical" and the identification of statewide strategies for addressing areas with a critical shortage of landfill disposal capacity.

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APPENDIX A

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY — Pete Wilson, Governor

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

8800 Cal Center Drive
Sacramento, California 95826

November 21, 1991

County Local Task Force

Subject: Required Local Task Force Information

Honorable Chairman:

The California Code of Regulations Chapter 9, Articles 7.0 and 8.0, Sections 18761 and 18777, mandate certain Local Task Force (LTF) actions. California Integrated Waste Management Board (Board) staff have reviewed LTF files and have determined there are required documents that are not present in your file. The following item(s) which are checked should be forwarded to the Board as soon as possible.

____Data of LTF establishment [Section 18761(a)].

____Documentation, by minute order or resolution, that the LTF was approved by the Board of Supervisors [Section 18761(a)].

____Documentation, by minute order or resolution, that the LTF was approved by a majority of incorporated cities with a majority of the incorporated population [Section 18761(a)].

____A LTF membership roster reflecting the entity each member represents and length of term to be served by each member [Section 18761(a)(1)].

____A written statement from the LTF to the Board indicating how often it will meet [Section 18761(a)(1)].

____A written statement from the LTF to the Board stating the remaining combined countywide permitted disposal capacity in years. This finding should consider population increases, remaining landfill capacity in years. This finding should consider population increases, remaining landfill capacity as of January 1, 1990, etc. The method used to determine remaining capacity must be shown [Section 18777(b)].

____A time schedule developed by the LTF for submission of the locally approved Siting Element and the Countywide Integrated Waste Management Plan to the Board [Section 18777(b)(2)].

Give that locally adopted Source Reduction and Recycling Elements and Household Hazardous Waste Elements are due to the county on July 1, 1991, your assistance in complying with these requirements as soon as possible would be greatly appreciated. In addition, please provide the name of the chairman or contact person for the LTF.

If you have any questions, contact either Dianne Range, Local Assistance Branch Northern California, at (916) 255-2304 or Judith Friedman, Local Assistance Branch Southern California at (916) 255-2303.

Sincerely,

John D. Smith, Manager
Local Assistance Branch

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