

**HUMBOLDT COUNTY
GENERAL
PLAN**

Hazardous Waste
Management Plan

November 1989

Humboldt County
GENERAL PLAN

HAZARDOUS WASTE
MANAGEMENT PLAN

November 1989

Summary of Revisions of Text in
Humboldt County Final Draft
Hazardous Waste Management Plan,
May, 1989

This document represents the most recent version of the Humboldt County Hazardous Waste Management Plan. Two preceding document versions are: The Preliminary Draft Hazardous Waste Management Plan, dated March 31, 1988, and the Hearing Draft Hazardous Waste Management Plan, dated August, 1988.

Chapters 1, 2, 3, 5, and 6 include text from both the Hearing Draft and the Final Draft Plan documents. Deletions of text from the Hearing Draft appear as overstrikes of text (with "---" marks used as overstrikes); the following word is an example: ~~deletions~~. Additions to the Hearing Draft text appear as underlined text surrounded by brackets ("[]"); the following word is an example [additions].

Because of the extensive revisions to the text in Chapter 4, illustrating the deletions and additions as described above is not an effective method of presenting the text revisions. Instead, a summary of the revisions to Chapter 4 is provided in this section.

Chapter 1 revisions are summaries of the subsequent chapters' revisions in the plan. Chapter 1 consists of a summary of each of the other five chapters in the plan. Footnotes to cited sections of statutes have been added to the text as reference sources.

Since the most significant changes occurred in Chapter 4, the summary of Chapter 4 which appears in Chapter 1 is substantially altered.

Chapter 2, which contains the Goals and Policies, has been revised to include footnotes that identify the source of the goal or policy. The majority of the goals and policies were derived from existing goals and policies in the Humboldt County General Plan or in one of the city's general plans. Other footnotes indicate that hazardous materials policies are included, but are not authorized by AB 2948.

Chapter 3, which identifies current and projected waste generation and analyzes waste facility needs, was modified to reflect the revised data in the tables. The tables, which appear in the text of Chapter 3 are summaries of portions of the tables that are included in the Appendix. The values in the tables show the most recent calculations and do not compare the previous data values with those reported presently. Some of the text, for instance in Section 3202, was rewritten to make a better presentation of the data analysis for waste generation that more accurately states local conditions.

Chapter 4 which contains the siting criteria has been substantially reorganized and revised. The primary purpose of the reorganization is to first identify the siting opportunities for facilities that are provided, and then to list siting constraints. Sections of the plan have been combined and renumbered. Many of the mitigation measures recommended in

the draft EIR have been added to the siting criteria. Additional background information concerning the geologic, soils, and slope stability conditions in Humboldt County have been added.

A listing of items that will be required of applicants is included in the siting criteria. For instance, Section 4251.2, Air Quality Siting Criteria specifies a list of information and analyses that applicants for new hazardous waste management facilities must provide. Similarly detailed reporting requirements have been added to sections on noise; geology, slope stability, seismic safety, permeable soils, groundwater and recharge areas, flood hazard areas, recreation, cultural, or aesthetic areas, public safety, fire circulation, public service and facilities, and energy conservation.

Chapter 5, which describes existing programs, regulations and administration, has only minor additions and deletions to the text. Revisions to the text: provide cross-referencing to related policy sections of the plan; clarify the existing transportation programs or policies; provide a citation of the Health and Safety Code about generator and storage requirements and definitions; and describe action taken locally to establish a household hazardous waste collection program.

Chapter 6 outlines plan implementation proposals. Revised text describes: additional efforts in implementing public education; procedures for siting facilities; risks of environmental contamination through lack of implementation of programs; and the County's commitment to implementation based on availability of funding. Cost estimates of personnel allocations have been added to the implementation summary table.

Appendices Table Revisions

Appendix 3-1, Tables A through Q have been revised to include:

- 1) Technical changes in format to address the State's concerns as expressed in DHS comments;
- 2) Changes in accounting of waste based on further consultation with DHS, i.e. how wastes were classified for treatment method and how wastes were calculated for residuals generation; and,
- 3) Evaluation for assuring wastes were not double-counted in tables.

ACKNOWLEDGEMENTS

**HUMBOLDT COUNTY
BOARD OF SUPERVISORS**

First District	Stan Dixon
Second District	Harry Pritchard
Third District	Wesley Chesbro
Fourth District	Bonnie Neely
Fifth District	Anna Sparks

PLANNING COMMISSION

First District	Greg Bish
Second District	Orinda Samuelson
Third District	Judy Longshore
Fourth District	Dale Reinholtsen
Fifth District	Tom Odom
At-Large	Jim Sorensen
At-Large	Don Roberts

HAZARDOUS WASTE ADVISORY COMMITTEE

Industry Representatives	Mark LaPointe W. Donald Hill
Environmental Organization Representatives	Andrew Alm Robert Gearhart
Public Representatives	Ken Mangrum David Will (resigned 6/88) A. Kelly Stalker (appointed 9/88)
Expertise Representatives	R.R. "Randy" Page Joe Thorne (resigned 2/88) John Dowd (appointed 3/88)
City Representatives	Council Member Thea Gast Mayor Fred Moore Mayor Patricia Moranda
Ex Officio Representative	Kaye Strickland

HUMBOLDT COUNTY PLANNING DEPARTMENT

Thomas D. Conlon, Planning Director
Kirk Gothier, Senior Planner
Thomas J. Hofweber, Senior Planner

FINAL DRAFT

HAZARDOUS WASTE MANAGEMENT PLAN

Linda Evans, Planner III
Michael Garoutte, Drafting Technician II
Leslie Riecke, Secretary III
Doris Hickerson, Clerk Typist III
Valerie Novarino, Clerk Typist III
Evaonne F. Hendricks, Clerk Typist II
Charles Penner, Student Intern

PUBLIC HEALTH DEPARTMENT - DIVISION OF ENVIRONMENTAL HEALTH

Jeffrey Arnold, Director of Environmental Health
Ronnan Melvin, Student Assistant
Terry Escarda, Student Intern

DRAFT

HAZARDOUS WASTE MANAGEMENT PLAN

BOARD OF SUPERVISORS, COUNTY OF HUMBOLDT, STATE OF CALIFORNIA

Certified copy of portions of proceedings, Meeting of

RESOLUTION

RESOLUTION AMENDING THE
GENERAL PLAN VOLUMES I AND II

WHEREAS, the Government Code requires all counties to have a General Plan, and

WHEREAS, the Humboldt County General Plan Volumes I and II have been adopted pursuant to State Law; and

WHEREAS, Volume I provides for a regularly scheduled amendment process, and

WHEREAS, Volume I identifies specific communities where the need for revisions is known to exist; and

WHEREAS, Volume I provides for revisions in the public interest as determined by the Board of Supervisors and based on specific findings described in the plan; and

WHEREAS, each revision included in this resolution has met all the requirements of the State Law pertaining to amendment of the General Plan;

NOW THEREFORE, BE IT RESOLVED by the Humboldt County Board of Supervisors that the following findings be and are hereby made:

1. Each revision of the Humboldt County General Plan included in this resolution has been reviewed for compliance with requirements of the California Environmental Quality Act and reports prepared pursuant to that Act have been duly considered by this Board.
2. Where required, measures have been incorporated into these General Plan revisions which mitigate or avoid, to the maximum extent feasible, all significant environmental impacts identified in considering the revisions herein.
3. Neither the revisions nor any part thereof will operate to limit the number of housing units which may be constructed on an annual basis in the areas to which the revisions apply.

DRAFT

HAZARDOUS WASTE MANAGEMENT PLAN

4. The adoption of these revisions herein is consistent with a comprehensive view of the General Plan Volume I.
5. The adoption of the General Plan amendments is in the public interest and is consistent with State law.

BE IT FURTHER RESOLVED that the documents entitled Humboldt County General Plan Volume I and Volume II are hereby amended by the revisions contained in the following Exhibits attached hereto and hereby incorporated into this resolution:

Exhibit A - Hazardous Waste Management Plan

DRAFT

HAZARDOUS WASTE MANAGEMENT PLAN

City Resolutions Approving the Hazardous Waste Management Plan

TABLE OF CONTENTS

1000	<u>INTRODUCTION</u>	<u>CHAPTER 1</u>
1100	OVERVIEW	1-1
1300	FORMULATION OF THE PLAN	1-2
1320	Legislative Requirements.....	1-2
1332	Consistency Between The County General Plan and Hazardous Waste Management Plan.....	1-4
1340	The Participants.....	1-5
1341	Board of Supervisors.....	1-5
1342	Planning Commission.....	1-5
1343	The Public.....	1-5
1344	Industry and Environmental Organizations.....	1-6
1345	The Cities of Arcata, Blue Lake Eureka, Ferndale, Fortuna, Rio Dell and Trinidad.....	1-6
1346	State Department of Health Services.....	1-7
1400	HOW TO USE THE PLAN	1-7
1410	Overview.....	1-7
1420	Key Terms.....	1-8
1430	Maps.....	1-8
1453	Revision Schedules.....	1-8
1500	SUMMARY OF PLAN CONTENTS AND RECOMMENDATIONS	1-8
2000	<u>GOALS AND OBJECTIVES</u>	<u>CHAPTER 2</u>
2100	OVERVIEW	2-1
2200	GOALS AND POLICIES	2-1
3000	<u>CURRENT & PROJECTED WASTE GENERATION AND NEEDS ANALYSIS</u>	<u>CHAPTER 3</u>
3100	OVERVIEW, CURRENT WASTE GENERATION	3-1
3101	Key Terms.....	3-1
3200	CURRENT WASTE GENERATION	3-2
3201	Summary of Total Generated Waste.....	3-2
3202	Wastes Shipped Off-Site.....	3-3
3203	Small Quantity Generators.....	3-6
3204	Household Hazardous Wastes.....	3-8
3205	Contaminated Sites.....	3-8
3206	Varianced, Exempted, Designated, Non-Hazardous Wastes.....	3-11
3207	Import Wastes.....	3-12
3208	Export Wastes.....	3-12
3209	On-Site Managed Wastes.....	3-13

3210	Waste Generated by Major Industry Groups.....	3-14
3300	PROJECTED WASTE STREAM.....	3-16
3301	Summary of Projections.....	3-16
3302	Projected Quantities by Industry.....	3-16
3303	Projected Quantities from Contaminated Sites.....	3-17
3304	New Hazardous Waste Streams.....	3-19
3305	Total Projected Wastes.....	3-20
3400	CURRENT NEEDS ASSESSMENT.....	3-21
3401	Summary of Needs.....	3-21
3402	Commercial Facility Capacity.....	3-22
3403	Commercial Storage Capacity.....	3-22
3404	Commercial Facility Capacity Needs Assessment.....	3-22
3500	PROJECTED NEEDS ASSESSMENT.....	3-23
3501	Projected Treatment/Disposal Capacity.....	3-23
3502	Projected Needs Assessment.....	3-24
3503	Residual Generation.....	3-24
3600	HAZARDOUS WASTE REDUCTION.....	3-25
3610	Methods of Waste Reduction.....	3-26
3620	Potential Waste Reduction.....	3-27
3630	Projection of Waste Reduction Impacts to Facility Siting Needs.....	3-29
3640	Barriers to Waste Reduction.....	3-29
3650	Incentives for Industry to Minimize Hazardous Waste.....	3-30
3660	Technical Assistance.....	3-31
4000	<u>SITING OF HAZARDOUS WASTE FACILITIES.....</u>	<u>CHAPTER 4</u>
4100	OVERVIEW.....	4-1
4200	SITING CRITERIA.....	4-3
4210	Land Use Compatibility.....	4-3
4220	Fair Share.....	4-7
4230	Resource Production Lands.....	4-8
4231	Mineral Resources.....	4-10
4232	Military Lands.....	4-10
4240	Geology.....	4-11
4241	Seismic.....	4-11
4242	Slope Stability.....	4-13
4243	Permeable Soils, Groundwater and Recharge Areas.....	4-14
4244	Flood Hazard Areas.....	4-17
4250	Air Quality.....	4-19
4260	Sensitive and Critical Habitats.....	4-23
4261	Noise.....	4-25
4262	Recreation, Cultural or Aesthetic Areas.....	4-26
4270	Public Safety.....	4-30

4271	Fire.....	4-31
4280	Circulation.....	4-32
4290	Public Services and Facilities.....	4-34
4300	PROXIMITY TO PUBLIC FACILITIES AND WASTE GENERATORS.....	4-35
4310	Energy.....	4-36
5000	<u>PROGRAMS, REGULATIONS AND ADMINISTRATION.....</u>	<u>CHAPTER 5</u>
5100	OVERVIEW.....	5-1
5110	Transportation.....	5-1
5120	Inspection, Technical Assistance, Enforcement.....	5-4
5130	Organizational Responsibilities for Implementation.....	5-6
5140	Emergency Response.....	5-9
5150	Storage.....	5-11
5160	Contaminated Sites.....	5-12
5170	Small Quantity Generators.....	5-14
5180	Household Hazardous Waste.....	5-15
6000	<u>PLAN IMPLEMENTATION.....</u>	<u>CHAPTER 6</u>
6100	OVERVIEW.....	6-1
6110	Steps to Implement Goals and Policies.....	6-1
6120	Public Education and Participation.....	6-1
6130	On-Going Data Collection and Analysis.....	6-4
6140	Waste Reduction.....	6-5
6150	Siting.....	6-6
6160	Transportation.....	6-9
6170	Storage.....	6-10
6180	Contaminated Sites.....	6-11
6190	Small Quantity Generators.....	6-12
6200	HOUSEHOLD HAZARDOUS WASTE.....	6-13
6210	Emergency Response.....	6-14
6220	Regulations, Enforcement, Surveillance.....	6-14
6230	Organization Responsibility.....	6-14
6240	Funding.....	6-14
6250	Monitoring and Evaluation of Plan Effectiveness.....	6-16
<u>TABLES</u>	<u>TITLE</u>	<u>PAGE</u>
1.	Total Waste By Volume.....	1-11
2.	Total Waste By Generator.....	1-11
3.	Small Quantity Generator Waste: 1986.....	1-12
4.	Household Hazardous Waste.....	1-13
5.	Waste Group Volume.....	3-3
6.	1985-1986 Average Manifested Waste.....	3-4
7.	Waste Generators.....	3-5
8.	P.G. & E's Hazardous Waste.....	3-5

<u>TABLES</u>	<u>TITLE</u>	<u>PAGE</u>
9.	Small Quantity Generator Hazardous Waste.....	3-7
10.	Household Hazardous Waste.....	3-8
11.	Waste Produced by Major Industries.....	3-15
12.	Summary of Total Generated Waste (excluding HHW).....	3-15
13.	Humboldt County Land Area.....	4-5
14.	Lead, Sulfate and Acid Deposition Values.....	4-21
15.	Gaseous Air Contaminants.....	4-21
16.	Humb. Co. Mileage of Roads By Jurisdiction.....	4-33
<u>FIGURES</u>	<u>TITLE</u>	<u>PAGE</u>
1.	Humboldt County Planning Area Map.....	1-2a
2.	Recommended Organizational Structure.....	1-17a
3.	Location of Manifesting Hazardous Waste Generators, 1980...	3-5a
4.	Location of Manifesting Hazardous Waste Generators, 1986, Eureka Vicinity.....	3-5b
5.	Counties Receiving Humboldt County's Hazardous Waste, 1986.....	3-12a
6.	Exported Waste Volumes, 1986.....	3-12b
7.	Exported Waste Generators.....	3-12c
8.	Waste from Contaminated Sites.....	5-13a
9.	Legislative Requirements Matrix.....	5-17a
10.	Implementation.....	6-17a

GLOSSARY

<u>APPENDICES</u>	<u>TITLE</u>	<u>PAGE</u>
-------------------	--------------	-------------

(See Appendices and Technical Background Studies)

CHAPTER 1

1000

INTRODUCTION

1100

OVERVIEW

The Hazardous Waste Management Plan is a long range statement of policy for public and private lands in Humboldt County. The Plan should be used in concert with the County Framework Plan and Community Plans. Together, these Plan Elements include all of the relevant goals, policies and Standards for managing hazardous wastes which are generated within Humboldt County.

As stated in the State "Guidelines For The Preparation of Hazardous Waste Management Plans, [June 30, 1987]", it is the intent of this plan

"to provide a mechanism through which sound hazardous waste management planning will:

- "Insure that the generation of hazardous wastes in California is reduced to the maximum extent feasible statewide.
- "Provide the public, industry and local government with the information needed to take rational steps to minimize, recycle, treat, dispose, and otherwise manage hazardous wastes in California.
- "Provide the basis for planning adequate hazardous waste management facility capacity.
- "Determine the current and estimated future hazardous waste generation rates, project the need for facilities to manage these wastes and establish a workable system to provide sites for needed facilities.
- "Insure that: 'Counties and Cities conduct local and regional efforts to assess the needs for and plan for the establishment of local and regional hazardous waste treatment and disposal facilities needed to manage hazardous wastes generated in their jurisdiction.'⁷
- "Insure that: 'all local governments consider the feasibility and appropriateness of identifying suitable sites⁸ for treatment and disposal facilities in their general plans.'⁸

- "⁷Hazardous Waste Management Plan, Recommendations of the Hazardous Waste Management Council, State of California, 1984, page 191.

- "⁸Subdivision (b)(3) of Section 1 of Chapter 1504 of the Statutes of 1986 (AB 2948, Tanner)."

Figure 1 illustrates the Planning Area.

The background information which was relied upon in developing and reviewing the plan is included in the Technical Appendices and Background Studies, the focused Environmental Impact Report, and the County Policy Background Studies.

1300 FORMULATION OF THE PLAN

1320 Legislative Requirements

Assembly Bill 2948 (Tanner, 1986) authorized counties to adopt a county hazardous waste management plan in lieu of amending existing solid waste management plans to include hazardous waste components. The State guidelines for preparing hazardous waste management plans further describe the legislative requirements as follows:

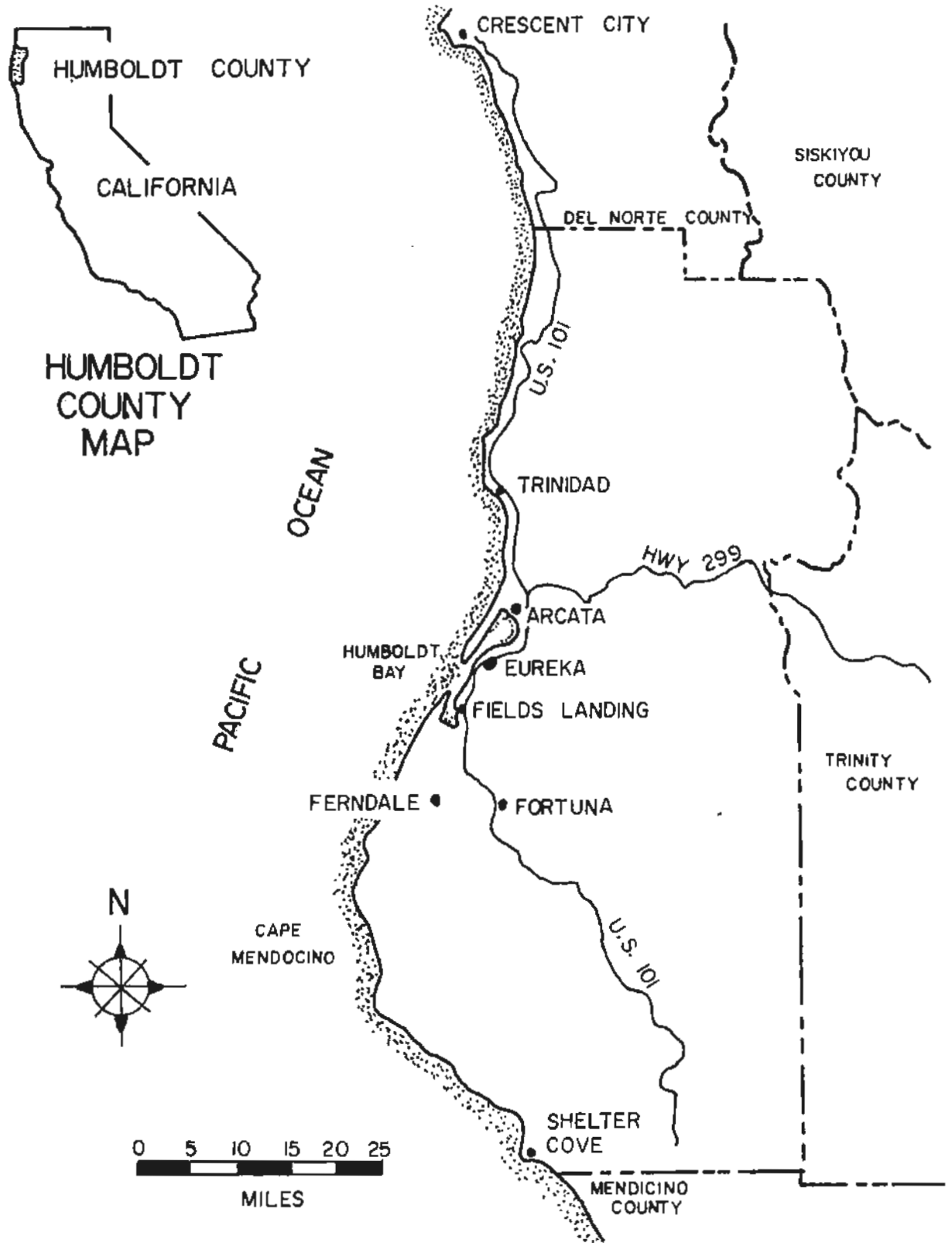
"The objective of AB 2948 (Tanner, 1986) is to insure that safe, effective, and economical facilities for the management of hazardous wastes are available when they are needed, and that these facilities are of a type, and operated in a manner, which protects public health and environment.

The Federal Resource Conservation and Recovery Act (RCRA)¹, the Hazardous and Solid Waste Amendments (HSWA) of 1984² and state statutes enacted in California in 1985³ and 1986⁴ mandate an immediate and dramatic improvement in the way nonradioactive⁵ hazardous waste is managed in the nation and California. These statutes will prohibit the land disposal of untreated hazardous waste after May 8, 1990."

"The 1986 amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), require that States assure EPA of the availability of hazardous waste treatment or disposal facility capacity for wastes expected to be generated within the State over the 20

1. Public Law 94-580.
2. Public Law 98-616.
3. Senate Bill 509, Carpenter/Assembly Bill 1809, Sher.
4. Senate Bill 1500, Roberti/Assembly Bill 2948, Tanner.
5. Radioactive wastes are regulated by the Federal Government.

FIGURE 1



year period following the date of a cooperative agreement with EPA (November 1989 for California). The amendments tie this requirement to continuation of Superfund monies to the State. If California fails to provide sufficient capacity for managing hazardous wastes after 1989, it may lose hundreds of millions of dollars in federal Superfund monies for cleanup of its major contaminated sites."

"AB 2948 provides local and regional governments the opportunity to develop a comprehensive county or regional hazardous waste management plan (CHWMP or Plan). The State will provide financial and technical assistance. A CHWMP prepared under AB 2948 replaces the hazardous waste element contained in the County Solid Waste Management Plan (COSWMP) prepared pursuant to Government Code Section 66780.1. If a county elects not to prepare a CHWMP, the Department of Health Services (Department) will review that county's COSWMP hazardous waste element using the same criteria for approval as those required for a CHWMP prepared under AB 2948. Thus, the COSWMP hazardous waste element should be prepared or amended according to these Guidelines.

The Department suggests that counties, cities and Councils of Government (COGs) view AB 2948 CHWMPs as comprehensive planning documents. The Plans should acknowledge the existence of other state laws and related federal laws which may directly or indirectly impact hazardous waste planning efforts. (For summaries of selected pertinent laws, see Technical Reference Manual (TRM), Part I, and Appendix 5.2 of the CHWMP.)

Section 25135.1 of the State Health and Safety Code authorizes counties to "prepare a county hazardous waste management plan for the management of all hazardous waste produced in the County", and specifies the required plan elements and contents. Section 25135.1(d) specifies the required eight plan elements which can be summarized as:

- 1) An analysis of the hazardous waste stream generated in the county [and rates of production until 1994].
- 2) A description of existing hazardous waste facilities.
- 3) An analysis of the potential for [recycling and] hazardous waste reduction at the source.
- 4) An analysis of household and small quantity generator hazardous waste source.
- 5) An analysis of additional hazardous waste facility needs [for wastes that are currently produced or that are expected to be produced during the planning period].
- 6) Identification of existing hazardous waste facilities which can be

expanded to accommodate projected needs and an identification of general areas or specific sites for new facilities [for the siting of hazardous waste facilities and hazardous waste management]. Siting criteria may be used in lieu of this facility and site identification if general applicable areas are mapped.

- 7) A statement of goals, objectives and policies through the year 2,000.
- 8) An implementation schedule through the year 2,000.

Assembly Bill 2948 also required the establishment of a citizens advisory committee, extensive public participation, and approval of the plan by the County Board of Supervisors, by a majority of cities within the county which contain a majority of the population in the incorporated area of the county, and by the Department of Health Services.

Section 25135.7(a) of the Health and Safety Code states that the Department of Health Services shall approve the county hazardous waste management plan and any amendment to the plan if the Department makes all of the determinations in Sections 25135.7(a) 1 through 4. It is assumed that the county and cities must also approve the plan and plan amendments if they make the same determinations.

1332 Consistency Between The County General Plan and Hazardous Waste Management Plan

To ensure consistency between the adopted County General Plan and the Hazardous Waste Management Plan, staff identified all relevant goals, policies, standards and background information in the following documents:

- 1) The Framework Plan
- 2) The Community Plans
- 3) The County Policy Background Studies

Staff also reviewed the adopted City Plans to identify relevant goals, policies and standards.

Relevant goals and policies are included in Chapter 2. The siting criteria in Chapter 4 includes all relevant County Plan standards, and references the applicable plan section.

It is the intent of this Plan Element to be consistent with all other Elements of the Humboldt County General Plan.

1340 THE PARTICIPANTS**1341 Board of Supervisors**

The Humboldt County Board of Supervisors, as the elected legislative body, is the chief policy making body for the County. The Board has sole responsibility and authority to adopt the Hazardous Waste Management Plan as the County's statement of public policy on hazardous waste management. The Board is required by law to hold at least one public hearing to receive public testimony and to review the report and recommendations of the Advisory Committee and its advisory agency, the Planning Commission. The Board, through the establishment of the Advisory Committee and the Planning Commission, the securing of grant funding for the work on this plan, and the adoption of policies to maximize the public participation has provided the greatest opportunities for public awareness and understanding of the plan.

1342 Planning Commission

The Planning Commission consists of seven people who are appointed by the Board of Supervisors as the advisory agency on all planning matters. One Commissioner comes from each supervisorial district and two are appointed at-large. The Commission must report to the Board and provide recommendations on the adoption and revision of the General Plan. The Commission is required by law to hold at least one public hearing to take testimony on plan proposals [(Section 65351 of the Government Code)]. The Planning Commission held ~~--- workshops~~ [one workshop] and [three] public hearings to solicit public comments on the draft hazardous waste management plan. The Planning Commission's recommendations on the draft plan are included in Appendix {1-3}. [Minutes from the Planning Commission hearings are on file in the Planning Department office.]

[A Notice of Preparation and Draft Environmental Impact Report have been prepared in compliance with the requirements of CEQA.]

The Planning Department provides planning services to the Board, the Advisory Committee, the Commission, and the public. These services include: the gathering, presentation, and/or coordination of information; making recommendation; and implementing the Plan. The Planning Director is appointed by the Board with the staff appointed by the Director. The staff level and supporting appropriations are determined annually by the Board during the budget process.

1343 The Public

One of the main goals of the county planning process is:

"To maximize the opportunity for individuals and groups to have meaningful participation in the planning process."

This goal was developed from the understanding that the public will be more able to support policies guiding the development of the County when an opportunity to participate in the development and review of the general plan has been provided. Through this exposure, and the contributions it makes to the process and the product, the public will hopefully gain greater understanding of the plan. Participation not only in the review of this document, but also in proposing subsequent revisions to improve what is adopted, will help insure that this document will remain a current statement of public policy.

[An advisory committee, appointed in part by the Board of Supervisors and in part by the City Selection Committee, held 18 meetings to review and discuss the draft Humboldt County Hazardous Waste Management Plan, to advise the staff, the Planning Commission, and the Board of Supervisors. Agendas for each of the CAC meetings were circulated prior to the meetings. Time was allocated on each agenda for input from the general public.]

1344 Industry [and Environmental Organizations]

Assembly Bill 2948 recognized the importance of involving industry [and environmental organizations] in the hazardous waste management planning process by requiring the inclusion of at least one industry [representative and one environmental organization] representative on the Citizens Advisory Committee. The County Board of Supervisors, recognizing the importance of industry participation, appointed two industry [representatives and two environmental] representatives to serve on the Advisory Committee.

Planning and Health Department staff further involved industry [and environmental organizations] by direct contact, [coordinating with sub-committees of the CAC on environmental review and waste reduction,] requests for informational assistance, a survey of small quantity generators, inviting industry representatives as guest speakers at Advisory Committee meetings and workshops, and including industry representatives [and environmental organizations] on the Department mailing list for notification of workshops, meetings and public hearings.

1345 The Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad

Assembly Bill 2948 established the cities as advisers and decision makers in the hazardous waste management planning process. The Advisory Committee includes three members chosen by the City Selection Committee, and the cities with a majority of the population in the County must approve the hazardous waste management plan.

The cities were involved in preparing and reviewing the draft plan. The City resolutions approving the hazardous waste management plan precede

the Table of Contents.

1346 State Department of Health Services

The State Department of Health Services has played a major role in the hazardous waste management planning process. The Department has distributed grant funding to help counties prepare the plans, has prepared guidelines for the preparation of the plans, has prepared a technical reference manual with support data and projection techniques, has provided counties with manifest data, and has provided technical advice and staff assistance. The Department also must approve the final plan and any subsequent amendments of the plan.

1400 HOW TO USE THE PLAN

1410 Overview

The Hazardous Waste Management Plan is a long range statement of public policy for the management of hazardous waste which is generated within Humboldt County. Generally, the plan does all of the following:

1. Identifies the type and quantity of hazardous waste which is generated within the County, and maintains a current data base.
2. Projects future levels of hazardous waste generation [by type of waste] within the County [to the year 2000].
3. Includes goals, policies and standards for the management of hazardous wastes.
4. Identifies the measures the County intends to take to implement the plan.
5. Includes technical advice for waste reduction, management of hazardous wastes, including recycling, and treatment techniques.
6. Establishes procedures for the siting of new hazardous treatment, storage or disposal facilities in Humboldt County.

The public, industry, and local, state and federal agencies are all encouraged to use the plan in adopting programs to manage the hazardous wastes which are generated within the County.

The state guidelines acknowledge that:

"The effectiveness of the Plans should be monitored and evaluated as conditions change and additional data are acquired. The first versions of the Plan will have limitations because the available data are

incomplete; the possibilities for waste reduction are not well understood; future economic development is always uncertain; the capability of facilities to comply with new requirements may be misjudged; and new waste reduction and treatment technologies will be developed. There are other sources of uncertainty as well. These include new regulations and law -- both local, state, and federal -- new product development, and new understanding about the short-term and long-term effects of toxic substances on human health and the environment.

Therefore, it is important to build into the Plan formal procedures to monitor its effectiveness and an evaluation process to identify changes that are needed. Monitoring and evaluation should be done on a regular basis and should be coordinated with three-year revisions of the State Plan. Annual reviews of data and facility needs should not be precluded. The implementation plan, implementation tools, funding sources, and other resource allocations should be reviewed as a part of the local budget process."

1420 Key Terms

Section 1.8 of the Guidelines For the Preparation of Hazardous Waste Management Plans includes a complete listing of common terms used throughout the plan. The Plan Glossary includes all of the key terms.

1430 Maps

In addition to text, the Hazardous Waste Management Plan contains maps, of which there are two types - official and illustrative. Official maps show the geographic application of Plan policies, while illustrative maps are merely visual aids for the reader. Only official maps shall be consulted to determine how Plan policies apply to geographic areas within the County. Both types were developed from maps prepared as part of the background studies which are now included as a series of technical appendices.

1453 Revision Schedules

As specified in Section 3.6.14 of the state guidelines, the County Hazardous Waste Management Plan shall be monitored and evaluated by Planning staff on a regular basis and shall be coordinated with the three year revisions of the State Plan. The County Board of Supervisors or Planning Director shall determine when Plan revisions are necessary. Generally, the Plan should be revised and updated every 6 years. Support data shall be updated as received by the Planning Department.

1500 SUMMARY OF PLAN CONTENTS AND RECOMMENDATIONS

As required by the California Department of Health Services "Guidelines For The Preparation of Hazardous Waste Management plans", this section of

the plan summarizes the contents, conclusions and recommendations in each chapter.

Chapter 1: Introduction

This chapter describes the legislative requirement to prepare a County hazardous waste management plan, the participants in preparing and approving the plan, and how to use the plan.

Chapter 1 includes a summary of Assembly Bill 2948 and a description of the mandated plan elements which include:

1. An analysis of the hazardous waste stream generated in the County.
2. A description of existing hazardous waste facilities.
3. An analysis of the potential for [recycling and] hazardous waste reduction at the source.
4. An analysis of household and small quantity generator hazardous waste ~~source~~.
5. An analysis of additional hazardous waste facility needs.
6. Identification of existing hazardous waste facilities which can be expanded to accommodate projected needs and an identification of general areas of specific sites for new facilities. Siting criteria may be used in lieu of this facility and site identification if general applicable areas are mapped.
7. A statement of goals, objectives and policies through the year 2,000.
8. An implementation schedule through the year 2,000.

Finally, Chapter 1 includes instructions on how to use the plan, where to find definitions of key terms, how to interpret official and illustrative maps, and a general schedule for plan revisions.

Chapter 1 recommends that the plan be revised and updated every 6 years during every other State plan revision and update.

Chapter 2: Goals and Objectives

This chapter includes goals and policies to guide the management of hazardous wastes within Humboldt County. There are 11 goals and numerous associated policies. Following each goal are a number of policies which provide specific statements guiding action and implying clear commitments.

The goals and policies in Chapter 2 were derived from the following sources:

1. Assembly Bill 2948 (Tanner)[;]
2. The State Guidelines for the preparation of Hazardous Waste Management Plans[;]
3. The Humboldt County General Plan[;]
4. The General Plans for the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad[;]
5. The Local Government Commission[;]
6. Resolution 87-120 (Humboldt County Board of Supervisors).

Basically, the goals and policies support establishing a system for managing hazardous wastes in a manner that protects the public health, safety and welfare. The goals and policies ~~require~~ [recommend] establishing a data storage system, an on-going public education and participation system, and adoption of siting criteria and the following plan priorities:

1. As the first plan priority, to manage hazardous materials to avoid or eliminate production of hazardous waste at the source.
2. As the second plan priority, to minimize hazardous waste production through source reduction.
3. As the third plan priority, to encourage on-site and off-site recycling.
4. As the fourth plan priority, to encourage on-site treatment.
5. As the fifth plan priority, to encourage off-site treatment.

Chapter 3: Current and Projected Waste Generation

This chapter describes current waste generation, the projected waste stream to the year 2,000, the current waste management and treatment needs, the projected needs, and methods and analysis for waste reduction. The plan represents an initial and comprehensive evaluation of hazardous waste generated by businesses (both large and small) and residences in Humboldt County. Data describing the amount and type of hazardous wastes is reported in Chapter 3 as well as in the appendices, and is derived from manifests that disclose hazardous wastes that are shipped off-site, and estimates of wastes from small quantity generators and households based on methodology provided by the Department of Health Services.

The most frequently occurring waste type in Humboldt County from all of the combined sources of hazardous waste is used lead acid batteries [waste oil]. Other high volume wastes generated in Humboldt County include waste oil, [used lead acid batteries,] non-halogenated solvents, dye and paint sludges and resins, PCB's and dioxins, and non-metallic inorganic liquids. The following table summarizes total wastes from all sources by waste groups:

TABLE 1

Waste Group Volume: 1986

<u>Waste Group</u>	<u>Tons</u>	<u>% Total Waste</u>
Waste Oil	1004.51	34.94
Used Lead Acid Batteries	914.60	31.81
Non-Halogenated Solvents	327.06	11.38
Dye & Paint Sludges & Resins	188.19	6.54
PCB's & Dioxins	87.31	3.04
Non-metallic Inorganic Liquids	<u>71.39</u>	<u>2.48</u>
Subtotal, Table 1	<u>2593.06</u>	<u>90.19</u>
Total Wastes	2875.10	100.00

For the manifesting waste generators, the six highest [largest] volumes by waste generators, (expressed as an average of 1985 and 1986 waste, and after subtracting the wastes shipped on a one-time basis), [wastes] were:

TABLE 2

Waste Generators: 1986

<u>Waste Generator</u>	<u>Tons</u>	<u>% Total Waste</u>
PG&E Power Plant, King Salmon	47.40	43.52
California Dept. of Transportation	20.67	18.98
Louisiana-Pacific Corp.	13.50	12.39
PG&E Service Center, Eureka	8.95	8.22
Simpson Pulp Co.	8.00	7.35
Chevron USA Inc., Eureka Terminal	<u>7.08</u>	<u>6.50</u>
Subtotal	<u>105.60</u>	<u>96.96</u>
Total Wastes	108.92	100.00

For the base year of 1986, six of the manifesting waste generators (including the 6 waste generators that are located in Eureka) are within 10 miles of Eureka. Eighty-one percent of the manifested hazardous waste generated in Humboldt County in 1986 was generated within 10 miles of Eureka.

According to the data provided by the DHS, in 1986 all of the manifested waste was shipped off-site to an outside county [counties].

Small quantity generators (SQG) include businesses that generate less than 1,000 kg (approximately 1 ton) of hazardous waste per month. Current state regulations require that hazardous waste from all businesses be stored, treated, transported, and disposed of properly.

Table 3 below summarizes the data. The five highest volumes by waste group of the hazardous wastes generated by small quantity generators consists of the following [is summarized in Table 3 below]:

TABLE 3

Estimated Small Quantity Generator Hazardous Waste: 1986

<u>Waste Group</u>	<u>Tons</u>	<u>% Total SQG</u>
1. Waste Oil	964.320	37.76
2. Used Lead-Acid Batteries	909.912	35.63
3. Non-Halogenated Solvents	278.117	10.89
4. PCB's & Dioxins	81.400	3.19
5. Dye & Paint Sludges & Resins	76.653	3.00
Subtotal	<u>2310.402</u>	<u>90.46</u>
Total	<u>2554.034</u>	<u>100.00</u>

Humboldt County's SQG's are characterized by the following types of industries: vehicle maintenance which produces such wastes as solvents, non-metallic inorganic liquids, and used lead-acid batteries; construction which produces such wastes as dye and paint sludges and resins, solvents and miscellaneous wastes; educational and vocational shops which produce such wastes as solvents, non-metallic inorganic liquids and dye and paint sludges and resins; printing and publishing which produce photographic wastes, solvents, non-metallic inorganic liquids, and metal-containing liquids; and sawmills which produce wastewater containing dioxin.

With 45,400 households projected to be in Humboldt County (based on 1980 population census projections for 1986, of 113,500 persons at 2.5 persons per household), a total of 170 tons of Household Hazardous Wastes was calculated for 1986. Table 4 below summarizes the data concerning household hazardous waste.

TABLE 4

Waste Group	Household Hazardous Waste	
	Tons	% Total SQG
1. Dye & Paint Sludges/Resins	95.340	56.0
2. Miscellaneous Wastes	25.538	15.0
3. Waste Oil	15.323	9.0
4. Halogenated Solvents	14.982	8.8
5. Pesticides	13.620	8.0
Subtotal	<u>164.803</u>	<u>96.8</u>
Total	170.250	100.00

In addition to the identification of existing and projected waste stream, Chapter 3 describes current and projected waste management facility capacity and needs. Existing commercial capacity is limited to storage of household pesticides and herbicides at a facility that is projected to close. Existing on-site, non-commercial capacity is limited to storage of wastewater sludges, waste oil and oily sludges. Facility needs are equivalent to existing and projected waste generation in Humboldt County due to the lack of existing or projected treatment facilities. Future amounts of waste generation to the year 2000 is calculated [by] using projected population growth rates of 10.2%, ~~or~~ [(or] less than [than] 1% growth per year), and applying that factor to existing amounts of waste generated.

Finally, Chapter 3 provides an overview of potential waste reduction, including description of methods of waste reduction, analysis of waste reduction potential in local businesses, projection of waste reduction impacts to facility siting needs, barriers to waste reduction, incentives for industry to minimize hazardous waste, and technical assistance.

Chapter 4: Siting of Hazardous Waste Facilities

This chapter includes siting criteria that shall be utilized in selecting sites for new [synthesizes siting opportunities and constraints based on policies of the County's existing Framework General Plan and the suggested siting criteria included in the State Health Services' Guidelines for Preparing Hazardous Waste Management Plans. Based on these siting criteria, general areas have been designated on the maps in Attachment 1 which identify potential opportunities for siting hazardous waste facilities. The criteria provide opportunities for siting new facilities in designated industrial and commercial areas.

Based on the County's needs assessment for new facilities, and in broad consideration of the statewide interest for the County to provide siting opportunities for a broad range of new facilities, the siting criteria could accommodate most facility types except for residual repositories. The criteria are also based on the County's interest in sharing the

responsibility for finding safe and effective solutions to the management and disposal of hazardous wastes. In doing so these criteria considered both the feasibility and the appropriateness of identifying suitable sites for treatment and disposal facilities as an element to be incorporated into the County General Plan. These criteria have been formulated to insure that health, safety and environmental requirements are met in the siting of] hazardous waste management facilities. In addition to the siting criteria, general areas are designated on the maps in Appendix --- where the criteria might permit new facilities.

The fact that areas have been designated on maps and are determined to be generally in conformance with the siting criteria does not guarantee that a treatment, storage, or disposal facility can be located there. The siting criteria and maps merely designate general areas where siting a hazardous waste management facility may be considered. The regulation of siting facilities must follow prescribed procedures in conformance with local use permit requirements, CEQA provisions, and all other applicable laws and regulations.

Section VIII F.1. of the County Solid Waste Management Plan concludes that:

"The Board of Supervisors should consider amending Ordinance No. 1339 to prohibit the development of a Hazardous Waste Disposal Site (Class I site) in Humboldt County, based on the lack of appropriate geologic and hydrologic conditions with the County for such development."

The Seismic, Slope Stability and Depth-to-Groundwater Siting Criteria within this Chapter also prohibit the location of residuals repositories within Humboldt County. The combination of seismic activity, slope instability and high water tables make the development of residuals repositories within Humboldt County technically, economically and environmentally infeasible.

While the relatively low volumes of hazardous waste generated in Humboldt County are probably not enough to economically support the siting of a treatment or disposal facility, it is probable that a transfer and storage facility could be established. Such a facility could serve as a collection station for household hazardous wastes and for small quantities of commercial wastes, and as a shipping facility when the quantities become large enough to be economically shipped to a treatment or recycling facility.

Proximity to urban-industrial areas, near the source of waste generation, is a factor that usually influences the chosen location. Hazardous wastes are shipped to transfer and storage facilities by rail and by vacuum, flatbed and tank trucks. Therefore, location of transfer stations is also influenced by accessibility to transportation routes. Finally, [Circulation and transportation needs are addressed as part of] the

siting criteria does identify those areas which may be suitable for the development of new industries and businesses which generate or manage hazardous wastes. Generally, these industries and businesses must be located in industrial or commercial zones in conformance with the siting criteria and development standards in Chapter 4.

Chapter 5: Programs, Regulations and Administration

Chapter 5 describes the numerous Federal, State and local regulations for the management and treatment of hazardous wastes. This chapter includes an overview of the regulatory requirements in the following areas:

1. Transportation
2. Inspection, Technical Assistance and Enforcement.
3. Organizational Responsibilities.
4. Emergency Response.
5. Storage.
6. Contaminated Sites.
7. Small Quantity Generators
8. Household Hazardous Wastes

Chapter 5 includes a matrix which briefly describes all of the relevant Hazardous Waste Management laws; (See Figure 9).

Chapter 6: Plan Implementations

This chapter contains the tasks to carry out or implement the Hazardous Waste Management Plan. Included here are both those implementation measures from previously adopted plan elements as well as those recommended through this revision of the General Plan. In addition, other items have been included where policy language of the General Plan implies action not otherwise identified as a specific implementation measure.

The purposes and applications of an Implementation Program are:

1. As an information device to assess and select the most suitable and cost effective means of implementing the Plan.
2. As a foundation for the preparation of departmental program budgets and the annual Plan Progress Report.
3. As an aid to County Departments, local governments and citizen groups to more easily identify other opportunities for cooperative and complementary efforts.
4. To satisfy state requirements which stipulate that the Plan be carried out by specific adopted implementation programs.

Implementation measures are required [Although the only component in the County Hazardous Waste Management Plan that is required by AB 2948 to be implemented is the siting criteria, the plan includes recommendations for implementing] in the following areas:

1. Public Education and Participation
2. Data Collection and Analysis
3. Waste Reduction
4. Siting
5. Transportation
6. Storage
7. Contamination
8. Small Quantity Generators
9. Household Hazardous Waste
10. Emergency Response
11. Regulations, Enforcement and surveillance
12. Organizational Responsibility
13. Funding
14. Plan monitoring and revision

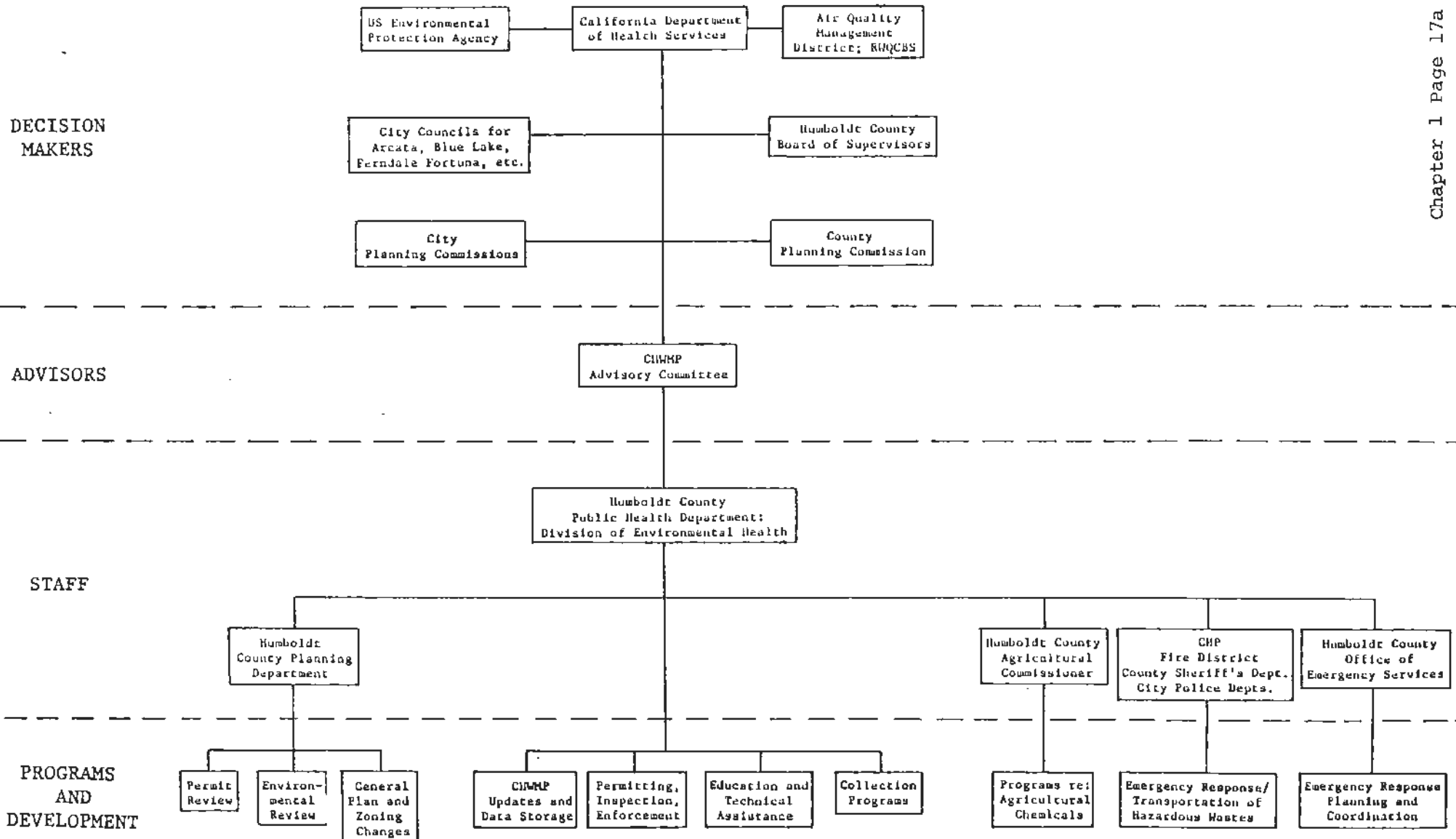
Key implementation measures include:

1. Continuation of Advisory Committee meetings and public involvement in hazardous waste planning.
2. Active public participation and education programs. Use of informational handouts, brochures, workshops, press releases and group presentations.
3. Maintenance of an ongoing data collection system in the Humboldt County Division of Environmental Health (DEH)
4. Training staff to provide technical assistance in implementing alternatives and reducing the generation of hazardous wastes.
5. Establishing cooperative agreements with adjacent counties to develop needed regional facilities.
6. Designation of appropriate transportation routes and emergency response plans.
7. Continuance of the County underground tank program.
8. County cooperation in the State and Federal contaminated site clean up programs.
9. Establishment of an educational and technical assistance program in DEH for small quantity generators.
10. Establishment of an annual household hazardous waste clean up day in cooperation with City Garbage Company.
11. Completion of the county-wide emergency response plan by the Office of Emergency Services.
12. Establishment of clear organizational responsibilities as illustrated in Figure 2.
13. Consideration of the wide range of funding sources for implementing the plan.
14. Monitoring and revising the plan every six years as needed. Annual

review of the plan by the advisory committee.

RECOMMENDED ORGANIZATIONAL STRUCTURE

FIGURE 2



CHAPTER 2

2000

GOALS AND OBJECTIVES

2100

OVERVIEW

Section 3.3 of the State guidelines specifies that:

"The primary goal of establishing a system for managing hazardous materials, including wastes, is to protect public health, safety and welfare and maintain the economic viability of the planning area and the State. Specific goals and objectives for the Plan should be developed with extensive public input so that they will be supported once the CHWMP is adopted."

The goals and policies in this chapter were derived from the following sources:

1. Assembly Bill 2948 (Tanner)
2. The State Guidelines For The Preparation of Hazardous Waste Management Plans
3. The Humboldt County General Plan
4. The General Plans For The Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad
5. The Local Government Commission
6. Resolution 87-120 (Humboldt County Board of Supervisors)

The goals and policies in this plan were adopted after extensive public review at Advisory Committee meetings and workshops, Planning Commission hearings, Board of Supervisor hearings and City Council hearings throughout Humboldt County.

2200

GOALS AND POLICIES

A **GOAL** is the ultimate purpose of an effort stated in a way that is general and immeasurable. Example: "The optimum amount of prime and non-prime agricultural land shall be conserved for and maintained in agricultural use to promote and increase Humboldt County's agricultural production."

A **POLICY** is a specific statement guiding action and implying clear commitment. Example: "The conversion of economically viable agricultural lands shall be monitored and reported annually."

The policies contained in the Plan are expressed in terms of "shall" or "should". There is an important distinction between these two terms. As used in the Plan, "shall" indicates an unequivocal commitment, while "should" indicates a slightly less rigorous commitment to be followed in the absence of compelling, countervailing factors specified in the

General Plan.

GOALS AND POLICIES

GOAL 1

To protect the public health, safety, environment, and economic growth through the effective management of hazardous wastes produced in Humboldt County. [To establish an effective process for hazardous waste management at the local level, consistent with the responsibility of local government to assure that adequate treatment and disposal capacity is available to manage the hazardous wastes within the local jurisdiction.]

POLICY

- A. Hazardous wastes shall be reduced to a level which assures the safety of residents of and visitors to Humboldt County.
- B. The County Hazardous Waste Management Plan shall identify, and where necessary, designate through all phases of production, handling, transport, storage and disposal, the respective responsibilities of federal, state, and local governments in hazardous waste management planning and regulation.
- C. The County and Cities in Humboldt recognize the importance of a statewide hazardous waste management system which provides for effective and efficient hazardous waste management by a combination of on and off-site facilities.
- D. New Hazardous industrial development [To ensure that land uses adjacent to or near hazardous waste facilities, or proposed sites for those facilities are compatible, new hazardous waste management facilities¹] shall be permitted only when:
 1. It includes emergency response and liability insurance

1. [This policy appears in Section 3292.7 E of the Humboldt County Framework Plan, but is directed to "hazardous industrial development". AB 2948 does not authorize planning for hazardous materials. This reference to the Framework Plan policy is for informational purposes.] Note: "Hazardous industrial development" is defined as: "Any development that handles toxic, flammable, or explosive materials in such quantities that would, if released or ignited, constitute a significant risk to adjacent human populations or development."

- measures sufficient to offset increased risks to adjacent human population and natural resources;
2. Increased risks to adjacent human populations have been reduced to the greatest extent feasible by approved disaster response plans, and the safest feasible location is proposed, based on an analysis of alternate sites;
 3. The benefits of the development outweigh the risks to human and environmental resources;
 4. Risks have been minimized through the consideration of the best available technology resulting in the least hazardous waste production.
- E. New businesses using hazardous materials shall be located in areas least dangerous to the public and the environment. ^[1]
 - F. An annual cleanup program should be instituted to encourage residents to properly dispose of household hazardous waste.
 - G. Before issuance of permits for new construction or establishment of new land uses, particularly where explosives and hazardous chemicals are involved, the county/city should refer the application to the appropriate Fire District to ensure that all fire safety concerns are satisfied. ^[2].
 - H. The CHWMP shall identify and provide for appropriate organizations to implement local government responsibilities defined in the CHWMP and recommend methods of funding implementation.
 - I. An equitable system to finance the cost of implementing the hazardous waste management plan shall be established and maintained through the CHWMP.
 - J. Existing County programs, where appropriate and feasible, shall be expanded and strengthened, to fill in gaps in the current federal, state, and local hazardous materials management efforts.

-
1. [Source: This policy appears in the City of Arcata's Waste Management Element, and appears for informational purposes. AB 2948 does not authorize planning for hazardous materials.]
 2. [Source: General Plan Public Safety Element, City of Rio Dell and City of Ferndale.]

GOAL 2

To consolidate data and establish a data management system for taking inventory and analyzing the hazardous waste stream, facility requirements and restrictions and need analysis.

POLICY

- A. The CHWMP shall identify all sources and locations of hazardous waste within the County of Humboldt.
- B. The CHWMP shall establish and maintain a coordinated hazardous waste data collection program for the County, utilizing data provided by the Department of Health Services and coordinating with the DOHS in the use of locally validated data.
- C. The CHWMP shall provide for incorporating changes in data, technology, economic development and goals and objectives for responsible management of hazardous wastes.

GOAL 3

As the first plan priority, to ~~manage~~ minimize hazardous materials to ~~avoid or eliminate~~ waste production by avoiding or eliminating production of hazardous waste ~~at the source~~ (or by implementing other mechanisms for source reduction).

POLICY

- A. To decrease as much as possible the per capita hazardous waste generated by users by the year 2000.

GOAL 4

As the second plan priority, to minimize hazardous waste production through source reduction.

POLICY

- A. ~~[B.]~~ New development which may generate significant quantities of hazardous wastes shall be required to provide a disposal plan which emphasizes waste reduction, on-site treatment, neutralization, recycling, and alternatives to the use of hazardous materials. [1]

[GOAL 4 Merged with Goal 3.]

1. [Source: Humboldt County Framework Plan Section 3292.8 B]

GOAL 5

As the third plan priority, to encourage on-site and off-site recycling.

POLICY

- A. New and existing business in Humboldt County should be encouraged to ~~dispose of~~ [manage] hazardous wastes in the way most favorable to the environment, such as recycling.
- B. On-site recycling is the preferred method of recycling and shall take precedence over off-site recycling where feasible.
- [C. To develop a solution to the safe and responsible management of hazardous wastes through improved programs of waste source reduction and recycling, and encouraging onsite treatment of hazardous wastes, as preferable to the siting of new land disposal facilities.¹]

GOAL 6

As the fourth plan priority, to encourage on-site treatment.

POLICY

- A. New and existing businesses in Humboldt County shall be encouraged to reduce the use of hazardous materials when feasible, and to dispose of hazardous wastes in the way most favorable to the environment.

GOAL 7

As the fifth plan priority, to encourage off-site treatment.

POLICY

- A. Treatment and disposal facilities shall be planned to accommodate only Humboldt County's "fair share" of the total hazardous waste which is generated in California; as determined by the County Board of Supervisors in adopting inter-county agreements for the treatment and disposal of hazardous wastes. Inter-county cooperative agreements shall be sought for counties with facilities that currently accept hazardous waste that is generated in Humboldt

1. [Source: Section 1 of the Tanner legislation, AB 2948, (Stats. 1986, c.1504).]

County.

New offsite hazardous waste management facilities shall be primarily limited to a scale necessary to meet the hazardous waste management needs of this County; larger facilities may be permitted in accordance with agreements reached between this County and other jurisdictions or upon determination of the local governing body that the project meets local planning criteria and serves public needs.

The County and its cities recognize their collective responsibility to cooperate with other governments in the region and the state in planning for the effective management of hazardous wastes generated in the region and the state in accordance with the hazardous waste management hierarchy. Sound hazardous waste management planning, waste reduction efforts, and appropriate facility siting are the mutual responsibility of all governments. To this end, the County and its cities encourage multi-county and regional efforts to plan and implement alternatives to land disposal of untreated hazardous wastes around the state. Agreements for new facilities to provide the offsite capacity needed for hazardous waste treatment and residuals disposal should be reached among jurisdictions according to their fair share of the hazardous waste stream, each jurisdiction's environmental suitability for different types of facilities, their economic interests, and the economic viability of different types and sizes of facilities. Any privately-owned facility located in this County shall be available to serve generators from inside and outside the County.

"Fair share" denotes that each county is responsible for the disposition of its own waste; that is, responsible for its fair share of waste management. No county should be expected to establish a hazardous waste facility with a capacity exceeding the amount of waste they generate. A county cannot be required to accept a facility with a capacity that exceeds the county's own needs, except as provided by an inter-jurisdictional agreement. It is recognized that the waste streams in each county will probably not support an economically efficient hazardous waste facility of each type needed to handle a county's waste. Therefore, counties are encouraged to enter into inter-jurisdictional agreements. It is recognized that the waste streams in each county will probably not support an economically efficient hazardous waste facility of each type needed to handle a county's waste. Therefore, counties are encouraged to enter into inter-jurisdictional agreements to balance economic efficiency in the size of facilities and to responsibly handle their fair share of the wastes generated.

B. To require the safe transport of hazardous materials from the

source of generation to the point of treatment and ultimate disposal, [AB2948, Sec. 2 (a) (5)], consistent with applicable routing requirements and emergency response.

- C. The maintenance and upgrading of disaster response plans shall continue to be provided.
- D. Access roads and utilities serving critical or hazardous waste facilities shall be reviewed to ensure their availability during an emergency.
- E. The above policies apply to Goals 5 and 6 and regardless of Plan priorities, hazardous wastes shall be managed in an environmentally sound manner.

GOAL 8

To develop siting criteria and identify general areas where the siting of new hazardous waste treatment, storage or disposal facilities may be acceptable. [To utilize the hazardous waste management plan as the primary planning document for hazardous waste management at the local level. To integrate the hazardous waste management plan with other local land use planning activities to ensure that suitable locations are available for needed hazardous waste facilities.]

POLICY

- A. The County Hazardous Waste Management Plan (CHWMP) shall regulate land use to ensure that development of hazardous waste facilities shall not occur in potentially hazardous areas and shall not preclude preserving and promoting public safety. ^[1]
- B. The CHWMP shall ensure that land uses adjacent to, or near, hazardous waste facilities or proposed sites for facilities, are compatible with their operation.
- C. All County and City programs shall be amended to be consistent with the Goals and Policies of this Hazardous Waste Management Element.
- D. Land uses which include storage and transfer of hazardous materials shall include special provision for accidental spills which ensure that the hazard will be contained on the premises and not be injected into the air or nearby drainage facilities or affect important traffic corridors or critical public facilities such as

1. [Source: Humboldt County Framework Plan Section 3291.1.A.]

hospitals and schools, or residential areas. ^[1]

- E. Flexibility shall be maintained in the CHWMP to facilitate the permit issuance process.
- F. The CHWMP shall include a statement of understanding and acceptance from the affected jurisdiction, when the CHWMP designates areas, or when the siting criteria could accommodate areas within the County over which the County has no jurisdiction as appropriate for siting facilities.

GOAL 9

To maximize opportunities for public participation in the planning process.

POLICY

- A. The CHWMP shall be prepared and reviewed with the full and meaningful involvement of the public, environmental groups, civic associations, generators of hazardous waste and the hazardous waste management industry.
- B. The CHWMP shall provide for continuing public education programs regarding the problems, progress and needs of the County hazardous waste management program.

GOAL 10

To apply the six priorities for hazardous waste management to household hazardous wastes.

POLICY

- A. Educating the residents of Humboldt County about ways to avoid generating hazardous waste shall be given high priority.
 - 1. Wholesalers and retailers should be encouraged to inform customers of the potential hazards of household materials, including their safe use, storage and disposal, and less hazardous alternatives as described in Appendix 2.3.
 - 2. County agencies responsible for health and safety should

-
- 1. [Source: General Plan, Cities of Ferndale, Fortuna, and Rio Dell. AB 2948 does not authorize planning for hazardous materials. This policy appears for informational purposes.]

counsel residents about how to avoid household hazardous waste problems.

3. Ongoing public and private efforts to educate residents about non-hazardous alternative materials and methods should be encouraged.

B. Use Reduction

1. "Good housekeeping" techniques for household hazardous waste reduction, such as those in Appendix 2.3, shall be encouraged.
2. Separation of household hazardous wastes from recyclable or reusable non-hazardous wastes shall be encouraged.

C. Reuse and Recycling

1. Household waste oil recycling shall be encouraged.
2. Use of hazardous household materials for their intended purposes shall be preferred to treatment or disposal.
3. Opportunities for household hazardous waste exchange should be encouraged.

D. Treatment

1. Sterilization of infectious wastes shall be encouraged where feasible.
2. Collection and treatment of non-recyclable household hazardous wastes by licensed or otherwise qualified persons shall be encouraged to reduce the risks of human and environmental exposure to hazardous wastes.

E. Disposal

1. Incineration of household infectious wastes at properly sited, designed and permitted facilities, including via sanitary sewers, shall be accepted practice when sterilization is not feasible.
2. The preferred method of disposal for non-infectious household hazardous wastes that cannot be reused, recycled or treated is in properly sited and designed residuals repositories. [Effective May 8, 1990, untreated hazardous wastes will be prohibited from disposal at landfills (SB 1500, Roberti, Section 25155.5 of the Health and Safety Code).]

GOAL 11

The risks associated with the transportation of hazardous wastes and hazardous materials shall be minimized. [Transportation restrictions or requirements shall conform with Section 31303 and 31304 of the California Vehicle Code.]

POLICY

- A. The transportation network must be adequate to provide safe efficient and usable facilities to handle the needs of generators and haulers.
- B. The transportation of hazardous wastes on city streets or County roads shall be restricted to the most direct or shortest route commensurate with public health and safety, to the nearest point of access of a state highway.
- C. Transporters of hazardous wastes should file a route plan with the local CHP office and the County Sheriff's Department five days in advance of such action, or in the case of continuous or on-going shipment, an annual plan should be filed with the CHP and designated County agencies.
- D. Public Notice shall be posted in cases where city streets or County roads are prohibited from the use of hazardous waste transport, in accord with Sections 31304 and 31305 of the California Vehicle Code.
- E. Prior to shipping hazardous wastes, transporters should check road conditions with Caltrans.
- F. The preferred shipping lane is Highway 101 North and South.
- G. Rail transport of hazardous wastes is not encouraged.
- H. [Facilities other than repositories shall be located so as to minimize distances to major transportation routes and designed to accommodate heavy vehicles.] A centrally located transfer station is recommended, in order to provide for the needs of small quantity generators and households.
- I. Special design standards and transportation needs, beyond what is

- 1. [AB 2948 does not authorize planning for hazardous materials. This reference is for informational purposes.]

being constructed in highway and road improvements today, should be identified.

- J. Cooperative agreements with neighboring counties should be negotiated in order to ensure adequate response capabilities at each county boundary and to adhere to the statewide emergency plan.

CHAPTER 3

3000 CURRENT AND PROJECTED WASTE GENERATION AND NEEDS ANALYSIS

3100 OVERVIEW, CURRENT WASTE GENERATION

The Humboldt County Hazardous Waste Management Plan provides a means for evaluating the current waste stream, by identifying how much and what kinds of hazardous wastes are being generated, by whom they are being generated, and how and where the wastes are being treated or disposed of. Once the current waste stream is described and analyzed, projections of future waste generation are made, followed by a needs analysis for treatment, storage or disposal facilities.

The plan represents an initial and comprehensive evaluation of hazardous waste generated by businesses (both large and small) and residences in Humboldt County. Refinement of the data reporting and development of an improved means of data analysis is needed and could be provided/developed in revisions or updates to the plan. Since the data collection and analysis has occurred over a limited period of time, estimates represent the best available data. Where assumptions are made or data gaps appear, the plan is so noted.

The most current descriptions and estimates of the volumes of hazardous waste generated in Humboldt County are provided in this section of the plan. Appendices to the plan include tables that detail the volume of wastes by waste categories [groups], source of generation (such as small quantity generators) or by location/method of disposal (such as off-site).

Methodology for collecting and reporting wastes is based on the formats recommended in the Dept. of Health Services' Guidelines and Technical Reference Manual. Any formats or reporting methods, other than those [recommended] by DHS, are explained in the plan text.

3101 Key Terms

Manifest

Wastes that are shipped off-site are required to comply with the Uniform Hazardous Waste Manifest system as administered by the Calif. Dept. of Health Services (DHS), for shipping within the State of Calif. Hazardous waste generators are required to complete a Manifest when hazardous wastes are shipped from the site of generation, from a transfer station, or from a storage facility. The manifest provides the basis for monitoring the flow of hazardous wastes from source of generation to point of disposal. The DHS reviews each manifest for accuracy and evaluates for discrepancies in manifest data.

Waste Groups

The Dept. of Health Services has established 17 waste groups in order to simplify the current waste classification system (as identified in the back of the uniform hazardous waste management manifest). These 17 waste groups, developed for counties in preparing the hazardous waste management plans, represent related waste groups for use in the County's initial evaluation of hazardous waste generation. The 80 California waste categories defined in the manifest have been re-sorted into 17 broad waste groups. The 17 broad waste groups and their respective waste categories from the list of 80 manifest categories are described in Appendix 3.3. The miscellaneous wastes are reported separately in the tables to enable the inclusion of the miscellaneous waste data in projections of future waste streams and needs analysis for treatment, storage or disposal facilities.

[Waste groups used in this CHWMP do not preclude the use of new waste groups (e.g., infectious waste) in the needs assessments of future amendments to the CHWMP. Amended CHWMPs may also be required to enhance the analysis of selected waste streams (e.g., out-of-state shipments, pretreatment sludges, etc.).]

Hazardous Wastes Shipped Off-Site

An off-site facility is an operation involving the handling, treatment, storage or disposal of a hazardous waste through either: a) the transport of hazardous wastes via a commercial railroad, public road or public waters, where the facility, if located on adjacent land, is not owned by or leased to the generator of the waste; b) the hazardous waste is taken to a site that is not owned by or leased to the producer of the waste; c) the hazardous waste is taken to a site which receives hazardous waste from more than one producer/generator. Hazardous wastes that are shipped off-site must file a manifest with the Dept. of Health Services.

Additional key terms are found in the glossary section of the draft plan.

3200 CURRENT WASTE GENERATION

3201 Summary of Total Generated Waste

Table I, Appendix 3.1 provides a summary of the total wastes generated in Humboldt County. This table includes an average of 1985 and 1986 manifested wastes from data provided by DOHS [wastes shipped out of state, wastes picked up by route service operators] wastes from small quantity generators, household hazardous wastes, and wastes from contaminated sites and clean up activities [wastes from households and an average of the 1985 and 1986 manifested wastes]. The most frequently occurring waste type in Humboldt County from all of the combined sources of hazardous waste is used lead acid batteries [waste oil]. Other high

volume wastes generated in Humboldt County include waste oil [used lead acid batteries], non-halogenated solvents, and dye and paint sludges and resins, which represents 83.98% of the total wastes produced, when combined with the volume of used lead acid batteries [and PCB's and Dioxins]. These other high volume wastes, when combined with waste oil, represent 87.7% of the total hazardous wastes produced in the County].

The total estimated hazardous waste produced in Humboldt County is 2,741.54 [2,875.20] tons annually. Of this, 2,462.399 [2,554.03] tons is [are] produced by small quantity generators. Household wastes account for 170.25 tons annually. Wastes manifested to disposal sites accounted [account] for 108.89 [108.92] tons. One-time manifested wastes include wastes collected at contaminated sites and shipments from business and government that are not expected to be repeated, [from contaminated sites, wastes generated at the beginning or ending of a program to change materials or processes used by a business, and wastes shipped irregularly, not on a yearly basis.] These one-time wastes account for an average of 201.89 tons for 1985 and 1986. The six highest wastes [waste groups that represent the largest amounts] generated in Humboldt County appear in Table 5 below.

TABLE 5
Waste Group Volume

<u>Waste Group</u>	<u>Tons</u>	<u>% of Total Waste</u>
Waste Oil	1004.51	34.94
Used Lead Acid Batteries	914.60	31.81
Non-Halogenated Solvents	327.06	11.38
Dye & Paint		
Sludges & Resins	188.19	6.54
PCB's & Dioxins	87.31	3.04
Non-Metallic		
Inorganic Liquids	71.39	2.48
Subtotal	<u>2593.06</u>	<u>90.19</u>
Total Wastes	<u>2875.10</u>	<u>100.00</u>

3202 Manifested Waste [Wastes Shipped Off-Site]

During 1985 and 1986, 604.94 [Table A, Appendix 3.1, reports "Quantities of Hazardous Waste Shipped Off-site Annually." This table includes the County's manifested hazardous waste generation for 1985, 1986 and an average of the two (the average has had one-time wastes subtracted from it). Also included in this table is the County's waste shipped out of state, and the County's waste that is picked up by route service operators. In this table, wastes are organized by waste groups. Generalized treatment methods for each waste group are also provided. Between 1985 and 1986, 1115.24] tons of hazardous waste, representing 14 of the state's 17 waste groups, were manifested, All of the manifested

wastes were shipped out of Humboldt County to at least 9 different counties with some shipped to unspecified or unknown county/facility destinations. [sent out of state, or picked up by route service operators.]

The six highest volumes, by waste groups, of manifested waste based upon a two year average are presented in Table 6. This data has been adjusted by removing materials that were manifested which were one-time shipments and [According to the data provided by the DHS, in 1986 Humboldt County manifested 235.09 tons of hazardous waste. All of this waste was shipped off-site to locations outside of Humboldt County. The category of Polychlorinated Biphenyls and Dioxins (PCB's and Dioxins) represents the largest amount at 61.83 tons (25.41%). The second largest waste group is metal-containing sludge at 50.61 tons (21.53%). Waste oil is the third highest volume at 46.74 tons (19.88%). These are the values of manifested wastes before one-time wastes are subtracted.]

[All of the manifested wastes were shipped out of Humboldt County to at least 9 different counties with some shipped to unspecified or unknown County/facility destinations. The six largest volumes, by waste group, of manifested waste based upon a two year average are represented in Table 6. This data has been adjusted by removing materials that were one-time shipments or were] not characteristic of normal waste production.

TABLE 6
1985-1986 Average Manifested Waste

Waste Group	Tons	% of Total Waste
Metal-Containing Sludge	25.31	23.24
Waste Oil	24.87	22.83
Dye and Paint Sludges and Resins	16.20	14.87
Asbestos-Containing Waste	11.03	10.13
Non-Halogenated Organic Sludges and Solids	7.83	7.19
Organic Liquids	6.55	6.01
Subtotal	<u>91.79</u>	<u>84.27</u>
Total	108.89	100.00

There were 16 hazardous waste generators in Humboldt County during 1985 and 1986 that manifested hazardous wastes. The six highest [largest] generators by volume are presented in Table 7. These wastes are an average of the two years for the companies and have also been adjusted by removing wastes shipped on a one-time basis.

TABLE 7
Waste Generators

Waste Generator	Tons	% of Total Waste
P.G.&E. Power Plant, King Salmon	47.40	43.52
Calif. Dept. of Transportation	20.67	18.98
Louisiana-Pacific Corp.	13.50	12.39
P.G.&E. (Myrtle Ave)	8.95	8.22
Simpson Pulp Co.	8.00	7.35
Chevron USA Inc. -Eureka Terminal	7.08	6.50
Subtotal	105.60	96.96
Total	108.92	100.00

Manifested wastes averaged 310,785 tons in 1985 and 1986 or 11.34% of the total County estimated annual waste production. In addition to the waste manifested by these generators, route service operators annually pick up approximately 154,000 tons of waste from Humboldt County. About 32,390 tons or 20.97% of this waste was non-halogenated solvents and about 114,800 tons or 74.55% of this waste was used oil which was transported by one of three route service operators: California Oil Recyclers, Chico Drain Oil, or Refineries Service.

Eight of the 16 hazardous waste generators/manifest locations were P.G.&E. facilities. After one-time wastes are [were] subtracted, the amount these facilities manifested during 1985 & 1986 combined totals 60,435 tons or 55.50% [55.54%] of the hazardous waste manifested. The following table gives a breakdown of the combined manifested waste from the P.G.&E. facilities as an average of the years 1985 and 1986, excluding one-time wastes:

TABLE 8
P.G. & E.'s Hazardous Waste

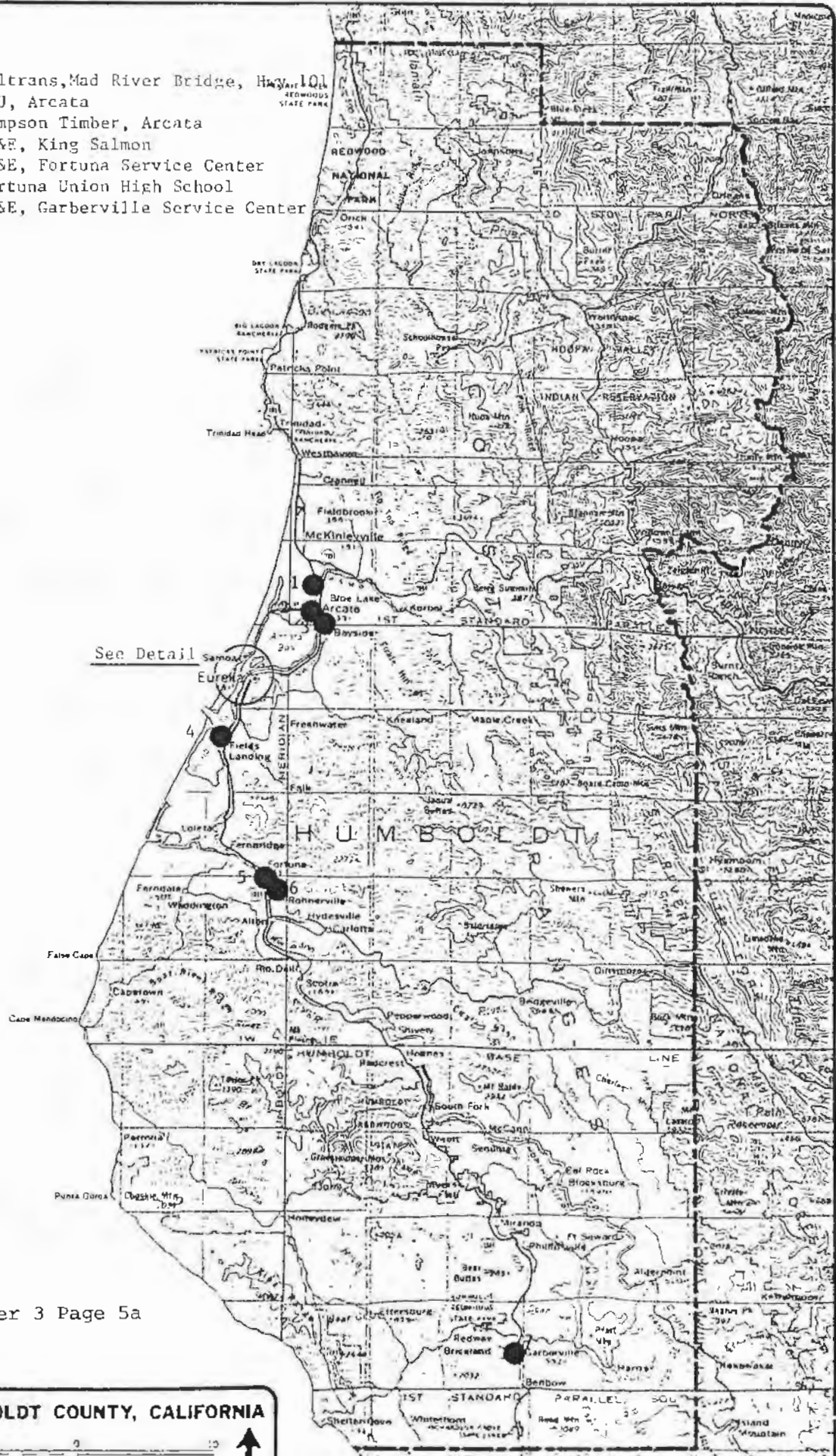
Waste Group	Tons	% [of] Total by Waste Group
Metal-Containing Sludge	25.310	41.88
Waste Oil	21.930	36.29
Dye & Paint Sludges & Resins	4.575	7.57
Asbestos-Containing Waste	3.030	5.01
Non-Halogenated Solvents	.965	1.60
Subtotal	55.81	92.35
Total of P.G.&E.'s Wastes	60.435	100.00

[Wastes shipped out-of state are not well documented because manifesters are not obligated to send notification to the State Department of Health Services for out-of-state shipments. Based on limited data provided by DHS, between 1985 and 1986 two manifesters in Humboldt County shipped waste out-of-state. Through personal contact with the two manifesters,

Location of 1986
Manifesting
Generators, Hum. Co.

FIGURE 3

1. Caltrans, Mad River Bridge, Hwy 101
2. HSU, Arcata
3. Simpson Timber, Arcata
4. PG&E, King Salmon
5. PG&E, Fortuna Service Center
6. Fortuna Union High School
7. PG&E, Garberville Service Center



Location of 1986
 Manifesting
 Generators, Eureka

- A-1. Louisiana Pacific, Samoa
- A-2. Crown Simpson Pulp Co., Samoa
- A-3. PG&E, Railroad & 14th, Eureka
- A-4. Caltrans, Wabash & Union, Eureka
- A-5. Union Oil Co. Terminal, Dock B, Eureka
- A-6. Valley Motorcycle Sales, Tomlinson, Eureka
- A-7. PG&E, Myrtle Ave, Eureka
- A-8. PG&E, Hubbard Ln., Eureka
- A-9. Chevron USA Inc., Eureka

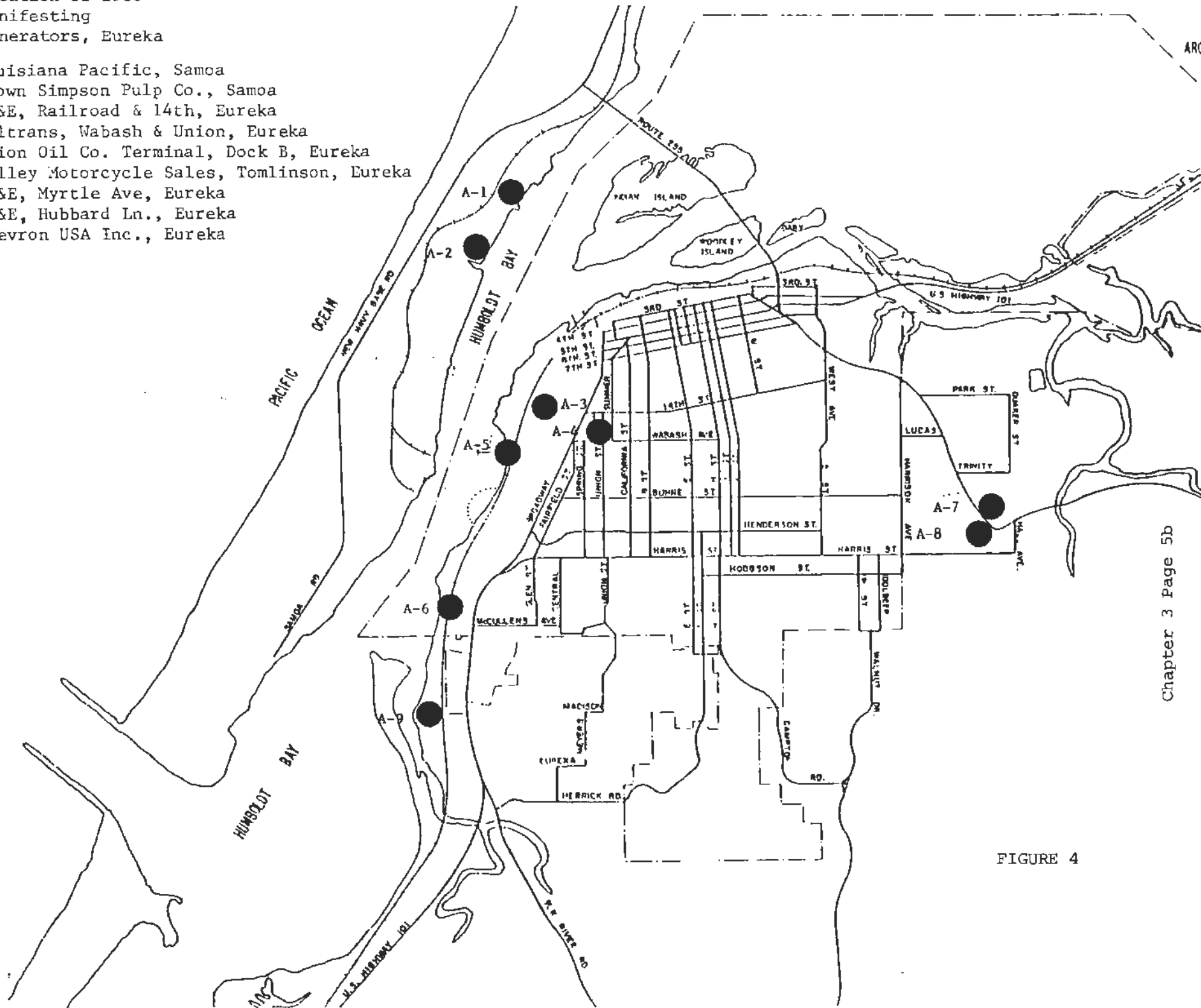


FIGURE 4

it was determined that the waste was shipped out-of-state for either economic reasons or because of lack of appropriate disposal facilities in California.

Route Service Operators pick up approximately 104.22 tons of waste from Humboldt County annually. In 1986, about 96% of the route service operator waste was waste oil which was transported by one of three route service operators: California Oil Recyclers, Chico Drain Oil, or Refineries Service. The data concerning route service operators was gathered through direct contact with the three waste oil haulers mentioned above.]

Waste Generator Locations

For 1986, six waste generators [manifesters] were located in Eureka city limits. Fourteen of the 16 waste generators [total manifesters in the County for 1986] (including the 6 waste generators [manifesters] that are [were] located in Eureka) were [located] within 10 miles of Eureka. Eighty-one percent of the hazardous waste generated [manifested] in Humboldt County in 1986 was generated [originated] within 10 miles of Eureka. Figures 3 and 4 illustrates [illustrate] the location of the manifesting waste generator companies in Humboldt County.

Table A, Appendix 3.1, reports "Quantities of Hazardous Waste Shipped Off-Site in Current Year by Generators in the County". This table organizes the County's current manifested hazardous waste generation in waste groups. Generalized treatment methods for each of the waste groups are also provided. The Adjusted Table A also includes wastes handled and manifested by route service operators, with the exception of waste oil haulers.

According to the data provided by the DHS, in 1986 Humboldt County manifested 277.09 tons of hazardous waste. All of this waste was shipped off-site to an outside county. The category of Polychlorinated Biphenyls and Dioxins (PCB's and Dioxins) represents the largest amount at 61.83 tons (22.31%). The second largest waste group is metal-containing sludge at 50.61 tons (18.26%). Waste oil is the third highest volume at 46.74 tons (16.87%).

3203 Small Quantity Generators

Small quantity generators (SQG) include businesses that generate less than 1,000 kg (approximately 1 ton) of hazardous waste per month. Current state regulations require that hazardous waste from all businesses be stored, treated, transported, and disposed of properly. This plan identifies the [quantity of hazardous waste produced by] small quantity hazardous waste generators. Table I Column #6, Appendix 3.1, reports wastes from SQG's This data has been derived by estimating data [as well

as waste oil from route service operators. The small quantity generator data was derived by using Part F of the Technical Reference Manual (TRM) and by using a list of County businesses with corresponding Standard Industrial Classification (SIC) codes provided by the Employment Development Department. Waste oil from route service operators was included here because the TRM worksheets for SQG's did not include waste oil and because most of the waste oil picked up was from SQG's].

Table 9 below summarizes the data. The five highest [largest] volumes by waste group of the hazardous wastes generated by small quantity generators consists of the following:

TABLE 9
Small Quantity Generator Hazardous Waste

<u>Waste Group</u>	<u>Tons</u>	<u>% of Total SQG</u>
Waste Oil	964.320	37.76
Used Lead-Acid Batteries	909.912	35.63
Non-Halogenated Solvents	278.117	10.89
PCB's & Dioxins	81.400	3.19
Dye & Paint Sludges & Resins	76.653	3.00
Subtotal	<u>2310.402</u>	<u>90.47%</u>
Total	2554.034	100.00%

Humboldt County's SQG's are characterized by the following types of industries: vehicle maintenance which produces such wastes as solvents, non-metallic inorganic liquids, and used lead-acid batteries; construction which produces such wastes as dye and paint sludges and resins, solvents, and miscellaneous wastes; educational and vocational shops which produce such wastes as solvents, non-metallic inorganic liquids and dye and paint sludges and resins; printing and publishing which produce photographic wastes, solvents, non-metallic inorganic liquids, and metal-containing liquids; and sawmills which produce wastewater containing wood preservatives (the latter is described by the Dept. of Health Services in the Technical Reference Manual, Part F Attachment A).

The County Division of Environmental Health is developing a data base for locally generated data concerning small quantity generators. This data base will use a survey that was circulated to businesses in Humboldt County and Business Plans on file with the County DEH, required by AB2185/2187. The survey data is being tabulated and sorted according to the amount of hazardous waste by waste group. A sample of the survey that was circulated is attached in Appendix 3.4. Approximately 45% of 1,720 businesses responded to the survey. This data base will provide a locally accurate accounting of hazardous waste generation and will be easily updated as more businesses respond or when new businesses are established.

3204 Household Hazardous Wastes

Current California and federal regulations exempt individual disposal of household hazardous waste from the manifesting requirements. For purposes of estimating quantities, household hazardous wastes are viewed separately. These separate calculations will facilitate analysis for household hazardous waste program needs. Household wastes were reported in Table I Column #8, Appendix 3.1, [and were determined] using Part F [Attachment H] in the TRM together with the estimated volumes of solid waste derived from the Humboldt County Solid Waste Management Plan, First Edition, March 1981. The DHS staff provided the County with an estimated 7.5 lbs. per household as the average annual generation of household hazardous wastes.

With 45,400 households projected to be [113,500 persons and 2.5 persons per household projected for 1986] in Humboldt County based on 1980 population census projections for 1986, of 113,500 persons at 2.5 persons per household, a total of 170,250 [data, 45,400 households were calculated to be in the County. Using the DHS estimate of 7.5 lbs per household, a value of 170.251] tons of Household Hazardous Wastes was calculated [determined] for 1986. Part F Attachment H of the TRM provided the basis for determining the amount of waste per waste group. See attached memo (Appendix 3.7) for methodology in calculating household hazardous wastes. Table 10 below summarizes the data concerning household hazardous waste.

TABLE 10
Household Hazardous Waste

Waste Group	Tons	% of Total HHW
1. Dye & Paint Sludges/Resins	95.340	56.0
2. Miscellaneous Wastes	25.538	15.0
3. Waste Oil	15.323	9.0
4. Non-halogenated Solvents	14.982	8.8
5. Pesticides	13.620	8.0
Subtotal	164.030	96.8
Total	170.251	100.0

3205 Contaminated Sites

The Department of Health Services (DHS), Toxic Substances Control Division's Hazardous Waste Information System provided counties with information concerning wastes from contaminated sites. Wastes from such sources as contaminated soils, asbestos-containing waste, and one time generators were provided to Humboldt County for the years 1984, 1985, and 1986. These waste categories typically represent wastes from contaminated sites and clean up activities.

One time (1x) waste generators include businesses that do not regularly manifest the same wastes. One-time wastes are often representative of clean-up waste activities, and ~~include~~ [in 1986 included] one-time contaminated soil removal, PCB removal, asbestos removal, and lab wastes ~~in 1986~~. Table I, Column #2, Appendix 3.1, represents the volume of wastes generated from one time site clean ups. Asbestos-containing waste, non-metallic inorganic liquids, and polychlorinated biphenyls were manifested by one time generators in 1986. For 1985, asbestos containing waste, oily sludges, waste oil, empty containers >30 gallons, and PCB's were manifested by one time generators. A more detailed description of the one-time wastes and waste generators is included in Appendix 3.9.

Other sources of data for current waste generation from contaminated sites in Humboldt County include: Superfund sites (NPL) Federal bond expenditure clean-up sites; Expenditure Plan Sites confirmed by the DHS or other government agencies as being hazardous waste sites requiring supervised abatement, according to the Hazardous Substance Cleanup Bond Act of 1984; and Office of Planning and Research pursuant to AB3750 (Cortese) for leaking underground tanks.

FEDERAL PROGRAM: Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) certain hazardous waste sites can receive federal superfunding for their clean-up. To be considered for federal funding the site must be on the National Priorities List (NPL), the Environmental Protection Agency's list of uncontrolled or abandoned hazardous waste sites identified for possible long term remedial actions under Superfund. The Superfund Data Base of Potential Hazardous Waste Sites maintained by the EPA's Region 9 Office in San Francisco includes 27 sites in Humboldt County. Specific locations of these sites include 5 in Eureka, 1 in Arcata, 1 in Samoa, 2 in Fortuna, 1 in Loleta, 1 in Ferndale, and 16 in Hoopa. Humboldt County has only one listed NPL site at Celtor Chemical Works, Hoopa Indian Reservation; address: Celtor Chemical Works, Hoopa Indian Reservation, Route 96, Hoopa, CA 95546.

In August 1983, EPA performed an immediate removal of some of the most contaminated soil. This short-term removal is called an "Interim Remedial Measure", or IRM, and is done where immediate actions may be taken to address releases requiring expedited response. During the IRM, over 1180 tons of heavy metal contaminated soil, wood vats, tailings, and general debris were removed from the site.

STATE PROGRAM: Under Health and Safety Code (HSC) Section 25334.5(a), the Calif. Dept. of Health Services is required to identify contaminated sites in the state which require public funds for clean-up. Contaminated sites in California which have been investigated are listed under the states current Hazardous Waste Cleanup Bond Act Expenditure Plan. It is required by law for DHS to specify site plans for spending the \$100 million in funds available. These documents describe each site's

specific hazardous wastes involved, the threat to public health and environmental health, the status of site remedial activity, and projected budget to implement remedial activities.

DHS distributed the Expenditure Plan information to each county's Board of Supervisors and Health Officer pursuant to the requirements of Proposition 65. Of the 400 sites currently listed in the State Expenditure Plan, three sites exist in Humboldt County. These sites include: McNamara & Peepes Lumber Mill, Cal-Pacific Lumber, and Hoopa Veneer/Humboldt Fir. A more detailed description of these contaminated sites is included in Appendix 3.9.

UNDERGROUND TANKS: Every county has numerous leaking underground tanks, many of which have not yet been found. Most leaking tanks either contain or have contained petroleum products; others have contained solvents which present a more complicated management problem. [Underground tanks which are confirmed as leaking hazardous materials may eventually be abated by the responsible parties with state or local government oversight or may be subject to government-funded cleanup if responsible parties cannot be located, or if they are uncooperative.]

In many counties, including Humboldt, soils from leaking underground tanks may be allowed to aerate. In doing so, the soils are rendered non-hazardous, and thus, the volume of such "wastes" is reduced. According to Bob Clark, engineer for the North Coast Unified Air Quality District, there are no ambient air quality limits for the aeration of soils contaminated by leaking underground tanks, and there are no permit requirements for letting contaminated soils aerate in Humboldt County.

At the state level, the [The] State Water Resources Control Board [(SWRCB)] is responsible for the underground tank inspection and permitting program. Underground tanks which are confirmed as leaking hazardous materials may eventually be abated by the responsible parties with state or local government oversight or may be subject to government-funded cleanup if responsible parties cannot be located, or if they are uncooperative [Underground Tank Inspection and Permitting Program; however, the program can be implemented at the local level as in the case of Humboldt County. If it is implemented at the local level, the SWRCB oversees the implementation].

A listing of identified hazardous substance sites (underground tanks) in Humboldt County, consolidated by the Governor's Office of Planning and Research (OPR) from data received from DHS, the State Water Resource Control Board (SWRCB), and the Calif. Waste Management Board, pursuant to AB 3750 (Cortese), Govt. Code Section 65940, is included in Appendix 3.9.

In Humboldt County, the DEH is implementing and enforcing the Underground Tank Program through processing permit applications and monitoring for

compliance. Upon hiring additional staff, the risk/hazard evaluation and permit inspection part of the program will be implemented. In addition, the County DEH is updating the existing data base for compatibility with the State DHS' data base system called SWEEPS, (Statewide Environmental Evaluation Program System).

An ~~current~~ [April 6, 1989] listing of leaking underground storage tanks is included in Appendix 3.13. Additional leaking underground storage tanks will be added to this list as the County Division of Environmental Health continues to implement the ordinances regulating underground storage tanks. A description of the existing underground tank program appears in Section 5120 of this plan.

3206 Varianced, Exempted, Designated, Non-Hazardous Wastes

Table I Column #5, Appendix 3.1, reports varianced/exempted wastes. This is to represent the volume of waste generated by ~~the~~ [a] company which is not manifested and/or not regulated but which nonetheless is managed as a hazardous waste and/or impacts the available hazardous waste facility capacity. This column ~~will~~ includes non-hazardous and exempted wastes and hazardous wastes which have received a variance from manifesting requirements. [As can be seen from examination of Table I column #5, no varianced or exempted wastes could be found to exist in Humboldt County.]

The Department of Health Services reports only one variance in Humboldt County granted to P.G.& E. for a storage facility. DHS has not reported granting variances from manifesting requirements to any waste generators in Humboldt County. The sole variance is for a storage facility, details of which are described in a Table H -1 and the accompanying text. P.G.&E. personnel provided the County with data about the storage and treatment facility at the Humboldt Bay Power Plant through the business plan required by AB2185 and through completing the attached ~~modified~~ version of Table H. The Dept. of Health Services has not provided information about variances from manifest requirements.

One of the "special wastes", as defined in Section 66740 of the Government Code is drilling muds from natural gas and oil well drilling. Although drill muds are generated periodically from natural gas well drilling operations in Humboldt County, the wastes are not characterized as hazardous wastes, and therefore are exempt from manifesting requirements.

The County currently has one onshore dry gas field which has been producing since 1937. Approximately 30 wells have been drilled in the field (Tompkins Hills) to produce the gas. In addition, occasional exploratory drilling occurs in the rest of the onshore portion of the Eel River Basin, at a rate which averages about 1 to 5 wells per year.

This drilling activity generates drilling mud wastes, which are typically non-hazardous (as determined by North Coast Regional Water Quality Control Board monitoring) water-based clay mixtures. According to a recent Conditional Use Permit application (Murphy, CUP-41-87) and NCRWQCB discharge permit (88-30), 20,000 cubic feet per year of drilling muds are anticipated to be disposed of from two wells per year over the next ten years by direct land application on pasture land spread sites 1/16" to 1/8" thick followed by discing and seeding. When direct application is limited by wet weather, the wastes are proposed to be stored in a holding pond of 36,000 cubic feet capacity. The NCRWQCB permit prohibits disposal of liquid hazardous waste, hazardous waste containing free liquids, restricted hazardous or extremely hazardous wastes as defined in Chapter 6.5, Division 20, Health & Safety Code to either the pond or land application sites.

3207 Import Wastes

Table E, Appendix 3.1, reports "Quantities of Hazardous Waste Imported into the County in Current Year." Since no commercial treatment facilities exist, as described in Table C, no hazardous wastes can be imported, and suggested Table E remains blank.

3208 Export Wastes

Table F, in Appendix 3.1, reports "Quantities of Hazardous Waste Exported from the County in Current Year." [Annually.] This table lists 1986 exported wastes according to the receiving county and facility. All of Humboldt County's manifested [wastes, route service operator wastes, and out-of-state] wastes are exported. Sacramento County received 68.41 tons, or 24.69% of Humboldt County's exported wastes in 1986. Contra Costa County received 59.03 tons or 21.30% of Humboldt County's hazardous wastes in 1986. Approximately 26%, or 72.37 tons were exported to unknown or unspecified counties in 1986.

The map [in Figure 3 provides an illustration of the location of the 16 manifesting waste generators in Humboldt County for 1986. The map] in Figure 5 provides an illustration of the ten destination counties that received hazardous wastes from Humboldt County in 1986. The bar graph in Figure 6 provides an illustration of the quantities of hazardous wastes by waste group and by county of destination/receipt. Table F, Appendix 3.1 reports Quantities of Hazardous Waste Exported from the County in Current Year, by specific waste generator. This table lists current exported wastes according to the exporting/generating industry. The map in Figure 2 provides an illustration of the location of the 16 waste generators. The bar graph in Figure 7 provides an illustration of the quantities of hazardous wastes exported by each of the 16 waste generators.

FIGURE 5

Import Counties
Receiving Humboldt
County Waste, 1986



FIGURE 6
EXPORTED WASTES

STATE & COUNTIES RECEIVING WASTE SHIPPED FROM HUMBOLDT COUNTY
HAZARDOUS WASTE GENERATORS, 1986

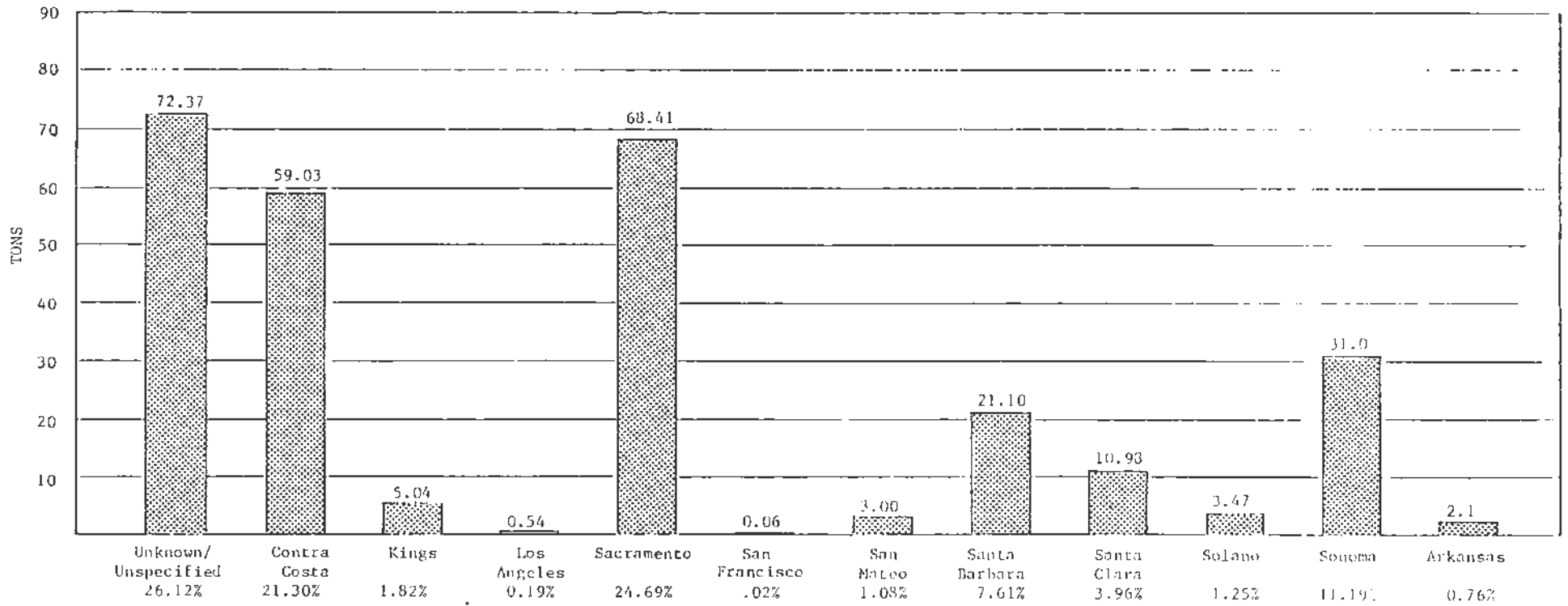
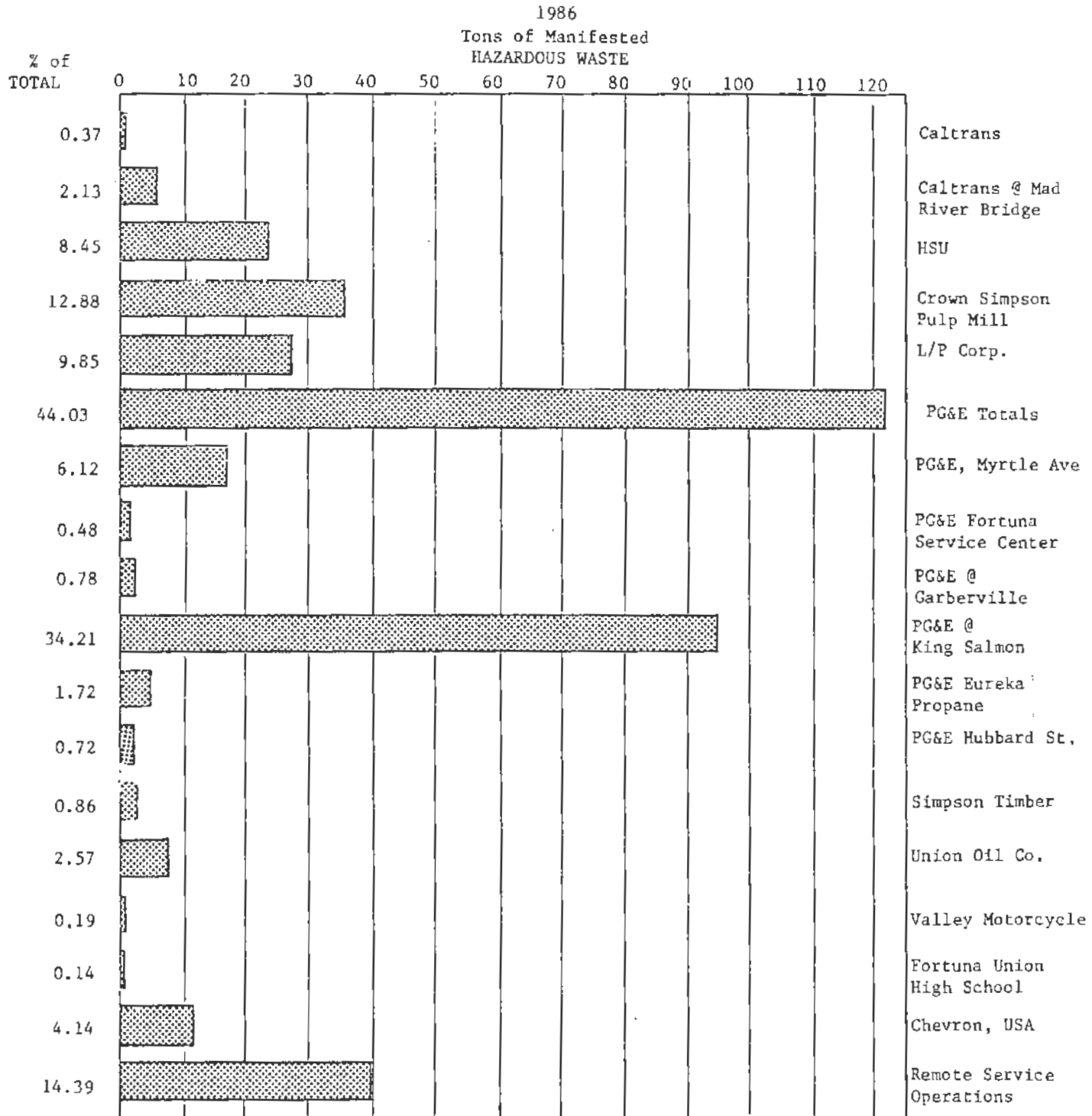


FIGURE 7



Off-Site Managed Wastes, Multi-Year Planning Estimate

Table I, Appendix 3.1, reports "Multi-Year Planning Estimate of Quantities of Hazardous Waste Shipped Off-Site by Generators in the County", [Annually,] for 1985 and 1986. This table utilizes in part the refinement of data in Table A and provides the basis for the projections of future hazardous waste generation. [The general terminology "off-site managed wastes" makes the assumption that the wastes described in this table are managed off-site, including wastes generated by small quantity generators and households. Although the actual management of these wastes may not be off-site, for purposes of preparing and evaluating the planning estimate in Table I, the assumption of off-site management is made nevertheless.]

Table I, Column #1, Appendix 3.1, is presented as an average of the total quantity of manifested wastes from the County for 1985 and 1986. The DHS provided the County with manifests for both 1985 and 1986, Appendix 3.1. Significant differences between the representation and amounts of manifested wastes for 1985 and 1986 are noted in: the absence of non-halogenated solvents, contaminated soils, and metal-containing sludges in 1985; the dramatically higher volumes of PCB's and dioxins, non-metallic inorganic liquids and organic liquids in 1985; and the absence of oily sludges in 1986. Most of the differences can be attributed to one of three things: one time waste generation and/or site cleanup; the beginning or ending of a program to change materials used or processes used; or waste that is shipped irregularly, not necessarily on a yearly basis.

[Table I, Column #3, Appendix 3.1 is entitled "Wastes from Transfer Stations". Since there are no transfer stations in Humboldt County, the column reports zero data. The column remains as a separate reporting entry however, so that if a transfer facility is developed in the future, the wastes from a transfer facility will not be counted twice as manifested wastes.]

3209 On-Site Managed Wastes

Table H, Appendix 3.1, reports "On-Site Treatment/Disposal of Hazardous Waste in Current Year". Only one treatment/disposal facility is permitted and reported to exist in Humboldt County [This facility is located] at the P.G.&E. power plant on Humboldt Bay. An annual facility report for P.G.&E.'s non-commercial on-site managed wastes was provided to the County by the Dept. of Health Services. A modified version of this table, Table H-1, reports "On-site Treatment and Storage of Hazardous Waste, 1986." The capacity summary for storage of hazardous wastes at P.G.&E.'s Humboldt Bay Power Plant reports: 20 tons of capacity is available as container storage of hazardous waste, but the average monthly quantity in storage is 6 tons; and 1,020 tons of capacity

is available as surface impoundment of hazardous waste, with 50 tons as the average monthly quantity in storage over 90 days. The wastes stored on-site at the PG&E Power Plant are transported and manifested on a biannual basis [for treatment at off-site facilities]. See Appendix 3.10 for a complete description of P.G.&E.'s on-site facilities. [Since the P.G.&E. facility functions as a storage facility, a change in the disposition of this facility (such as closure or changes in regulations affecting the permitting of the facility) would not have a significant impact on facility capacity requirements elsewhere because the wastes managed at the P.G.&E. facility are ultimately shipped off-site for management.]

Future on-site facilities treatment or disposal facilities should be evaluated for the potentiality of creating future waste management problems or opportunities. For instance, if an on-site treatment or disposal facility were to lose its operating privilege, the waste that it handled would have to be managed off-site. Also, if excess capacity for needed treatment methods is found in on-site facilities, it may be advantageous to encourage such facilities to take the necessary steps to permit this capacity to operate as an off-site facility. Neither of these scenarios has applicability in Humboldt County given current conditions of lack of facilities. Nevertheless, evaluating these scenarios should be considered when on-site facilities are proposed. While the requirements of AB2948 direct themselves to off-site facility siting opportunities, the County has included goals, policies and siting criteria that would also consider on-site facilities as a segment of the County General Plan instead of the County Hazardous Waste Management Plan.]

3210 Waste Generated by Major Industry Groups

Table J, represents wastes that are generated and reported by major industry groups. Since no wastes managed on-site have been identified, only one version of Table J has been prepared, ~~reporting~~ [which reports] wastes managed off-site. This table, which describes waste generation according to two digit Standard Industrial Classification (SIC) codes, is essential for economic projections, for the design of a waste minimization program, and for the general understanding of waste patterns in the County. These waste generating industries were identified through the use of Part F Attachment A in the TRM to determine which SIC's produce which hazardous wastes. The Employment Development Department provided a listing of business names and addresses that corresponded to the appropriate SIC codes. [The wastes reported in this table include the wastes from Columns 3 through 6 of Table I. The SIC Codes were known for the manifested waste, the out-of-state wastes, and the small quantity generator wastes; however, they were not known for the route-service operator wastes. Since it was not known with which SIC Code the route service operator wastes should be reported, these wastes were not

included under any particular SIC Code. Instead, the amounts of route service operator wastes are simply added to the total column in Tables J and K].

There are 43 two-digit SIC codes representing hazardous waste generating businesses in Humboldt County. Because Humboldt County's industries are mainly Small Quantity Generators, none of the 43 SIC codes have an appreciable amount of the total waste for the County associated with them. Rather, the responsibility for hazardous waste generation is shared among all 43 industry groups. Of the 43 SIC codes, the six appearing in Table 11 have the most significant amounts of waste associated with them. [This table does not include waste oil values since the bulk of waste oil is route service operator waste. It was not specified in the TRM how to categorize this waste in terms of the SIC's. It is mentioned, however, because all of the SIC's in Table 11 undoubtedly would have large amounts of waste oil associated with them.]

TABLE 11
Waste Produced by Major Industries

<u>SIC</u>	<u>Industry Group</u>	<u>(Tons/Year)</u>	<u>% of Total</u>
55	Automotive Dealers & Gasoline Service Stations	222.429	8.23
42	Trucking and Warehousing	175.419	6.49
75	Automotive Repair Services and Garages	161.136	5.96
09	Fishing, Hunting & Trapping	159.195	5.89
41	Local & Interurban Transit	143.693	5.32
43	Lumber & Wood Products	99.285	3.67
	Subtotal	<u>961.157</u>	<u>35.55</u>
	Total	2703.411	100.00

The six ~~highest~~ [largest] volumes by waste group of the hazardous wastes generated by all industrial generators is summarized in Table 12:

TABLE 12
Summary of Total Generated Waste (excluding HHW)

<u>Waste Group</u>	<u>Tons/year</u>
Waste Oil	989.190
Used Lead-Acid Batteries	909.912
Non-Halogenated Solvents	312.082
Dye & Paint Sludges & Resins	92.853
PCB's & Dioxins	87.305
Non-Metallic Inorganic Liquids	67.303
Subtotal	<u>2458.645</u>
Total	2703.411

3300 PROJECTED WASTE STREAM**3301 Summary of Projections**

The County Hazardous Waste Management Plans are required to project the amount and type of hazardous waste generation to the year 2000. These projections are used to determine future needs for treatment capacity, facility siting and waste reduction potential. The Calif. Dept. of Health Services suggested that projections of industrial hazardous wastes could be made by using economic projections by industry type. There is assumed to be a relationship between economic growth and waste generated. The assumed relationship is that the level of waste generated grows at the same rate as the gross product of the industry.

Urbanized regions of the State of California have more detailed data available concerning industry output by SIC code. This is due, in part, to the fact that the census data is much more comprehensible in metropolitan areas. Availability of data for making economic forecasts is extremely limited in Humboldt County. No study exists within the County that projects economic growth by industry type. Interviews with local and branch banks, economic development agencies, chamber of commerce, economists, federal and state Dept. of Commerce, and the Employment Development Department, reveal that the only detailed information available by 2 digit SIC code for Humboldt County reports employment levels.

Humboldt County attempted to utilize employment data to forecast economic growth by SIC code; however, due to the sample size of the employment data, the fluctuations in employment patterns during the data years (due to recession), and the unavailability of data for certain industries, the use of employment data rendered misleading results. Because of the inadequacy of the available employment data, estimates of future waste were determined by using population projection growth rates from the census data. This method assumes there is a direct correspondence between the rate of population growth, 10.2%, and the projected growth rate of hazardous waste generation.

3302 Projected Quantities by Industry and Household

Table K, Appendix 3.1, reports "Projected Quantities of Hazardous Waste Generation. [Amount of Waste Generated Annually By Major Industry Groups.]" This table utilizes the base data from Table J, which identified, by industry type, the current waste generators. Projections reported in Table K estimate the quantity of each waste group which will be generated in the year 2000 by projecting economic development to that year. The Table J entries for each waste group are multiplied by the projected industrial economic growth factor (~~for~~ [(10.2% for] the year 2000) for each SIC code. The projections of Household Wastes reported in

Table K were derived by multiplying the entries under Household Wastes, Column 7 of Table I by the county population growth multiplier for the year 2000 and entering these products under "Projected Household Wastes" in Tables K and N.

3303 Projected Quantities from Contaminated Sites

Table L, Appendix 3.1, reports "Projected Quantities of Cleanup Activity Wastes". The projected quantities of waste generation for Humboldt County involves three different areas:

1. Known contaminated site clean-ups (i.e. Celtor Chemical Works, McNamara & Peepes Lumber, Cal-Pacific Lumber);
2. Unknown quantities from known site clean-ups (this would include the various amounts of asbestos cleaned up in the lumber mills); and,
3. The possible contaminated soil clean-ups at the underground tank sites reported by the County DEH and the North Coast Regional Water Quality Control Board.

Bond Expenditure Plan Sites

Column #2, Table L, Appendix 3.1, provides information about "Old Disposal Sites". A fact sheet describing proposed clean up activities is included in Appendix 3.8. The County Environmental Health Division maintains a list of sites and the estimated waste removal. As cleanup occurs, the list will be updated.

In addition to the fact sheets, which provide very generalized information about each site, more detailed data concerning types and amounts of wastes was obtained by contacting the cleanup site managers for each of the sites at the EPA office and at the Dept. of Health Services, the County Environmental Health Division, and the Regional Water Quality Control Board.

The volume of wastes reported in Column #2 represent the estimates of the volume of contaminated media (soil and groundwater) and estimates of the volume of wastes to be removed from the site. Both estimates are prepared for each of the four sites. The estimate of the volume of wastes to be removed has been divided by 10 (to average the cleanup over a 10 year period), and appears as that quotient in Table L.

1. Known contaminated site clean-ups include Celtor Chemical Work in Hoopa, McNamara & Peepes Lumber Mill in Arcata, Cal-Pacific Lumber in Hoopa, and Eureka Gas Cardlock in Eureka. Additional information about each of these sites and the projected wastes from

clean up activities is included in Appendix 3.9.

2. Unknown quantities from known site clean-ups either have varying amounts of waste or the report estimates have not been established yet, (as of February 1988). An example of this would be the pulp mills that routinely do extensive maintenance, during the course of which, asbestos may be uncovered. The asbestos, in turn, needs to be removed and manifested; however the amounts manifested varies with each clean-up each year.
3. Another area of concern is the underground tanks not in compliance with the County DEH's Underground Tank Program. Many tanks are not registered or do not meet the underground tank program qualifications. Survey studies for many have not been started or completed, so estimates for possible contamination clean-ups is unknown at this time. A partial list of some projected wastes from clean-up activities is included in Appendix 3.9.

Leaking Underground Tanks

Column #1 of Table L, Appendix 3-1, reports about leaking underground tanks. The estimated number of leaking tanks in Humboldt County is 50. Of the 27 existing leaking underground tanks, one contains a polymer and the rest contain gasoline. According to the North Coast Air Quality Management District, the soils from the leaking underground tanks may be allowed to aerate. As a result of aeration, the soils are rendered non-hazardous, and thus, the volume of such "wastes" is reduced. Because of this, it is difficult to estimate the tons of contaminated soil and tons of liquid waste that will be considered hazardous. Depending upon the amount of soil aerated, there could be anywhere from very little to a large amount. For the purposes of Table L, a conservative estimate was made.

Toxic Pits

Column #3 of Table L, Appendix 3.1, reports about Closed Toxic Pits. The DHS' Guidelines assume that toxic pits are another potential source of hazardous wastes generated by clean up activities. The State Water Resources Control Board, through the Regional Water Quality Control Board, administers the toxic pits program. According to information provided by the Dept. of Health Services, a toxic pit exists at the P.G.&E. Humboldt Bay Power Plant. Information concerning this facility is reported in Table H-1, since this facility represents a storage facility and on-site neutralization treatment through a surface impoundment. Since this facility is planned to continue to be used by P.G.&E., the facility is not considered to be a contaminated site or a toxic pit, and is not included in Table L.

Since wastes generated during clean-up activities present unique problems for hazardous waste management planning, and the amount of wastes generated from clean-up activities may increase during the projected planning period (to the year 2000), it is essential that the waste stream from contaminated sites is included in the projected waste generation figures.

Volumes of hazardous wastes to be removed from sites are impacted by the trend to clean up contaminated sites with on-site technologies (physical/chemical/biological treatment methods either detoxify a waste or separate and/or concentrate a waste). Consequently, the volume of hazardous wastes that will be removed from each site will probably be substantially less than the volume of contaminated material and possibly less than the volume of contaminant itself.

3304 New Hazardous Waste Streams

Table M, Appendix 3.1, reports "Projected Quantities of New Hazardous Waste Streams". Specific discharge limits have been defined for companies identified within the listing of "Categorical industries" regulated by the National Pretreatment Program under the Clean Water Act. Compliance with these requirements is generally achieved by companies installing pretreatment units which concentrate the hazardous chemicals into a sludge. While the effluent from such units is generally not a hazardous waste, the pretreatment sludge is usually classified as such.

Typically a local sanitation agency monitors the pretreatment units. The sanitation districts produce quarterly and annual reports summarizing the status of industrial users. The reports include an identification of the companies, details the company's regulatory status, and estimates the level of the company's compliance. Usually the information is self-reported by the generators/dischargers. The sanitation districts have inspection reports on file which include sample analyses of company discharges. Presently none of the sanitation districts in Humboldt County have pretreatment programs, so data does not appear in Column #1 of Table M.

Column #2 of Table M is to report "other new wastes" derived from new industry. "New industry", for the purposes of this plan, refers to industry that is planning to locate in the County, but has not yet been formally established. These industries have not been included in the industrial projections of Table K. According to a local economic development agency, a medical instrument firm is considering moving into Humboldt County. The amounts of waste typical of a medical instrument firm, SIC #38, are reported in Column #2 of Table M. These values were derived from the Technical Reference Manual Part F.

There is the potential for future oil and gas well drilling to generate

hazardous drilling mud wastes. The U.S. Interior Department is proposing to lease tracts in the offshore portion of the Eel River Basin for oil and gas exploration and development. There is approximately a 50% chance that no commercial discoveries of oil or gas will occur as a result of leasing based on current resource estimates (Draft EIS, Lease Sale 91). If a commercial discovery is made in the Eel River Basin offshore there is an approximately 90% chance that natural gas will be found rather than oil.

There is rarely the need to employ hazardous materials in the drilling muds for exploratory or gas development drilling in this region in quantities and concentrations that would lead them to be classified as hazardous wastes once used. Hence the anticipated disposal method for most of the muds and drill cuttings is ocean disposal. (However, muds and cuttings from offshore drilling operations do exhibit some toxicity at and near point of discharge). However, and in particular if oil is discovered, hazardous materials may come into use in some drilling situations. Typically the need to employ hazardous materials in the drill muds (such as using a diesel fuel-based mud rather than water based) come into play toward the end of the production life of the field, when enhanced recovery or well workover operations are necessary. In such cases for offshore operations, land disposal at a Class I site becomes the normal regulatory choice.

Formation waste is another component of well drilling that may result in the need for hazardous waste disposal. Formation water is associated with the oil and is brought up out of the ground with the oil when it is produced. The formation water is separated, treated, and discharged, in compliance with discharge regulations. The resulting treatment plant sludge, however, is likely to be classified as hazardous, depending upon the amounts of metals, oils, and greases in the sludge.

At present, the best guess estimate is that the County will not need to accommodate significant quantities of hazardous waste from these future activities because the activities will most likely not result in commercial finds of oil, and therefore such wastes are not included in the projected waste tables. The Federal government should, however, assume the responsibility of planning the accommodation of such potential wastes resulting from such leasing activities.

Updates and future revisions to the plan can address new sources of wastes from any newly established or planned industries, above and beyond the industries identified and considered in the economic projections.

3305 Total Projected Wastes

Table N, Appendix 3.1, reports "Total Projected Quantities of Hazardous Waste Generation." This table summarizes the information contained in

Tables K, L and M, [and includes projections for household waste]. Projected waste generation of off-site managed wastes is transferred from Table K to the first column of Table N. This represents the projected industrial (both small and large quantity generators) waste for the year 2000. Column #2 represents the total projected annual generation quantities of site cleanup wastes that were reported in Table L. The sum of the projected quantities of new hazardous waste streams by waste groups reported in Table M is added and placed in Column #3 of Table N [and were derived by multiplying the entries under Household Wastes, Column 7 of Table I by the county population growth multiplier for the year 2000 (10.2%)]. Projected household wastes are in Column #4 of Table N. The Table N entries are then added across the page for each waste group, with the sum placed in Column #5 of Table N. The total wastes projected to be generated in the year 2000 amounts to 3526 [3716] tons per year. [The estimated waste reduction potential multiplier values were derived by using the waste reduction potential table provided in Part H of the TRM.]

The Department of Health Services suggests in the TRM that Table N include different values for projections of on-site and off-site managed wastes. The Table N that appears in Appendix 3.1 of the Humboldt County HWMP does not project on-site managed wastes because there are no current on-site facilities upon which to base any projections.]

3400 CURRENT NEEDS ASSESSMENT

3401 Summary of Needs

Table B, Appendix 3.1, reports "Current County Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity." This table determines the treatment capacity, in terms of generalized treatment methods, that is necessary to treat all waste manifested in the County. The Generalized Treatment Methods are those seven methods preferred by the DHS and assigned to the 17 waste groups, regrouped from the 80 types of wastes referenced by Calif. Waste Category on the manifests. The DHS assignment of generalized treatment methods represents only a preference. Alternatives in waste treatment assessment may occur when or if wastes are known to be treated in a method different than the suggested treatment method. [Humboldt County used the DHS assignment provided in Table E-1 of the TRM.]

For Humboldt County's 1986 manifested wastes, the Incineration [Oil Recovery] treatment method represents the largest amount of required capacity for generalized treatment at 108.69 tons. This can be attributed, primarily, to the 61.83 tons of PCB's and Dioxins, and secondarily, to the 31.40 tons of Dye and Paint Sludges and Resins [to waste oil and oily sludges, manifested by route service operators and generated by small quantity generators.]

Table P, Appendix 3.1 reports the existing estimated capacity requirement as determined from the total wastes in Table I. [Aside from oil recovery, the] "Other Recycling" treatment method represents the [second] largest overall capacity need. "Other Recycling" encompasses a variety of recycling methods, for instance: recycling of empty containers, recycling of used lead acid batteries, recycling of photochemical wastes, and recycling of miscellaneous inorganic wastes. ~~Aside from the other recycling described above, oil~~ [Oil] recovery is the single largest treatment method need in Humboldt County. [Because of the variety of waste types generated in relatively small amounts in Humboldt County, a storage and transfer facility would provide an interim hazardous waste management method for a large percentage of the wastes generated locally].

3402 Commercial Facility Capacity

Table C, Appendix 3.1, reports "Commercial Hazardous Waste Treatment and Disposal Facilities and Their Capacities, Quantities of Waste Treated and Disposed, and Percentage of Capacities Used in the Current Year." This table does not report any capacity. The sole commercial facility reported to exist in Humboldt County is the Humboldt County Agricultural Commissioner. The facility at that location is a storage facility only. Therefore, the capacity of that facility is reported in Suggested Table G.

3403 Commercial Storage Capacity

Table G, Appendix 3.1, reports "Commercial Hazardous Waste Storage Capacity and Activity in Current Year." The sole commercial storage facility is at the Humboldt County Agricultural Commission, where empty containers of household pesticides and herbicides are stored and manifested on an irregular, as needed basis. [A "commercial facility" is defined as one that accepts off-site generated wastes.] Because it is the intention of the Agricultural Commission to close this facility, the available storage capacity cannot be considered in the future capacity projections for this planning document.

[Commercial storage facilities do not provide capacity for the ultimate handling of hazardous waste. Data on commercial storage facilities is important, however, for three reasons. First, commercial storage capacity can buffer the effect of a temporary closure of a commercial treatment or disposal facility. Secondly, a commercial storage facility could be a useful temporary repository of wastes resulting from a hazardous waste emergency. Finally, wastes that are located at commercial storage facilities are a factor that must be considered in the calculations of imports compared to exports to define a net balance or imbalance.]

3404 Commercial Facility Capacity Needs Assessment

Table D, Appendix 3.1, reports "Current County Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity." This table might also be titled "Current County Commercial Hazardous Waste Treatment/ Disposal Capacity Excess/Deficiency." Since no treatment facilities exist, as described in Table C, then no treatment capacity is available. Therefore, the capacity deficiency reported in the third column, is equal to the required treatment capacity reported in the first column. The largest volume of capacity deficiency for manifested waste is ~~108.69~~ [993.85] tons/year for the ~~incineration~~ [Oil Recovery] Generalized Treatment Method.

[The need for treatment and/or disposal of hazardous wastes generated within Humboldt County is currently being met, to a large degree, through commercial facilities located outside of Humboldt County, as described in Section 3208 of the CHWMP. Reliance on the use of private facilities located outside of the jurisdiction of Humboldt County leaves the resident waste generators somewhat vulnerable and at-risk should circumstances change about any of these existing facilities. Changes in circumstances that could affect the viability of a facility include: a determination that an existing facility no longer meets regulations; a facility operator or owner chooses not to modify the facility in order to meet changing regulations; a facility permit application is denied; a facility is closed; or a facility operator or owner chooses to modify to comply with new regulations on an unknown time schedule.]

Any of these scenarios could result in significant implications to local waste generators as well as generators from other jurisdictions that ship their wastes to the same facility. Among the implications would include the need to find alternative waste treatment or disposal facilities that have sufficient capacity to accept wastes from Humboldt County generators. Another implication is the potential threat of illegal disposal and contamination of the solid waste landfill or of groundwater contamination].

3500 PROJECTED NEEDS ASSESSMENT**3501 Projected Treatment/Disposal Capacity**

Table O, Appendix 3.1, reports "Projected Commercial Hazardous Waste Treatment/Disposal Capacity in the County." Column #1 of Table O represents the capacity from existing facilities as reported in Generalized Treatment Methods. This was previously reported in Column #1 of Table C and again Column #2 of Table D. In each case, there is no capacity for treatment since no commercial treatment facilities exist in Humboldt County.

Column #2 is to report capacity from proposed facilities. As of this writing, no new commercial facilities are proposed in Humboldt County. The loss of capacity due to closing facilities is to be reported in Column #3. Again, since no facilities exist, this column reports zero. The last column represents total projected County capacity. Under the present circumstances in Humboldt County, no facilities exist, are proposed or are planned to be closed. Therefore, the total reports no capacity.

3502 Projected Needs Assessment

Table P, Appendix 3.1, reports "Projected Needs Assessment for Commercial Hazardous Waste Treatment Capacity". This table summarizes the current and projected County needs assessment and the projected County excess/deficiency for commercial hazardous waste facilities. This table parallels the data reported in Table D for current waste treatment, except that Table P projects the needs. [This table uses the generalized treatment methods that first appear in Table A.]

The needed commercial hazardous waste treatment capacity is based on the assumption that all hazardous wastes that are generated in the County and shipped off-site will be treated and disposed of in Humboldt County. The projected County capacity of Column #4 [1] is reported as a deficiency [in column #3] for all of the generalized treatment methods. This ~~is~~ [was] determined by subtracting the projected ~~county~~ [estimated] capacity requirement ~~in~~ [of] Column #3 [1] (or the total projected quantities of hazardous waste generation found in Column #5 of Table N) from the projected county capacity requirements in Column #1 [2] (none for each of the generalized treatment methods). The highest projected capacity deficiency is seen in the other recycling treatment method at ~~1130,943~~ [1144.311] tons per year. However, as stated in Section 3401, since "other recycling" encompasses a wide range of recycling methods and a wide range of waste types, the single treatment method that represents the highest capacity deficiency is oil recovery of waste oil.

Included in Table P is a column which provides adjustments to projected needs reported in Column #1 due to the projected effects of source reduction. These estimated revisions were derived by use of the waste reduction potential table found in Part H of the TRM. These adjustments indicate that overall waste generation could be reduced by ~~11.31%~~ [4.27%].

3503 Residual Generation

Table Q, Appendix 3.1, reports "Projected Quantities of Residuals Generation." For each of the generalized treatment methods, the DHS anticipates that a percentage of residuals will be generated. This ratio of residuals is provided in Table E-2. The ratios from this table are

applied to the projected quantities of hazardous waste to determine the quantity of residuals that will have to go to disposal. The projected quantity appears as the product of Columns #1 and #2 in Column #3. The projected quantity of residuals generation for Humboldt County's wastes is ~~465,483~~ [1113.73] tons. This amount could be reduced to ~~422,674~~ [1068.32] tons through the application of waste reduction measures.

3600 HAZARDOUS WASTE REDUCTION

The term hazardous waste reduction refers to those practices implemented by hazardous waste generators that reduce, avoid, or eliminate the need for off-site hazardous waste facilities. Such practices include source reduction, recycling, and treatment of wastes. A benefit of waste reduction is the decrease in local need of hazardous waste treatment, storage and disposal facility capacity. Another benefit is the reduction in liability associated with handling and transporting wastes off-site.

This section attempts to describe the activities that could be employed by Humboldt County's hazardous waste generators, keeping in mind the objective of reducing the quantity of waste requiring new local hazardous waste management facilities. On-site source reduction and recycling are emphasized, consistent with the goals and policies in Chapter 2.

The types of wastes and industrial classifications of waste generators were identified in earlier sections of Chapter 3. This information is summarized in Sections 3202 and 3210 of the text.

The vehicle maintenance industry, as a general group, generates the highest volume of hazardous waste in Humboldt County. Small quantity generators comprise the majority of this industry group. Hazardous wastes generated by this group include waste oil, non-halogenated solvents, non-metallic inorganic liquids, and used lead-acid batteries.

The category of highest volume of hazardous waste generated by the vehicle maintenance industry group is lead acid batteries. Substantial volumes of waste oils are generated when motor vehicle lubricants are replaced. Non-halogenated solvents are generated during degreasing operations. Non-metallic inorganic liquids are the wastes from cleaning of engine parts and equipment as well as from oil, grease, and rust removal.

Other high volume waste generating industries and their respective waste groups include:

<u>Industry Group</u>	<u>Waste Group</u>
Construction	Dye and Paint Sludges and Resins Solvents Miscellaneous Wastes
Educational/Vocational Shops	Solvents Non-Metallic Inorganic Liquids Dye and Paint Sludges and Resins
Printing and Publishing	Photographic Wastes Solvents Non-Metallic Inorganic Liquids Metal-Containing Liquids
Sawmills	Wastewater Containing Dioxins

3610 **Methods of Waste Reduction**

An active involvement of the business community is contingent upon the business owners understanding that wastes are equivalent to inefficiency and can be costly. Waste is generally viewed as an end product that needs to be managed. A change in thinking is inherent to successful waste reduction, wherein attention is focused on the processes that produce the wastes. The processes can then be evaluated for waste reduction through process modification.

Locally, waste reduction methods that can be employed are broadly described as either source reduction, recycling, or treatment. "Source reduction" means those practices that reduce the volume or toxicity of hazardous materials used or wastes generated.

- A. Source Reduction includes measures such as:
 - 1) Good housekeeping practices
 - a) Use of equipment or operating procedures that minimize the loss of hazardous materials during storage or handling.
 - b) Preventative maintenance programs that reduce incidence of spills or leaks.
 - c) Self-inspection and corrective action programs.
 - d) Inventory control.
 - e) Educate and increase employee awareness.
 - f) Provide incentives for waste minimization.
 - 2) Waste Segregation
 - a) isolate waste types according to chemical hazard, contaminants present, and separate by solid,

- liquid, or sludge.
- b) Prevent mixing of non-hazardous with hazardous wastes.
- 3) Process modification
 - a) Substitution of hazardous materials with non-hazardous materials.
 - b) Pretreatment or use of a more pure stock.
 - c) Process alteration that improves operational efficiency and minimizes or eliminates the use of hazardous substances.
- 4) End Product Substitution
 - a) Substitution of a product that requires the use of hazardous materials during formulation or manufacture with a product that does not.
- B. On-Site Recycling includes recovery of a waste material through processing to be able to reuse a product or reuse a waste material. Some methods of on-site recycling are:
 - 1) Distillation of solvent wastes.
 - 2) Recovery of metals from metal finishing sludges.
 - 3) Reuse of a waste product from one process as a feedstock in another.
- C. On-Site Treatment can include waste segregation to separate hazardous from non-hazardous and sludge from liquid.

3620 Potential Waste Reduction

Some kinds of waste reduction and on/off-site recycling methodologies appear to be the most feasible alternatives for Humboldt County. Table N, Appendix 3-1 estimates the level of potential waste reduction by waste group. The percentage reductions figures, found in the TRM Part H, are considered by DHS to be reasonable goals for waste reduction programs.

The potential for waste reduction in Humboldt County may be limited due to the rural nature of the County. DHS' Guidelines recognize that it is more feasible for large generators to realize waste reduction than small generators. The data on current and projected wastes revealed that the majority of Humboldt County's hazardous waste stream is produced by small quantity generators.

Hazardous waste reduction programs would probably have a significant impact on reducing the amount of hazardous waste that may be improperly disposed of at this time. In addition, waste reduction may contribute to a reduction in local facility needs for Humboldt County.

In Humboldt County, the only company authorized to manage extremely hazardous wastes on-site is Pacific Gas & Electric Company. Their facility is available only for use by P.G.& E., and only for wastes generated at the Humboldt Bay power plant facility and thus is not

considered to be a commercial facility. This non-commercial status is not expected to change. Because of the lack of waste treatment, storage, transfer, and disposal facilities in Humboldt County, most generators must use off-site disposal or recycling.

One of the [The] largest categories [category] of hazardous waste in Humboldt County is waste oil. Additional recycling of waste oil will occur in the future as more people and businesses are aware that waste oil is recyclable, and that there are waste oil haulers that provide a pick-up service to Humboldt County generators.

Other methods of minimizing volumes of waste oil in Humboldt County include: prevention of spills and leaks; use of oil collector devices that are connected directly to containers used for waste storage; and use of a single waste collection tank.

Used lead-acid batteries comprise the [second] highest volume of waste generated. Typically, batteries are taken to salvage facilities where they are either rebuilt or disassembled for scrap metal. Both consumer and retailer awareness will have to be increased to achieve this. Encouragement of salvaging used batteries through education programs could result in more recycling and less waste.

Solvents used during cleaning and degreasing can be recycled and reclaimed. Handling methods affect the quality of the waste and are critical in being able to reduce solvent wastes. Various handling methods include: installing lids on tanks to reduce loss through volatilization; segregating wastes in separate tanks; avoiding contamination of solvents with water; removing sludges at intervals from tanks; distancing solvents from heat sources to minimize evaporation; substituting non-hazardous cleaners.

Other waste reduction potential in Humboldt County could be achieved by processing photo finishing chemicals on-site for heavy metal recovery, by triple rinsing pesticide and wood preservative containers, and by implementing a County waste minimization program.

A hazardous waste minimization program developed for Humboldt County should emphasize public awareness about the need to reduce, reuse, and recycle wastes. Industry can begin a self-analysis program by taking stock of hazardous materials that are used. Consideration of the notion that the use of hazardous materials often results in the generation of hazardous wastes can introduce the concept of reducing the use of hazardous materials.

**3630 Projection of Waste Reduction Impacts to Facility
 Siting Needs**

Table N in Appendix 3-1 estimates the potential for reduction of hazardous wastes by waste group generated in Humboldt County. Through employing waste reduction methods, the overall volume of hazardous waste in Humboldt County could be reduced by ~~11.31%~~ [4.27%], based on estimation percentages of waste reduction provided by DHS in the Guidelines.

Realization of waste reduction potential also impacts assessments of facility needs. The data analysis and facility needs in Chapter 3, and the accompanying tables in the appendix, already indicated that the amount of waste generated in Humboldt County is substantially less than the estimated volumes needed to sustain even the smallest of the variously described facilities. Further reductions to the quantities of hazardous waste could decrease the cost-effectiveness of siting a facility that ~~only~~ meets local needs. New on-site treatment by large quantity generators could have an additional affect on reducing the need for facilities. (See Table P, Appendix 3.1).

The needs of households and some small quantity generators that are unable to reduce or recycle wastes will still have to be met through the siting of a transfer facility.

3640 Barriers to Waste Reduction

While implementing waste reduction methods may result in numerous benefits to industry including a reduction in the liability associated with handling and transporting wastes, conservation of limited chemical resources, and reduction in overall operating costs for the generator, some waste reduction practices may not be practicable due to technical, financial, institutional and physical barriers.

A. Technical Barriers

Technical barriers are those which impede a facility's ability to develop, evaluate or implement waste reduction methods. These barriers include: lack of information on waste reduction methods, lack of in-house expertise to evaluate and implement waste reduction, and absence of readily available technologies. Some of the technical barriers can be overcome by providing technical assistance or advice to some of the generators, in particular to the small quantity generators. For certain waste categories and industries, the technology is not available to implement source reduction. This is particularly true of process modification and end product substitution.

B. Financial Barriers

Financial barriers prevent a firm from undertaking a waste reduction project because of funding inadequacies. Smaller businesses simply cannot generate the capital required to fund a waste reduction program or to modify operating practices which result in waste reduction. For some industries and for some waste categories, waste reduction may be technically feasible, but at a high cost. The expenses associated with on-site treatment and recycling, especially for SQG's, may be substantially higher than off-site management. The implementation section, Chapter 6, notes that some loan money is available from the state to help SQG's implement waste reduction plans.

C. Institutional Barriers

Institutional barriers include regulatory constraints, or lack of awareness and commitment at the decision-making level within a company. An objective self-analysis by industry for waste reduction potential is difficult to achieve, since there may be preconceived notions at the management level that source reduction is not possible, not practical, or too costly.

D. Physical Barriers

Physical barriers to waste reduction, including lack of space on the property of the waste generators to accommodate a waste management facility or process, can impede waste reduction.

3650 Incentives for Industry to Minimize Hazardous Waste

Neither the U.S. Environmental Protection Agency nor the State Dept. of Health Services has mandatory standards of performance and required hazardous waste minimization practices at this time. Both agencies are studying the potential for waste minimization programs and may develop regulatory programs in the future.

In the interim, however, industry has numerous incentives to implement waste reduction. These incentives include: economic, regulatory, liability, and public image.

A. Economic Incentives

Because costs for the storage, treatment, transportation and disposal of hazardous wastes are increasing, waste reduction efforts would also result in cost reduction. Product substitutions to less or non-hazardous materials could result in savings on the costs of raw materials. Compliance with regulatory requirements covering the management of hazardous materials and waste can be costly; waste minimization can help

reduce these costs. Loans and grant funds may be available to industry for implementing waste minimization programs.

B. Regulatory Incentives

More restrictive regulations that prohibit the land disposal of untreated hazardous wastes by May 8, 1990, will have an effect on industry's decisions concerning hazardous waste management practices. As traditional methods of waste management become more costly or more cumbersome due to new regulatory requirements, waste minimization will become a more attractive alternative. Waste reduction certification is required on manifests. Waste reduction programs are to be described in biennial reports where permits have been granted for on and off-site treatment facilities.

C. Liability

Hazardous material and waste minimization efforts can reduce the liabilities associated with environmental hazards and safety in the workplace.

D. Public Image

Instituting a waste reduction program can improve the image of that business within the community. Employee relations can be improved by providing a safer work place. Public recognition, such as awards, certificates, or resolutions from governing boards, can help to encourage industry in implementing their waste reduction programs.

3660 **Technical Assistance**

Since one of the major obstacles to waste reduction is the inability of generators to develop, evaluate, or implement waste reduction methods due to a lack of technical expertise, a technical assistance program should be developed to aid local hazardous waste generators. Such a program could provide generators with the expertise necessary to develop waste reduction programs and could encourage businesses to evaluate and adopt waste reduction strategies.

Components of a local technical assistance program should include: a library of information regarding hazardous waste reduction technologies applicable to industries within the County; distribution of technical, economic, and regulatory advice to businesses to assist in their evaluation of waste reduction alternatives; assistance in conducting waste audits, process analysis, and feasibility studies; and current marketing sources for recyclable wastes.

Education and the dissemination of information are the primary factors in

developing a technical assistance program. Access to industry could be achieved through newsletters and direct mailings, and tailored workshops and seminars. Communication within industry and between industries that generate similar wastes, at forums such as workshops and seminars, would encourage the exchange of ideas and concerns and could generate cooperative agreements for waste management.

A technical assistance program can be instrumental in helping industry to conduct waste audits. Waste audits are most effective in identifying opportunities for waste reduction. Facility operations are assessed for the potential of employing waste reduction technologies. Once an audit has been performed, the benefits of waste reduction become more apparent. Cooperation from the facility for conducting the audit and for implementing the recommended waste minimization programs is a necessary element. Because industry participation and commitment are essential to the program, waste audits should be initiated by industry, rather than be required by government.

Developing a locally based waste reduction/minimization program, including provision of technical assistance is one of the many elements recommended in Chapter 6, Implementation. Possible sources of funding are also considered in Chapter 6.

CHAPTER 4

4000 SITING OF HAZARDOUS WASTE FACILITIES

4100 OVERVIEW

This chapter integrates siting opportunities and constraints based on policies of the County's existing Framework General Plan and the suggested siting criteria included in the State Health Services Guidelines for preparing Hazardous Waste Management Plans. Based on these siting criteria, general areas have been designated on the maps in Attachment 1 which identify potential opportunities for siting hazardous waste facilities. The criteria provide opportunities for siting new facilities in designated industrial and commercial areas.

Based on the County's needs assessment for new facilities, and in consideration of the statewide interest for the County to provide a broad range of siting opportunities for new facilities, the siting criteria provides siting opportunities for most facility types. Residual repositories, however, are not accommodated in the County Plan at this time. The criteria are also based on the County's effort to share in the responsibility for finding safe and effective solutions to the management and disposal of hazardous wastes. In doing so these criteria considered the feasibility and appropriateness of identifying suitable sites for treatment and disposal facilities as an element to be incorporated into the County General Plan. These criteria have been formulated to insure that health, safety and environmental requirements are met in the siting of hazardous waste facilities.

Utilizing the current and projected wastes and the needs assessment for identifying generalized treatment methods, the siting criteria focuses on the greatest need in terms of waste group and generalized treatment methods for all other types (i.e., other than residual repositories) of hazardous waste management facilities. For Humboldt County, oil recovery is the generalized treatment method that would be most in demand, representing 30% of all the generalized treatment methods needed for treating Humboldt County's waste. Wastes requiring oil recovery as a treatment method that are generated in Humboldt County include waste oil and oily sludges. Oil recovery is a specialized type of recycling. Additional recycling treatment methods can be applied in solvent recovery and in recycling used lead-acid batteries, empty pesticide containers, and organic liquids. Together, these three recycling treatment methods -- oil recovery, solvent recovery, and other recycling -- constitute more than 71% of the projected facility capacity requirements for treating Humboldt County's projected wastes (See Table Q in the Appendix).

The TRM describes the principal characteristics of a typical, small recycling facility which would process 10,000 to 15,000 tons of hazardous waste per year. General descriptions of typical hazardous waste

treatment, storage and disposal facilities are included in Appendix 4.1, derived from Part J of the TRM. Current needs assessment indicates that the required recycling treatment capacity for all wastes generated in Humboldt County is 1,049 tons. The projected needs for recycling treatment is 1,146 tons per year for the year 2000, including needs for manifested wastes and small quantity generator wastes. Since the amount of potentially recycled hazardous wastes generated in Humboldt County is substantially less than the 10,000 to 15,000 tons per year handled at a typical "small" facility (as described in the TRM), it seems unlikely that a recycling facility would be an economically viable operation.

Nevertheless, siting criteria have been developed that address the potential for siting each of the generalized treatment, storage or disposal facilities, in the event that Humboldt County's hazardous waste stream should increase to the extent that a treatment, or storage facility would be warranted.

While the relatively low volumes of hazardous waste generated in Humboldt County are probably not enough to economically support the siting of a treatment or disposal facility, it is probable that a transfer and storage facility could be established. Such a facility could serve as a collection station for household hazardous wastes and for small quantities of commercial wastes, and as a shipping facility when the quantities become large enough to be economically shipped to a treatment or recycling facility.

Proximity to urban-industrial areas, near the source of waste generation, is a factor that usually influences the chosen location. Hazardous wastes are shipped to transfer and storage facilities by rail and by vacuum, flatbed and tank trucks. Therefore, location of transfer stations is also influenced by accessibility to transportation routes.

Since the Guidelines state that "counties should work closely with one another to define general locations which can be used to meet the needs of more than one county where that is desirable for economic, environmental, social, or other reasons", the siting criteria addresses the possibility of assessing regional needs and developing inter-jurisdictional agreements for meeting facility siting needs based on a fair share principle. The plan policies and siting criteria reflect the legislative finding in the Tanner statute (Section 1 (b) (3) of Stats. 1986 c. 1504) which addresses the necessity that all local communities share the burden, and "that all local governments consider the feasibility and appropriateness of identifying suitable sites for treatment and disposal facilities in their general plans."

Finally, the siting criteria identify those areas which may be suitable for the development of new industries and businesses which generate or manage hazardous wastes. Generally, these industries and businesses must be located in industrial or commercial zones in conformance with the

siting criteria and development standards in this chapter. The enabling legislation, AB 2948 otherwise known as Section 25135 et. seq. of the Health and Safety Code, does not provide for planning for hazardous materials or industries and businesses which generate or manage hazardous wastes. Policies and siting criteria that are geared toward hazardous materials and businesses that generate but do not treat off-site hazardous wastes, are foot-noted to be treated separately from the provisions for the CHWMP. Such policies and siting criteria are included for informational purposes and will be considered as revisions to the general plan.

The Humboldt County Hazardous Waste Management Plan, serving as the primary planning document for hazardous waste management in the County, includes siting criteria that shall be utilized in selecting sites for new hazardous waste treatment, storage, transfer or disposal facilities. In addition to the siting criteria, general areas are designated on the maps in Attachment 1 where the criteria might be applicable.

The fact that areas have been designated on maps and are determined to be generally in conformance with the siting criteria, does not guarantee that a treatment, storage, or transfer facility can be located there. The siting criteria and maps designate general areas where siting a hazardous waste management facility may be considered. Some criteria are not mappable, and/or require further assessment to determine site suitability. In addition, the regulation of siting facilities must follow prescribed procedures in conformance with local use permit requirements, CEQA provisions, and all other applicable laws and regulations.

The need for hazardous waste management facilities based on locally generated wastes and the lack of existing treatment facilities is documented in Chapter 3 and in the accompanying tables that appear in the Appendix. While the County needs assessment indicates that a storage and transfer facility is the most likely facility that would be needed, the siting criteria addresses the accommodation of a wide range of other facilities in addition to storage and transfer facilities, consistent with both the Health and Safety Code requirements and the Guidelines.

4200 SITING CRITERIA

4210 Land Use Compatibility

1. Overview

Table 13, from Volume I of the Humboldt County General Plan, summarizes existing land use in Humboldt County.

Approximately 90 percent of the total land area in the County, is devoted to public lands, land zoned Timberland Production Zone (TPZ), land under

Williamson Act contract, or lands designated for agriculture. The remaining land area is located in incorporated cities, community planning areas, and lands designated for rural development.

Residential, commercial and industrial land uses are concentrated in the incorporated cities and community planning areas. Approximately 46 percent of the County's residents live in the incorporated cities, and 48 percent live in the designated community planning areas. The remaining 6 percent of the County's population live in those areas devoted to public lands, TPZ lands, Agricultural Preserves and lands designated for agriculture or rural development.

The Redwood Region Economic Development Commission and Humboldt County Planning Department have both conducted Industrial Site Suitability Inventories.

TABLE 13

HUMBOLDT COUNTY LAND AREA

AREA	ACREAGE	% OF TOTAL
Total County	2,286,720	100
State and Federal Public Lands Devoted to Timber Production	485,191	21
State and Federal Public Lands Not Devoted to Timber Production	145,655	7
Total State and Federal Public Lands	630,846	28
County Parks	478	.02
Incorporated Cities	23,143	1
Timberland Production Zones	991,609	43
Agricultural Preserves	198,814	9
Areas designated for rural development (outside of Community Planning Areas)	131,471	6
Community Planning Areas excluding Coastal Zone Area Plans	100,480	4
Lands designated for Agriculture (not in Williamson Act Contracts - Force Figure)	209,879	9

Hazardous waste management facilities, other than residual repositories, are basically industrial facilities. Generally, it is appropriate to site these facilities in industrial or heavy commercial zones. Treatment methods for the following types of facilities have general characteristics that may be compatible with other industrial uses:

1. Aqueous Treatment - Organic
2. Aqueous Treatment - Metals/Neutralization

3. Incineration
4. Solvent Recovery
5. Oil Recovery
6. Stabilization and Solidification
7. Other Recycling
8. Transfer and Storage facilities

In addition, the transfer and storage facilities and recycling facilities hazardous waste management methods have general characteristics that may be compatible with other commercial uses.

Detailed descriptions of the various types of treatment facilities and hazardous waste management methods are provided in Appendix 4.1.

Current industrial and commercial land use designations in the Humboldt County General Plan do not specifically provide for hazardous waste management facilities. Amendments to the County and City General Plans and zoning ordinances will be needed to plan for hazardous waste management facilities within the appropriate industrial commercial, or specially zoned lands.

2. Siting Criteria

- A. The following new hazardous waste facilities may be permitted with a discretionary permit in areas designated Industrial General in the County General Plan, and in similar industrial designated areas within the City plans for Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad:

1. Aqueous Treatment - Organic
2. Aqueous Treatment - Metals/Neutralization
3. Incineration
4. Solvent Recovery
5. Oil Recovery
6. Stabilization and Solidification
7. Other Recycling
8. Transfer and Storage facilities

- B. New storage areas, transfer stations, recycling centers, and transportable treatment units may be permitted with a discretionary permit in areas designated Commercial Service and Commercial General in the County General Plan, and in similar commercial designated areas within the City plans for Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell and Trinidad.

1. Only facilities serving neighborhood or local needs may be sited in commercial districts, except that facilities serving larger than neighborhood or local needs may be sited in commercial districts where the environmental assessment

provided on the project indicates that the impacts of siting such a facility would be insignificant to the surrounding area.

Define "facilities meeting neighborhood needs" as those facilities such as neighborhood recycling centers, or facilities serving the immediate surrounding commercial districts such as solvent recovery for automotive repair, paint shops, etc. Define "facilities serving local needs" as those facilities which do not have a market service area substantially larger than the County but which are somewhat specialized in their function, such as print shop and photographic recovery or transfer facilities. Application of these definitions shall not be used to restrain trade of a facility, but shall be used to achieve land use compatibility and impact mitigation.

- C. New hazardous waste management facilities shall not be permitted within any City or County land use designations other than those specified in the above Sections 4231 (2) (A) and (B). Residual repositories for treated and untreated hazardous wastes are not accommodated in this Plan.
- D. The application for new hazardous waste management facilities shall not be accepted as complete without a hazards/risk assessment which considers the following: 1) the physical and chemical characteristics of the specific type of wastes that will be handled; 2) the design features of the facility, and, 3) any need for buffering residential areas, immobile populations, or other sensitive areas from adverse emissions or accidental spills from the proposed development. The proposed new development shall be sited according to the recommendations within the final hazards/risk assessment report.
- E. Facilities shall be subject to special setback regulations. Special setbacks are to be determined during the environmental assessment of the facility. The setbacks shall be set to ensure:
 - 1. Facility safety and consistency with all applicable local, State and Federal regulations (such as the Uniform Fire Code);
 - 2. To the maximum extent practical, land use and visual compatibility.

4220 Fair Share

The following siting criteria applies to any new hazardous waste facility which is proposed to be developed within Humboldt County.

- A. Any proposed specified hazardous waste management facility shall be consistent with the goals and policies of this Plan. In particular, any proposed facility shall be consistent with the fair share principle, and with any inter-county agreements on hazardous waste management. Local needs are to be the primary basis for this decision, along with regional commitments. Specifically, facilities are to be designed and sized primarily to meet the hazardous waste management needs of this County, or to meet the County's broader commitments under an inter-jurisdictional agreement or upon determination of the local governing body that the project meets local planning criteria and serves public needs.

4230 Resource Production Lands

1. Overview
- A. Timberlands

The Humboldt County General Plan, Volume I Framework Plan states in part:

Timber and agricultural production are similar in that both are dependent on the quality and character of the land, and the degree of management that is practiced. The true resource is the soil, topography, climate, and that which exists upon the land as a product of the above factors. Management technology is an interrelated human resource which greatly affects the productivity of the primary resource, the land. Humboldt County contains extensive areas of forest land which rank among the most productive in the world. Consequently, management practices can have a profound effect on productivity gains and employment.

Through Humboldt County's implementation of the Timberland Production Zone (TPZ), nearly one million acres of good forest land were placed in a zone which reduced tax assessments in exchange for a devotion to timber growth and harvest and compatible uses.

Although competition among various land uses is escalating, the Timberland Production Zone provides relative assurances that uses allowed within the affected timberlands will be consistent with local needs in resource economics, open space, and compatibility of uses. TPZ classification provides a static productive land base from which accurate timber supply projections can be made.

Approximately 43% of the total land within the County is classified Timberland Production Zone. In addition, about 20% of the County's total acreage is managed by timber production oriented public entities. The combination of these factors

provides a stable resource base for manufacturing facilities, maintenance of a viable labor force, and fulfilling lumber demands.

Recognizing the importance of retaining and protecting timber land in Humboldt County, the Framework Plan established the following goal and policies (in part):

GOAL

To actively protect and conserve timberlands for long-term economic utilization and to actively enhance and increase County timber production capabilities.

POLICIES

1. Timberlands shall be retained for timber production, harvesting and compatible uses, and reclassification of Timberland Production Zones (TPZ) shall be done in accordance with statutory requirements.
2. Avoid, wherever practical, the location of any state or local public improvements and any improvements of public utilities, and the acquisition of land therefore, in Timberland Production Zones where the project will have a significant adverse effect on the production of timber.

B. Agriculture Lands

Agriculture has historically been one of the major resources of Humboldt County. Approximately 690,000 acres or nearly a third of the total land area in the County is directed to some type of agricultural use. About 67,000 acres of land is classified as being under intensive farming, while an estimated 605,000 acres of land is used primarily for grazing related purposes. The high rainfall, fertility of the soil, marine climate, and soil depth make some of the County's agriculture land highly productive. The more profitable, intensive agricultural practices generally occur on the more fertile land, on manageable parcels, with ample water supply. Although upland grazing is the predominant agricultural practice in Humboldt County and requires vast acreages for profitability, it tends to involve non-prime quality land in the remote areas which are subjected to competition from possible competing land uses.

Significant agricultural resources are located near the cities of Arcata, Fortuna, and Blue Lake, as well as around McKinleyville, Dow's Prairie, the Eel River Delta, Metropolitan, Holmes, Willow Creek, Orleans, Mattole Valley, Garberville, Petrolia, Honeydew, Ettersburg, Bunker Hill, Table Bluff, Bear River, Alderpoint, Blocksburg, Harris, Pepperwood, Redwood Creek drainage, and many other areas.

The County is currently attempting to slow down the agricultural land conversion process by supporting the Williamson Act Program. Nearly 200,000 acres of land in the County is presently under this program. Humboldt County will continue to support the Williamson Act, as well as other measures to discourage the loss of agricultural land.

Many opportunities exist on smaller parcels through non-traditional crops, intensive management and the operator's commitment to agriculture, to significantly contribute to the County's agricultural production. Much of the rural land in the County has the potential for a variety of agricultural uses.

Recognizing the importance of retaining and protecting agricultural land in Humboldt County, the Framework Plan established the following goal:

The optimum amount of agricultural land shall be conserved for and maintained in agricultural use to promote and increase Humboldt County's agricultural production.

2. Siting Criteria

- A. New hazardous waste management facilities shall not be located in resource production areas, i.e. lands designated Timberlands (T), Agricultural Grazing (AG) or Agricultural Exclusive (AE) in the County General Plan.

4231 Mineral Resources

1. Overview

The State Surface Mining and Reclamation Act of 1975 (SMARA) brought about a State policy for surface mining and reclamation of mined lands. The policy includes provisions for protecting access to, and availability of, mineral resources which are important to the State. Humboldt County adopted a SMARA ordinance pursuant to the State law.

2. Siting Criteria

- A. New hazardous waste management facilities shall not be sited so as to preclude extraction of minerals necessary to sustain the economy of the State.

4232 Military Lands

The following policy was taken directly from the State Guidelines for preparing a Hazardous Waste Management Plan:

1. Siting Criteria

It is the policy of the Department of Defense (DOD) that military lands shall not be considered for establishment of public hazardous waste management facilities. This policy is considered non-negotiable by DOD.

4240 Geology

Introduction: Geological Survey Professional Paper #946 entitled "Geologic Principals For Prudent Land Use--A Decision-Maker's Guide For The San Francisco Bay Area Region" (Brown and Kockelman, 1983) included a methodology for identifying potential hazardous waste disposal sites. The methodology included a list of criteria classified as either strict (factors which would eliminate sites), graded (which identified sites as most likely, moderately likely, or unlikely, and acceptability factors which identify site limitations unrelated to hydrology or geology).

The strict criteria consisted of:

- Areas not within the hundred year flood plains;
- Areas not in areas that average more than 30 inches more of range fall;
- Not in areas within 0.2 km of a fault capable of producing ground shaking;
- Not on unconsolidated materials (areas shown as quaternary or quaternary/tertiary); and,
- Not on unstable materials or on slopes greater than 15%.

Applying just these criteria to Humboldt County would completely eliminate any sites in Humboldt County. This study goes on to include graded criteria which includes identifying the Franciscan complex rock type as the most unlikely rock type to be acceptable for a siting facility. The Franciscan complex is the dominant bedrock type in Humboldt County.

4241 Seismic

1. Overview

The County is in the two highest seismic risk zones of the Uniform Building code, and offshore Cape Mendocino has the highest concentration of earthquake events anywhere in the continental United States. The area near Cape Mendocino is a complex, seismically active region, influenced by the subducting Gorda plate. The majority of earthquakes have focal depths between 15 and 35 km (10 and 20 miles); shallower earthquakes can also be expected both onshore and offshore in this area.

Recent studies indicate that Humboldt County is also the point at which a 1200 kilometer long earthquake structure called the Cascadia Subduction Zone comes onshore (see Appendix 4.2). The Cascadia Subduction Zone

stretches from north of Vancouver Island, British Columbia to Cape Mendocino and has caused major onshore earthquakes in recent geologic times. Recent unpublished information also indicates that a potential for at very large magnitude earthquake (on the order of 9.0 M on the Richter scale) occurring with a 5-600 year reoccurrence interval (Carver, personal communication).

The above described seismic setting has the potential to cause significant groundshaking, leading to: (1) a serious liquefaction hazard, particularly around the muds and sands of Humboldt Bay; (2) a significant landslide hazard countywide; and, (3) a surface fault rupture hazards along the San Andreas, and along the Little Salmon fault, the Mad River fault zone, and other active or potentially active faults in the County.

2. Siting Criteria

- A. The application for new hazardous waste management facilities shall not be accepted as complete before the project proponents comply with the "R1" report requirements in Section 3292 of Volume I of the Humboldt County General Plan.
- B. New hazardous waste management facilities shall be designed to minimize the risk of a hazardous waste spill or accident during an earthquake of the magnitude of 9.0 on the Richter scale. All containment structures at waste management units shall have a foundation or base capable of providing support for the structures and capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, or uplift as certified by a registered civil engineer or certified engineering geologist.
- C. New hazardous waste management facilities shall be located at least 200 feet away from known active earthquake faults.

The following policies apply to facility types where geologic issues are major concerns. These **major facility types**, as described in the Technical Reference Manual (DHS, 1987), include: treatment facilities (e.g. aqueous hazardous waste treatment); recycling (i.e. liquid recovery processing such as solvent distillation, oil rerefining, etc.; not neighborhood recycling centers); solidification and stabilization facilities; incineration facilities (multi-user, and for example, over 5,000 tons per year); and, most importantly, should the Plan be amended to accommodate them, residual repositories. Not included are mobile treatment technologies which have been approved subject to Department of Transportation and other applicable regulations.

- D. Relative to the "R1" report requirements, seismic and fault rupture hazards are hereby identified as issues of concern for major hazardous waste management facilities, and as such, full evaluation pursuant to California Division of Mines and Geology Notes #37, 43,

and 49, shall be included with the "R1" report.

- E. The "R1" report requirements called for in the County HWMP in Section 4231.2B shall not be waived for major hazardous waste management facilities (as defined above).
- F. An independent reviewing geologist shall be utilized by the County to review the "R1" report provided with a project application, and to make recommendations on the scope, methodology, interpretations, conclusions, and recommendations of the report.
- G. Where these standards conflict with state or federal standards, the standards that are most protective of the health, safety and welfare of the population in the vicinity of the site shall be applied, where not otherwise preempted.

4242 Slope Stability

1. Overview

Section 3214 of the County General Plan states that:

"Slope stability refers to the landslide susceptibility of slope-forming materials composed of natural rock, soils, artificial fill, or combinations thereof. Landslides move along surfaces of separation by falling, sliding, and flowing, giving rise to many characteristic features. The features range in appearance from being clearly discernible, largely unweathered and uneroded, to highly weathered and eroded, recognized only by topographic configurations.

"Landslides are characteristically abundant in areas of high seismicity, steep slopes, and high rainfall, but may be triggered by any or a mixture of the following: (1) type and structure of earth materials, (2) steepness of slope, (3) water, (4) vegetation, (5) erosion, and (6) earthquake-generated groundshaking.

"The factors listed above are just some of the many complex factors contributing to the formation of landslides. The prediction of slope failure at a specific site, therefore, requires an analysis of all possible factors. As part of the County General Plan, relative slope stability maps have been prepared to provide general delineation of areas susceptible to sliding. Still, these maps must be used with caution, since it is possible that areas not presently known to be unstable are designated as stable and the inverse may also be true."

The County "Hazards" policy background study concludes that "Slope stability problems are probably the chief concern among geologic hazards in Humboldt County."

2. Siting Criteria

- A: New hazardous waste management facilities may be permitted with a discretionary permit in landslide zones 0 or 1 (as designated on the Humboldt County General Plan Geologic Maps), and shall not be permitted in landslide zones 2 or 3.
- B. New hazardous waste management facilities shall be designed to minimize the risk of a hazardous waste spill or accident during potential slope failures. All containment structures at waste management units shall have a foundation or base capable of providing support for the structures and capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, or uplift as certified by a registered civil engineer or certified engineering geologist.

4243 Permeable Soils, Groundwater and Recharge Areas

1. Overview

A. Permeable Soils:

The diverse and relatively unstable geologic conditions in Humboldt County are also evidenced in the wide range of soil types and drainage characteristics. The soils of Humboldt County reflect the parent bedrock material which is dominated by the Franciscan formation for most of the County.

In contrast to the information on the County's bedrock geology, the available soils information is quite detailed. Soil-Vegetation maps prepared by the California State Cooperative Soil-Vegetation Survey are available for the County at the 7-1/2 minute scale. These maps describe vegetation and soils, including information of parent rock materials, soil depth, permeability erosion, and slope.

Two comprehensive soils studies and maps, the "Soil-Vegetation Maps of California" and the Soils of Western Humboldt are helpful in identifying potentially compatible soils with the permeability requirements.

Unfortunately, use of these two comprehensive soils maps alone does not give sufficient information for finding suitable soils. Neither of these soil maps includes soils in urbanized areas. Furthermore, the use of soil information alone is not appropriate in that many of the soils with slow permeability (which may be more suitable for locating facilities) are also in a high precipitation area, an imperfectly to poorly draining area or a moderate to high erosion hazard area. Therefore, the siting criteria includes a requirement that site specific soils tests be conducted, demonstrating conformance with the State Water Resource Control Board's permeability standards.

The State Water Resource Control Board's permeability standards which apply to Class I Hazardous Waste landfill, require that such landfills be sited, designed, constructed and operated to insure that all wastes will be a minimum be five feet above the highest anticipated elevation of underlying groundwater and that the landfill immediately underlain by natural geologic materials which have a permeability of not more than 1×10^{-7} centimeters per second, and which are of sufficient thickness to prevent vertical movement of fluid.

B. Groundwater and Recharge Areas:

The hydraulic basins in Humboldt County, like most parts of the North Coastal area, provide very large surface water volumes. Mean annual runoff in Humboldt County from the major rivers and streams is approximately 23 million acre feet. In comparison, total groundwater yield of the entire County is approximately 100,000 acre feet. The largest individual drainage area of the County is that of the Eel River and its various tributaries. The contributory surface area involves over 763,000 acres, and is in excess of one-third of the surface area of the County.

The total average annual runoff of the rivers running through the County reflects almost 30 percent of the total runoff of the State of California, yet there is an extreme variance in flows of the various rivers. Because the flows of most of the rivers in the County are directly related to the precipitation within the area, over 80 percent of the flows of these streams occur during the months of November through March.

The prime source of ground water, insofar as quantity, lies in the Eel River and Van Duzen delta. Though the storage capacity is about 136,000 acre feet, the usable yield of this ground water storage basin is estimated to be 40,000 to 60,000 acre-feet annually. A little more than 10,000 acre-feet of ground water is currently being pumped from the basin for use in agricultural purposes (Winzler and Kelly, 1973). The Mad River basin has been reported to have a yield of about 45,000 acre-feet annually (Baruth and Yoder, 1973).

Other ground water basin areas include: Hoopa Valley, Prairie Creek, Big Lagoon, Mattole River Valley, Honeydew, Pepperwood, Weott, Garberville, Larabee Valley, and Dinsmore.

More wells each year are being drilled to serve new development, yet little is known about the location or capacity of the groundwater aquifers.

Development which could potentially "pollute a water shed area" includes, but is not limited to: the placement of septic systems, junkyards, waste disposal facilities, industries utilizing toxic chemicals, and other potentially polluting substances proximate to streams, creeks, reservoirs, or groundwater basins. It can also occur from additions of natural

material into a stream because of land use practices but does not include normal agricultural practices which do not require permits from the County.

A Critical Water Supply Area is defined as the specific area used by a municipality or community for its water supply system, which is so limited in area that it is susceptible to a potential risk of contamination from development activities.

2. Siting Criteria

- A. New hazardous waste management facilities shall comply with all applicable Regional Water Quality Control Board regulations.
- B. All above ground facilities shall have engineered structural design features, common to other types of industrial facilities. These features shall include, at a minimum, spill containment and monitoring devices.
- C. New hazardous waste management facilities shall not be permitted in Critical Water Supply Areas (as defined in Volume I).

For major hazardous waste management facilities (as described in the Seismic section 4241, the following policies shall apply:

- D. The applicants shall include a survey of all surface water bodies such as springs, creeks, and ponds on the site and the immediately surrounding area. The applicants shall also include a description of all subsurface water bearing areas including their extent both vertically and laterally, water quality data, direction and rate of flow, porosity and permeability of water bearing and non-water bearing strata, determination of the highest anticipated elevation of underlying groundwater and any expected pressure gradients including hydraulic head and external hydrogeologic forces due to seasonal variations in groundwater elevation (Subchapter 15, Sections 2532, 2540 and 2541).
- E. The applicant shall sample and analyze groundwater near the proposed facility for background water quality information. The samples shall be taken utilizing the network of groundwater monitoring wells to obtain representative samples both upgradient and downgradient of the hazardous waste management facility. Additional groundwater monitoring wells may be required of the applicant to be installed at appropriate locations and depths if the initial network of groundwater monitoring wells prove to be inadequate or non-representative of background and down-gradient water quality.
- F. Facilities shall not be permitted to be located on highly permeable soils, sediment or rock.

- G. All facilities shall have engineered design structures (capable of withstanding soil failure), to contain spills. The applicant must demonstrate that the foundation of all containment structures at the facility are capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, or uplift during the life of the facility, as certified by a civil engineering or engineering geologist registered in California.

4244 Flood Hazard Areas

1. Overview

Volume I of the Humboldt County General Plan states that:

"Flood hazards in Humboldt County can be attributed to three sources: rivers, dam failure, and coastal high water hazards (tsunamis and flood tides). River flooding is by far the most prevalent flood hazard, with flood alert occurring most every year during the rainy season (October to April).

"The hydraulic basins in Humboldt County, like most parts of the North Coastal area, provide very large surface water volumes. Mean annual runoff in Humboldt County from the major rivers and streams is approximately 23 million acre feet. In comparison, total groundwater yield of the entire County is approximately 100,000 acre feet. The largest individual drainage area of the County is that of the Eel River and its various tributaries. The contributory surface area involves over 763,000 acres, and is in excess of one-third of the surface area of the County.

"The 1955 and 1964 floods caused extensive damage along the Eel, Mad, and Trinity Rivers. Damages in the County from the 1964 flood totaled \$100 million.

"The Flood prone areas have been remapped by the Federal Emergency Management Agency (FEMA). The maps provide the basis for regulating flood plains in conformance with the National Flood Insurance Program."

The County flood hazard management regulations (Ordinance No. 1541), were adopted to implement the National Flood Insurance Program and include standards for:

"(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water hazards, or which result in damaging increases in flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of construction;

(3) Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

(4) Controlling, filling grading, dredging, and other development which may increase flood damage; and

(5) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas."

The following siting criteria are based in part upon the above referenced regulations.

2. Siting Criteria

- A. New hazardous waste management facilities shall not be located in the "floodway" (as defined in the County Flood Hazard Management Regulations).
- B. New hazardous waste management facilities may be permitted with a discretionary permit in the "base flood" area (as defined in the County Flood Hazard Management Regulations), if in conformance with the Sensitive and Critical Habitat Criteria in Section 4260, and with other sections of 4244, Flood Hazard.
- C. New structures containing hazardous waste which are located in the "base flood" area shall be designed to not fail and cause a spill or accident during a flood as certified by a registered civil engineer.
- D. New hazardous waste management facilities shall comply with all applicable requirements of the County flood hazard management regulations (Ordinance No. 1541).
- E. New hazardous waste management facility development proposals shall include a report certified by a registered civil engineer, that the proposed facility is designed to not fail, and not cause a spill or accident during a 500 year flood. (See Appendix C for discussion of various design models.)
- F. New hazardous waste management facilities shall comply with all applicable requirements of the County flood hazard management regulations (Ordinance No. 1541).
- G. No facility will be located within a 500 year tsunami or high coastal wave run-up area. Facilities proposed in the vicinity of Humboldt Bay and located below the 20 foot contour (USGS 7.5 min) may be required to provide an assessment of run-up areas within the Bay.

- H. No facility shall be located within an area of inundation as identified in any Dam Failure Contingency Plan. Any facility proposed in the floodplain with an upstream dam may be required to provide for updating of the contingency Plan and calculation of the area and timing of inundation.
- I. Facilities in the flood plain shall be bermed so as to be protected from a 500 year flood event.
- J. Facilities shall have a direct communication link to the flood elevation warning system.
- K. Facilities shall prepare and maintain a flood evacuation emergency response plan and system, subject to the approval of the County Office of Emergency Services.
- L. At the discretion of the County, the 100 year flood elevation may be used in place of the 500 year elevation where the 500 year elevation has not been mapped.

4250 Air Quality

1. Overview

The entire California North Coast Air Basin, which includes all of Humboldt County, is designated as attainment or unclassified for all air pollutants, and subject to federal Prevention of Significant Deterioration (PSD) permit procedures.

Air quality policy and regulation is implemented by the North Coast Unified Air Quality Management District (UAQMD). The District is part of the North Coast Air Basin and shares responsibility for implementation of the Basin Air Pollution Control Plan with the other north coast counties in the basin.

The primary responsibility of the NCUAQMD is to control air emissions from stationary sources, while for transportation related sources, state and federal authority dominates.

The NCUAQMD permit authority gives it the primary role in achieving air quality goals, thus the policy suggested for inclusion in the General Plan is limited to ensuring coordination between the goals of the District and the General Plan.

Whereas in major metropolitan areas of San Francisco and Los Angeles, air quality concerns are tied closely to future patterns and levels of urbanization, the issues of major concern to the north coast are less directly related to urbanization, but more specifically related to industrial point sources. Because the forest products industry is the

chief industry in the County, particulate emissions related to timber processing are a primary focus of the Basin Plan. To quote the Plan:

"The main thrust of the air pollution control plan for the North Coast Air Basin will continue to be directed toward the reduction of particulate emissions and the minimization of the unique odor problems by the Kraft pulp mills..." (Air Pollution Control Plan for the California North Coast Air Basin, 1977, page 17).

Ambient air quality standards (AAQS) have been developed for a number of pollutants, including sulfur dioxide, total suspended particulates, nitrogen dioxide, carbon monoxide, photochemical oxidants, non-methane hydrocarbons and lead. Both California and Federal Standards exist for ambient air quality, and are commonly expressed in concentrations, typically parts per million, over a period of time, (one hour, twelve hours, twenty-four hours, or annual).

Different areas of the State are classified by their respective current air quality levels. Humboldt County is generally a Class II area, indicating that it meets the current State ambient air quality standards (AAQS). Because it meets these standards, the County is considered to be an "attainment area".

Within the attainment areas, a variety of regulatory thresholds allow air emittants to reach what is considered to be a safe level for various pollutants. New major stationary sources and major modifications to existing sources in attainment areas must comply with regulations concerning the prevention of significant deterioration (PSD) of air quality.

PSD classification II encompasses most of the North Coast Air Basin except for the classification I areas of Redwood National Park. (Approximately 28% of Humboldt County is owned by Federal and State agencies and managed for uses such as resource protection, resource production and recreation).

"Ambient levels of gaseous air contaminants have been determined at several locations within the North Coast Air Basin"... (TABLE 15).

"Air quality data and emission inventory statistics for the California North Coast Air Basin clearly indicate that the major air pollution concern at the present time is excessive concentrations of particulate matter and odorous compounds." TABLE 14 presents a summary of lead and sulfate particulate concentrations determined from samples collected.

TABLE 14

LEAD, SULFATE AND ACID DEPOSITION VALUES

<u>Substance</u>	<u>Location</u>	<u>Year</u>	<u># of Samples</u>	<u>Monthly Ave. Max.</u>	<u>Quarterly Maximum</u>	<u>AAQS*</u>
LEAD (micrograms/ cu. meter) ug/m ³	Eureka	1973	38	0.76	0.59	1.5 ug/m ³ per 30 day average
SULFATE ug/m ³	Eureka	1976	9	5.9	8.6	25 ug/m ³ per 24 hr. average
		1977	12	4.4	9.2	
ACID DEPOSITION (pH of rainwater)	Eureka	'84-85	17	Min.pH 4.36	Max.pH 6.28	

TABLE 15

GASEOUS AIR CONTAMINANTS

<u>Substance</u>	<u>Location</u>	<u>Year</u>	<u>Average</u>	<u>Average Daily Max/hr</u>	<u>Yearly Max/hr</u>	<u>AAQS*</u>
OZONE (ppm)	Eureka	1972	0.022	0.034	0.06	0.12 ppm per 1 hr. average (Nat'l Stds)
		1973	0.025	0.037	0.07	
NITROGEN DIOXIDE (ppm)	Eureka	1972	0.017	0.030	0.11	0.25 ppm 1 hr. ave.
		1973	0.017	0.029	0.11	
CARBON MONOXIDE (ppm)	Eureka	1974	1.2	---	12.0	9.0 ppm per 8 hr. average
		1975	1.2	---	15.0	
		1976	---	---	14.0	
		1977	---	---	15.0	
SULFUR DIOXIDE (ppm)	Eureka	1972	54	Daily Average <0.010	Max. Daily 0.011	0.05 ppm 24 hour average
		'73-74	103	<0.010	0.010	
		'75-78	188	<0.010	<0.010	
		1981	continuous	0.000	0.003	

*California State Ambient Air Quality Standards

"Air pollution problems of the inland valleys and coastal basins are predominantly those of excess particulate matter generated by lumbering and agricultural operations."

"Some coastal basins and inland valleys may exceed federal air quality standards for particulate matter during periods of strong atmospheric inversions and subsequent air stagnation." Air contaminants created by industrial sources and agricultural activities are prevented from dispersion during these adverse meteorological conditions.

2. Siting Criteria

A. An application for a facility shall include the following information:

1. A description of the environmental setting before implementation of any of the projects proposed under the HWMP, including:

- a. Location;
- b. Meteorology and topography;
- c. Existing air quality, including information on ambient air concentrations of toxic wastes to be managed at the proposed project;
- d. The proximity of general and sensitive populations (e.g., residential areas, schools, hospitals); and
- e. Existing sources of air pollution in the vicinity of the proposed project.

2. An analysis of the potential air quality impacts associated with any proposed projects including:

- a. Construction of the project;
- b. Vehicular traffic;
- c. Transportation, storage, handling, treatment, recycling, or disposal of hazardous wastes; and
- d. Accidental releases

This analysis should include both criteria air pollutants for which ambient air quality standards exist and non-criteria air pollutants from the hazardous wastes (e.g., ketones and chlorinated solvents). The analysis should also include estimates of average and highest controlled and uncontrolled emission rates of criteria and non-criteria air calculations used to determine these estimates.

3. An analysis of potential public exposure from the emission of non-criteria air pollutants.

4. A description of mitigation measures to minimize emissions. This discussion should include control equipment, process control, and other technical measures to reduce emissions of criteria and non-criteria air pollutants.
 5. A description of similar sources proposed in California and the control requirements applicable to these sources.
 6. Identification and description of all applicable federal, state and local air pollution control regulations, and measures to comply with these regulations.
 7. A description of alternatives to the proposed projects and associated emissions of these alternatives.
- B. Require that the plans of operation and emergency response for facilities incorporate Best Available/Best Practical air quality control technologies.
 - C. New hazardous waste management facilities shall not be permitted where they may deteriorate air quality within national parks, wilderness areas, memorial areas, wildlife refuges, or other similarly dedicated areas.
 - D. Existing Class I PSD air standards shall be required for all new hazardous waste management facilities.
 - E. Federal new source performance standards (NSPS) and national emission standards for hazardous air pollutants (NESHAPS) shall also be applied to new hazardous waste management facilities.

4260 Sensitive and Critical Habitats

1. Overview

Volume I of the Humboldt County General Plan describes the County's Sensitive and Critical habitats as follows:

"Ample precipitation in combination with the mild climate of the North Coastal Basin has provided a wealth of fish, wildlife, and scenic resources. The region is mountainous and is dominated by dense coniferous forests interspersed with grass or chaparral covered slopes. These areas provide habitat for deer, elk, bear, mountain lion, fur bearers and many upland bird and mammal species. While wildlife habitats have been significantly reduced in the more urbanized portions of the state, they remain a significant aspect of Humboldt County.

The general types of vegetation and associated wildlife which are found in the County are listed below:

Coastal Coniferous Forest	Chaparral	Cultivated Pasture
Pine-Fir Woodland	Riparian	Coastal Dunes
Foothill Woodland	Salt Marsh	Nearshore Zone
Grasslands	Aquatic Habitat	Tidal Zone

Of the above mentioned habitats, certain portions of them are particularly important, and are classified as sensitive or critical. When habitat requirements for a specific species of plant or wildlife are in short supply because either the habitat is limited to a small geographical area or is threatened by rapidly changing conditions, then the habitat is designated **sensitive**. A **critical** habitat is a type of sensitive habitat which is presently threatened and reduction or loss would cause the extinction of a threatened, rare or endangered species.

The protection of sensitive habitats has become recognized as an important part of planning and environmental assessment for land use development. They are specifically protected by passage of the National Environmental Policy Act of 1969 (NEPA), the California Environmental Quality Act of 1970 (CEQA), and from the establishment of the Open Space and Conservation Elements and part of the General Plan, 1970 (Government Code Section 65302(d), and (e), 65560-65567).

The location of sensitive habitats is one measure considered in compiling a compatible land use designations map. When sensitive habitats are incorporated into the planning process many of the conflicts can be eliminated or reduced. To a large extent this has been accomplished through the agriculture and timber land use designations, and through public land ownership. The densities, and management of these areas are generally consistent with continued maintenance of these habitats. Located below are some of the habitats threatened by loss or reduction in the County:

Roosevelt Elk Range
 Rookery and Nest Sites
 Critical Habitat Areas (e.g., Rare and Endangered Species)
 Streams and Streamside Areas
 Coastal Habitats"

2. Siting Criteria

- A. New hazardous waste management facilities shall not be located within sensitive and critical habitats as mapped on the County General Plan Biological Resources (Volume I) or Resource Protection Maps (Coastal Plans).
- B. New hazardous waste management facilities shall not be located within sensitive and critical habitats as defined in Volume I of the County

General Plan.

- C. New hazardous waste management facilities shall not be located within wetlands, farmed wetlands or other "environmentally sensitive habitats" as defined in the County Coastal Plans.
- D. New development proposals for siting or expansion of hazardous waste management facilities in undeveloped areas or areas known or believed to contain sensitive habitats shall include a detailed biotic resources assessment. This assessment should include a survey for rare and endangered species to be performed by a qualified botanist. Mitigation shall be provided where impacts to sensitive or critical habitats or species might occur.
- E. New or expanded hazardous waste management facilities should be located a minimum of 500 feet from the edge of any riparian or wetland habitat.
- F. The site plan for any hazardous waste management facility should be designed to prevent or minimize removal of mature trees on site. To mitigate removal of vegetation, facilities should be landscaped with drought-tolerant native plant species.

4261 Noise

Some hazardous waste treatment facilities involve techniques which may produce significant noise and/or vibration impacts. Such facilities, if located adjacent to noise sensitive uses, could result in adverse impacts to the affected persons and/or employees. Potential impacts resulting from excessive noise exposure include irreversible hearing damage and other physiological effects including headaches, nausea, irritability, constriction of peripheral blood vessels, changes in heart and respiratory rates and glandular and gastrointestinal activity and increased muscular tension. Noise can also have adverse effects on materials and structures if located in close proximity to the noise source.

Land uses generally considered noise sensitive include residential, educational and health facilities, research institutions, certain recreational and entertainment facilities (typically, indoor theaters and parks for passive activities), and churches. Uses considered less sensitive to noise include commercial and industrial facilities, and certain noise generating recreational facilities such as playgrounds and gymnasiums.

1. Siting Restrictions for Noise Generators - Hazardous waste facilities shall be discouraged from locating adjacent to noise sensitive uses.
2. Noise Mitigations Required - Hazardous waste facilities generating potentially significant noise levels adjacent to noise sensitive uses

shall incorporate noise control measures so that outdoor noise levels at the noise receptor do not exceed:

- a. L_{eq} of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.
- b. L_{eq} of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.
- c. L_{eq} of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

4262 Recreation, Cultural or Aesthetic Areas

1. Overview

A. Recreation

Humboldt County park facilities, though used primarily by County residents, also provide valuable recreational opportunities for visitors from outside the County. Accessibility to a wide segment of the population and the provision and maintenance of recreational facilities and opportunities are priority goals in Humboldt County's Volume I Framework Plan and in the Recreation Element. Seventeen County parks on 478 acres of land exist in Humboldt County. Numerous City parks are located in the cities of Humboldt County.

In addition to County and City owned parks and recreation lands, the State and Federal governments own 630,846 acres or 28% of Humboldt County's total land area. Much of these State and Federal lands are available for recreational use through the U.S. Forest Service, BLM, Redwood National Park, and State Parks providing day use, camping, trails and other recreational opportunities.

B. Cultural

Volume I of the Humboldt County General Plan states:

The term cultural resources is used in the General Plan to denote vulnerable and irreplaceable resources--historic, archaeological, paleontological, architectural, and scenic--from which we may be reminded of the conditions and lessons of the past. These resources have through the times been influenced by a mix of natural forces unique to Humboldt County. Natural forces such as the climate, coast, vegetation, land, and mineral wealth have led to the development of diverse ways of life. It has also influenced the way in which our predecessors have shaped the environment. Left behind is a fragile legacy of past cultures, and prehistoric life forms that existed during past geologic time periods.

Numerous sites of cultural significance have been surveyed and officially designated as cultural resources in Humboldt County. The participation of State and Federal historic registration programs include 13 sites as California Historical Landmarks, 16 sites included on the National Register of Historic Places, 58 sites as California Historical Resources, 661 sites as Historical and Prehistorical Archaeological sites, and one northern segment of Highway 101 officially designated as a State Scenic Highway.

The California Public Resources Code, Section 5097.9, states that no agency or party is to cause damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property.

The Humboldt County Board of Supervisors established a similar policy in 1971 to evaluate archaeological sites not only in terms of their scientific value, but also in regard to their importance to the Native American community (Resolution No. 71-14).

Besides the need to preserve important archaeological finds, there is also a need to protect paleontological resources from loss or destruction. The protection of these resources is required by law and can make valuable scientific contributions to the community.

In addition to numerous sites of archaeological or paleontological significant in Humboldt County, there are also many other sites of historic worth. For example, some sites may be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of the County. While State and Federal historic registration programs have cataloged many of these historic resources, additional protection is needed at the local level.

C. Scenic/Aesthetic.

A scenic highway traverses an area of outstanding scenic quality for the purpose of enhancing the motorists' overall scenic experience. In 1971, State statutes required the preparation of a Scenic Highway Element in the General Plan. The Scenic Highway Element attempts to accomplish numerous goals, including:

- To establish a system of scenic routes.
- To conserve scenic views observable from the routes.
- To provide multiple recreational uses on publicly owned lands adjacent to the routes.
- To recognize the dual scenic and economic value of lands planned for the growing and harvesting of timber and agricultural products.

Humboldt County has adopted a Scenic Highways Element as part of the General Plan in 1980. Several scenic highway routes have been designated

along State highways in Humboldt County. These routes include: 96, 254, Route 36 from Route 101 near Alton to Route 3 near Peanut, Route 101 from Route 208 near Leggett to Route 199 near Crescent City, Route 299 from Route 101 near Arcata to Route 96 near Willow Creek.

In addition to the designated State scenic highways, the Open Space - Conservation Element adopted in 1973, provides goals and policies for the preservation of natural and human resources, and plans for open space areas for health, welfare and well-being.

Finally, the Coastal Land Use Plan Elements designate Coastal View areas and Coastal Scenic areas for specifically mapped areas that include significant coastal visual resources. Coastal scenic areas represent the more generalized visually pleasing areas while the Coastal View areas include areas where views from public roads to the coast or coastal waterways are of concern, including views from trails, beaches or public recreation areas.

Natural scenic resources are a major component of Humboldt County's landscape. The composition of the natural visual resources include its varied topography: river valleys and creek canyons, forested hills and mountains, rolling rangelands, rock formations, unique coastline, including coastal lagoons. Many of these landscapes are protected from impacts on visual resources through public ownership and land management for recreational, wildlife and aesthetic purposes. Additional protection is afforded by existing General Plan policies concerning protection of scenic Highways and Coastal View and Coastal Scenic areas.

The location and type of hazardous waste management facility proposed to be constructed would determine the level of potential impacts on visual resources hazardous waste treatment, storage, or transfer facilities generally resemble other industrial facilities. For example, a typical transfer station would occupy from one to ten acres and would be characterized by numerous storage tanks surrounded by protective dikes. In industrial areas the tanks and the warehouse-style truck transfer building would be visually compatible with the surroundings.

An aqueous waste treatment facility could cover from three to thirty acres, depending on the volume of wastes to be processed. These liquid waste treatment facilities visually resemble a typical municipal sewage treatment plant with a variety of covered tanks where the treatment occurs.

Recycling facilities for the recovery of liquid organics, solvent distillation, and oil rerefining appear similar to small refineries on petrochemical plants. Observable storage tanks, pipelines, or distillation towers and periodic steam venting from distillation equipment create the impression of small refineries. The size of sites for recycling facilities ranges from one to ten acres.

Solidification and stabilization facilities range in size from 1 to 10

acres. These types of facilities appear as a large industrial building with several tall silos for storage of dry chemicals.

Incinerators can vary in size from a few feet square to massive structures several hundred feet long. New large incinerators are likely to be rotary kilns, resembling a cement kiln and requiring 4 to 10 acres of land. Visual impacts of incinerators could be expected to be significant, and would include a tall smoke stack with a visible plume, storage tanks and support buildings. Very small incinerators can be housed in buildings and not be distinguishable as an incinerator facility.

2. Siting Criteria

- A. When a specific TSD facility is proposed, the environmental analysis should include a detailed evaluation of the project's visual impacts. This should specifically address views from major roads and public areas. Recommended mitigation measures which may include construction of a wall or berm or installation of landscaping for adequate screening, should then be incorporated into the project design.
- B. Upon a facility's closure, the operator shall be required to carry out a landscaping plan to revegetate the area, consistent with the other closure criteria. This requirement shall be incorporated as a condition of approval of a land use permit.
- C. See also Suggested Mitigation #2 in Land Use and Population Section.
- D.
 - 1. Low-Volume Transfer and Storage Facilities: Such facilities may be allowed in recreation, cultural or domestic areas if other less environmentally or culturally damaging areas are not available to handle hazardous wastes generated by visitors, workers or residents in these areas. Mitigation of impacts to recreation, cultural or aesthetic areas shall be required of new developments in order to minimize or offset effects on these resources.
 - 2. All Other Facilities: Other facilities shall not be allowed in these areas.
- E. Expert opinions and field reconnaissance at the applicant's expense may be required during environmental assessment to determine the presence, extent, and condition of cultural resources and the likely impact upon such resources.
- F. Conditioning, designing or mitigating projects to avoid loss of cultural resources in general, but archaeological or

paleontological resources in particular shall include, where applicable:

1. Changing building and construction sites and/or road locations to avoid sensitive areas, or;
 2. Providing protective cover for sites that cannot be avoided, or;
 3. Where appropriate and with the approval of all parties concerned, provide for the removal or transfer of culturally significant material by a professional archaeologist or geologist.
- G. Potentially unsightly features such as parking lots, etc., shall be located in areas not visible from Scenic Routes. Where it is not possible to locate such features out of view, they shall be effectively and expediently screened from view by planting and/or fences, walls, or berms. Screening shall utilize primarily natural materials rather than solid fencing, preferably vegetation in conjunction with low earth berms.
- H. The location and design of access roads should not detract from the scenic quality of the route and should be consistent with the adopted Scenic Route Plan, where practicable.
- I. Within designated Coastal Scenic Areas, measures are included in the project design so that it will be subordinate to the character of the surrounding setting.
- J. Within designated Coastal View Areas and where views from public roads to the coast or coastal waterways are of concern, the height, width and siting of structures, including setbacks from roads and parcel lines will be considered to retain as much of the existing view as possible; views from public trails, beaches or public recreation areas into the development site will also be considered.

4270 Public Safety

1. Siting Criteria
 - A. All new hazardous waste management facilities shall be designed to minimize the risk of a hazardous waste spill or accident, as certified by a registered civil engineer or certified engineering geologist.
 - B. An emergency response plan shall be submitted with the discretionary permit application for any new hazardous waste

management facility. All new facilities shall be required to conform to the standards and requirements stated in the Hazardous Material Incident Contingency Plan, prior to granting of permits to said facilities.

- C. The Hazardous Materials Emergency Planning Guide, NRT-1, March, 1987, or equivalent document (See Appendix D of the EIR) should be used as a checklist to determine the adequacy and completeness of the risk assessment required for new hazardous waste facilities.

4271 Fire

1. Overview

Fire hazard concerns poses a special concern when dealing with hazardous waste management facilities. Most of Humboldt County has a moderate to high wildland fire hazard rating as compiled by the California Department of Forestry (CDF). CDF is in fact the primary fire response agency for most of Humboldt County. CDF's fire response capability primarily focuses on fighting wildland fires. CDF is not geared toward providing structural fire protection. Substantial additional damage can result when CDF has to turn its firefighting efforts toward providing structural protection for scattered, remote rural structures. A rural hazardous waste management facility would pose additional risk because of the potential combustible, explosive or toxic materials that could be released in the event of a fire. Not only does such a facility pose a risk of a fire in itself, but adds to the risk posed by existing fire risk for much of rural Humboldt County. The fire response capabilities need to be carefully assessed for any proposed hazardous waste facilities. It cannot be assumed that the local fire protection district would be in a position to respond to an emergency event at a hazardous waste management facility.

2. Site Plan standards

- a. Incompatible and/or unidentified wastes need to be separated and labeled if feasible.
- b. Storage containers should be closed and protected from adverse weather conditions.
- c. Equipment for handling wastes and for emergency response should be accessible and available.
- d. Structural designs should include firewall separators for flammable wastes, and berms for explosive or combustible materials.
- e. Vehicle barriers should be included in the design.
- f. Parking, internal on-site circulation and ingress/egress to the site should not interfere with safe entry, exit, or on-site movement areas.
- g. A comprehensive list of on-site equipment for emergency

- personnel should be prepared.
- h. Describe training of personnel responsible for handling/treating the hazardous waste and for emergency response.
3. Services to site
 - a. Provide a report on the available water services including fire flow pressures and the needs for water in emergency response.
 - b. Describe the road access and approach improvements necessary to provide safe access and emergency equipment access.
 - c. Prepare and submit an assessment of emergency response capabilities of responding agencies that includes:
 1. response time
 2. equipment on hand
 3. back-up and redundancy response
 4. costs of providing and maintaining emergency response support.
 - d. Assess potential for damages to adjacent land uses and/or resources in the event of contamination from an incident.
 - e. Assess potential for damage in the event the facility is enveloped in a fire which started off-site.
 - f. Assess the relative impacts to emergency response agencies where a facility is proposed to be sited in a wildland fire hazard area and the capabilities of responding agencies are concerned with protecting timber resources rather than structures or facilities.

4280 Circulation

1. Overview

Volume I of the Humboldt County General Plan describes existing circulation systems within the County. Volume I describes streets and highways as follows:

The roads, streets and highways form the most significant element of transportation in Humboldt County. With the exception of a small amount of air passenger service, all people use this system for transportation. The roads have also played a growing importance in the movement of freight. The County is served with a variety of roads from freeways (U.S. 101) to dirt logging roads. Collectively, these roads provide a complete network with access to virtually all areas of the County where access is presently necessary. Few new roads are expected to be needed, except in urbanizing areas. The following table summarizes the road mileage under the various public administrations.

TABLE 16

HUMBOLDT COUNTY MILEAGE OF ROADS BY JURISDICTION

<u>Total</u>	<u>State</u>	<u>County</u>	<u>City</u>	<u>State (not Highways)</u>	<u>Federal</u>
2638	336	1199	237	119	737

Source: California Statistical Abstract, 1980.

2. Siting Criteria

A. A proposed development of a hazardous waste management facility could be required to submit a traffic analysis study that includes:

1. Traffic projections (existing and proposed as a result of the project)
2. Volumes of traffic in peak hours
3. Cumulative impacts of projected traffic including ultimate development of project site and vicinity
4. A capacity study of the streets/highways involved
5. Availability of acceptable ingress and egress
6. Conflicts in turning movements
7. Sight distance and visibility
8. Pedestrian movements (proposed and existing)
9. Bicycle traffic patterns and rates in vicinity of project
10. On and off-street parking availability
11. Projected noise impacts from increased traffic
12. Projected air emissions from increased traffic
13. Projected and existing accident rates for streets/highways involved
14. Types of hazardous materials/wastes to be transported and relative risk assessment in handling of these wastes
15. Hours of operation
16. Emergency response capabilities
17. Projected increase in demand on emergency response services

B. New hazardous waste management facilities may be permitted with a discretionary permit only if the site has frontage on one of the following major roadways, (as defined in Section 4240 of Volume I):

1. Rural Principal Arterials
2. Rural Minor Arterials

3. Rural Connectors
 4. Major Rural Collectors
 5. Urban Principal Arterials
- C. Hazardous wastes shall not be transported along roadways other than those listed in Siting Criteria 4232 2.A. above.
- D. Hazardous wastes shall be transported in accordance with all applicable Federal, State, and local regulations.

4290 Public Services and Facilities

1. Overview

A. Water Facilities

The Humboldt Bay Municipal Water District is the major purveyor of domestic and industrial water services to Humboldt County. The district supplies water to the cities of Eureka, Arcata, Blue Lake, and the community of Fairhaven, the pulp mills in Samoa, and numerous special districts around Humboldt Bay. Eighteen special districts provide water services to inland northern and southern County communities including, but not limited to Willow Creek, Jacoby Creek, Hydesville, Miranda, Redway, Orick, Alderpoint, Orleans, Weott and Shelter Cove.

B. Wastewater Facilities

Wastewater treatment and disposal facilities serve the more densely populated areas of Humboldt County. Six of the incorporated cities (Arcata, Eureka, Blue Lake, Ferndale, Fortuna and Rio Dell) and six special districts (Humboldt, McKinleyville, Redway, Garberville, Loleta, and Shelter Cove) have wastewater treatment systems.

C. Solid Waste Collection/Disposal

The County's solid waste management program encompasses the storage, collection, transportation, processing, reduction, recycling, recovery and disposal of solid waste. Container sites, city and County franchise holders, the general public, private industry, and road and park maintenance departments deposit their respective solid wastes at one of two transfer stations (Eureka and Redway), which are then transferred to the Cummings Road landfill.

2. Siting Criteria

- A. Hazardous waste treatment facilities shall be required to disclose the projected volume and contents of discharges to the sewage treatment system. Compliance with industrial pretreatment standards for publicly owned treatment works will

be required.

- B. Water conservation techniques may be required as part of the project and facility design. When the facility uses process water, a water use assessment study shall be provided which provides a range of the feasible water use alternatives.
- C. Availability of sewer and water service shall be considered at the time a specific facility is proposed. Demand for services should be established, and compared to available capacity. All necessary line extensions and other improvements should be the responsibility of the developer. If a facility is proposed in an area outside of the sphere of influence of the nearest service district, on-site sewer and water systems should be developed. This would prevent the potential impacts associated with extension of new sewer and water lines.
- D. Proposed development shall be adequately serviced by water supplies for fire protection or shall have a letter from an appropriate fire protection agency indicating that adequate fire protection can be provided.

4300

PROXIMITY TO PUBLIC FACILITIES AND WASTE GENERATORS

1. Overview

Volume I of the Humboldt County General Plan describes the County's development timing policies as follows:

"The development timing system will be applied to the community planning areas in a flexible and dynamic manner, responsive to community needs. Basically, this system sets the framework with which to designate regions for urban development and expansion (those regions are referred to in the general plan as urban development and expansion areas).

"An urban development area contains land developed to a density of one or more dwelling units per acre. This area is typically provided with public water or sewer services and constitutes an identifiable urban community, substantially more developed than surrounding lands. Urban density requirements and land use designations apply to the urban development area. The basic premise behind the establishment of such an area is to concentrate physical development in a region that can be most effectively and economically provided with necessary public services.

"Closely related to the urban development area is the urban expansion area. The urban expansion area can be viewed as a phased extension of urban development. The concept is to hold

land within the expansion area in reserve at rural densities until necessary facilities and services are provided that can support urban level development.

"A fundamental objective of establishing areas for urban development and expansion is to direct community development to locations dictated by the free market and best equipped to handle growth. Urban growth can be handled, for example, in regions provided with adequate public water and sewer facilities, roads and streets, or electricity, etc. The purpose of utilizing the development timing policies of the general plan is to time development and public services in a manner that will be most effective, and economical for Humboldt County."

The State guidelines for the preparation of hazardous waste management plans indicate that transfer/storage hazardous waste facilities can be located in rural areas, close to waste generation sources, but all other facilities should be located where adequate services are available. All hazardous waste management facilities should be located as close as possible to waste generation sources to minimize the risks of transportation.

2. Siting Criteria

- A. New self sufficient transfer/storage hazardous waste management facilities may be located in either urban or rural areas.
- B. New hazardous waste management facilities, other than transfer/storage facilities, shall be located where adequate support services are available.
- C. New hazardous waste management facilities should be located as close as possible to the waste generation sources.

OTHER STATE, FEDERAL AND INDIAN LANDS:

The criteria listed above are suitable for use in determining the suitability of lands within these areas for siting of hazardous waste management facilities.

4310 Energy

Energy requirements of a hazardous waste facility would vary considerably depending on the type of operation. Certain types of treatment methods place higher demands on energy services. The specific energy demands of a given facility would have to be disclosed and evaluated at the time of applying for a permit.

A feasibility study for refuse to energy conversion projects was prepared for potential projects to be located in Humboldt County. The study entitled the "Solid Waste Resource Recovery Study" dated April 1978, assesses the feasibility of either a publicly or privately owned facility which would receive domestic solid waste, separate out the recyclables, remove materials unsuitable for fuel and dispose of them in the sanitary landfill, and convert the balance of the resource into fuel. The fuel processing facility would then sell the refuse derived fuel to the energy conversion facility. An energy conversion facility would purchase refuse derived fuel and wood waste, convert the resources to an energy form and sell the converted energy to an energy consumer.

The study found that wood waste would be necessary to supplement the solid waste so that a fairly constant rate of electricity generation could be maintained throughout the project life. The wood waste volume required to maintain the optimum plant factor (the percent of total plant design capacity at which efficiency is maximized and air pollution regulations are still met) of 75-90% is less than the wood waste volume that is anticipated to be available within an economical transportation distance projected through the year 2001.

The study summarized other potential impacts of resource recovery projects identified in the "Humboldt County Resource Recovery Project, Draft Environmental Impact Report" January, 1978. At the time, three sites were under consideration for the project - North Arcata, Samoa, and Buhne Point. Construction and operation of the plant was anticipated to have potential significant impacts on: emissions of airborne particulates from waste incineration, traffic increases of about 300 vehicles per day, noise generated by traffic and plant operation, consumption of approximately one million gallons of water per day and generation of about fifty thousand gallons per day of wastewater. Site specific impacts depended on each site's characteristics and included air quality impacts, poor drainage characteristics, proximity to fault hazards, liquefaction hazards, ecological impacts, land use compatibility, social impacts, and economics of solid waste transport.

Serious consideration of a proposed refuse derived fuel (RDF) facility in Humboldt County has been tabled because of the uncertainties in the lack of standards for air emissions from the proposed facilities, the uncertainties of the fuel source, and the market for such a fuel source.

While a refuse derived fuel facility has the potential to generate additional energy through fuel conversion, such a facility also has the potential to significantly impact the environment as outlined in the above-noted study. The study did not specifically address whether or how hazardous wastes would be handled in the incineration of solid waste. Inclusion of hazardous waste in the fuel stream, whether household or commercially generated hazardous wastes, would affect both the input of the refuse and the output of particulate emissions and fly ash.

The location of a hazardous waste treatment or management facility in relation to the market area of the hazardous waste generators influences the amount of energy consumed in the transportation of hazardous wastes. The farther apart the generators are from the facility, the more energy is necessary to transport the hazardous wastes.

1. Siting Criteria

- A. To minimize transportation energy requirements, potential areas for facilities have been selected to be close to industrial areas where the majority of wastes are generated. Proximity to major transportation routes must also be considered in selection of potential areas.
- B. Energy conservation features should be considered in the design and operation of any type of facility. For example, incinerators can use waste solvents to substitute for conventional fuels, provided air quality concerns can be met.
- C. An application for a hazardous waste management facility should include an energy audit and should employ the best available control technology for energy conservation in the operation of the facility.
- D. Any refuse derived fuel facilities shall disclose a complete listing of fuel sources including an accounting of the disposition of either household or commercially generated hazardous wastes.

CHAPTER 5

5000 PROGRAMS, REGULATIONS AND ADMINISTRATION

5100 OVERVIEW

Numerous major state and federal pieces of legislation serve to regulate hazardous materials and waste in California (See Figure 9 and Appendix 5.1 for a matrix of pertinent statutes ~~acts~~ and Appendix 5.2 for a summary of the scope, elements, and principal goals of the major legislation).

The State of California surpasses most states in the country for its efforts to control hazardous materials and waste. In diverse areas such as air pollution, water pollution, underground tanks, disclosure requirements, and worker protection, the state has passed legislation that expanded the scope of hazardous waste regulation. Many of these programs are designed for local government implementation.

The level of local government involvement is a function of legal requirements and staff and resource allocations, and ranges from mandates, to conditional authority to optional jurisdiction over unregulated matters.

An overview of existing programs and requirements follows, as well as an analysis for programs needs and improvements.

5110 Transportation

The first statutory requirements for the transportation of hazardous wastes was contained in the Hazardous Waste Control Law enacted in 1972. The Department of Health Services was given a mandate to develop standards for the regulation and control of hazardous wastes including the transportation thereof.

The Hazardous Waste Hauler's Act of 1979 expanded DOHS' powers and duties to regulate the transportation of hazardous wastes. This act specifically preempts all conflicting local and state regulations, and requires the inspection and certification of all vehicles and containers used in hazardous waste transportation, and the registration of all hazardous waste haulers.

Transportation of hazardous waste is regulated by the U.S. Department of Transportation (DOT) and the California Highway Patrol (CHP). In general, the same rules that apply to the transportation of hazardous materials also apply to the transportation of hazardous wastes, with minor modifications.

Wastes that are shipped off-site are required to comply with the Uniform

Hazardous Waste Manifest system as administered by DOHS for shipping within the State of Calif. Hazardous waste generators are required to complete a manifest when hazardous wastes are shipped from the site of generation, from a transfer station, or from a storage facility. The manifest provides the basis for monitoring the flow of hazardous wastes from source of generation to the point of disposal.

California Vehicle Code and DOT regulations require that shipments containing more than 500 pounds of certain hazardous materials must be accompanied by a shipping paper ("Bill of Lading") listing the proper DOT shipping name, DOT hazard class, and UN or NA number of the material. For hazardous waste shipments, the hazardous waste manifest takes the place of the Bill of Lading, and there is no exemption below 500 pounds. However, the same DOT hazard class labels and placards are required for both types of shipments.

Humboldt County does not currently have an active role in regulating hazardous materials transportation. Traffic enforcement on local roads in the county is handled by the California Highway Patrol, which also is responsible for state and federal highways. AB 1861 allows local governments to restrict the transportation of hazardous materials to routes that are safest and will lower the risks to residential areas, sensitive facilities, or the environment. [Policies for the selection of connector routes between a facility and major routes appear in Chapter 2, Section 2200, Goal 11, Policies B, D, and F and in Chapter 4, Section 4232.2, Circulation Siting Criteria.] Listing of all licensed hazardous waste haulers should be available at the County Division of Environmental Health.

The role of transportation is to provide all necessary and appropriate facilities for off-site movement of hazardous wastes. This activity includes transport of hazardous waste from a point of generation within the county to an off-site facility or the passage of vehicles hauling hazardous waste through the county or to a point of transshipment within the county's jurisdiction.

The city street and county road system supplements and supports the State Highway network. The system is composed of main arterials, linking collectors, and maintained roads and streets. Other modes of transportation should be considered in the total picture, however. Because of uncertainty of railroad operations, use of this facility is not viable as a primary transporter. Shipping out of Humboldt Bay may be useful for certain types of wastes, but it is not recommended for hazardous wastes mainly because of potential to affect a large area in case of spills or mishandling. Exceptions to the use of both of these modes may be allowed upon application to the County with a complete management plan including a contingency plan and showing conformance with applicable State and Federal regulations [While transporting hazardous wastes via rail or shipping out of Humboldt Bay may be options to

consider, the recommended mode of transport is via truck on Highway 101 North and South and using the most direct or shortest route (on County or City roads) commensurate with public health and safety].

The major arteries serving Humboldt County are Highways 101, 299, 199 and 36. Highways 36, 199 and 299 are connector routes to Interstate 5 to the east. Highway 101 to the south connects with Highway 20 east, and eventually ties into Interstate 5. [Humboldt County does not currently have any ordinances governing the transportation of hazardous materials or hazardous wastes other than a prohibition on transportation of nuclear materials (Ordinance #1403, Humboldt County Code, Title III, Division 8, Chapter 3), but the regulation of nuclear materials/wastes is not encompassed within the scope of the County Hazardous Waste Management Plan.]

Transfer stations are needed in Humboldt County to store small quantities of hazardous waste where they can be accumulated into economic shipping units. Household wastes, and small quantity generators of hazardous wastes could use these facilities. A transfer station would provide the opportunity to combine compatible wastes and make sure that the shipments are full truck load for the best price.

Route service operators will be key to coordinating the pickup of hazardous wastes. They would coordinate a "milk run", which would go from transfer station to transfer station or waste generator to waste generator, picking up hazardous wastes for treatment or disposal. A license to handle hazardous waste should be required.

The need for transportable or mobile treatment units has arrived. The phasing out of landfills, and the mandate to treat hazardous waste on-site has spawned a new industry within the alternate technology field. These units are being used where waste treatment lends itself to incineration and air stripping. They are presently in the development phase, and will need to be approved and licensed by DOHS. Leasing of equipment, contracting for services by large quantity generators, and cooperative agreements among small quantity generators that generate similar wastes are just a few ways that transportable treatment units could meet local needs.

The transport of hazardous waste across state lines is not regulated by the Dept. of Health Services, but is by the EPA in their manifesting requirements.

Spills of hazardous materials and hazardous waste that are being transported on county roads and city streets are under the jurisdiction of the County's draft Hazardous Materials Incidents Area Plan for emergency response. Incidents on State Highways are covered by Spill Coordinators and consultant contracts.

5120 Inspection, Technical Assistance, Enforcement

Four programs relating to hazardous materials mandated by state law for implementation by local government are in existence. These programs are the "State Regulation of Underground Storage Tanks", "Hazardous Materials Storage and Response", "Infectious Waste" laws and Proposition 65. All of these programs are being implemented county-wide by the Public Health Department, Division of Environmental Health. The Division of Environmental Health also responds to emergencies concerning toxics and provides technical assistance to business and individual citizens concerning toxics.

Underground Tanks

The Division of Environmental Health is the responsible agency for implementing state law relating to underground storage tanks containing hazardous materials. State law requires that owners of existing tanks obtain operating permits and monitor tanks for leaks. New tanks must be installed to standards established by the state. Standards have also been established for methods of closure of tanks. Leaking tanks must be reported to the North Coast Regional Water Quality Control Board (NCRWQCB). Clean-up of leaking tank sites is the responsibility of the NCRWQCB, although a pilot program provides grants to local agencies for oversight of the clean-up of leaking tanks. Humboldt County has identified 1,033 underground tanks, located at 541 facilities. Three staff positions are allocated for implementation of this program.

Hazardous Materials Storage

Businesses that handle hazardous materials in quantities greater than 55 gallons, 500 pounds, or 200 cubic feet for compressed gases are required to submit an inventory of hazardous materials to the Division of Environmental Health by the provisions of state law. Businesses are also required to submit an emergency response plan with the inventory. The DEH is required to provide the response plans to emergency responding agencies on a 24 hour basis. DEH, as administering agency for this law, is also responsible for the preparation of an area response plan. The County Office of Emergency Services has been assigned the responsibility of preparing the plan for the Division of Environmental Health by the Board of Supervisors. Requirements of the law in the future include site inspections of specified businesses and development and implementation of a data system. No staff is currently provided for this program.

Assembly Bill 3777 added other requirements to this law for acutely hazardous materials. Businesses that handle acutely hazardous materials are required to submit a separate registration. The DEH, after review of the registration, may require the business to prepare a Risk Management and Prevention Program (RMPP). The business then has one year to prepare the RMPP. The RMPP develops a comprehensive response plan based upon a

worst-case toxic spill or release scenario.

Infectious Waste

State law requires that producers of infectious waste handle and dispose of that waste using certain methods. The local health department has authority to enforce the laws relating to infectious waste.

Proposition 65

Proposition 65 requires that the local health officer inform the local media of reported toxics incidents and make information regarding the incidents available to the public. This function is implemented by DEH.

Emergency Response

The DEH responds to toxic incidents in accordance with the County's Hazardous Materials Response Plan. Division staff also respond to requests for assistance from other local and state agencies and individual citizens. Inadequate protective equipment and analytical equipment exist for providing a proper emergency response.

Technical Assistance

Technical assistance concerning toxics is provided to businesses and individual citizens. Technical assistance provided ranges from providing information regarding the toxic effects of hazardous materials to assistance in obtaining EPA identification numbers to allow proper shipment and disposal of toxics.

Assistance is also provided to the Department of Health Services, Toxic Substances Control Division by DEH in response to complaints and toxic incidents that state staff cannot make response to because of their distant location. Due to lack of staffing and training at the local level, many requests for technical assistance are referred to state agencies.

Additional assistance for providing technical advice may be available through several new bills, passed at the end of the 1987 legislative session. These bills include:

- a. AB685 (Farr) of 1985 requires the Dept. of Health Services to impose additional permit conditions to hazardous waste treatment, storage, and disposal ("TSD") facilities, specifically requiring that each facility must submit a waste reduction program. AB685 also creates a state grant program to support hazardous waste research, development, and demonstration projects by granting funds to universities, public agencies (including counties and cities), and private organizations for feasibility studies, project design,

- construction, and project evaluation.
- b. AB1961 (Farr) requests the University of California ("UC") to develop an internship pilot program by June 1, 1988, to place students with hazardous waste reduction, recycling and treatment expertise in small and medium sized businesses. The university is encouraged to seek funding from other sources such as industry, foundations, and the federal government, and then to report on its progress by January 1, 1990.
 - c. AB2489 (Killea) requires DHS to establish a Hazardous Waste Resource and Research Coordination Program, which will consist of two parts: one to establish a data base containing all hazardous waste research being conducted in the state; and two to define a pool of research consultants qualified in the field of hazardous waste management.
 - d. AB2490 (Killea) allows local business organizations to demand a meeting with their county to determine whether the businesses need a hazardous materials information and consulting service. Once a local need is identified, counties can establish a service, using fees provided by the clients to fund the program. The service would be required to provide: informational materials; verbal or written responses to telephone inquiries; onsite consultation; and seminars.
 - e. AB2234 (Bronzan) requires DHS to establish a meeting and information program at the state level with trade associations representing eleven specific industries that consist primarily of small hazardous waste generators in order to provide general assistance to industry representatives in their efforts to comply with applicable hazardous waste laws.
 - f. SB788 (Garamendi) creates a Hazardous Waste Loan Guarantee Account to be administered by the state Office of Small Business, which will provide funds to local small business development corporations for use in establishing local funds for loans and loan guarantees to reduce hazardous waste generation.

5130 Organizational Responsibilities for Implementation

Generally, hazardous waste management responsibilities fall under one of three areas of jurisdiction: federal, state, and local.

Federal

The EPA administers the federal programs. Federal regulations provide for tracking hazardous materials/wastes from "cradle to grave" through the requirements of the Resource Conservation and Recovery Act of 1976,

(RCRA). Two other federal pieces of legislation that regulate hazardous waste include: the Hazardous and Solid Waste Amendments of 1984 ("HSWA") and the Superfund Amendments and Reauthorization Act of 1986 ("SARA"). RCRA requires regulation and permitting of hazardous waste generators, including establishing standards for record keeping, labeling, use of appropriate containers, and use of manifests to document the safe transport of hazardous waste to either a treatment, storage or disposal facility covered by a RCRA permit. On-site waste management facilities and practices are not subject to as many constraints as off-site facilities. RCRA establishes regulations of facilities that treat, store and/or dispose of hazardous wastes.

The HSWA establishes new standards for phasing out disposal of all untreated liquid hazardous waste onto land by 1990. HSWA also requires EPA to develop technical standards for hazardous waste treatment, storage and disposal, and required environmental monitoring of existing landfills operating under interim permits. A new section was added to HSWA that deals with underground storage tanks (UST), and requires the owners to register tanks with the state. The states, in turn will develop inventories of all USTs. The EPA is authorized to order corrective actions at leaking UST sites. The HSWA provides grant funds for states to develop and implement UST programs. The SARA amendments provide funds for remedial action at UST leak sites.

Federal legislation for "Superfunds" creates procedures to identify clean up site that have been contaminated by hazardous materials or hazardous wastes. The basic Superfund law is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), later amended by SARA. The EPA implements Superfund activities, although states are allowed to take the lead on certain cleanups. The first step involves identification of sites that may be contaminated. The second step is to set priorities for cleanup. The third step in Superfund is the cleanup activity itself.

In addition to the Environmental Protection Agency, the U.S. Coast Guard is another federal organization that has a role in the management of hazardous waste in Humboldt County. The Coast Guard responds to emergency spills when they occur within their jurisdiction.

State

In California, the State is responsible for implementing a variety of hazardous materials/waste management laws. The state regulations include: underground tanks and storage of hazardous materials (Sher, AB 1362 and Cortese, AB 2013); hazardous materials storage and emergency response (Waters, AB 2185/2187); acutely hazardous materials risk management (La Follette, AB 3777/1059); emergency planning and community right-to-know regarding extremely hazardous substances (SARA Title III); county hazardous waste management plan (Tanner, AB 2948); State Superfund

(Carpenter-Presley-Tanner Hazardous Substance Account Act); toxic pits cleanup act (Katz, AB 1046); state regulation of hazardous wastes associated with solid waste disposal (Calderon, AB 3374 and Eastin, AB 2448); State Hazardous Waste Control Law ("HWCL"); Hazardous Waste Management Act (Roberti, SB 1500); technical and financial assistance to hazardous waste reduction, recycling and treatment; household hazardous waste management (Tanner, AB 1809); Safe Drinking Water and Toxics Enforcement Act (Proposition 65); drinking water monitoring (AB 1803); toxic air contaminants (AB 1807 and AB 2588); industrial waste pretreatment programs operated by publicly-owned treatment works; and the Porter-Cologne Water Quality Control Act. Additional information concerning many of these pieces of legislation is contained in the Appendix, where pertinent laws are summarized.

The primary vehicle at the State level for regulating hazardous waste generators, transporters and treatment, storage, or disposal facilities is the Hazardous Waste Control Act. Under these requirements, the Dept. of Health Services annually inspects facilities that are licensed to store, treat, or dispose of hazardous wastes. A small percentage of known hazardous waste generators (businesses that generate waste and file manifests with DHS) are inspected on a random basis. Since there are thousands of waste generators in the state, DHS does not have the staff available to inspect all generators on an annual basis. Additionally, DHS coordinates the transportation requirements for hazardous material and waste, including the periodic inspection of registered haulers. Caltrans, the Calif. Dept. of Forestry, and the California Highway Patrol have a role in the management of hazardous waste in Humboldt County in that they are responding agencies in the event of an incident within their respective jurisdictions.

Local

Several Humboldt County departments are currently responsible for various aspects of hazardous materials/waste management. Most of the existing Humboldt County hazardous materials/wastes programs are required under state or federal law. The local implementation of State mandates is described in Section 5120, immediately preceding this section.

Different departments within the County are responsible for various aspects of either hazardous materials or hazardous waste management with the respective roles limited principally by small staff and limited resources. Other agencies have responsibilities as well, such as fire and police departments for emergency response, or planning departments for granting permits for new facilities or business licenses to new hazardous waste generators.

A significant problem in spreading the responsibilities among many departments and agencies is that of keeping the various parties informed and aware of all the relevant programs and policies. Fragmented data

bases complicate the collection and dissemination of information. The County Hazardous Waste Management Plan can be helpful in providing a framework for both integrating and communicating information.

Any local government hazardous waste programs should address problems that can best be managed at the local level. The jurisdiction must also be clearly incorporated into the framework of state and federal regulations.

The DHS has the responsibility to inspect hazardous waste generators. This is a duty that is not well carried out by the department, due to limited inspection capability, limited staff resources and distance from remote rural counties. Local health departments are able to obtain authorization for Title 22 enforcement through a Memorandum of Understanding (MOU) with the State Department of Health Services.

A coordinated local effort with County Health Department and District Attorney could provide more surveillance than the State Department of Health Services does at this time. Such an MOU would enable the County to perform regular inspections of all facilities generating small amounts of hazardous waste. It would still not provide for regular inspection of facilities using hazardous materials that do not generate waste.

Pretreatment programs for industrial dischargers through authorized municipally owned sewer treatment plants could be developed and implemented locally in order to reduce hazardous wastes from sludges

Specific routes for the transportation of hazardous materials and hazardous waste could be designated, provided the designation does not restrict commerce or negatively impact other areas.

Local fire districts have a role in hazardous waste management in Humboldt County in the event of an emergency spill or incident within the fire district's jurisdictions.

5140 **Emergency Response**

The Humboldt County Office of Emergency Services (OES) in conjunction with the County Division of Environmental Health, is preparing a new Hazardous Materials Incidents Area Plan for emergency response. Utilizing the data base and businesses plans on file at the DEH, the Area Plan will identify first response agencies and procedures in the event of an incident. A copy of the working draft Area Plan is incorporated by reference into this Hazardous Waste Management Plan. Updates to the County Hazardous Waste Management Plan should include incorporating the Hazardous Materials Incidents Area Plan once the Area Plan is formally adopted.

Humboldt County is located within a regional Planning District, defined in the federal Title III of "SARA", the Superfund Amendments and

Reauthorization Act of 1986. Humboldt County's Area Plan eventually will be submitted to the district planning committee for coordination on emergency response to releases of "extremely hazardous substances". Plans must include procedures for facilities to notify local agencies about emergencies, and for coordinated agency emergency responses. Plans must also document equipment availability, response training, and provisions for evacuation. The district plans eventually will be submitted to a state commission, designated by the Governor. Locally, there are two known facilities with extremely hazardous substances above thresholds.

Title III also requires local government involvement in reporting requirements covering unauthorized discharges (leaks or spills) of any chemical on the "CEPP" (Chemical Emergency Preparedness Program) list, or of any substance already subject to emergency notification requirements under federal legislation (CERCLA). Local emergency response agencies provide the front line for response in that any facility must report any discharge above the reportable quantity immediately to local emergency response agencies. State and district Title III agencies also must receive copies of reports.

Title III also requires reporting of thousands of hazardous materials for which the federal Occupational Safety and Health Act of 1970 ("OSHA") has required the preparation of a Material Safety Data Sheet ("MSDS"). Chemicals that are reported on the MSDS are sorted into one of five "hazard categories" -- two health hazard categories, and three physical hazard categories. By October 17, 1987, each business was required to provide either a list of all onsite chemicals requiring MSDSs, or the MSDSs themselves, to the state and district Title III agencies and their local fire departments. Initially, the MSDS reporting requirements are limited by OSHA only to businesses in Standard Industrial Classification ("SIC") code 20 - 39 (manufacturing industries). However, the reporting requirements are being expanded to include nonmanufacturing businesses as of May 1988. Within Humboldt County, it is not known how many facilities are required to submit MSDSs because there is no central repository for filing these reports. The MSDS reports are filed with local fire districts.

Finally, Title III requires annual reporting of "continuous" releases of chemicals to any environmental medium (air, water, land) by selected businesses. These reporting requirements also apply only to facilities in SIC codes 20 - 39. Currently in Humboldt County, no facilities are required to report continuous emissions.

The Uniform Fire Code ("UFC") provides a model for construction standards for buildings and the fixtures they maintain, in order to prevent or mitigate hazards from fire or explosion. The UFC is divided into parts and articles, several of which regulate different aspects of the storage, handling, and use of hazardous substances. These generally include provisions for the issuance of permits for hazardous uses or operations.

Locally, the UFC is administered by the local fire districts. The UFC has not been adopted into the Humboldt County Code. Documentation of the level of and location of local resources including trained personnel and special equipment needs to be assembled and available to the public. Such an inventory will be part of the Hazardous Materials Incidents Area Plan.

5150 Storage

The Federal legislation, Resource Conservation and Recovery Act (RCRA) includes permit requirements that generally apply only to larger facilities which store hazardous waste for more than one year.

In 1985, the California legislature passed AB 2185, which requires all local jurisdictions to implement a disclosure ordinance. AB2187 was signed into law in 1986 to clarify several points in AB2185. In addition to disclosing the location, nature, and quantity of materials stored at a facility, the owner must now also provide "business plans" detailing emergency preparations and report all spills or releases. The legislation also requires inspections of firms that must comply with the measure, but the frequency has not yet been determined. Currently, the State Department of Health Services is responsible for inspecting hazardous waste generators, but has delegated this function to local agencies in several counties.

State regulations require the registration of all existing Underground Storage Tanks ("UST"), that store hazardous materials and hazardous wastes. These requirements have been incorporated into the Humboldt County Code through the adoption of Chapter 4, Division 8, Title III on December 20, 1983. In addition to simple reporting and registration of UST's, the ordinances regulate construction and monitoring of UST's containing hazardous substances, and require prompt reports of any discharge.

Hazardous wastes are generated during the cleanup of contaminated soils from leaking underground storage tanks and from waste left in the tanks themselves. A problem exists in that there are no commercial engineering contractors locally available that are licensed to remove hazardous waste tanks. While the cleaning of intact tanks may render them less or non hazardous, the disposal of the hazardous rinsate then becomes another hazardous waste disposal problem.

Cleanup of leaking underground storage tanks includes removal of contaminated soils. When these soils are proposed to be aerated, the North Coast Air Quality Management District regulates the activities for protection of air quality.

One commercial hazardous waste storage facility exists at the Humboldt County Agricultural Commission. This facility has been used only to store household pesticides and herbicides which are periodically

manifested. It is the intention of the Humboldt County Agricultural Commission to permanently close this storage facility.

Pacific Gas and Electric Company maintains a non-commercial facility (available for use only by P.G.&E.) for storage of hazardous wastes. This facility was granted permits by the Dept. of Health Services.

In February 1988, the Northern Humboldt School District staff coordinated with other local schools, under the guidance of the State Department of Education, in conducting a collection program for lab wastes from the various schools. A registered waste hauler was contracted to collect, lab pack and consolidate all the hazardous substances and to transport the wastes to an appropriate Class I landfill. Permits from both the EPA and the DHS were granted to the school district for use of the bus depot at Boyd Road, Arcata, as a temporary collection site.

5160 Contaminated Sites

Applicable federal legislation that regulates the identification and cleanup of contaminated sites include the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Emergency Response Compensation and Liability Act (CERCLA). Pertinent State laws include: the Hazardous Waste Control Act (HWCA "Title 22"), the Hazardous Substance Account Act (HSAA, State Superfund), and the Toxic Pits Cleanup Act of 1984 (TPCA).

These five pieces of legislation have some overlap and some application beyond waste disposal, but generally can be separated into those that regulate routine hazardous waste disposal (RCRA and HWCA), and those that address the cleanup of problems due to past disposal practices.

The Resource Conservation and Recovery Act (RCRA) followed the Clean Air Act and the Clean Water Act by several years. It became evident at that time that the regulations restricting disposal into the air and water were resulting in increased reliance on landfills. To address this problem, regulations were developed which include: hazardous waste definitions, rules for short and long term storage of waste, "cradle to grave" tracking, and licensing, operating, and closure requirements for disposal facilities.

Amendments to RCRA in 1984 lowered the threshold for compliance with the Act to include "Small quantity generators" of 100 kilograms per month (it had previously been 1,000 kilograms per month). The 1984 amendments also regulate underground storage tanks, but do not preempt equivalent state or local programs. The RCRA regulations will cover underground tanks on farms. No federal or state legislation has yet been adopted which regulates above ground storage tanks, although Uniform Fire Code provisions may apply locally.

The California Hazardous Waste Control Act (codified and known as

"Title 22") was one of the earliest, and is still one of the most comprehensive state hazardous waste control programs. The Act requires a generator to notify the Department of Health Services if hazardous waste is stored over 90 days, and to receive a permit if the waste remains "on site" for over one year. [Section 25123.3 of the Health and Safety Code provides that a generator who generates less than 100 kg per year of hazardous waste has one year to store waste onsite, or the generator must have a permit or variance from DHS. If the generator accumulates less than 100 kg per month, the generator has 90 days to store waste onsite once the generator accumulates 100 kg. However, the generator may only store hazardous waste onsite up to one year maximum for any accumulation of hazardous waste. In either case, exceedance of the requirements would require a permit or variance from DHS. Also, if a generator generates greater than 100 kg/month, the generator has 90 days from the date of the initial accumulation of any amount to store onsite. For longer storage periods, the generator would need a permit or variance from DHS.]

Title 22's provisions are similar to those under federal law with respect to testing, listing wastes, manifesting, licensing, and permitting disposal facilities, although some more stringent requirements have been developed in California. Most significantly, Title 22 has no lower threshold for compliance. Also, Title 22 provides incentives for waste reduction and recycling. In 1984, when a dispute over program management heated up, California's authorization to implement RCRA through Title 22 was temporarily rescinded.

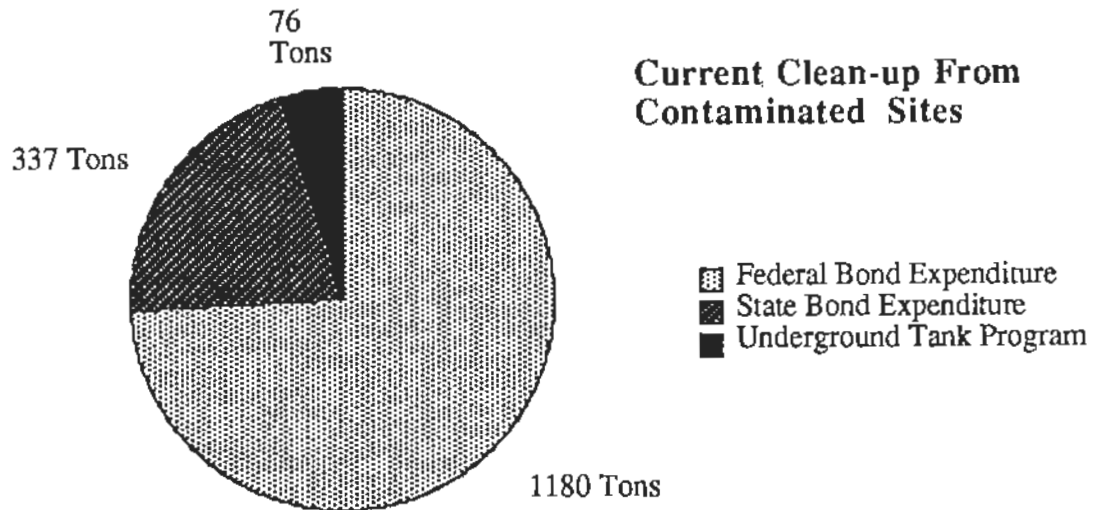
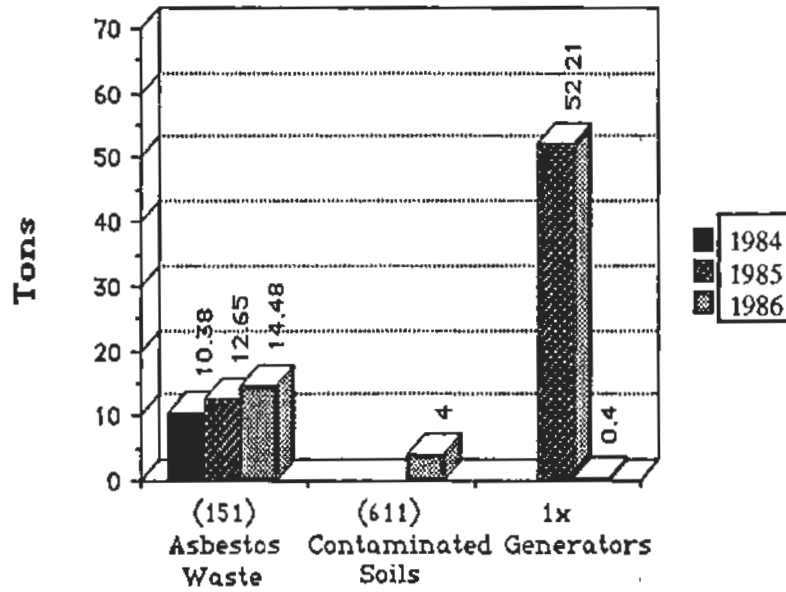
The state and federal legislation addressing problem disposal sites (both active and abandoned) established funds to cover the costs of study and cleanup, so that delays in finding or prosecuting the responsible parties would not worsen the impacts of improperly disposed hazardous waste. This legislation also provides emergency funds to cover cleanups in spills and other incidents.

Contaminated site clean-ups in Humboldt County presently involves three different areas: Federal Bond Expenditure Plan Sites, State Bond Expenditure Plan Sites, and leaking underground tank sites which are part of the State Water Resource Control Board inspection program [See Figure 8]. Underground tanks which are confirmed as leaking hazardous materials may eventually be abated by the responsible parties with state or local government oversight, or may be subject to a government funded clean up if responsible parties cannot be located or if they are uncooperative.

The process for discovering contaminated sites in Humboldt County starts through a variety of sources such as business disclosure, public disclosure, and DEH testing. Information about possible contaminated sites is received, documented, and investigated. After site assessment investigations are completed, remedial action programs are followed according to the level prescribed by federal, state, or local

FIGURE 8

Current Waste Generation Contaminated Sites



regulations.

Understanding problems related to contaminated sites requires much detailed information, including the kinds and quantities of waste present, where they came from, how they are managed, and the costs of managing them properly. Accurate information of such a broad scope is difficult to obtain.

Humboldt County presently does not have land use restrictions for contaminated sites. The contaminated sites within the county are enclosed by fencing, locked by gates, or posted with warning signs. This typically has been enough to protect the public from direct contact with the contaminants present. Guidelines should be established to direct allowable activities at known contaminated sites that have been cleaned up or are in the intermediate stages of being cleaned up.

5170 Small Quantity Generators

The Department of Health Services [Health and Safety Code, Section 25122.6] defines a small quantity generator (SQG) as a business that generates [generator who produces] less than one ton [1000 kilograms] of hazardous waste per month. [This is equivalent to approximately one ton.]

Currently, the County provides no specific program for assisting small quantity generators in the management of hazardous wastes. Some of the small quantity generating businesses currently recycle, reuse and properly dispose of hazardous materials and wastes, such as in oil recycling and solvent recovery.

Technical assistance to small businesses could increase participation in waste recovery and waste reduction programs. The State Dept. of Health Services could assist small quantity generators in auditing waste generation and in determining appropriate resources and techniques in source and waste reduction, recycling, and recovery. Small quantity generators could benefit from increases in services of route service operators, transportable treatment units, recycling centers, and transfer stations.

With current budget limitations directly affecting staff and resource allocations in this County, unless a sustainable source of funding is available, it would be difficult for the County to finance a position for assisting small quantity generators in managing hazardous wastes. A fee could be charged of the small quantity generators for providing the service, however it would have to be set at a level that would not discourage participation in the hazardous waste management programs.

The County Hazardous Waste Management Plan preparation and hearing process will provide a vehicle for educating the small quantity

generators about programs and services currently available.

5180 Household Hazardous Waste

Currently there are no locally adopted programs to manage hazardous wastes from households in Humboldt County, other than storage of pesticides and herbicides at the Humboldt County Agricultural Commission. This facility no longer accepts household pesticides and herbicides and is projected to close permanently (as far as hazardous waste storage is concerned) by the end of 1987. [The Solid Waste Advisory Committee and the Hazardous Waste Management Plan Citizens Advisory Committee met jointly to consider financing options for household hazardous waste collection programs. The committees developed a mutual recommendation, which was forwarded to the Board of Supervisors on December 20, 1988. The committees' recommendation and the Board of Supervisors' action appear in Appendix 5.5.]

Hazardous substances in the household solid waste stream cause increasing problems. Awareness of the need to separate these hazardous wastes has grown in recent years. These wastes are not regulated, usually appear in small quantities, and are often unidentifiable. Household hazardous wastes enter the environment through disposal together with solid wastes, by pouring down the drain and into the sewers, or by spreading on the ground. Improper disposal of household hazardous wastes can be attributed to a variety of reasons, including disregard of proper methods, ignorance, or lack of proper disposal methods. Some of the problems associated with improper disposal of household hazardous wastes include: leachate in landfills causing groundwater contamination; improper use, storage, handling, disposal, mixing of hazardous materials or products containing these materials/substances, before or after they become part of the waste stream; injuries and deaths of refuse workers, landfill operators, or firefighters; property and equipment damage; health risks or deaths to/of householders.

Diverting the household hazardous wastes from the solid waste landfills, from wastewater treatment plants, and from the environment has been accomplished in many communities through collection days. These collection days involve identifying a specific time, date and location where residentially generated hazardous wastes can be taken by community residents to be properly identified, sorted and packaged in lab-packs by trained personnel, and then transported to approved Class I landfills. Co-mingling of any wastes from any source other than residential can put the entire collection into the large quantity generators regulatory system. Generally these wastes are brought in, sorted, packed and moved out within one day. Household wastes properly packed in lab-packs require less regulation, cost less for disposal, and cause fewer problems with long-term liability. Collection days can be held at specific time intervals as needed.

On-going programs for collection or storage of household hazardous wastes could be considered at a transfer site, fire station, or other suitable location where the materials can be dropped off on a daily or weekly basis. A door-to-door pick-up program was attempted in San Diego, CA. This program proved to be more time consuming and more costly than collection sites.

As communities have gained experience with household hazardous waste collection programs, attention is now being focused on methods for ultimately managing or disposing of the collected waste in a manner other than landfilling it. The same waste management practices that are sought of industry can also apply in the home environment.

Residents in the community should be educated on the "three R's" as part of an education effort that accompanies a household collection program. The three R's include: reduce, reuse, and recycle. "Reduce" refers to reducing the reliance on hazardous materials at the source by using safer alternatives when they are available. For some materials, there are no feasible alternatives. For products such as these, it is recommended to buy only the amount needed. If any material is left over, then recycle whenever possible. "Reuse" implies that a product or substance may still have value in its present form and may be used by another party. "Recycle" indicates that the materials can be of some further use following treatment. Examples of household hazardous wastes that can be recycled include waste motor oil and car batteries.

There is a need for public education concerning household hazardous waste. A new program, such as a collection day program would require advance publicity in order to maximize participation. A speakers bureau, workshops with assistance from existing organizations such as garden clubs, the League of Women Voters, schools, would be helpful in distributing information about alternative products, alternatives to disposal and landfill, and about up-coming collection days.

The Humboldt County Solid Waste Advisory Committee has been considering various alternatives for financing and conducting household hazardous waste collection and disposal days. One of the funding mechanisms suggested by City Garbage Company has been to add a fee to the tipping fee (which would, in turn, be passed onto the consumer in the form of an increase in collection rates, disposal rates, or gate fees).

The Eastin Bill (AB2448, 1987), creates new planning and financing programs to assure that solid waste disposal sites will be cleaned up on closure, and make grants to local jurisdictions to keep hazardous wastes, especially household hazardous wastes out of landfills. The Eastin Bill does not describe which types of local programs are eligible for receipt of funding. AB1809, Tanner, allows local governments to fund household hazardous waste programs through solid waste disposal fees, while state Dept. of Health Services signs memoranda of understanding with counties

willing to assume DHS' hazardous waste generators inspection and permit responsibilities under federal and state hazardous waste control laws.

Critical to the effectiveness of any household hazardous waste program is education that focuses particularly on recycling and on product substitution to avoid using hazardous materials.

HAZARDOUS MATERIALS PROGRAM MATRIX -- COUNTY IMPLEMENTATION REQUIREMENTS

DRAFT

HAZARDOUS MATERIALS LAWS	PURPOSE/OUTPUT	APPROACH/BASIC REQUIREMENTS	IMPLEMENTING AGENCIES (LOCAL/STATE)	COVERAGE	NUMBER OF FACILITIES	FUNDING (SOURCES/AMTS)	KEY DEADLINES	PERMITTING/INSPECTION REQUIREMENTS	DATA MGMT. REQUIREMENTS	PUBLIC PARTICIPATION REQUIREMENTS	CRITICAL COORDINATION NEEDS	COMMENTS
*SPEIR-AB1302 (1984) *HAZMAT STORAGE CONTROL	*REGULATES UNDERGROUND HAZ. SUBST. STORAGE TO PREVENT GROUND-WATER CONTAMIN. TANKS	*MONITORING OF EXISTING AND NEW TANKS *CONSTRUCT STDS FOR NEW TANKS AFTER 1/1/78 *REPORTING OF UNWANT. DISCHARGES	*COUNTY (CITIES CAN ASSUME BY 1/1/84) *STATE WATER RES. CONTROL BOARD (1983) *REG. WATER QUALITY CONTROL. BOB.	*HAZ. MATERIALS AND WASTES STORED UNDERGROUND	*LOCAL FACILITIES (TANKS) *173,000 TANKS STATEWIDE	*PERMIT FEES	*7/7/83 - MGMT. SYSTEM INSTALLED *8/1/80 - FINAL PERMIT APPROVED/ISSUED	*PERMIT REG. 15 YEARS *ANNUAL RPT. BY PERMITTEE *LOCAL AGENCY INSPECT./3 YEARS	*NONE TO MAINTAIN COMPUTERIZED DATA FROM PERMITS	*NONE	*RPT. RELEASED TO WROOD R/PT. HPL *COORD. W/ WASTE GENERATOR INSPECT.	*EVALUATE CITIES/COUNTIES W/ LOCAL ORDINANCE AS OF 1/1/78
*WATERS - AB2185/2187 (1984) "BUSINESS PLANS AND EMERGENCY RESPONSE"	*REGULATES OVERALL HAZ. MAT STORAGE EMERGENCY RESPONSE PLANNING *PUBLIC RIGHT-TO-KNOW	*COUNTY DEMONSTRATES ADMIN. AGENCY BUSINESS PLANS *COUNTY PREPARES AREA EMERGENCY RESPONSE PLAN *CITIES MAY ASSUME (SELF-DESIGNATION)	*LOCAL ADMIN. AGENCY (SOS) *STATE OFFICE OF EMERGENCY SERVICES (DES)	*MATERIALS POSING HEALTH/ENV. HAZARD. *THRESHOLDS: LIQUID-25 OR SOLID-500 OR GAS-200 OR HL	*LOCAL FACILITIES *FACILITIES STATEWIDE	*LOCAL FEES *LOCAL BUDGET	*12/28/88 - DRAFT AREA PLANS, *8/1/77-87 - FINAL AREA PLANS, INSPECTION/DATA MGMT. PLANS. *12/21/78 - HAZ. MAT DATA MGMT. SYSTEM OPERATIONAL	*BUSINESS PLAN ANNUAL INVENTORY OF HAZ. MAT. MATS. HANDLED DISIN. HAZ. WASTE ESTIMATES *INSPECTIONS	*OVERALL HAZ. MAT. DATA MGMT. SYSTEM *EXTENSIVE DATA IN BUSINESS PLANS	*NONE *PUBLIC ACCESS TO INFO	*DATA COLLECTION CRUCIAL TO ADDRESS (TANNER) PLANNING *COORDINATE W/ LA FOLLETTE, WASTE GEN. INSPECT., SHEA, SARA	*CITIES CAN SELF-DESIGNATE (CITIES W/ WATER PROGRAMS IN COUNTIES) *88 CITIES SELF-DESIGNATED STATEWIDE
*LA FOLLETTE - AB3772 (1984) "FACILITY HAZARDOUS MATERIALS (HMT)"	*REGULATES STORAGE/HANDLING OF HMT'S "FACILITY HAZARDOUS MATERIALS (HMT)"	*FIRMS FILE HMT RPT. FORM *NEW/EXISTING FAC. W/ HMT'S MUST PREP. RISK MGMT. & PREVENTION PROGRAM (RMP) *LOCAL ADMIN. AGENCY MAY REQ. RMP FROM EXISTING FIRMS	*LOCAL ADMIN. AGENCY (SOS OR W/ HMT'S) *STATE DES	*HMT'S DEFINED BY EPA (402 CHEMICALS) *SAME THRESHOLDS AS WATERS	*LOCAL FACILITIES *FACILITIES STATEWIDE	*STATE COST REIMB. NO STATE BUDGET ALLOCATION *LOCAL BUDGET	*1/1/87 - STD. RPT. FORMS AVAL. FROM DEP *8/1/87 RPT. FORMS DUE TO ADMIN. AGENCY *8/1/87 - RMP REQ. IN EFFECT	*INSPECTIONS/3 YRS	*NONE OVERALL *EACH FACILITY KEEPS DATA	*AGENCY MUST COORDINATE *RMP INCLUDES OFF-SITE HIGHEST CASE CONSEQUENCES ASSESSMENT	*WATERS *MFC ART. 60 *SARA *BUILDING/PLANNING PERMITS	*LOCAL ADMIN. AGENCY APPROVES RMP
*SARA TITLE # (1984) "SUPERFUND AMENDMENTS"	*REQUIRES STATEWIDE & LOCAL EMERG. PLANNING & PUBLIC RIGHT-TO-KNOW FOR HANDLING EXTREMELY HAZARDOUS SUBSTANCES (EHS)	*GOVERNOR DESIGNATES AGENCIES & DISTRICTS *EPA ESTAB. EMERG. PLANNING REQUIREMENTS	*STATE LEVEL COMMISSION *REST TO BE ESTABLISHED *EPA ESTAB. EMERG. PLANNING REQUIREMENTS	*EHS DEFINED BY EPA (402 CHEMICALS) (IDENTICAL TO LA FOLLETTE) *DIFF. STORAGE THRESHOLDS	*LOCAL FACILITIES *FACILITIES STATEWIDE	*NOT SPECIFIED	*5/23/87 - BUS. HMT'S STATE EHS STORAGE *7/1/88 - FIRST ANNUAL BUS. RPT. *10/17/88 - LOCAL EMER. PLAN	*NO INSPECTIONS *NO PERMITS	*NONE REQUIRED *LOCAL EMERG. PLANNING COMM.	*INFO AVAILABLE TO PUBLIC *LOCAL EMERG. PLANNING COMM.	*LA FOLLETTE *WATERS *MFC ARTICLE 60	*NONE TO COORDINATE FEDERAL (SARA) WITH STATE (ARTICLE LA FOLLETTE) AND LOCAL (MFC)
*UNIFORM FIRE CODE (ARTICLE 60) "FIRE CODE"	*REGULATES STORAGE OF HAZ. MAT. "FIRE CODE"	*MODEL STDS. DEVELOPED BY WESTERN FIRE CODES ASSN. (NEW REG. 1984 UNIFORM FIRE CODES)	*LOCAL FIRE AGENCIES	*ALL HAZ. MAT. (EXC. IN ART. 6) (EXC. TOXIC CASES) *SPECIFIC EXEMPTIONS	*LOCAL FACILITIES	*SEPARATE ART. 60 PERMIT FEE *LOCAL BUDGET	*REV. APPROVE 1/80 (IN DRAFT) *FINAL DUE 8/87	*NO INSPECT. BY FIRE PREVENTION SERV. (TYPICALLY ANNUAL)	*NONE	*NONE	*LA FOLLETTE *WATERS *SARA	*LOCALITIES CAN ADOPT STRICTER REQUIREMENTS *DISCREETINARY PROGRAM
HAZARDOUS WASTE REGULATION												
*AB2184 (TANNER) "OVERALL HAZ. WASTE PLANNING TO FACILITY AND"	*NON-MANDATORY COUNTY HAZ. WASTE MGMT. PLANS *REGULATED/PERMITTED OF HAZ. WASTE MGMT. FACILITIES *APPEALS PROCESS TO OVERRIDE LOCAL SIGNED DECISIONS	*COUNTY PLANS - APPROVED BY QJWS/DHS *ADDED INTO LOCAL GEN. PLANS *SUBSEQUENT FAC. SIGNED CONSISTENT WITH PLANS *7-MEMBER STATE APPEALS BOARD	*COUNTY PLAN BEING PREPARED BY *STATE GUIDELINES/ APPROVED BY DHS/TSO *LOCAL ADVISORY COMMITTEE WITH SPEC. FUNCTIONS	*ALL HAZ. WASTES GENERATED WITHIN THE COUNTY *1987 VOLUMES AND TYPES *PROJECTIONS TO 1994	*WASTES FROM LOCAL HAZ. WASTE GENERATORS *LOCAL HAZ. WASTE FACILITIES	*COUNTY TO RECEIVE \$ FROM TANNER PLAN - W/NO FROM DHS (\$10,000,000 STATE WIDE BUDGET)	*8/31/87 - COUNTY NOTIFIED STATE *7/1/87 - DHS GUIDELINES DRAFT PLAN *12/31/87 - FINAL APPROVED PLAN	*NONE	*OVERALL HAZ. WASTE DATA TO PREP. COUNTY PLAN (COLLECT THROUGH WATERS) *LA FOLLETTE, BERAN/NOU)	*ADVISORY COMM. - DUE/IN 1989 *PUBLIC HEARINGS - 1988 PLAN APPROVAL PROCESS	*NOV. INSPECTIONS *WATERS DATA *MFC SIGNED NEEDS	*NON-MANDATORY *HOW WILL BOUND COUNTY HAZ. WASTE PLANS BE ENFORCED? *CAN PLANS BE BASED ON HAZ. WASTE HAZARDITY? *WILL PLANS BE SUPPLEMENTED THROUGH SUBSID. FAC. SIGNED? *NEED TO RELATE COUNTY HAZ. WASTE PLANNING TO FED. / STATE REG. EFFORTS *CORRECTIVE ACTION FOR CLAMP WHEN NEEDED *COURT LAWSUITS AUTHORIZED
*SARA (1980) "NATIONAL HAZ. WASTE LAW"	*REGULATES HAZ. WASTE OPERATIONS TREATMENT STORAGE & DISPOSAL (TSD) *CRACK-TO-CRACK REGULATION	*PERMITS/ TSD FACILITIES *TSD SITES *GROUNDWATER MONITORING RECS. *GEN. WASTEPLANS *1984 HSWA SWAPS TO TREATMENT/ REC. UNDERGROUND TANKS	*CALIF. NOT AUTHORIZED *DHS/TSO CARRIES OUT SELECTED PERMITTING/ INSPECTIONS *NO DIRECT LOCAL ROLE (BUT SEE HOW INSPECTIONS)	*HAZ. WASTES DEFERRED BY EPA *STORAGE > 90 DAYS	*LOCAL TSD FACILITIES *500 (17-1) TSD FACILITIES STATEWIDE	*EPA GRANT TO DHS/TSO FOR INSPECTIONS, PERMITTING	*DEADLINES FOR LAND DISPOSAL PHASEOUT (1986 TO 1990) *RPT. PERMIT DEADLINES (1988)	*DHS INSPECTS TSD'S (EVERY 1 OR 2 YEARS) *DHS MANAGES DATA	*NONE	*1988 SARA REG. W/NO PUBLIC INVOLVEMENT *LOCAL ADVISORY COMMITTEE - (ESTAB. FOR SPEC. SITES) *COUNTY RELATIONS EFFORT	*NOV. GENERATION INSPECTIONS *TANNER PLANNING	*NEED TO RELATE COUNTY HAZ. WASTE PLANNING TO FED. / STATE REG. EFFORTS *CORRECTIVE ACTION FOR CLAMP WHEN NEEDED *COURT LAWSUITS AUTHORIZED
*SUPERFUND (FEDERAL) 1980/1986 AMENDMENTS (SARA) "NATIONAL TOXIC CLEANUP LAW"	*LOCATE, ASSESS & CLEAN UP POTENTIAL HAZ. SITES *FUNDED BY RESP. SHAREABLE PARTIES OR SUPERFUND (ABANDONED SITES) *STRICT LIABILITY TO ORIGINAL HAZ. WASTE GENERATOR AND TRANSPORTER	*REMOVAL & REMEDIAL ACTIONS *HAT PRIORITY LIST (HPL) *REMEDIAL INVEST. & FEASIBILITY STUDY (RIFS) *RECORD OF DECISION (ROD)	*EPA (REGION 9) *DHS/TSO - "STATE LEAD" CLEANUP *NO DIRECT LOCAL ROLE	*HAZ. WASTE SITES HIGH ON RANKING SYSTEM (HRS) *189 SITES ON STATE LIST	*LOCAL HPL SITES *484 CALIFORNIA SITES ON HPL	*\$9 BILLION SUPERFUND NATIONALLY - \$ CALIFORNIA *500 SPENT IN COUNTY THROUGH 12/31/84	*DELAY TYPICAL - LITIGATION - TECHNICAL COMPLEXITY *CONSIDERING CLEANUP PROGRESS BY EPA W/ R/NOV. AND DHS	*REVIEWING PROGRESS BY EPA W/ R/NOV. AND DHS	*EXTENSIVE DATA AVAL. TO DHS/EPA ON HMD/NOV. DATA *LITTLE APPROPRIATE INFO.	*1988 SARA REG. W/NO PUBLIC INVOLVEMENT *LOCAL ADVISORY COMMITTEE - (ESTAB. FOR SPEC. SITES) *COUNTY RELATIONS EFFORT	*COORD. W/ FEDERAL SUPERFUND/ GROUNDWATER PROTECTION	*FEDERAL CLEANUP STDS. PLUS APPLIC. FEDERAL STATE & LOCAL STDS. *STRONG ENFORCEMENT POLICIES *COURT LAWSUITS AUTHORIZED *EPA/TSO REMEDIES (TREATMENT) NOT PREFERRED *NO LOCAL PERMITS FOR ON-SITE REMEDIAL ACTIONS
*HAZ. SUB. CLEANUP 1981 ACT (1981) "STATE SUPERFUND"	*ACCELERATE PRIVATE CLEANUP OF SITES NOT ON HPL *PROVIDE STATE FUNDS FOR CLEANUP OF ABANDONED SITES NOT ON HPL	*PRIORITY SITES (STATE LIST) *RIFS ANALYSIS *CLEANUP	*DHS/TSO (REGIONAL OFFICES) *RIFS ANALYSIS *CLEANUP	*189 SITES ON STATE LIST	*LOCAL SITES	*\$180 MILLION STATEWIDE (BOND AUTHORITY) *500 SPENT IN COUNTY THROUGH 12/31/84	*ONGOING	*DHS/TSO	*DHS DATA	*COUNTY PARTICIPATION (OPTIONAL) *REMEDIAL ACTION PLAN	*COORD. W/ FEDERAL SUPERFUND/ GROUNDWATER PROTECTION	*STDS. FOR GROUNDWATER CLEANUP NOT NARY FROM WROOD
*STATE (AB1344) (1984) "TOXICS RFS CLEANUP ACT"	*LIMIT USE OF SURFACE IMPONEMENTS FOR HAZ. WASTE MGMT. *PROTECT GROUND-WATER	*IMPONEMENTS W/IN 17' W/LE OF GROUND-WATER SOURCE MUST CLOSE UNLESS RECEIVE EXEMPTION *OTHER IMPONEMENTS NEED DOUBLE LINERS, LEACHATE COLLECTION, GROUNDWATER MONITORING SYSTEMS	*WROOD REVIEWS EXEMPTION REQUESTS *NO DIRECT LOCAL ROLE	*ALL SURFACE IMPONEMENTS	*SURFACE IMPONEMENTS LOCALITY *SURFACE IMPONEMENTS STATEWIDE	*NONE *OWNER PAYS COSTS	*PROVIDE TO ACT ON ALL EXEMPTION REQUESTS BY 12/31/87 *IMPONEMENTS MUST CLOSE BY 9/30/88 UNLESS EXEMPT	*WROOD	*WROOD DATA ON SURFACE IMPONEMENTS	*WROOD PUBLIC HEARINGS	*COORD. W/ OTHER GROUNDWATER PROTECTION ACTIONS *COORD. W/ TANNER HAZ. WASTE PLANNING	*MAY IDENTIFY EXISTING REMEDIAL ACTION NEEDS *SITES OWNED BY LOCAL GOV. INACTIVE OR ID BY MAY REQ. COSTLY TESTING/CLEANUP
*CALDERON (AB3223) (1984) "TOXICS FROM MUNICIPAL SOLID WASTE SITES"	*NEED TESTING AIR EMISSIONS AND LEACHATE FROM ALL EXISTING/ FUTURE MUNICIPAL SOLID WASTE SITES	*PRIORITY RANKINGS FOR WATER QUAL. AND AIR QUALITY ASSESSMENTS *WROOD FOR LEACHATE AND/ OR AIR FOR EMISSIONS *NO DIRECT LOCAL ROLE *FACILITY OWNER DOES TEST	*WROOD FOR LEACHATE AND/ OR AIR FOR EMISSIONS *NO DIRECT LOCAL ROLE *FACILITY OWNER DOES TEST	*ALL SOLID WASTE BSEP SITES	*LOCAL SITES *SITES STATEWIDE	*TESTS PAID FOR BY SITE OWNER	*PRIORITY LISTS CITE/NOV. MANY YEARS *EARLY RPTS. 1/87 *SITES TO BE TESTED IN COUNTY BY 12/31/87	*PERMITS (DHS COUNTY RENEWS) *INSPECTIONS (COUNTY OR CITY)	*WROOD & ADMIN. APCD TO HAVE AVAL. DATA	*NONE *STRONG PUBLIC CONCERN NEAR MANY SOLID WASTE SITES	*RELATE TO EDW/NOV. APCD ACTIVITIES	*MAY IDENTIFY EXISTING REMEDIAL ACTION NEEDS *SITES OWNED BY LOCAL GOV. INACTIVE OR ID BY MAY REQ. COSTLY TESTING/CLEANUP

HAZARDOUS WASTE REGULATION	PURPOSE/ OUTPUT	APPROACH/ BASIC REQUIREMENTS	IMPLEMENTING AGENCIES (LOCAL/STATE)	COVERAGE	NUMBER OF FACILITIES	FUNDING (SOURCES/AMTS)	KEY DEADLINES	PERMITTING/ INSPECTION REQUIREMENTS	DATA MGMT REQUIREMENTS	PUBLIC PARTICIPATION REQUIREMENTS	CRITICAL COORDINATION NEEDS	COMMENTS
*LOCAL GENERATOR INSPECTIONS (1900) *INSPECTIONS OF HAZ. WASTE GENERATORS	*ENSURE LOCAL GENERATOR COMPLIANCE W/PROCA REG. NEMA	*COUNTY HEALTH DEPT. SQA MOW WITH DHS *IMPLEMENT LOCALLY W/DELEG. TO STATE AUTHORITY	*COUNTY OR CITY HEALTH DEPT. (16 COUNTIES, 4 CITIES STATEWIDE HAVE REGS) *DHS OVERSIGHT	*HAZ. WASTE GENERATORS (DEFINED BY EPA/DOHS)	*LOCAL FACILITIES	*GENERATOR FEES. Firms can deduct local fees from state haz. waste generation fees.	*FLEXIBLE - UP TO LOCAL AGENCY	*INSPECTIONS (ANNUAL OR LESS OFTEN IF NECESSARY)	*NONE	*NONE	*TANNER PLANNING *OTHER ASPECT OF SAME FACILITY BY DMT, AGENCIES	*LOCAL AC. CODES NOT FACILITY HOL. NEMA 190 PLANS *INSPECTIONS CAN ENFORCE SOURCE REGULATION
*19100 (POWER) *LAND DISPOSAL PHASEOUT	*ACCELERATE TRANSFER FROM LAND DISPOSAL TO HAZARDOUS WASTE TREATMENT	*PROHIBITS DISP. OF LIQ. WASTES IN AWT *PROHIBITS LAND DISP. OF UNTREATED WASTES (EXCEPT FROM SITE CLEANSUPS)	*DHS/TSO *NO DIRECT LOCAL ROLE	*ALL HAZ. WASTES (AS DEFINED BY DOHS)	*LOCAL FACILITIES SENDING WASTES TO LAND DISPOSAL IN 1987 *DISPOSAL SITES STATEWIDE	*FROM HAZ. WASTE CONTROL ACCOUNT & HAZ. SUBSTANCE ACCOUNT	*5/8/90 DEADLINE FOR DISP. OF UNTREATED WASTES- DIS. TREATMENT SITES	*NONE	*NONE	*NONE	*TANNER PLANNING *OTHER HAZ. WASTE TREATMENT FACILITIES	*RELATED TO FED. HSWA/RCRA LAND DISP. BANS *DHS SETS CRITERIA/ADOPTS TREATMENT SIDS. *2-YEAR CATEGORIES IF NO TREATMENT EXISTS
*CLEANUP OF GROUNDWATER CONTAMINATION *GROUNDWATER CLEANUP	*CLEANUP IDENT. EPISODES OF CONTAMINATION TO PROTECT PUBLIC HEALTH/FUTURE RECREATIONAL USES	*IDENTIFY CONTAMIN. SOURCE *DEF. EXTENT/ CHARACTERISTICS *DEV. CLEANUP STRATEGY *IMPLEMENT CLEANUP	*RWOCB *LOCAL AGENCIES (IDENTIFY NEW EPISODES) *DHS INVOLVED IF STATE SUPERFUND	*ALL CONTAMINATION EPISODES ("PLUMES") *FUEL LEAKS (HAZARDOUS) NOT NOW BEING CLEANED UP.	*COVERS LOCAL GROUNDWATER CONTAMINATION SITES	*RWOCB - STATE FUNDING (LIMITED) *CLEANUP TYPICALLY PAID FOR BY RESP. PARTY	*VARIABLE *ENORMOUS DELAYS BECAUSE OF CLEANUP PROCESS	*WASTE DISCHARGE REQUIREMENTS (DWHQ) *DHS PERMITS *CLEANUP/FABRICATION ORDERS	*RWOCB - DATA ON CLEANUP ACTIVITIES *STATE BOARD DEVELOPING GROUNDWATER STRATEGY	*LOCAL LEVEL - NONE *RWOCB DECISIONS MADE IN PUBLIC MEETINGS	*SUPERFUND *OTHER GROUND-WATER PROTECTION ACTIONS *ADDITIONAL PERMITS MAY BE REQUIRED BY FIRE DEPT., CO. HEALTH DEPT., APCD	*RWQI SIDS APPLY TO CLEANUP (WQI 1 - HIGH DEGRADATION) *RELATIONSHIP TO RWOCB BASIN PLAN *ISSUE "HOW CLEAN IS CLEAN"
*19100 (TANNER) *HOUSEHOLD HAZ. WASTE	*SAFE DISPOSAL OF HOUSEHOLD HAZ. WASTES (1910) *PUBLIC UNDERSTANDING OF PERSONAL ROLE IN HAZ. WASTE	*COUNCIL MUST INCLUDE PROGRAM FOR SAFE MGMT. OF HW *PUBLIC UNDERSTANDING OF PERSONAL ROLE IN HAZ. WASTE	*COUNTY SOLID WASTE AGENCY *COUNTY PLANNING *COUNTY ENV. HEALTH *STATE SOLID WASTE MGMT. BOARD	*HOUSEHOLD HAZ. WASTES	*N/A	*RELIES ON SOLID WASTE FEES	*VARIABLE: NEXT COUNCIL REVISION TO INCLUDE 1990 PROGRAM *12/88 STATE SOLID WASTE MGMT. BOARD REPORT TO LEGISLATURE ON STATUS/PROGRESS	*NONE	*NONE	*STATE ADVISORY WASTE PLAN *DEPT. OF EDUCATION TO DISTRIBUTE HWB INFO TO SCHOOLS	*INCLUDE IN SOLID WASTE PLAN *COORDINATE WITH HAZ. WASTE PLAN (A82914)	*NONE
OTHER MAJOR TOXICS LAWS & PROGRAMS												
*PROPOSITION 65 (1986) *TOXICS AND SAFE DRINKING WATER INITIATIVE	*PROTECT DRINKING WATER SOURCES FROM FUTURE TOXIC CONTAMINATION *WARN PERSONS POTENTIALLY EXPOSED TO TOXICS *REQ. CERTAIN GOVT EMPLOYEES TO REPORT DISCHARGES	*DEVELOP LIST OF TOXICS AND/OR CAUSING CANCER OR REPROD. DAMAGE, OR SUSPECTED *PRELUDE REPORTING TO DRINKING WATER SOURCES *SHIFT BURDEN OF PROOF TO DISCHARGER RE SAFETY ("WHO RISK" VS. "SAFE USE")	*HEALTH & WELFARE AGENCY (STATEWIDE) *COUNTY BO. OF SUPERVISORS & COUNTY HEALTH OFFICER	*CHEMICALS ON LIST PREPARED BY GOVERNOR	*FIRMS WITH 10+ EMPLOYEES *GOVERNMENT FACILITIES EXEMPT *LOCAL FACILITIES USE LISTED CHEMICALS	*NONE LOCALITY *\$4.7 MILLION TO STATE AGENCIES (1987)	*1/1/87 - DESIG. EMPLOYEES REPORT TO INCLUDE 1990(S) *3/1/87 - GOV. LIST (ANNUAL REVISIONS) *3/1/88 - EXPOSURE HANDBOOKS *11/1/88 - NO DISCHARGES OF LISTED CHEMICALS *1/1/88 - GOV. LIST OF SUSPECTED CANCER/REPRO. TOXICITY (ANN. REVISED)	*NONE	*STATE AGENCIES PROVIDED INITIAL DATA TO COUNTIES (11/1/87)	*BASED ON 1986 BALLOT INITIATIVE *SCIENCE ADVISORY BOARD	*ALIGN TO SOURCE REDUCTION PROGRAMS FOR LISTED CHEMICALS *ALIGN TO LA FOLLETTE/SARA TITLE III	*WATER COMPANIES EXEMPT (FROM ISSUE) *IMPLEMENTATION *CLARITY OF UTILITY *CIVIL PENAL FES (\$1500/DAY) *CRIMINAL SANCTIONS
*18100 (1985) *DRINKING WATER MONITORING	*MONITOR FOR ORGANIC CHEMICALS IN PUBLIC DRINKING WATER WELLS	*REQ. WATER PURVEYORS TO TEST WELLS, REPORT FINDINGS TO STATE	*DHS/SEB (\$200 + CONNECT.) *COUNTY HEALTH DEPT. (\$ - 198 CONNECT.)	*TESTS FOR HAZARDOUS CHEMICALS AND METALS	*MONITORING WATER SYSTEMS AND WELLS IN COUNTY	*MONITORING COSTS PAID BY WATER SYSTEMS *SER - STATE BUDGET (\$ - 1987)	*18 MAJOR WATER SYSTEMS TESTED IN 1984 - 1988 *SMALL SYSTEMS 1986 - 1988 *ONGOING	*NONE	*DHS/SEB RECEIVED ALL DATA *ANNUAL STATE REPORT	*NONE *ISSUE: PUBLIC NOTIFICATION OF DETECTED DRINKING WATER CONTAMINATION	*COORD. WITH GROUNDWATER PROTECTION/CLEANUP PROGRAMS *SUPERFUND	*10 PERCENT OF WELLS STATEWIDE HAD DETECTABLE CONTAMINANT.
*INDUSTRIAL WASTE (PMT/TREATMENT) PROGRAMS *CONTROL TOXIC DISCHARGE TO SEWER SYSTEMS	*PROTECT SEWER SYSTEMS FROM TOXIC CONTAM. *PROTECT RECEIVING WATERS FROM TOXIC CONTAM.	*SEWER SYSTEMS IMPLEMENT PRE-TREATMENT PROC. LOCALITY *NATIONAL (EPA) STATEWIDE SIDS UNDER CLEAN WATER ACT (ENFORCED LOCALLY)	*RWOCB *LOCAL SANITATION AGENCIES (POTW'S)	*METALS *ORGANICS	*DISCHARGER TO LOCAL SEWER SYSTEMS *LOCAL FACILITIES (DOM OR MPDES) *PERMITS FACILITIES STATEWIDE	*DISCHARGERS PAY FEES (OPTION MODERN) *ANNUAL PROGRAM	*ONGOING	*FREQUENT INSPECT. OF EACH FACILITY *DISCHARGE PERMITS REQUIRED FROM POTW'S	*POTW'S - DATA ON PERMIT REG. & DISCHARGE CHARACTERISTICS	*NONE (SOME POTW'S HAVE DISCHARGE ADVISORY COMM.)	*COORD. WITH ALL OTHER INSPECTIONS OF SAME FACILITIES (WATER, SOLID WASTE, FOLLETTE, ETC.)	*TRENCHES OVER TOXIC DISCHARGES POTENTIAL FOR INFILTRATION INTO BROWDER SOURCE MGMT. EFFORT
*REGULATING SURFACE WATER DISCHARGES (CLEAN WATER ACT) (PMT/PER-COLOGNE ACT) *BASIC WATER QUALITY REGS.	*PROTECT QUALITY OF SURFACE WATERS & GROUNDWATER *MAINTAIN "BENEFICIAL USES"	*WATER SIDS FOR ALL MAJOR DISCHARGES *LOCATION SIDS TO PROTECT SURFACE GROUNDWATER REGS. (NOM)	*REGIONAL WATER QUALITY CONTROL BOARD *STATE WATER RESOURCES CONTROL BOARD	*POLLUTANTS DISCHARGED TO NAVIGABLE WATERS BY INDUSTRY OR SEWAGE PLANTS *BASIN PLANS	*LOCAL FACILITIES (DOM OR MPDES) *PERMITS FACILITIES STATEWIDE	*STATE BUDGET	*ONGOING	*NOR'S ALLOW DISCHARGE TO GROUNDWATER *DHS PERMITS REGULATE DISCHARGE TO SURFACE WATER *SELF-REPORTING	*RWOCB MAINTAINS PERMIT DATA	*PUBLIC RWOCB MEETINGS	*WATERS *LA FOLLETTE *GENERATOR INSPECTIONS (NMA) *SRA	*CONTROLS OVER TOXIC DISCHARGES INCLUDED IN BASIC PERMITS
*REGULATING SOURCES OF AIR EMISSIONS (CLEAN AIR ACT) *BASIC AIR QUALITY STANDARDS	*PROTECT AND ENHANCE AIR QUALITY *ATTAIN AIR QUALITY STANDARDS	*SET STANDARDS FOR POINT SOURCES AND FOR MOBILE SOURCES *CONTROL EMISSIONS FROM MAJOR SOURCES *CONTROL AUTO EMISSIONS	*AEPD OR AHP FOR FIND SOURCES *CONTROL EMISSIONS FROM MAJOR SOURCES *EPA SETS NAR, SIDS, APPROVES STATE IMPL. PLAN	*SO2, NOX, SHOD, LEAD	*LOCAL FACILITIES W/AIR PERMITS	*PERMIT FEES *STATE BUDGET *EPA GRANTS	*ONGOING	*PERMITS FOR ALL MAJOR FACILITIES *INSPECTIONS	*APCD/AQMD MAINTAINS PERMIT FILES	*PUBLIC HEARINGS *WORKSHOPS *FORMAL PUBLIC COMMENTS	*COORDINATE WITH OTHER INSPECTIONS OF SAME FACILITIES (SP, LA FOLLETTE, AIR TOXICS)	*CONTROLS ON THESE POLLUTANTS ALSO CONTROL SOME TOXIC AIR EMISSIONS (E.G. BENZENE)
*18100 TANNER (1983) *TOXIC AIR EMISSIONS	*CONTROL RISKS OF HIGH PRIORITY TOXIC AIR CONTAMINANTS *SET STANDARDS *DEVELOP EMISSIONS CONTROL REGS.	*SCIENTIFIC STUDY OF RISKS FROM TOXIC CONTAM. *SET PRIORITIES (BENZENE FIRST) *MOVE TO ENFORCEABLE REGS.	*AIR SIDS SIDS - IMPLY FROM SCIENCE ADV. BOARD *AGENCY - DISCUSSIONS CONTROL PROGRAMS	*TOXIC CHEMICALS IDENTIFIED TO DATE	*LOCAL FACILITIES (W/ THESE TOXICS)	*NONE (LOCAL FACILITIES W/ AIR PERMITS) *STATE BUDGET	*ONGOING	*NONE UNL. EMISSIONS REGS. ESTAB.	*ARB - AIR TOXICS DATA	*NONE	*COORD. WITH FED. CLEAN AIR ACT REGULATIONS *LINK TO PROP. 65 (EXPOSURE WARNING)	*EPA CONTROLS OTHER AIR TOXICS UNDER CLEAN AIR ACT (SECT 112)
*Pesticide Contamination Prevention Act and Restricted Materials Act *1CA (CDB & AG CODES 12141 AND 1481 PA. 1962)	*PREVENT CONTAMINATION OF GROUNDWATER AND RESTRICTED MATERIALS ACT	*PRE-USE CONTAMINATION OF PESTICIDES *REGULATE USE OF MATERIALS	*STATE DEPT. OF FOOD & AG. *COUNTY AG. COMM. (EMERGENT)	*PESTICIDE CONTAMINANTS & OTHER ORGANIC CHEMICALS *STATE LIST OF PM	*LOCAL STORAGE FACILITIES *LOCAL APPLICATIONS	*STATE BUDGET *STATE REIMBURSE COUNTIES	*1/1/84 REGISTRATION *12/1/87 STATE SIDS *ONGOING	*REGISTRATION PERMITS (ANNUAL) *INSPECTION ON SITE PRIOR TO APPLYING	*RECEIVES USCA'S REPORTS	*NONE	*EPA (SIDS) *GROUNDWATER PROTECTION PROGRAM	*NEP RESTRICTED MATERIALS NEED STATE APPROVAL
*INFECTIONOUS WASTE CONTROL *22CAC6833 vs. 1986	*CONTROL SPREAD OF INFECTIONOUS DISEASE	*STATE REGULATIONS *LOCAL ENFORCEMENT	*COUNTY ENV. HEALTH DIVISION *STATE DHS	*INFECTIONOUS WASTE	*NON-UNLICENSED FACILITIES *LICENSED FACILITIES	*LOCAL FEES *LOCAL BUDGET	*ONGOING	*DHS (PERMITS) *COUNTY INSPECTIONS	*NONE	*NONE	*CALDECON	*NONE

CHAPTER 6

6000

PLAN IMPLEMENTATION

6100

OVERVIEW

This chapter contains the tasks to carry out or implement the Hazardous Waste Management Plan. Included here are both those implementation measures from previously adopted plan elements as well as those recommended through this revision of the General Plan. In addition, other items have been included where policy language of the General Plan implies action not otherwise identified as a specific implementation measure. [Figure 10 provides an overview of programs being recommended for implementation.]

DEFINITION

The term "implementation" is defined as a Key Term in Section 1420 and in the Glossary of the Framework Plan; however, it is important to understand the relationship between the plan as a policy statement and the implementation of the plan. The implementation measures, collected together as a program to carry out the plan, are essentially a listing of tasks.

6110

Steps to Implement Goals and Policies

Implementation measures are presented in the same general order as other components of this Hazardous Waste Management Plan. Each implementation measure in the text of this chapter is followed by a series of comments covering responsibility, priority, schedule and cost and supplemented as necessary by remarks to further clarify the intent of the implementation measure.

6120

Public Education and Participation

During the preparation of the preliminary draft County Hazardous Waste Management Plan (CHWMP), nine public meetings were held: seven meetings were the regularly scheduled CAC meetings and two specially scheduled CAC meetings. All of the meetings were held in Eureka. The Citizens Advisory Committee consists of the following members:

Andrew Alm
Robert Gearheart
W. Donald Hill
Markley LaPointe
Ken Mangrum
R.R. "Randy" Page
Kaye Strickland
Joe Thorne (resigned on February 17, 1988)

John Dowd (replaced Joe Thorne on March 8, 1988)
David Will [(resigned on June 27, 1988)]
A. Kelly Stalker (replaced David Will on September 27, 1988)
Council Member ~~Mayor~~ Thea Gast
Mayor Fred Moore
[Mayor] ~~Council Member~~ Patricia Moranda

Press releases and agendas were mailed prior to each meeting. Minutes were prepared for each CAC meeting. A Public Participation sub-group of CAC members and interested citizens prepared a Fact Sheet (Appendix 6.1) about the CHWMP process. This Fact Sheet will be used by CAC members and staff during presentations to local decision makers, agencies, professional and social groups, the business community and the public. The Public Participation Sub-group of the CAC has already presented the Fact Sheet to the public at their regular meeting and to the City Councils of all the cities in Humboldt County during their regular meetings.

A narrated slide show about the CHWMP process was purchased by the County of Humboldt and was utilized by some of the CAC members in preparing the Fact Sheet and in encouraging public participation.

[During the preparation of the Hearing Draft County Hazardous Waste Management Plan and the Draft Environmental Impact Report, four of the regularly scheduled CAC meetings were held in Eureka. Three additional public workshops were held during the month of May -- one in Trinidad, one in Eureka and one in Rio Dell.]

Once the Hearing Draft CHWMP and Draft EIR were printed and distributed, additional public meetings occurred. These meetings included four public hearings before the Humboldt County Planning Commission, one meeting before the Humboldt County Board of Supervisors, and a series of meetings before the seven cities' Planning Commissions and City Councils.

Minutes from each of the Advisory Committee meetings, Humboldt County Planning Commission and Board of Supervisors meetings are on file with the County. The most significant issues and detailed discussions at any of the public hearings centered on the issue of facility siting, "Fair Share" planning for size of facilities in proportion to the small amount of waste that is generated locally, and protection of the existing landfill from contamination through inappropriately handled hazardous wastes.]

The CAC ~~will~~ [may] continue to meet after completion of the CHWMP and can provide a vehicle for involving the public in the process and for disseminating information about hazardous waste.

Additional programs for public education and participation include:

- School curriculum on hazardous waste;
- Brochures for small quantity generators;
- Information dissemination at solid waste transfer and storage facilities and with solid waste collection bills;
- Surveys of industry concerning waste reduction efforts;
- Workshops for select small quantity generators.

[Some of these public education programs have begun to be implemented by the County and advisory committee members during the CHWMP preparation process. School curriculum on household hazardous waste has been purchased by Humboldt State University and is available to teachers throughout the County through the Humboldt County Office of Education. Brochures and fact sheets for small quantity generators were developed by the County Division of Environmental Health and the Public Participation sub-group of the Advisory Committee. These fact sheets describe briefly how to handle hazardous waste and who to contact for additional information (Appendix 6.4), and were distributed to approximately 260 business people at two seminars for small quantity generators. The City of Eureka is interested in a comprehensive distribution of the fact sheets to city residents through the monthly water bill or some other similar mechanism.]

The League of Women Voters, Humboldt County Chapter has been active in the past in disseminating information about household hazardous waste. The League has hosted workshops and prepared and distributed fliers about handling of household hazardous wastes. Sample of these brochures are included in Appendix 2.3.

Two seminars for small quantity generators were held -- one in Arcata on August 11, 1988, attended by 60 business people, and one in Eureka on February 1, 1989, attended by 200 business people. The events were co-sponsored by the respective cities, the County, and the Chamber of Commerce. Additional support and sponsorship came from the Advisory Committee, the League of Women Voters and Simpson Paper Company. Records of these seminars are on file with the County Planning Department. The latter seminar was video-taped. This video-tape will be broadcast on the community access television and can be used for presentations to community groups and business organizations. Evaluations and responses from the seminar participants indicates an interest in the County hosting additional workshops for select industries or waste types such as the automotive industry, solvent wastes or infectious wastes.

Public service announcements are planned to be developed by the County Planning Department to educate the public about handling specific waste types such as waste oil and used batteries. These PSA's will be distributed to the local media on a regular basis.]

6130 On-Going Data Collection and Analysis

An accurate data base that characterizes Humboldt County's hazardous waste stream is critical to the success of implementing the CHWMP. The data base includes an inventory of hazardous waste generators, the type and volume of waste generated, methods of storage and disposal, and the availability and capacity of treatment facilities.

The waste stream data base for Humboldt County represents the best available information, compiled in a limited time frame. This data base can be refined in order to minimize errors in the implementation of and during future revisions to the CHWMP.

The existing Humboldt County waste stream data base was developed utilizing 1985 and 1986 information provided by DHS regarding known hazardous waste producers and hazardous waste facilities. These hazardous waste generators represent the large quantity generators. The majority of Humboldt County's hazardous waste stream, 95.76%, is produced by small quantity generators (SQG). The data base for the SQG's was developed by the Humboldt County Division of Environmental Health using ~~business surveys (Appendix 3-4) together with~~ a projection model for SQG's provided by DHS in the Technical Reference Manual.

The data base is entered into various tables suggested by the DHS for use in analyzing and manipulating the data. The format for presenting the data utilizes the DHS suggested tables to report current and projected waste stream and needs for treatment, storage, and disposal facilities.

Annual reviews and updates once every six years are suggested in implementing the CHWMP. Reviews or revisions can occur by adding to or deleting generators or facilities and by adjusting the volumes and types of waste generated. Methods of reviewing and revising the data base include: continual updating of the data base using the same sources and methods used in preparing the initial data base; and instituting an annual hazardous waste inventory (survey) of all hazardous waste generating businesses in the County.

The data base will be maintained by the Humboldt County Public Health Department, Division of Environmental Health (DEH). The data base maintenance entails data collection, data base review and revision, and information distribution. Within the data base, additional information from other agencies that regulate discharges to air, bodies of water, and sewers or publicly owned treatment works, shall also be collected and stored. The County DEH should collect records or data from the following regulatory agencies and organize the data into the following categories:

<u>Discharge Type</u>	<u>Data Source</u>
Air discharge	Air Pollution Control District

<u>Discharge Type</u>	<u>Data Source</u>
Hazardous waste	DHS and DEH
Hazardous materials/ waste storage	DHS, DEH, County Office of Emergency Services
NPDES discharge	Regional Water Quality Control Board
Wastewater	Local wastewater treatment plants

The responsibility for gathering records of the other discharge categories from the regulating agencies and for centralizing data storage within the County, should be at the County DEH. The County DEH would need to supplement their staff (and budget) to develop and implement a data base program covering small quantity generators, contaminated sites, storage tanks and regulations regarding hazardous materials and wastes.

6140 Waste Reduction

There is a need for a waste reduction program in Humboldt County. Chapter 3 first identified current waste generators then projected quantities and types of waste to the year 2000, next developed an analysis for a needs assessment for treatment, storage and disposal facilities, and finally analyzed the data for waste reduction potential. This final analysis revealed that waste could, theoretically, be reduced by 11.3% given current levels of projections based on best available technology. Without a hazardous waste reduction program, however, the likelihood of ever realizing this potential reduction is marginal.

Support and cooperation between local government and business is essential to the successful implementation of a waste reduction program. Necessary components in developing a waste reduction program include: collection and analysis of data; identification of waste reduction potential; location of funding sources; training of industry inspection personnel; support of industry and local governments; and public education and participation.

The Humboldt County Board of Supervisors has adopted a Resolution #87-120 Appendix 6.2), which establishes priorities for managing hazardous wastes, as follows:

- 1) First, reduce the use of hazardous substances and the generation of hazardous wastes at their source;
- 2) Second, recover and recycle the remaining waste for reuse;
- 3) Third, treat those wastes not amenable to source reduction, or recycling so that the environment and community health are not threatened by their ultimate release or disposal.

Trained and qualified staff for conducting such functions as facility inspections and monitoring, waste audits, waste reduction consultations, technical assistance, and public education programs are needed to

implement a waste reduction program. Staffing support and technical expertise could be provided in part by the State Dept. of Health Services and by in-house staff provided by industry. Additional staff needs exist at the local government level for developing and implementing a data base and for providing technical monitoring and assistance.

Longer range goals ~~over the four to eight year period~~ include expansion of technical assistance and public education programs, updating and refinement of the data base, monitoring the effectiveness of new waste reduction programs, and maintenance of programs.

Technical assistance and expertise could be provided by the State Dept. of Health Services through conducting periodic workshops or consultations to specific industries or waste generators about current technologies, product substitutions or other means of waste reduction.

Funding for waste reduction implementation is currently not available in the Humboldt County budget. However, there are a variety of possible funding sources that could be evaluated including: special taxes (voter approved), fees, grants (private and public), revenue sharing, revolving loan funds, cost-sharing, and penalty charges. These various funding methods are described in more detail in Section 6240.

Waste reduction feasibility for new or expanded site specific hazardous waste facilities can be analyzed through internal audits. Such audits can be required through the permit and regulatory process. [One method of notifying business owners of the waste reduction programs could be through local government's early identification of waste generating businesses through the issuance of business licenses.]

Successful implementation of site specific waste reduction depends on the cooperation of industry management. Additional means for ensuring success of on-site waste reduction programs include: management coordination with regulatory agencies; internal communication within industry; internal program evaluation and inspection; record keeping and documentation; spill prevention and response; operations and maintenance; environmental training and monitoring; and proper storage, treatment and disposal of hazardous wastes.

6150 Siting

Chapter 4 developed siting criteria and identified areas that generally conform with the criteria for consideration of possible treatment, storage or transfer facilities.

The needs assessment in Chapter 3 concluded that due to the relatively small waste stream generated in Humboldt County, a storage/transfer facility would be the only locally needed and [serve the greatest local need and would be a relatively] economically feasible type of facility

[to site]. The siting criteria would still allow consideration of other types of treatment facilities in addition to the storage/transfer facility.

Siting Consistency: The County, and each city, shall require that all local land use decisions on siting specified hazardous waste management facilities are consistent with the goals and policies and the siting criteria contained in the County Hazardous Waste Management Plan.

Focus of Inter-Jurisdictional Agreement Negotiations: The County shall enter into discussions with other jurisdictions for the purpose of negotiating one or more inter-jurisdictional agreements for the siting of hazardous waste management facilities adequate and necessary to meet the needs of the signatory jurisdictions. Such agreements shall follow the principle of fair share and may take into account both the volumes and degree of hazard for the wastes generated that require offsite management within each participating jurisdiction, and the degree of waste reduction effort made by each participating jurisdiction.

If the siting of a particular type of hazardous waste management facility needed in this County is not environmentally appropriate or economically viable, the County shall seek to reach an agreement with one or more other jurisdictions to facilitate the siting of a larger, environmentally appropriate and economically viable facility (or facilities) to be located elsewhere. This County and its cities, in turn, agree to actively consider and, if appropriate, to commit as part of an inter-jurisdictional agreement to approve the siting of an environmentally appropriate facility (or facilities) within its own borders designed and sized to serve the hazardous waste management needs of other jurisdictions as well as of this County.

While the neighboring counties Del Norte, Mendocino and Trinity are still in the midst of drafting their respective CHWMP's telephone conversations with the responsible staff have indicated an interest in coordinating our hazardous waste management planning efforts. Humboldt County should continue to exchange information with neighboring counties and should initiate discussion concerning inter-county agreements for multi-county facilities, for continuing to accept Humboldt County's exported waste stream, and for exploring possibilities of "fair share" facility siting, for each county according to each county's contribution to the region's waste stream. Examples of approaches to developing inter-county agreements are included in Appendix 6.

[The development and application of inter-county agreements and fair share facility siting opportunities is encouraged through the Legislative intent expressed in Section 25135 (b) of the Health and Safety Code, and with the purpose statements of the Guidelines. These inter-county agreements can provide a mechanism through which jurisdictions can communicate about hazardous waste generation, facility capacity and

facility needs. While the counties realize that the detailed language forming the inter-county agreements would not be written until facilities are actually proposed within a region, the majority of the counties within the State are generally supportive of the concept of "Fair Share" planning and inter-county agreements].

Implementation of the siting criteria will necessitate amendments to County and applicable City General Plans, revisions to zoning ordinances, and environmental analysis. The General Plan amendments would designate those areas that generally conform with the siting criteria. Revisions to zoning ordinances would specify the regulatory process, (i.e. a conditional use permit), the procedures to review project applications for site suitability, environmental hazards, risks to sensitive facilities and other factors pertinent to hazardous waste management facilities.

[Recognizing that the approval of hazardous waste facilities typically involves numerous permits issued by a variety of local and state governmental agencies, and has not been a coordinated process; that former procedures for approving facility siting did not provide adequate opportunities for public involvement in the decision-making process; and that a formal administrative process for reviewing or appealing local discretionary land use decisions on facility siting was lacking, the Legislature established procedures for the approval of new facilities through the adoption of Section 25199 et. seq. of the Health and Safety Code.

These new procedures require a project proponent to file a notice of intent to apply for a hazardous waste facility with the Governor's Office of Permit Assistance in the Office of Planning and Research and with the applicable city or county at least 90 days before filing an application for a land use decision for a specific hazardous waste facility project. Legal noticing of the notice of intent is required to be published at the applicant's expense. Within 90 days of filing a notice of intent, the Office of Permit Assistance is required to hold a public meeting in the affected city or county to inform the public about the scope of the proposed facility and the procedures that are required for approving applications for the project.

Within 90 days of filing a notice of intent, the affected local jurisdiction is required to appoint a seven member local assessment committee. Costs incurred by the local jurisdiction in the formation and meeting of the local assessment committee can be recovered from the project proponent. The local assessment committee has the following responsibilities:

- (a) negotiate with the proponent for the proposed hazardous waste facility project on the detailed terms of, provisions of, and conditions for, project approval which would protect the public

- health, safety, and welfare, and the environment of the jurisdiction and would promote the fiscal welfare the jurisdiction through special benefits and compensation;
- (b) represent generally the interests of the residents of the affected jurisdiction and of adjacent communities;
- (c) receive and expend the technical assistance grants made available through the statute, which enable the committee to hire an independent consultant to assist the committee in reviewing the project;
- (d) adopt rules and procedures which are necessary to perform its duties;
- (e) advise the legislative body of the affected jurisdiction of the terms, provisions, and conditions for project approval which have been agreed upon by the committee and the proponent. The legislative body of the affected jurisdiction may use this advice for its independent consideration of the project.

The statute additionally sets forth an appeal process in which either a proponent or an opponent may file an appeal of a local agency's land use decision. The qualifications for filing an appeal are specified in the Legislation in Sections 25199.9 et. seq. The composition of the appeals board is also specified in the statute and consists of a combination of state agency officials and locally elected officials from the affected jurisdiction that are appointed by the Legislature for each specific appeal. In hearing an appeal, specific findings must be addressed by the appeals board. These findings are detailed in Sections 25199 of the Health and Safety Code.]

A clear definition of the types of facilities that will be affected by the proposed regulatory procedures is also needed. At a minimum, this definition includes all new or expanded treatment, storage, transfer or disposal facilities that currently need a permit from the Department of Health Services. One type of treatment facility that needs further clarification in terms of how it is regulated is the transportable treatment unit.

6160 **Transportation**

The siting criteria in Chapter 4 recommends that new hazardous waste treatment, storage or transfer facilities have frontage on one of several road classifications. Chapter 5 describes existing transportation programs and recommends preferred routes for the transportation of hazardous materials and hazardous waste.

Implementation of the transportation element[, consistent with Sections 31303 and 31304 of the California Vehicle Code and any other applicable State or federal law,] should include:

1. designation of major transportation routes connecting to a

- regional and state system and connecting linkages to service hazardous waste management facilities and hazardous materials delivery routes. Highway 101 North and South are preferred;
2. specifying hours of operation of transportation equipment on specific routes in order to minimize incidental/accidental risks, non-peak travel hours are preferred;
 3. identification and recommendations of special design standards and transportation needs beyond what is being constructed in highway and road improvement today. Appropriate signs should be posted on designated routes;
 4. development of a route plan requirement to be filed with the local OES, CHP and County Sheriff's Department by hazardous waste haulers;
 5. requirement of any necessary road standard on frontage roads or preferred routes that should take place before any hazardous waste treatment storage or transfer facility is developed;
 6. inform hazardous waste haulers, including route service operators and transportable treatment unit operators of the designated routes and hours of operation.

6170 Storage

The existing underground tank program was described in Chapter 5 of this CHWMP. The Humboldt County Division of Environmental Health is responsible for implementing the program. Funding for the program is provided in part by user fees. Three staff members are assigned to administer this program. Appendix 3.13 contains a listing of any known leaking underground tanks. These tank sites will be evaluated by DEH and prioritized according to risk.

Disclosure requirements for storage of above-ground hazardous materials is being implemented by the County DEH. About 150 businesses submitted a plan for emergency response and an inventory of hazardous materials. Since notifications were sent to businesses in December 1985, approximately 50% notified have responded. No staffing has been provided for this program. The Health Department is preparing a program plan for consideration by the Board of Supervisors to provide resources for this program. Funding will be provided by fees.

The data base for both the underground tank program and the disclosure and emergency response program resides in the County DEH. Implementation of both programs is continuous. The County should identify methods of storage or disposal of hazardous rinsate from cleansing tanks that have been removed from underground sites. The County should incorporate the Emergency Response Hazardous Materials Incident Plan into the Hazardous

Waste Management Plan when it is complete.

The County should continue to advise households and small quantity generators about safe methods of storage of hazardous wastes until a transfer facility is established or until some other means of safe treatment/disposal is available.

6180 Contaminated Sites

Contaminated site cleanup is implemented by federal and state governmental agencies operating under legislation described in Appendix 5.2. The County should coordinate with the responsible implementing agencies in order to maintain a current data base on the wastes generated during cleanup activities. Fact sheets prepared by the responsible agencies concerning the extent of contamination and proposed cleanup activities should be kept on file and available for public review at the County DEH.

Contaminated sites from leaking underground storage tanks are required to be cleaned up by the owners of the sites. Public information about the location of contaminated sites from underground tanks should be kept on file at the County DEH.

The Public Works Department is testing the former solid waste disposal site at Table Bluff per the requirements of AB3522 (Calderon). Both air and water quality assessment tests are being conducted at this former County facility. Pending the outcome of these tests, if contamination is identified, the information will be added to the County Hazardous Waste Management Plan, and recommendations will be developed for cleanup of the potential contaminated sites.

Other contaminated sites may be identified through state and local implementation of Proposition 65. Records of contamination and cleanup activities will be kept on file and will be publicly available at the County DEH.

The County should continue to update the data base of the Hazardous Waste Management Plan as new contaminated sites are identified and as existing sites are cleaned up.

The County should amend the General Plan and zoning ordinances to include land use restrictions on or adjacent to contaminated sites, affecting uses before, during, and after remedial action. At a minimum, these land use amendments should restrict inappropriate or high risk land uses such as immobile populations (hospitals, convalescent care centers) and public facilities (schools) from locating at or near contaminated sites.

[Since Humboldt County does not have either off-site hazardous waste management facilities or adequate funding to implement programs for

generators of small quantities of hazardous waste, there is a risk that hazardous wastes will not be properly managed within the community and that additional sites could become contaminated as a result of improper handling or disposal. Without adequate hazardous waste management facilities available locally, it is imperative that the County place a high priority on educating the public about the legal and proper methods of handling, storing, treating and disposing of hazardous wastes. Educating the public can become a mechanism for preventing: additional costs associated with the clean-up of contaminated sites; health and environmental risks caused by improper handling or disposal; liability issues for worker safety at the landfills and sewer treatment facilities.]

6190 Small Quantity Generators

Chapter 5 stated that no programs exist locally for small quantity generators (SQG's). The data base developed in Chapter 3 identified the small quantity generators as the major contributor to Humboldt County's hazardous waste stream. There is a need to develop a small quantity generator program.

The challenges to the small quantity generator are many-fold, and include: lack of knowledge regarding what is hazardous waste, how to manage hazardous waste, confusion over the myriad of regulations, and cost effective disposal methods.

Education and technical assistance will be the most effective methods in meeting the needs of small quantity generators. The County should encourage small quantity generators to share their information with each other. Forums such as public meetings or workshops involving small quantity generators, the Chamber of Commerce and technical advisors are conducive to sharing of information. Newsletters, brochures or workbooks, such as appear in Appendix 6.4 can be supplied to SQG's by the County. The County DEH should continue to coordinate with industry, and state and federal agencies in providing current technical advice to small quantity generators.

Businesses and the County should consider the establishment of a consulting service to business to assist in compliance with toxics laws and regulations.

The County should encourage the State Department of Health Services to establish a list of products which produce hazardous wastes as a by-product. Waste reduction and product substitution should be encouraged in advising small quantity generators.

The data base of small quantity generators and their respective types and volumes of waste generated should be regularly updated. Coordination with the Tax Collectors Office responsible for issuing business licenses

can assist in keeping this list current.

The HWMP Citizens Advisory Committee ~~is planning~~ [held] a workshop in August of 1988 [and another workshop in February 1989] for small quantity generators and ~~is inviting~~ [included] industry representatives ~~to describe~~ [who described] how their services and equipment can provide an alternative to storage and disposal of hazardous waste. Similar workshops for select businesses that generate similar wastes should be conducted.

6200 HOUSEHOLD HAZARDOUS WASTE

Currently there is no program for household hazardous waste. The Agricultural Commissioner provided a storage facility for household pesticides and herbicides, but this is no longer available. Residents of Humboldt County can take their used motor oil to any of the three recycling centers in the County.

The Solid Waste Advisory Committee, the Hazardous Waste Advisory Committee, City Garbage Company, and the Board of Supervisors have expressed interest in hosting annual household hazardous waste cleanup days. Implementation of this program is dependent on establishing a funding source prior to hosting an event. An increased fee within the franchise service areas and at the gate at container sites areas could generate funds to finance a household hazardous waste cleanup program.

Consideration should also be given to monitoring waste entering the landfills or solid waste transfer facilities and diverting hazardous wastes for proper disposal. A small transfer station for household hazardous wastes could be considered at the primary solid waste transfer facility if sufficient funds were available. A transfer station would offer the benefit of a routine, continuing service rather than the one-time service characteristic of household hazardous waste days. The cost comparisons of hosting annual household hazardous waste cleanups or establishing a storage/transfer station should be evaluated prior to committing to one method of managing household hazardous wastes.

In addition to meeting immediate needs of disposal of HHW, a long-term need is to educate the public. The education program should be designed to inform the public about the hazards associated with the products they use, lists of alternative products that are less or non-toxic, the dangers of improper storage and disposal, and proper disposal methods. The County should continue to coordinate with the California Waste Management Board, State DHS, Golden Empire Health Planning Center and other organizations for access to current and readily usable educational materials.

Mass mailings of flyers could be included with billings to patrons of solid waste pick-up service. Samples of some educational flyers are

included in Appendix 6.7. Additional mailings and publicity events should precede any household hazardous waste cleanup days.

If a permanent transfer facility is established in Humboldt County, part of the educational efforts would be to inform the public that the facility exists.

6210 Emergency Response

The County Office of Emergency Services in conjunction with the County DEH are responsible for implementing the County-wide emergency response plan. This plan is still being drafted. When complete, it will identify evacuation routes in the event of an incident, where and how to report an incident, offices responsible for various aspects of the response, communication channels for notifying the public and funding for program inspection, monitoring, plan review and implementation.

The CHWMP should add the Hazardous Materials Incident Area Plan to the overall hazardous waste planning data base. Evacuation routes need to be coordinated with the implementation of transportation goals and policies. The training and equipment needs identified in the emergency response plan should be included as implementation needs in the CHWMP.

6220 Regulations, Enforcement, Surveillance

The Humboldt County DEH is responsible for enforcing the underground storage tank program. DEH is responsible for enforcing the emergency response plan and business disclosure plans. However, no comprehensive hazardous waste management program exists in Humboldt County at the present. The County should establish a program that would combine efforts of existing monitoring and regulatory agencies.

6230 Organization Responsibility

The Planning Department will continue to coordinate activities directly relating to the preparation and adoption of the CHWMP. The County DEH will take the lead role in revisions to the CHWMP with assistance from the County Planning Department in revisions to the General Plan and Zoning Ordinances.

An organizational chart of the various departments and their responsibilities for implementing State and Federal programs regarding hazardous materials and hazardous waste is attached in Appendix 5.2.

6240 Funding

Funding sources for implementing the CHWMP are not available in Humboldt County at the present time. Since existing County General Funds are limited and are committed to implementing existing programs, other

funding sources are necessary.

Possible funding mechanisms should be considered including: Federal and State government, grants (private and public), special taxes, fees, revenue sharing, revolving loan funds, cost-sharing, and penalty charges.

Grants Numerous and recent pieces of state legislation authorize the allocation of grant funds for a variety of purposes related to hazardous waste management. The referenced pieces of legislation and the funding mechanism, which are described more fully in Appendix 5.2, include AB2948, AB685, AB2490, AB534 and SB788.

Private grants may be available from private businesses, industrial associations or community foundations. These grants are most beneficial to businesses that have neither the financial nor technical resources for participating in hazardous waste management planning activities.

Taxes Special taxes would require approval of 2/3 of the "qualified electorate". A special sales tax, such as a specific percentage increase for all taxable items could be applied to developing and maintaining a public hazardous waste storage and transfer facility.

Fees Voter approval is not required in instituting a fee schedule. Typically, however, regulatory fees are limited to covering the cost of the regulatory activity. Additional fees are needed, therefore, to ensure that enforcement, inspection, data base management, technical advice and program management are sustained.

A "user fee" could be established to pay for hazardous waste management services, similar to services such as sewer and water. If a storage/transfer facility is established, a fee could be charged for all businesses and households that use the facility. Fees could finance costs of construction, maintenance and operation of a facility if it is public or could be used to monitor a private facility. AB2948 provides for local government collecting up to 10% of gross receipts of any off-site, multi-user, transfer, storage or disposal facility.

A "generator fee" could be instituted in Humboldt County. This type of fee could be developed in association with the proposed regulatory program of processing conditional use permit of hazardous waste management facilities. Permit fees would be attached that would be used (in addition to covering regulatory processing costs) for inspections, siting analysis, review of waste minimization plans, and other tasks.

A "generator fee" could also be garnered through the local business license procedures. Businesses that generate hazardous waste could be charged special fees, which would be applied to maintaining and updating the data base and, if sufficient revenue is generated, for developing educational materials regarding waste elimination/minimization, for

inspecting, for reviewing waste minimization plans, and for providing technical assistance in waste minimization.

Revenue Sharing Typically, this funding technique is a state-based mechanism that is based on an established formula.

Revolving loan funds Waste reduction programs and activities by small quantity generators could benefit from Small Business Administration supported loans. Industrial organizations may provide private funding of revolving loan funds.

Cost Sharing Up front costs are provided by the County or State for services such as technical assistance and consulting for waste reduction and firms repay for the service based on a percentage of the cost savings realized from waste minimization improvements.

Penalty charges Penalties could be levied against any violator of hazardous waste/material regulations in effect locally. For instance, failure to comply with underground storage tank permit requirements, could result in penalties. Or, if the County adopted an ordinance requiring the submittal of waste minimization plans from all generators within a specified period of time and that deadline was not met, then a fine could be charged. Illegal hazardous waste disposal activities could be subject to penalty charges.

Money derived from penalties could be applied toward developing hazardous waste minimization programs including education, technical assistance, inspection and enforcement.

General Funds As previously stated, general funds in Humboldt County are extremely limited and are committed to sustaining existing County programs. If general funds were diverted to finance hazardous waste management programs, it would be at the expense of other County programs.

6250 **Monitoring and Evaluation of Plan Effectiveness**

Once the County Hazardous Waste Management Plan is approved by the State Department of Health Services, it will be added to the County and City General Plans. At that point, the CHWMP should be reviewed annually by the CAC and updated every six years.

The County, the CAC, and the State DHS Guidelines all recognize that the first versions of the Plan will have limitations because the data may be incomplete, the implications of waste reduction are not well defined, economic projections are uncertain, regulations may change, and new treatment technologies may develop. Therefore, regular review, analysis for effectiveness and revisions are important in establishing a credible Hazardous Waste Management Plan program.

[While the County recognizes that regular review of the plan is important to assess the plan's effectiveness, the funding for plan evaluation is not provided in the County's current budget and the State has not committed to reimbursing counties for fulfilling this task. Many programs would be desirable to meet the goals and objectives of this plan, such as small quantity generator programs and household hazardous waste programs, but until funding is secured for these programs, the County cannot to funding, staffing, and training for implementation of these programs.]

The table on the following pages outlines the tasks necessary for implementation of this plan. Priority rankings are assigned, and estimates of staff allocations for completion of the tasks are included.]

FIGURE 10

HUMBOLDT COUNTY HAZARDOUS WASTE MANAGEMENT PLAN
IMPLEMENTATION SUMMARY

3/15/89

<u>Program</u>	<u>Recommendation</u>	<u>Agency^a</u>	<u>Priority^b</u>	<u>Cost^c</u>
<u>Public Education</u>	Develop and distribute brochures; secure funding	EH	I	0.8 p/y
	Curriculum distribution; teacher in-service training	COE	I	
	Workshops for industry	EH	II	0.5 p/y
<u>Data Collection</u>	Develop data base program for: business related waste generation; inspections (with Memo of Understanding with DHS); data from other agencies	EH	I	0.5 p/y
	Identify new businesses that are hazardous materials handlers or waste generators	EH, TC	II	0-G
<u>Waste Reduction</u>				
A. Avoid or Eliminate Production	Technical advice	EH	I	0.25 p/y
	Develop inspection and consultation program	EH, CAO, CC	I	0.08 p/y
	Enter into MOU with DHS for inspection of facilities	CAO, CC, EH	I	0.08 p/y
	Adoption of waste management hierarchy by cities	Cities, PBD	I	1 P/W
	Information dissemination	EH, PBD, AC, OES	I	0-G
	Economic incentives	EH, PBD	II	0.08 p/y
	Regulatory incentives	EH, PBD	II	0.08 p/y
	Public recognition of industry's success in waste reduction	BOS, Cities	II	1 P/W
	B. Source Reduction	Determine feasibility of source reduction ordinance	CAO, EH	I
Develop city/county agency source reduction program		Cities, CAO, EH AA	I	1 P/M 0.25 p/y
Integrate waste audit requirements into use permit & business license requirements		EH, PBD TC	II	0.08 p/y
Require waste minimization plans to be submitted to local gov't		EH, PBD	II	0.25 p/y
Encourage industrial modifications that result in waste reduction with flexible permit requirements		PBD, EH, CC	II	0.25 p/y

DRAFT HAZARDOUS WASTE MANAGEMENT PLAN IMPLEMENTATION SUMMARY

<u>Program</u>	<u>Recommendation</u>	<u>Agency_a</u>	<u>Priority_b</u>	<u>Cost_c</u>
C. Recycling	Education	EH, PBD, COE, AC, L	I	0.08 p/y
	Develop county/city agency program for recycling	Cities, CAO, EH, PBD, AA	II	1 P/W
	Encourage cooperation among businesses generating similar wastes	EH	II	0.25 p/y
	Develop waste oil recycle program	EH	II	0-G
	Develop solvent recovery program	EH	II	0.08 p/y
	Develop lead-acid battery program	EH	II	0.08 p/y
				II
D. On-Site Treatment	Develop fee system for waste generated and treated on-site	CC, EH, CAO	II	0.25 p/y
E. Off-Site Treatment	Designate specific routes	PW, CHP, PBD	II	0.2 P/D
	Charge fees for wastes hauled off-site	CC, EH	II	0.08 p/y
<u>Siting</u>	Revise general plan and zoning	PBD, Cities	I	2 P/W
	Identify affected business as waste generators that need use permit per CHWMP siting criteria	PBD, EH	I	0-G
<u>Transportation</u>	Designate routes	PW, PBD, CT, CHP, OES	I	0.2 P/D
	Determine design needs, hours of operation, signing needs, route plan requirement standards, road standards	PW, CHP, CT, S, OES	II	0.1 P/D
	Provide information to haulers	PW, CHP, CT, OES	II	
<u>Storage</u>	Underground Tank data base	EH	I	0.16 p/y
	Complete Emergency Response Plan	OES, EH	I	0.25 p/y
	Educate about HHW storage	EH, PBD	II	0-G
<u>Contaminated Sites</u>	Develop data base of existing sites	EH	I	0.08 p/y
	Test and monitor landfills	EH, PW	I	0-G
	Continue to implement Prop 65	EH	I	0.08 p/y
	Develop land use restrictions on use of existing contaminated sites	PBD, Cities	I	0.16 p/y
			I	1 P/M

DRAFT HAZARDOUS WASTE MANAGEMENT PLAN IMPLEMENTATION SUMMARY

<u>Program</u>	<u>Recommendation</u>	<u>Agency^a</u>	<u>Priority^b</u>	<u>Cost^c</u>
<u>Small Quantity Generators</u>	Education	EH, L	I	
	Provide technical assistance	EH	I	
	Maintain data base on SQG's	EH	I	
	Provide forums, workshops	EH	II	
	Develop newsletters, brochures	EH	II	
<u>Household Hazardous Waste</u>	Education	EH, L, AC, COE	I	0.08 p/y
	Storage, collection service, clean-up days to be planned	EH	I	0.25 p/y
	Publicity for HHW clean-up events	EH	II	0.08 p/y
	Monitor solid waste stream for HHW	EH	II	0.016 p/y
<u>Emergency Response Plan</u>	Complete emergency response plan	OES, EH	I	
	Append emergency response plan to CHWMP	PBD	II	
	Identify evacuation routes	OES, PW	II	
	Develop emergency response training and equipment	OES, EH, FD	I	0.25 p/y
<u>Regulations Enforcement Surveillance</u>				
<u>Organization Responsibility</u>				
<u>Funding</u>	Secure consistent funding source for program implementation	EH	I	0-G
<u>Monitor Evaluate Plan Effectiveness</u>	Annual review of plan by CAC	PBD, EH	I	0.08 p/y
	Update plan every 6 years	PBD, EH	II	0.16 p/y

DRAFT HAZARDOUS WASTE MANAGEMENT PLAN IMPLEMENTATION SUMMARY

Legend for Implementation Summary Table

- a. Agency responsibility: AA = Affected Agencies
AC = Agricultural Commission
BOS = Board of Supervisors
CAO = County Administrative Office
CC = County Counsel
CHP = Calif. Highway Patrol
Cities = Cities
COE = County Office of Education
EH = Environmental Health
FD = Fire Departments
L = Libraries
OES = Office of Emergency Services
PBD = Planning and Building Dept.
PW = Public Works
S = Sheriff
TC = Tax Collector
- b. Priority rankings: I = 1988 - 1990 for allocation of staff time and support, given available funds, for implementation
II = 1990 - 2000 longer range objectives for allocation of staff time and support
- c. Costs represent allocation of staff time and support
- Costs: P/D = Person/Day
P/W = Person/Week
P/M = Person/Month
P/Y = Person/Year
O-G = On-Going

GLOSSARY

The Glossary in Volume 1 of the Humboldt County Framework Plan is incorporated by reference into this plan. The following terms are also defined and included in the plan to help the reader understand some of the more technical terms which are used to describe hazardous wastes.

Acute: Effects which are manifested soon after exposure to a hazardous material.

Aqueous: Of, relating to, or comprised mostly of water.

Aquifer: A geologic formation, group of formations or part of a formation capable of yielding a significant amount of ground water to wells or springs. (CAC, Title 22, Section 66011.1)

Biological Treatment: Treatment processes utilizing living microorganisms to decompose organic hazardous wastes into simpler organic or inorganic substances. The five principal techniques include activated sludge, aerated lagoons, trickling filters, waste stabilization ponds, and anaerobic digestion.

Chemical Treatment: Treatment processes which alter the chemical structure of hazardous waste constituents to produce an innocuous or less hazardous material. Principle techniques include neutralization, precipitation, ion exchange, chemical dechlorination, and chemical oxidation/reduction.

Class I Land Disposal Facilities: Land disposal facilities which conform to requirements of regulations of the State Water Resources Control Board for Class I units, and which shall be located where natural geologic features provide optimum conditions for isolation of wastes from the waters of the State. Currently, these facilities may accept solid and dry hazardous waste. After 1990, they will be precluded from accepting any untreated hazardous wastes. They may not be located in areas subject to flooding by 100 year floods, areas subject to rapid geologic changes, or areas subject to tsunamis, seiches and surges, or within 200 feet of a fault zone active within the period defined.

Class II Land Disposal Facilities: Land disposal facilities which must be located where site characteristics and containment structures isolate wastes from the waters of the State. They may be located within areas subject to flooding, areas subject to rapid geologic change and areas subject to tsunamis, seiches, and surges, if they are designed, constructed and maintained to preclude failure in protecting the waters of the State. Class II land disposal facilities are suitable for wastes which have been granted a variance from hazardous waste management requirements pursuant to Section 66310, Title 22,

CAC. (See definition of Designated Waste.)

Designated Waste: Hazardous waste which has been granted a variance from hazardous waste management requirements pursuant to Section 66310, Title 22, CAC. A variance may be granted if the waste is insignificant as a potential hazard to human health and safety, livestock or wildlife because of its small quantity, low concentration or physical or chemical characteristics. Designated wastes must be handled, stored or disposed in a manner which will not result in hazard to human health and safety, livestock or wildlife.

Exempt Waste: Wastes exempt from the permitting process and from reporting requirements, such as wastes which are recycled on-site and some waste which are treated prior to discharge to sewers.

Groundwater: Water below the land surface in a zone of saturation. (22 CAC Section 66079)

Halogenated: Substance having a chlorine, bromine, fluorine, or iodine atom in their structure.

Hazardous Material: A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either:

- (1) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
- (2) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Unless expressly provided otherwise, the term "hazardous material" shall be understood to also include extremely hazardous material. (22 CAC, Section 66084)

Hazardous Substance: This term means:

- (a) Any substance designated pursuant to Section 1321 (b) (2) (A) of Title 33 of the United States Code.
- (b) Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of the Federal Act (42 U.S.C. 9602).
- (c) Any hazardous waste having the characteristics identified under or listed pursuant to Section 6921 of Title 42 of the United States Code, but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by act of Congress.

- (d) Any toxic pollutant listed under Section 1317 (a) of Title 33 of the United States Code.
- (e) Any hazardous waste air pollutant listed under Section 7412 of Title 42 of the United States Code.
- (f) Any imminently hazardous chemical substance or mixture with respect to which the Administrator of the United States Environmental Protection Agency has taken action pursuant to Section 2606 of title 15 of the United States Code.
- (g) Any hazardous waste or extremely hazardous waste as defined by Sections 25117 and 25115, respectively, unless expressly excluded. (Health and Safety Code Section 25316)

Hazardous Waste: A waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either:

- (a) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.
- (b) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Unless expressly provided otherwise, the term "hazardous waste" shall be understood to also include extremely hazardous waste. (Section 25117, Health and Safety Code.)

Hazardous Waste Facility: All contiguous land and structures, other appurtenances, and improvements on the land, used for handling, treating, storing or disposing of hazardous wastes. (22 CAC, Section 66096)

Hazardous Waste Management: The systematic control to the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous waste. (22 CAC, Section 66130)

Incineration: A process for reducing the volume or toxicity of hazardous wastes by oxidation at high temperatures.

Manifest: A State form which indicates generator, quantity, type of waste, and disposer of waste for each shipment of hazardous wastes handled in off-site facilities.

Off-site Hazardous Waste Facility: A hazardous waste facility that is not an on-site facility. (Health and Safety Code Section 25117.11)

On-site Hazardous Waste Facility: A hazardous waste facility at which a hazardous waste is produced and which is owned by, lease to, under the control of, the producer of the waste. (Health and Safety Code Section 25117.12)

Physical Treatment: Treatment processes which separate components of a waste stream or change the physical form of the waste without altering the chemical structure of the constituent materials.

Recharge Zone: A land area where water, from precipitation, infiltration from surface streams or impoundment areas or other sources soaks into the ground and enters an aquifer.

Recycle: To redirect or utilize a hazardous waste or a substance from a hazardous waste, and includes recovery of resources from a hazardous waste. (Health and Safety Code Section 25121)

Residuals Repository: A permanent underground storage facility which accepts solid materials resulting from the treatment of hazardous wastes to standards established by the Department or hazardous organic waste which is stabilized, solidified or encapsulated. No free liquids will be accepted. The residuals are solids, with relatively insoluble toxic material content and are to be kept dry by the design of the facility.

Source Reduction: On-site practices which reduce, avoid or eliminate the generation of hazardous waste.

Special Wastes: A waste which is a hazardous waste only because it contains in inorganic substance or substances which cause it to pose a chronic toxicity hazard to human health or the environment and which meets all of the criteria and requirements of Section 66742 and has been classified a Special Waste pursuant to Section 6674. (22 CAC, Section 66191)

Storage Facility: A hazardous waste facility at which hazardous waste is contained for period greater than 96 hours at an off-site facility or for periods greater than 90 days at an on-site facility. (Health and Safety Code Section 25123.3)

Superfund: Refers to the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the California Hazardous Substance Bond Act of 1984 (Article 7.5 of Division 20 of the California Health and Safety Code). These provide funding for cleanup of sites contaminated with hazardous waste.

Transportable Treatment Units (TTUs): Hazardous waste treatment works which are designed to be moved either intact or in modules and which are intended to be operated at a given location for a limited period

of time. TTUs are regulated as follows:

- (1) Where TTUs are treating wastes at the site of the waste generation, they shall be considered as on-site and therefore exempt from the consistency requirements of AB 2948;
- (2) Where TTUs are treating wastes which have been removed from the generation site, such as at a transfer station, they will be situated on property which is already permitted for hazardous waste management by the state and local government. They shall be given consistency status with CHWMPs; and
- (3) TTUs used at cleanup sites, either for site mitigation or for emergency response purposes shall be considered to be on-site units.

Transfer Station: Any hazardous waste facility where hazardous wastes are loaded, unloaded, pumped or packaged.

Transportation: The movement of hazardous waste by air, rail, highway or water. (22 CAC Section 66213.5)

Treatment: Any method, technique or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage or reduce in volume. (22 CAC Section 66216)

Variance: An exemption from the Department's permitting process which is granted under special, stated conditions. Notifications of variances are sent to the local environmental health and land use planning departments and such facilities are still subject to local land use permits.

Waste Reduction: On-site practices which reduce, avoid or eliminate the need for off-site hazardous waste facilities, including source reduction, recycling and treatment.

