

**COUNTY OF SANTA CLARA
UNINCORPORATED AREA**

**HOUSEHOLD HAZARDOUS
WASTE ELEMENT**

OCTOBER 1994

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Prepared by

**County of Santa Clara
Environmental Resources Agency**

Integrated Waste Management Program

**1735 North First Street, Suite 275
San Jose, CA 95112**

408 441-1198

COUNTY OF SANTA CLARA

ENVIRONMENTAL RESOURCES AGENCY

Leode G. Franklin, Director

INTEGRATED WASTE MANAGEMENT PROGRAM

Margaret J. Rands, Program Manager

Michael D. Perry, Analyst

Paula F. Stoner, Analyst

Barbara G. Hall, Associate Analyst

with special thanks to the following former staff members:

Nicole Headley-Edwards, Analyst

Nancy Reutlinger, Associate Analyst

BOARD OF SUPERVISORS

Michael M. Honda District 1

Zoe Lofgren District 2

Ron Gonzales District 3

Rod Diridon District 4

Dianne McKenna District 5

Household Hazardous Waste Element

Table of Contents

INTRODUCTION	1
HOUSEHOLD HAZARDOUS WASTE ELEMENT REQUIREMENTS	1
DEFINITION OF HOUSEHOLD HAZARDOUS WASTE	1
HHW PLANNING EFFORTS IN SANTA CLARA COUNTY	2
Demographic Overview	2
Development of HHW Collection Programs	2
Multijurisdictional Planning For HHW Management	2
Tanner Plan Household Hazardous Waste Goals	3
Unmet Needs	3
COUNTYWIDE COLLECTION SYSTEM	4
Participants in Pilot Program	5
Special Program for South Santa Clara County	6
GOALS	6
OBJECTIVES	7
SHORT-TERM PLANNING PERIOD (1991-1995)	7
Objective 1: Provide convenient household hazardous waste collection services.	7
Objective 2: Expand motor oil collection programs	8
Objective 3: Redistribute reusable HHW	8
Objective 4: Improve monitoring and evaluation of HHW programs	9
Objective 5: Limit improper disposal of hazardous waste.	9
Objective 6: Coordinate programs with other jurisdictions and agencies ...	9
Objective 7: Decrease potential liability risks by monitoring	10
Objective 8: Support legislative efforts	10
MEDIUM-TERM PLANNING PERIOD	10
Objective 1: Short-term planning period objectives will continue in the medium-term planning period.	11
Objective 2: Increase educational efforts to reduce the amount of HHW ..	11
Objective 3: Explore the feasibility of additional permanent HHW facilities.	11
Targeted and Excluded Materials	11

EXISTING CONDITIONS	12
QUANTITY OF HOUSEHOLD HAZARDOUS WASTE GENERATED	12
Table 1: Unincorporated Area HHW Disposed 1990	14
Stanford University and Moffett Field	14
TYPES AND AMOUNTS OF HHW DIVERTED	15
EXISTING SOURCE REDUCTION, COLLECTION, RECYCLING, TREATMENT AND DISPOSAL PROGRAMS	15
Periodic Drop-off Events	15
Table 2: 1990 Drop-Off Events	16
Curbside Motor Oil Collection	16
Motor Oil Drop-Off at Recycling Center	16
Hazardous Waste Exclusion Program	16
Exclusion Measures Taken by Waste Hauler	17
MANAGEMENT OF HHW DIVERTED FROM LANDFILL DISPOSAL IN 1990 ..	17
FUTURE OF EXISTING PROGRAMS	18
METHODOLOGY FOR EVALUATION OF HOUSEHOLD HAZARDOUS WASTE MANAGEMENT ALTERNATIVES	18
EVALUATION CRITERIA	19
Waste Diversion Potential	19
Absence of Hazard	19
Flexibility	19
Availability of Service (Nearby and Frequent Services)	19
Provides Immediate Need Disposal Services	20
Limited Shift in Waste Type Generation	20
Ease of Implementation	21
Facility Need	21
Consistency with Local Policies	21
Absence of Institutional Barriers	22
Estimated Cost	22
End Uses (Recyclability and Redistribution Potential)	22
EVALUATION OF HOUSEHOLD HAZARDOUS WASTE MANAGEMENT ALTERNATIVES	23
ALTERNATIVE 1 - PERIODIC DROP-OFF EVENTS	24
ALTERNATIVE 2 - FIVE PERMANENT FACILITIES	25

ALTERNATIVE 3 - MOBILE COLLECTION	28
ALTERNATIVE 4 - COMBINATION PROGRAM: MOBILE UNIT PLUS PERMANENT FACILITY	30
ALTERNATIVE 5 - CURBSIDE MOTOR OIL COLLECTION	33
ALTERNATIVE 6 - DOOR-TO-DOOR PICKUP FOR ELDERLY AND DISABLED .	34
ALTERNATIVE 7 - HAZARDOUS WASTE EXCLUSION PROGRAM/LOAD CHECKING	37
ALTERNATIVE 8 - HHW RECYCLING COMPONENT	39
ALTERNATIVE 9 - HHW WASTE EXCHANGE COMPONENT	42
Table 3: Evaluation of HHW Management Alternatives	45
SELECTION OF HOUSEHOLD HAZARDOUS WASTE PROGRAM	46
ALTERNATIVES SELECTED	46
SHORT-TERM PLANNING PERIOD	46
Alternative 5: Curbside Motor Oil Collection	46
Alternative 7: Hazardous Waste Exclusion Program	46
Alternative 8: Household Hazardous Waste Recycling Component	46
Alternative 9: Household Hazardous Waste Exchange Component	47
MEDIUM-TERM PLANNING PERIOD	47
Alternative 4: Combination Mobile Unit Plus One Permanent Facility ..	47
Alternative 6: Door-to-Door Pickup for Elderly and Disabled	48
HOUSEHOLD HAZARDOUS WASTE ANTICIPATED TO BE COLLECTED	48
FACILITIES NEEDED FOR IMPLEMENTATION	49
HANDLING AND DISPOSAL METHODS	50
MULTIJURISDICTIONAL HHW EFFORTS	50
REUSE, RECYCLING, AND END USES FOR DIVERTED MATERIALS	51
PROGRAM IMPLEMENTATION	51
GOVERNMENT AGENCIES RESPONSIBLE FOR IMPLEMENTATION	52
IMPLEMENTATION TASKS AND SCHEDULE	52
Table 4: Implementation Tasks and Schedules	53
COST OF PROGRAMS	54
Table 5: Cost of Programs 1991	55
SOURCES OF FUNDING	56

MONITORING AND EVALUATION	56
METHODS TO QUANTIFY AND MONITOR ACHIEVEMENT OF SHORT-TERM PLANNING PERIOD OBJECTIVES	56
Objective 1: Provide convenient household hazardous waste collection services.	56
Objective 2: Expand motor oil collection programs	57
Objective 3: Redistribute reusable HHW	58
Objective 4: Improve monitoring and evaluation of HHW programs. . .	58
Objective 5: Limit improper disposal of Hazardous Waste	58
Objective 6: Coordinate programs with other jurisdictions and agencies . .	58
Objective 7: Decrease potential liability risks	59
Objective 8: Support legislative efforts	59
METHODS TO QUANTIFY AND MONITOR ACHIEVEMENT OF MEDIUM-TERM PLANNING PERIOD OBJECTIVES	59
Objective 1: Short-term planning period objectives will continue in the medium-term planning period	59
Objective 2: Increase source reduction efforts.	59
WRITTEN CRITERIA FOR EVALUATING EFFECTIVENESS	60
RESPONSIBLE PARTIES FOR MONITORING, EVALUATION, AND REPORTING	60
FUNDING REQUIREMENTS FOR MONITORING AND EVALUATION	60
CONTINGENCY MEASURES	61
EDUCATION AND PUBLIC INFORMATION	61
OBJECTIVES FOR SHORT- AND MEDIUM-TERM PLANNING PERIOD	61
Objective 1: Increase resident's awareness	61
Objective 2: Increase accuracy of information disseminated	62
EXISTING EDUCATION AND PUBLIC INFORMATION PROGRAMS	62
County-sponsored Education Efforts	62
Non-profit and Volunteer Organization Efforts	63
Public Agency-Sponsored Programs	63
IMPLEMENTATION OF PUBLIC INFORMATION PROGRAM	66
Program Description	66
COMMUNITY AUDIENCES TO BE TARGETED	67

AGENCIES RESPONSIBLE FOR IMPLEMENTATION 67
IMPLEMENTATION TASKS 68
COSTS AND SOURCES OF FUNDING 68
MONITORING AND EVALUATION 68
 Objective 1 - Increase residents' awareness 69
 Objective 2 - Increase accuracy of information disseminated 69
Written Criteria for Evaluating Program Effectiveness 69
Agencies Responsible for Monitoring, Evaluating, and Reporting 70
Funding Requirements and Sources for Monitoring and Evaluating 70
Contingency Measures 70
Program Monitoring and Reporting Schedule 70

FUNDING 71

PROGRAM COSTS AND ALLOCATION OF RESOURCES 71
CONTINGENCY FUNDING 71

Attachment A: Section 25117 of the Health and Safety Code Attachments
Attachment B: CIWMB Form 303 Attachments
Attachment C: Memorandum of Understanding Attachments

Household Hazardous Waste Element

INTRODUCTION

HOUSEHOLD HAZARDOUS WASTE ELEMENT REQUIREMENTS

On September 27, 1990, the Governor signed Assembly Bill 2707 into law. This legislation requires that each city and county (for unincorporated areas) identify the amount of household hazardous waste in the waste stream and develop plans for safe collection, recycling, treatment, and disposal of hazardous wastes generated by households. This Element is intended to fulfill these requirements for the unincorporated area of Santa Clara County.

DEFINITION OF HOUSEHOLD HAZARDOUS WASTE

Hazardous substances are prevalent in modern society, not only in the commercial and industrial sectors, but in the residential sectors as well. Hazardous substances can be found throughout the home, garage, garden, and hobby shop as ingredients in such products as cleaners, paints and pesticides. Once these products are no longer needed by the consumer, the unused portion is considered household hazardous waste (HHW). Improper disposal of HHW can pose a risk to human health and the environment and thus requires special handling.

A substance is classified as a hazardous waste by the Department of Health Services (DHS), California Code of Regulations (CCR) Title 22, if it demonstrates one of the following characteristics:

- ignitable - flammable (e.g., lighter fluid, spot and paint removers);
- corrosive - eats away materials and can destroy human and animal tissue by chemical action (e.g., oven and toilet bowl cleaners);
- reactive - creates an explosion or produces deadly vapors (e.g., bleach mixed with ammonia-based cleaners); and
- toxic - capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface (rat poison, cleaning fluids, pesticides).

HHW PLANNING EFFORTS IN SANTA CLARA COUNTY

Demographic Overview

With nearly 1.5 million residents, Santa Clara County ranks first in the Bay Area and fourth in the state in terms of population. The county covers 1320 square miles, making it the second largest county in the San Francisco Bay Area. It is a diverse county encompassing both highly urbanized as well as rural-agricultural areas. Santa Clara County has experienced rapid population growth since the 1950's, with corresponding growth in solid waste and household hazardous waste generation.

Located at the southern end of the San Francisco Bay, Santa Clara County has a number of landfills located in close proximity to the bay and wetland ecosystems. This, coupled with the fact that groundwater supplies 50 percent of the drinking water, requires that special measures be taken to protect the environment and groundwater by keeping hazardous waste out of landfills.

Development of HHW Collection Programs

The County of Santa Clara and many of the cities in the county have been in the forefront in California and the nation in developing HHW management programs. Beginning in 1986, the County has co-sponsored a number of collection events for the unincorporated area with neighboring cities. In addition, curbside motor oil recycling is available in several portions of the unincorporated area. County staff has developed and distributed educational materials to alert residents to the proper disposal methods for HHW and suggest less-toxic alternatives to household products generating hazardous waste.

The success of past HHW programs has resulted in an increasing demand for disposal services. However, because of the limited number of one-or two-day HHW events available in most jurisdictions, the hazardous waste disposal needs of many residents have not been met. This is an acute problem for those with immediate disposal needs, such as residents who are moving.

Multijurisdictional Planning For HHW Management

The increasing demand for HHW services, together with the rising cost of collection and disposal, led a number of local jurisdictions to the conclusion that one-or two-

day collection events alone do not offer a viable solution for meeting current and future needs. Additionally, there was a recognition that many of the problems associated with improper disposal of HHW are regional issues and require regional solutions.

The Household Hazardous Waste Working Group of the Santa Clara County Tanner Advisory Committee developed a set of goals for management of household hazardous waste in the county. The Working Group is composed of household hazardous waste program coordinators from cities, county hazardous waste, solid waste, and environmental health staff, private waste contractors, and community advisory members. The Working Group developed the following goals for management of HHW in the county, which were incorporated into the County Hazardous Waste Management Plan (Tanner Plan).

Tanner Plan Household Hazardous Waste Goals

- Keep household hazardous waste out of landfills, sanitary and storm sewers, and waterways
- Reduce potential adverse effects of household hazardous waste on public health and safety
- Prevent harmful exposures in the home and environment through coordinated public education
- Provide services to all residents in the county

The Working Group determined that while most jurisdictions were sponsoring one-day collection events, a number of unmet needs remain in the county. These unmet needs are described below.

Unmet Needs

- Access to household hazardous waste collection on an "immediate need" basis (residents who are moving or otherwise need to dispose of materials rapidly)
- Access to ongoing collection centers
- Public education materials and programs that are consistent for all jurisdictions in the county.

The Working Group's recommendations are summarized in the County's Hazardous Waste Management Plan (Tanner Plan) of 1989 which states that:

"The County and cities shall coordinate the development of a program for the proper management and disposal of household hazardous waste on a county-wide basis in accordance with the waste management hierarchy and considering existing programs and conditions."

Under direction of the Tanner Committee, a HHW Working Group began a planning effort to examine alternative program models and determine equitable and efficient methods of countywide service delivery. The group concluded that a countywide HHW management program would be cost effective and provide greater access to service for residents of Santa Clara County.

COUNTYWIDE COLLECTION SYSTEM

The Working Group recommended implementation of a mobile collection unit, with a permanent HHW facility or facilities to be added in the near future. The mobile unit is located at neighborhood collection sites identified by the city HHW coordinators and the County for the unincorporated area and moves to new locations throughout the county on a rotational basis. Residents of any participating jurisdiction are eligible to use the mobile program on an appointment-only basis at any of its scheduled stops throughout the county.

The HHW Program has recently purchased a specially equipped vehicle, a portable chain link fence for security, and canopies to protect workers from the weather. The vehicle contains an electric generator, a water system, as well as emergency and personal protective equipment and a small lab. The vehicle also provides storage space for supplies and equipment needed to conduct the mobile collections.

Planning for a permanent HHW collection site is in the early stages and potential sites are being identified. Additional permanent facilities may be developed in the future. The permanent site will provide additional collection services and support the mobile collection program, by allowing expanded storage capabilities for more efficient consolidation of wastes prior to disposal. This may result in lower per unit disposal costs as well as additional opportunities to separate materials for reuse, treatment, or recycling. The permanent facility could also support a HHW pickup service for elderly and disabled residents.

The County Division of Environmental Health Services serves as the lead agency for the administration and implementation of the countywide HHW Program. Hazardous materials specialists and environmental health specialists have been utilized for development and initial implementation of the collection program. Health Department in-house support services include an industrial hygienist, a toxicologist, and a chemist. A public health laboratory is available as a site where the chemical identification kits can be used for identifying unlabeled wastes. Environmental Health Services staff contract with private companies for lab-packing, transportation, recycling and disposal of the waste.

The Department of Planning and Development serves as the lead agency for public education efforts. Staff coordinates with other city, county and non-profit agencies to maximize use of available resources and avoid duplication in the development of educational materials and programs. Educational projects emphasize source reduction in the use of potentially hazardous products by providing information about less-hazardous alternative materials and techniques, in addition to information about safe disposal practices.

Participants in Pilot Program

Thirteen jurisdictions have participated in the 1991-92 pilot countywide HHW program and are currently participating in the 1992-1993 program year. Participating jurisdictions are listed below.

City of Campbell	City of Cupertino
City of Los Altos	Town of Los Altos Hills
Town of Los Gatos	City of Milpitas
City of Monte Sereno	City of Mountain View
City of San Jose	City of Santa Clara
City of Saratoga	City of Sunnyvale
County for the Unincorporated Area	

The countywide pilot HHW program, hereafter referred to as "Countywide HHW Program," began collection in the fall of 1991. Some participating cities relied entirely upon the Countywide HHW Program for management of HHW. Other cities used the Countywide HHW Program to augment existing HHW programs such as periodic drop-off events. The Program serves the unincorporated areas of Santa Clara County.

While the Countywide HHW Program operated as a pilot project in its first year, it is anticipated that it will continue through the short-term (1991-1995) and medium-

term (1996-2000) planning periods. At the end of the first year of operation, the program was evaluated by the County and the participating cities. The cities decided the extent to which they would continue their participation in the Countywide HHW program. Cities not currently participating in the program have the option of participation in future years.

Special Program for South Santa Clara County

South Valley Refuse Disposal Company, which provides garbage collection, disposal and recycling services to the Cities of Gilroy and Morgan Hill and the south county unincorporated area, is proposing to operate a permanent HHW facility at its San Martin Transfer Station. South Valley Refuse Disposal Company (SVRDC) currently employs specially trained personnel who operate the hazardous waste load checking program. In addition, the company has permits and storage facilities for hazardous waste. The operation of a permanent HHW facility would require merely an expansion of these existing operations.

Should SVRDC decide to implement its plan to provide a permanent HHW service at the transfer station, the County will perform a cost analysis and service comparison between the mobile collection unit and the permanent facility for HHW collection. Based on this analysis, a decision will be made as to which of these HHW management options would best serve the unincorporated area of south Santa Clara County.

GOALS

Improper disposal of household hazardous waste will be reduced or eliminated in the unincorporated areas of Santa Clara County in the short term and medium term planning periods. Household hazardous waste generated by residents will be collected, recycled, treated or safely disposed. Generation of household hazardous waste by unincorporated area residents will be reduced.

OBJECTIVES

SHORT-TERM PLANNING PERIOD (1991-1995)

Objective 1: Provide residents of the unincorporated area access to convenient household hazardous waste collection services.

Mobile Collection Unit

The County of Santa Clara plans to participate in the Countywide HHW Program which will provide unincorporated area residents with year-round collection services. The mobile unit will operate in close proximity to most residents in the county four times per year. In addition, residents in need of immediate disposal services can deliver their HHW, by appointment, to the mobile collection unit at any location in the county.

Telephone Appointment and Information Service

The Countywide HHW Program will initially operate on an appointment-only basis. The County Division of Environmental Health Services will operate the telephone appointment and information line for the mobile collection unit and the permanent HHW facility.

Permanent HHW Collection Facility or Facilities

The County of Santa Clara intends to participate in the Countywide HHW Program plan to develop and operate one or more permanent HHW collection facilities in the County. Residents in the unincorporated area of south Santa Clara County may have access to a permanent HHW facility at the San Martin Transfer Station operated by South Valley Refuse Disposal Company.

Objective 2: Expand motor oil collection programs, to the maximum extent possible, to serve single and multi-family dwellings in the unincorporated area of Santa Clara County.

Expand Collection Services

Curbside motor oil collection programs will be implemented where feasible. For those dwellings where collection of used motor oil is not practical, special public informational efforts will be implemented to notify residents of the most convenient drop-off locations.

Increase Participation

In areas where participation is low, special publicity and educational efforts will be conducted to increase the number of residents using the curbside motor oil collection services and drop-off centers.

Objective 3: Minimize disposal of collected HHW by redistributing reusable materials and sending HHW for recycling.

Re-distribution to Agencies and Municipal Departments

When practical, usable materials such as paint and automotive maintenance products will be offered to non-profit agencies, and city and county public works and vehicle maintenance departments.

Re-distribution at HHW Collection Events

When practical, reuse tables will be operated at HHW collections events to allow residents to take away usable products that have been chosen by Program staff.

Recycling

To the maximum extent possible, HHW such as latex paint, motor oil, antifreeze, and automotive batteries will be separated from incoming waste and sent away for recycling.

Objective 4: Improve monitoring and evaluation of HHW programs.

The County of Santa Clara intends to participate in the development of standardized methods for measuring collected HHW.

Objective 5: Limit improper disposal of hazardous waste at solid waste landfills by continuing State-mandated hazardous waste exclusion programs.Load Checking, Sign Posting, Training, and Customer Notification

Incoming solid waste at landfills will be monitored by load checking programs under the oversight of County Environmental Health (the local enforcement agency) as required by the Regional Water Quality Control Board. Landfill operators will carry out sign posting, employee training and customer notification regarding the prohibition of HHW from landfill disposal and will inform residential customers about the HHW Program.

Objective 6: Increase efficiency and effectiveness of HHW collection services and public education by coordinating programs with other jurisdictions and agencies whenever feasible.Multijurisdictional HHW Management in Santa Clara County

The Cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Sunnyvale, San Jose, Santa Clara, and Saratoga, the Towns of Los Altos Hills and Los Gatos, and the County for the unincorporated area, the County Hazardous Waste Management Program, the Office of Hazardous Materials Compliance Division, and the County Solid Waste Program have participated in cooperative HHW management efforts during the 1991-92 pilot project and intend to continue participating cooperatively. Other cities may join this effort at a later date. The Nonpoint Source Pollution Control Program of the Santa Clara Valley Water District, the wastewater treatment plants, schools, community advisory persons, and non-profit organizations will be invited to participate in this multijurisdictional effort.

The cities of Morgan Hill and Gilroy have reported that they will continue to provide their residents with an annual HHW Disposal event. The County will co-sponsor any such event to allow the residents of the unincorporated area in south county to also participate.

Objective 7: Decrease potential short-and long-term liability risks by monitoring environmental compliance records and proof of insurance documents of contract waste haulers and contract treatment, storage and disposal facilities.

Environmental Compliance Records

The environmental compliance records of all hazardous waste contractors will be examined by the Division of Environmental Health Services. Records for the previous three years will be evaluated.

On-Site Audits

Audits of facilities under consideration will be conducted by Environmental Health Services to confirm that proper waste management methods are employed.

Liability Insurance

Proof of adequate liability insurance will be required and be kept on file. The verification of environmental compliance will be done by Environmental Health Services.

Objective 8: Increase source reduction options for residents by supporting local, State and Federal legislative efforts aimed at promoting development of safer products and safer HHW management methods.

Legislative Efforts

The County will initiate and/or endorse legislative and voluntary efforts to require or encourage manufacturers to market less hazardous or non-hazardous products. Legislation to require or encourage recycling of particular types of household hazardous waste will also be supported.

MEDIUM-TERM PLANNING PERIOD

Landfill disposal of household hazardous waste will be further reduced or eliminated in the County of Santa Clara in the medium-term planning period (1996-2000) by achievement of the following objectives:

Objective 1: The implementation of the short-term planning period objectives will continue in the medium-term planning period.

Objective 2: Increase educational efforts to reduce the amount of HHW generated by residents.

Objective 3: Explore the feasibility of development of additional permanent HHW facilities.

Targeted and Excluded Materials

Household materials that have the characteristics of hazardous waste, as defined by Section 25117 of the Health and Safety Code, have been targeted for collection by the County of Santa Clara. See Attachment A for Section 25117 of the Health and Safety Code.

Several types of materials are excluded from HHW collection programs due to potential hazards to the public and collection program staff. Ammunition and explosives will not be accepted. Residents who request disposal services for ammunition or explosives will be referred to the police or fire department.

Medical wastes will not be accepted. Residents requesting disposal services for medical wastes will be advised of proper disposal methods for specific types of waste materials. Radioactive waste will not be accepted. Smoke alarms, the common household product containing radioactive materials, is considered "below regulatory concern" and may be discarded with household solid waste.

Procedures for proper disposal of compressed gas cylinders are under development by county staff. Residents needing disposal of gas cylinders, i.e. propane tanks, should contact the County of Santa Clara Division of Environmental Health Services.

EXISTING CONDITIONS

QUANTITY OF HOUSEHOLD HAZARDOUS WASTE GENERATED IN THE UNINCORPORATED AREA

In 1991, three disposed waste characterization studies were done to identify the amount and composition of solid waste generated in the south, west, and north county portions of the unincorporated area.

In the south Santa Clara County area, the study evaluated wastes at the San Martin Transfer and Recycling Center. In the north county area, wastes that would normally be disposed of or diverted at Newby Island Sanitary Landfill were diverted to Zanker Road Landfill and Recycling Center for the study. In the west county area, wastes disposed of or diverted at Guadalupe Landfill were evaluated there. The quantity and composition of the waste stream in the unincorporated San Jose area was based on data from a comparable jurisdiction (City of Sunnyvale). The quantity and composition of the waste stream in the Lexington Hills area was based on data from the south county study.

The studies indicate that a total of 35,192 tons of residential solid waste is disposed of annually in the unincorporated area by customers of franchised waste haulers. The studies estimate that 0.2% of the disposed waste was HHW. If this percentage is applied to the total collected residential waste, an estimated 70.4 tons of HHW is being improperly disposed of in landfills annually in collected residential waste.

The studies indicate that an estimated 16,518 tons of waste is self-hauled to area landfills and transfer stations for disposal by residents and businesses from the unincorporated area. The studies did not differentiate between the residential self-hauler and the business self-hauler, but they did generally characterize the self-haul loads into four categories: yard waste, construction/demolition, dirt/rubble, and miscellaneous. A large percentage of the loads categorized as miscellaneous were composed of the solid waste from residents who do not receive curbside or regular collection service. North county self-haul loads were 25% miscellaneous. South county loads were 55% miscellaneous. West county loads were not characterized in this manner. The studies estimated that 1.6% of all self-hauled waste was hazardous waste. Therefore, if we assume that an average of 35% (5,781 tons) of self-haul waste is residential, we can estimate that 92.5 tons of HHW were disposed of in self-hauled waste by residents of the unincorporated area in 1990.

In 1990, a total of 65.8 tons of HHW and used motor oil was collected from unincorporated area residents by county-sponsored HHW collection programs, the curbside oil collection service, and the oil drop-off at San Martin Transfer Station. This figure was derived by converting the amount of gallons collected to pounds and tons. The following conversion factors were used.

1 gallon of liquid (other than oil) = 8.6 lbs. (Source: Santa Clara County Department of Weights and Measures)

1 gallon of used motor oil = 7.6 lbs. (Sources: Santa Clara County Department of Weights and Measures, State Division of Measurement Standards, and Evergreen Oil, Inc.)

1 gallon of paint = 8 lbs. (Source: Romic Chemical Corporation)

1 automotive battery = 34 lbs. (Source: Santa Clara County Environmental Health)

55 gallon drum of lab-packed wastes = 20 gallons of liquid (Source: Santa Clara County Hazardous Waste Management Program)

55 gallon drum of consolidated oil-based paint = 55 gallons of paint (Source: Palo Alto Public Works)

In summary, of the HHW generated in the unincorporated area in 1990, 162.9 tons (70.4 + 92.5 tons) were improperly disposed of in the solid waste stream and 65.8 tons were disposed of properly through HHW Disposal Programs or through curbside pickup or drop off of used motor oil. Table 1 below summarizes HHW disposal in the unincorporated area.

Note that amounts of HHW generated in the unincorporated area that were illegally disposed of into other media, (i.e. into the sanitary sewer system, into the storm drain system, into the air by evaporation or burning, or by dumping onto the ground or into bodies of water) is unknown. The HHW Collection Program and public education efforts will address all illegal disposal problems, not solely landfill-based problems.

Table 1
HHW Disposed of in the Unincorporated Area of Santa Clara County in 1990*

Residential Tonnage Solid Waste (Collected)	35,192 tons
Residential Tonnage Solid Waste (Self-hauled)	5,781 tons
Tonnage HHW in Solid Waste Stream (improperly disposed)	162.9 tons
Tonnage HHW Collected at HHW Events in 1990 (properly managed)	16.9 tons
Tonnage of Used Motor Oil Collected at Curbside and Drop-off in 1990 (properly managed)	48.9 tons
Amount of HHW Discovered in Landfill Load Checking Programs	not available
Total Tonnage Diverted in 1990 (properly managed)	65.8 tons

* Does not include Stanford University or Moffett Field waste streams.

Stanford University and Moffett Field

The amounts of disposed waste discussed above do not include residential waste from Stanford University or from Moffett Field, two areas within the unincorporated area of Santa Clara County.

Stanford University has reported that 11,439 tons of waste were disposed of in 1990 from campus. The analysis estimates that 34 tons of HHW were disposed of in 1990. The University's Department of Environmental Health and Safety independently sponsored an HHW Collection event in May 1990 where approximately 2 tons of HHW was collected and properly disposed of. The University's recycling center and the University's residential curbside collection program did not accept/collect used motor oil in 1990.

Moffett Field will not be included in this analysis of HHW because there are so few residences on base and Moffett Field is under the jurisdiction of the federal government.

TYPES AND AMOUNTS OF HHW DIVERTED

The types and amounts of HHW collected by county-sponsored collection events and programs in the County of Santa Clara in 1992-1993 are shown on the CIWMB Form 303 "Household Hazardous Waste Collection Information" included as Attachment B. Unincorporated area residents participate in the county-sponsored collection events. Collection amounts for the unincorporated area is estimated to be 10% of the countywide total.

EXISTING SOURCE REDUCTION, COLLECTION, RECYCLING, TREATMENT AND DISPOSAL PROGRAMS

Several types of household hazardous waste collection and recycling programs have been implemented in the unincorporated areas of the Santa Clara County. In 1990, the following services were provided to unincorporated area residents.

1. Periodic Drop-off Events
2. Curbside Motor Oil Collection
3. Motor Oil Drop-off at Transfer Station
4. Hazardous Waste Exclusion Programs
5. Exclusion Measures Taken by Waste Haulers

Periodic Drop-off Events

The County of Santa Clara co-sponsored 5 mobile drop-off events in 1990. As shown in Table 2, a total of 412 unincorporated area households participated. 16.9 tons of HHW were collected during this period from unincorporated area residents.

Table 2
1990 Drop-off Events co-sponsored by the County of Santa Clara

<u>1990 Event</u>	<u>LOCATION</u>	<u>HOUSEHOLDS PARTICIPATING</u>	<u>AMOUNT COLLECTED</u>
March	Campbell	203	10.0 tons
April	Los Altos	61	1.7 tons
April	Milpitas	65	2.0 tons
June	San Martin	80	3.1 tons
October	Mountain View	3	0.1 tons
Totals from unincorporated area:		412 households	16.9 tons

Curbside Motor Oil Collection

The County of Santa Clara began curbside used oil collection in some portions of the unincorporated area in 1990. In 1990, 5,372 gallons of oil were collected.

(5,372 gals = 40,827 lbs = 20.4 tons)

Motor Oil Drop-Off at Recycling Center

Motor oil was collected at the San Martin Transfer Station which serves residents in the south county. The amount of motor oil collected in 1990 from unincorporated area residents was 7,500 gallons.

(7,500 gallons = 57,000 lbs = 28.5 tons)

Hazardous Waste Exclusion Program

The objective of a hazardous waste exclusion program is to discourage the improper disposal of hazardous waste at the solid waste disposal facility. Solid waste generated in the unincorporated areas of the county is landfilled at the following landfills: Newby Island, Guadalupe, Zanker Road, Pacheco Pass, and Kirby Canyon.

All landfills are required to implement hazardous waste exclusion programs. The Hazardous Waste Exclusion Program consists of the following components.

Load Checking

Load checking involves inspection of incoming solid waste, landfill employee training, state and county-mandated hazardous waste handling and reporting procedures.

Landfill Public Awareness Efforts

Landfill public awareness efforts include sign posting at landfill entrances and unloading areas, verbal instructions to residents using the landfill, and answering phone inquiries regarding waste disposal.

Exclusion Measures Taken by Waste Haulers

Franchised waste haulers send utility bill inserts, post notices on dumpsters, conduct hazardous materials training, and inspect incoming waste during collection.

**MANAGEMENT OF HHW DIVERTED FROM LANDFILL DISPOSAL
IN 1990**

The County of Santa Clara ascribes to the disposal hierarchy "Reduce, Reuse, Recycle, Treat, Dispose" for management of collected HHW. The management methods used by the County for collected HHW are listed in Form 303, Attachment B.

Form 303 is a summary report of the types and amounts of HHW collected at HHW events that unincorporated area residents could participate in. Form 303 does not include the waste oil that was collected by curbside oil pickup programs or at the San Martin Transfer Station.

Of a total of 16.9 tons of HHW collected in 1990 from unincorporated area residents at HHW events:

- 30.6 % was recycled
- 30.8 % was incinerated
- 18.4 % was used in a fuels blending program
- 20.1 % was sent to a hazardous waste landfill.

A description of the recycling, treatment and disposal methods for HHW is included in the evaluation of Alternative 9: HHW Waste Exchange Component (page 41) and in the section on Multijurisdictional HHW Efforts (page 50).

FUTURE OF EXISTING PROGRAMS

The HHW Program will continue to rotate the location of the mobile unit throughout the County, providing household hazardous waste collection services in most or all areas of unincorporated Santa Clara County. In south county, a permanent facility may be developed at the San Martin Transfer Station.

Public education and information efforts will continue with increased coordination among city, county, regional and non-profit agencies. Motor oil drop-off at the San Martin Transfer Station is expected to continue in the short- and medium-term planning period. The curbside motor oil collection programs are expected to continue and may be expanded. The hazardous waste exclusion programs are expected to continue into the short-and medium-term planning periods.

METHODOLOGY FOR EVALUATION OF HOUSEHOLD HAZARDOUS WASTE MANAGEMENT ALTERNATIVES

This section contains a detailed description of the methodology used to evaluate nine HHW management alternatives. The evaluation procedure used here is consistent with the *Planning Guidelines for Preparing Source Reduction and Recycling Elements, and Household Hazardous Waste Elements* issued by the California Integrated Waste Management Board, 1991.

EVALUATION CRITERIA

The following twelve criteria have been used to rate each of the nine HHW management alternatives. A scale of high, medium, and low was used, with high being the positive rating. The evaluation was summarized in Table 3 which is located at the end of the Evaluation of Alternatives (page 45).

Waste Diversion Potential

Waste diversion potential is the estimated ability of the alternative to reduce the amount of HHW improperly disposed in landfills. Waste diversion potential measures the alternative's ability to accept, handle, recycle or properly dispose of HHW.

Low:	The alternative has low potential to divert HHW.
Medium:	The alternative is likely to divert some HHW.
High:	The alternative is likely to divert large amounts of HHW.

Absence of Hazard

Absence of hazard reflects the extent to which hazards result from the alternative. Hazards could include health risks, injury, fire, or other.

Low:	Potential hazards are not completely understood, or the alternative presents potential hazards.
Medium:	Potential hazards are known and controllable. Some impacts remain.
High:	There are few or no potential hazards or unmitigated impacts.

Flexibility

Flexibility measures the adaptability to changing economic, technological, and social conditions.

Low:	The alternative is limited in adaptability to changing conditions.
Medium:	The alternative is anticipated to have a moderate adaptability to changing conditions.
High:	The alternative can be readily adapted to meet changing conditions.

Availability of Service (Nearby and Frequent Services)

Availability of service is a consideration of travel distance for participants and frequency of service. Optimal travel distance was determined to be no more than a 20 minute commute from residents' homes. Optimal frequency of service was

determined to be at least two disposal opportunities per year within the 20 minute commute distance.

- Low: The alternative does not provide services within a 20 minute commute. Cost or logistical barriers make frequent service with this alternative difficult.
- Medium: The alternative has potential to provide disposal services within a 20 minute commute. The alternative has the potential to provide one or two disposal opportunities per year.
- High: The alternative is designed to provide disposal services within a 20 minute commute and can provide two or more disposal opportunities each year.

Provides Immediate Need Disposal Services

Provides immediate need disposal service refers to the ability of the alternative to provide disposal services within several days of a request from a resident. Residents who are moving often request HHW disposal services. If disposal services are not available, these residents may improperly dispose of their stored HHW.

- Low: The alternative does not accommodate needs of residents requesting immediate disposal services.
- Medium: The alternative may provide some immediate need services.
- High: The alternative has flexibility to accommodate residents requesting immediate disposal of HHW.

Limited Shift in Waste Type Generation

Limited shift in waste type generation measures the alternative's ability to limit consequences of diversion of one material at the expense of increased generation of another material.

- Low: The alternative would significantly shift waste production to generation of non-recyclable, non-marketable, or more hazardous materials.
- Medium: The alternative would result in the creation of little shift toward non-recyclable, non-marketable, or

High: more hazardous wastes.
The alternative would result in no shift toward non-recyclable, non-marketable, or more hazardous wastes.

Ease of Implementation

Ease of implementation measures the speed with which the alternative can be brought into service, i.e., whether it can be implemented in the short-term or medium-term planning periods.

Low: Implementation of the alternative could not be completed until after 2000.

Medium: Implementation of the alternative is anticipated to be completed between 1995 and 2000. This is the medium-term planning period.

High: Implementation of the alternative is anticipated to be completed by 1995. This is the short-term planning period.

Facility Need

Facility need measures the need to expand existing facilities or build new facilities to support the implementation of the alternative.

Low: New facilities must be developed to accommodate the alternative.

Medium: Existing facilities must be expanded or altered to accommodate the alternative.

High: The alternative requires no new facilities or modification of facilities.

Consistency with Local Policies

Consistency with local policies measures the alternative's compatibility with existing local plans, policies, and ordinances.

Low: The alternative would require major changes to existing local plans, policies, or ordinances.

Medium: The alternative may require minor changes to

High: existing local plans, policies, or ordinances. There are no existing local plans, policies of ordinances that would impede the implementation of the alternative.

Absence of Institutional Barriers

Absence of institutional barriers evaluates the extent to which institutional barriers, such as long-term franchise agreements or other contracts, or other barriers, may impact local implementation of the alternative.

Low: The alternative is impacted by existing institutional barriers which are not under the control of the jurisdiction.

Medium: The alternative is impacted by existing institutional barriers over which the jurisdiction maintains some control.

High: There are no existing institutional barriers to the alternative.

Estimated Cost

Estimated cost evaluates the projected cost of the alternative, including capital costs and operating costs for the short-term and medium-term planning period. This criterion was not rated using the low, medium, and high scale.

End Uses (Recyclability and Redistribution Potential)

End uses measures the recycling or reuse potential of collected HHW products.

Low: Recycling or redistribution activities are incompatible with the alternative.

Medium: The alternative might allow for some recycling/redistribution.

High: Recycling or redistribution activities are compatible with the alternative.

EVALUATION OF HOUSEHOLD HAZARDOUS WASTE MANAGEMENT ALTERNATIVES

This section presents the evaluation of the HHW management alternatives that were considered to meet HHW management objectives for the unincorporated area. The criteria and rating scale used here are described in detail in the previous section. The following nine alternatives were evaluated. The results of the evaluation are summarized in Table 3 (page 45).

Alternative 1	Periodic HHW Drop-off Events
Alternative 2	Five Permanent HHW Facilities
Alternative 3	Mobile Collection
Alternative 4	Combination - Mobile Unit Plus One Permanent Facility
Alternative 5	Curbside Motor Oil Collection
Alternative 6	Door-to-Door Pickup for Elderly and Disabled Residents
Alternative 7	Hazardous Waste Exclusion Program
Alternative 8	Household Hazardous Waste Recycling Component
Alternative 9	Household Hazardous Waste Exchange

An additional method of HHW management was considered: curbside collection of all types of HHW. This method was not included in the "Evaluation of Alternatives" due to unacceptably high risks to the public health and safety. Household hazardous waste set at the curbside could be blown over or rained upon, resulting in toxic run-off into the storm drain system. Children or pets could tamper with materials left at the curb, and waste haulers could be harmed if residents set out unacceptable types or amounts of wastes.

Curbside HHW collection programs that accept all types of HHW have not been implemented in California. Unlike programs that collect motor oil at the curb, it is unlikely that permits could be obtained to collect all types of HHW in this manner. The permitting process for curbside HHW collection was not explored as the alternative was deemed unfeasible due to potential health and safety hazards.

ALTERNATIVE 1 - PERIODIC DROP-OFF EVENTS

The County of Santa Clara has sponsored or co-sponsored periodic drop-off events since 1986. In 1990, five events serving unincorporated area residents were held at the following locations: the Senior Center in the City of Milpitas, St. Simon's Church in Los Altos, the public works facility in the City of Mountain View, the Community Center in the City of Campbell, and the San Martin Transfer Station in unincorporated south Santa Clara County.

Waste Diversion Potential. Periodic events have proven to be an effective means of collecting HHW in the unincorporated area. The waste diversion potential of periodic drop-off events was rated as "high".

Absence of Hazard. Potential public health risks and safety hazards associated with any HHW collection method include spills, fires, leaks, or explosions resulting from improper collection, storage, handling, or transport of hazardous material. However, proper design, equipment, and health and safety training minimize potential hazards. Periodic drop-off events were rated as "medium" in absence of hazard.

Flexibility. Periodic drop-off events are limited in ability to respond to unanticipated conditions, such as an unexpectedly high turn-out. On the other hand, periodic events are flexible in the sense that, if funding permits, a jurisdiction can decide to hold more frequent events. A "medium" rating was assigned.

Availability of Service (Nearby and Frequent Service). Availability of service refers to the alternative's ability to provide HHW disposal services within a 20 minute commute of residents' homes and two or more times per year. The periodic drop-off event alternative was rated "medium" as these events are generally held in one centralized location and only one or two times per year. Additional events and event locations could be added. However, planning periodic events is very time-consuming and may not be cost-effective as compared with other HHW collection methods.

Provides Immediate Need Disposal Service. Periodic drop-off events have generally operated at each location one or two days per year, although the possibility exists to hold such events more frequently. The periodic drop-off event alternative was rated "low" in its ability to provide immediate need disposal services.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. The County of Santa Clara has sponsored or co-sponsored a number of periodic drop-off events. Staff is familiar with the planning and implementation procedures. Ease of implementation was therefore rated "high".

Facility Needs. Periodic drop-off events do not require expansion or development of facilities and were rated "high."

Consistency with Local Policies. Based on past experience, it appears that this alternative is not in conflict with local policies and ordinances. However, the periodic events do not meet the needs of residents requesting immediate disposal services and do not provide ongoing collection services as recommended in the County Hazardous Waste Management (Tanner) Plan. A "medium" rating was assigned.

Absence of Institutional Barriers. No institutional barriers, such as existing contracts, would impede the County of Santa Clara in continued implementation of periodic drop-off events. A "high" rating was assigned.

Estimated Cost. A cost analysis of past periodic events throughout the county indicates considerable variation in cost between events. Factors contributing to the cost variations include the amount of volunteer labor and other donated services used to plan and operate the events.

Costs for all of the HHW collection methods under consideration (periodic, mobile, five permanent facilities, and combination mobile and one permanent facility) are driven primarily by waste disposal and event staffing costs. It was estimated that the cost per vehicle serviced at all four of these options would be within the \$90 - \$110 range.

End Uses (Recyclability and Redistribution Potential). Latex paint, oil, antifreeze and automotive batteries can be sent for recycling. However, lack of space limits the ability to separate and store usable products for redistribution. A "medium" rating was assigned.

ALTERNATIVE 2 - FIVE PERMANENT FACILITIES

The five permanent HHW collection facilities would be located throughout the county to provide HHW collection services within a 20 minute commute for a majority of residents in participating communities and the unincorporated area. The program would be administered by the Countywide HHW Program. Each city

and the county would determine, on an annual basis, the desired level of HHW services for residents in participating jurisdictions.

Waste Diversion Potential. Five permanent facilities may process participants and materials more efficiently than collection events because of the presence of more extensive equipment and greater storage capabilities. Permanent facilities can provide comprehensive, ongoing disposal services that residents could become accustomed to. This was rated "high" for waste diversion potential.

Absence of Hazard. Permanent facilities can provide a highly structured and controlled means of collecting and disposing of HHW. Proper design, equipment, and permanent staff can minimize potential hazards associated with HHW collection. The permanent facilities alternative received a "high" rating.

Flexibility. Permanent facilities do not have the flexibility to operate in various locations as do periodic collection events or a mobile collection unit. However, permanent facilities can accommodate changing social conditions, such as increasing demand for service, by adjusting the days of operation. A permanent facility can also serve as a "hub" for a mobile unit that collects HHW from elderly and disabled residents or from residents in outlying areas. This alternative received a "high" rating.

Availability of Service (Nearby and Frequent Service). The five permanent facilities alternative has the potential to provide frequent services, depending on the number of days the facility is open. Residents from any participating community could use the permanent facilities. The five facilities could be located so that most residents would have to drive no more than 20 minutes to the nearest facility. The five permanent facilities alternative was rated "high."

Provides Immediate Service. The five permanent facilities alternative was rated "high" in its ability to provide immediate need services.

Limited Shift in Waste Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. The implementation phase for permanent facilities requires site selection, environmental review, permitting, Board of Supervisors' approval, and construction. In addition, the siting of permanent facilities may be subject to the Tanner Plan review process. The implementation of five facilities could extend beyond the short-term planning period (1991 to 1995) and therefore received a "medium" rating.

Facility Needs. This alternative requires the location or construction of collection and storage facilities. A HHW facility must meet local, state and federal safety and operating standards. A facility should have separate storage bays or bins to prevent spilled or leaked incompatible wastes from mixing. A collection and storage building should also have explosion proofing, ground columns, proper containment, and sufficient ventilation. Adequate emergency response and safety equipment would be necessary. A permanent facility should be situated on an impervious surface and fenced for security. A "low" rating was assigned to this alternative due to the complexity of facility needs for five facilities.

Consistency with Local Policies. The five permanent facilities alternative appears to be consistent with the Tanner Plan recommendations to provide on-going and immediate need disposal services for all residents. However, land use decisions may be required by the local planning commission to site the permanent facilities. A "medium" rating was assigned.

Absence of Institutional Barriers. No contractual or other institutional barriers are known that would impede implementation of the five permanent facilities alternative. A "high" rating was assigned.

Estimated Cost. A preliminary cost analysis for the five permanent facilities indicates that the cost of this alternative is dependent, to a large extent, on two factors; availability of sites and facility design.

If appropriate sites could be located that did not require purchase of land, the cost of this alternative would be significantly lower. It might be possible to site permanent HHW facilities at existing landfills, transfer stations, materials recovery facilities, wastewater treatment plants, or public works facilities. However, if siting permanent facilities requires the purchase of property, or if nearby residents opposed the siting of such facilities, a significant increase in cost would result.

The second factor that would affect the cost is the actual design of the facilities. A range of options exists for structural design and equipment for permanent HHW facilities. These factors would greatly influence the cost of implementing the five permanent facilities alternative. The cost estimates used here assume permanent facilities consisting of slightly modified existing structures and/or the use of roll-off bins for waste collection and storage.

It was estimated that it may be possible to implement the five permanent facilities alternative at a cost similar to costs for the other HHW collection alternatives under

consideration (periodic, mobile, and combination mobile and one permanent facility). Costs of all options are driven primarily by waste disposal and event staffing. It was estimated that the cost per vehicle served at all four of these options would be within the \$90 - \$110 range. However, the unknown factors regarding facility siting and design could significantly change this estimate.

End Uses (Recyclability and Redistribution Potential). Valuable materials diverted from the incoming waste stream can be stored at a permanent facility, thereby making waste exchange or organized waste referral services feasible. The presence of permanent staff enhances the ability to carry out recycling and redistribution activities. The five permanent facilities alternative received a "high" rating for recycling/redistribution potential.

ALTERNATIVE 3 - MOBILE COLLECTION

A mobile collection program consists of a modified collection vehicle or vehicles which may contain an electric generator, compressor, and water system, a fire response system, emergency equipment, and a lab for identification of unlabeled HHW. A mobile facility can be dismantled in a short time once a collection event is completed. This alternative assumes no permanent sites would be developed.

Waste Diversion Potential. A mobile collection program is an effective approach for HHW collection in a large geographical area. A "high" rating was assigned to this alternative.

Absence of Hazard. The mobile collection alternative involves more transportation of equipment and staff than a permanent facility and therefore, presents a slightly higher risk of hazard. Proper design, equipment, as well as safety training can minimize potential hazards. The potential for risks associated with mobile collection was rated as "medium."

Flexibility. A mobile collection unit is highly flexible as both location and frequency of operation can be readily changed to accommodate variations in demand or shifts in population density. However, because of location changes, sufficient advertising must be done to notify the public of the exact location. In addition, finding sites with adequate and safe accessibility might be difficult in some areas. The mobile unit received a "high" rating in ability to accommodate changing conditions in a large geographical area.

Availability of Service (Nearby and Frequent Service). The mobile unit would operate 20 times in various locations throughout the county during the first year of operation. Most residents will have a maximum 20 minute drive to the unit. The mobile unit's operating schedule could be modified to include additional collection locations or more frequent service as needed. Additional locations and days of operation may be added annually throughout the short- and medium-term planning period. The mobile collection unit was rated "high" for availability of service.

Provides Immediate Need Disposal Services. The mobile unit would operate at the various locations in the county on a rotational basis. Residents in need of immediate disposal services will be able to deliver their HHW, by appointment, to the mobile unit at the next scheduled day of operation anywhere in the county. A "high" rating was assigned to this alternative for ability to provide immediate disposal services.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. A mobile program can be permitted by the California Department of Toxic Substances Control under a variance. The mobile countywide HHW disposal Program has been implemented in the short-term planning period (before 1995). A "high" rating was assigned to the mobile collection alternative.

Facility Needs. The mobile collection unit requires a modified vehicle or vehicles and equipment. However, no purchase of land or construction of facilities is required. The mobile collection alternative was rated "high" for facility needs.

Consistency with Local Policies. The mobile collection program was determined to be a HHW management technique best able to provide ongoing and immediate need services to residents in a large geographical area. This alternative is expected to require a less complex siting process than the permanent facilities alternative due to the temporary nature of the mobile unit stopovers. The mobile collection unit alternative was rated "high" in consistency with local policies that recommend countywide access to ongoing HHW collection services.

Absence of Institutional Barriers. No regulatory prohibitions or contractual barriers exist to implementing a mobile HHW collection program. A "high" rating was assigned.

Estimated Cost. A preliminary cost analysis for the mobile HHW collection alternative indicates that this alternative might be implemented at a cost similar to the periodic events alternative, five permanent facilities alternative, and the combination mobile unit plus one permanent site alternative. Costs of all options are driven primarily by waste disposal and event staffing costs. It was estimated that the cost per vehicle served for all four of these options would be within the \$90 - \$110 range.

End Uses (Recyclability and Redistribution Potential). A mobile collection unit can divert materials for recycling and can include a HHW waste exchange component. However, limited space prevents storage of reusable products for distribution at future events. Therefore, this alternative was rated "medium" in recyclability/redistribution potential.

ALTERNATIVE 4 - COMBINATION PROGRAM: MOBILE UNIT PLUS PERMANENT FACILITY

The combination program consists of a mobile unit plus one permanent facility. The permanent facility would be located in a densely populated urban area and the mobile unit would serve cities and the unincorporated area throughout the county on a rotating basis. The number of vehicles served would be adjusted in response to demand for services and availability of funds.

Waste Diversion Potential. The mobile unit plus permanent facility alternative could provide convenient, cost-effective and efficient service to both densely populated areas and a large geographical region. A "high" rating was assigned to the combination alternative.

Absence of Hazard. The mobile unit involves more movement of equipment and materials than the permanent facility. The majority of collected HHW would be removed directly from the mobile unit by licensed waste haulers. To minimize waste disposal costs, partially-filled lab-packed drums might be delivered to the permanent facility to await additional waste. Proper equipment, training, and operating procedures would minimize the potential hazards. A "medium" rating was assigned to the combination mobile plus one permanent facility alternative.

Flexibility. Days of operation of the mobile unit and permanent facility can be adjusted, depending on the demand for services and availability of funds. The mobile unit's schedule can be modified to include additional locations as needed. A special effort to notify residents of the various locations would be necessary. In addition, multi-lingual advertising and telephone appointment services may be

necessary. The combination alternative received a "high" rating in ability to respond to changing social conditions.

Availability of Service (Nearby and Frequent Service). The combination alternative would provide HHW disposal services within a 20 minute commute for most residents in the participating cities. Depending on demand for services, frequency of both of these collection services can be expanded in the short- and medium-term planning period. A "high" rating was assigned to the combination alternative.

Provides Immediate Needs Services. A "high" rating was assigned, as residents from any of the participating jurisdictions could deliver HHW, by appointment, to the next operating day of either the permanent facility or the mobile unit.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. A mobile program can be permitted by the California Department of Toxic Substances Control under a variance. The mobile countywide HHW disposal Program has been implemented in the short-term planning period (before 1995). A "high" rating was assigned to the mobile collection alternative.

The implementation phase for a permanent facility includes site selection, environmental review, permitting, Board of Supervisors' approval, and possibly, facility construction or modification of existing structures. "Permit-by-Rule" regulations for siting permanent HHW facilities are under development by the California Department of Toxic Substances Control. If a site is chosen before the regulations are in place, a variance would need to be obtained from the Department. The siting of a permanent facility may be subject to the Tanner Plan review process. It appears unlikely that one permanent facility could be operational before the end of the short-term planning period (before 1995). A "medium" rating was assigned.

Facility Needs. The mobile collection unit requires waste collection and storage equipment. However, no purchase of land or construction of facilities is required. The permanent facility will require either location of an appropriate site for roll-off storage bins or the construction or modification of a structure. A "medium" rating was assigned to the combination mobile unit plus one permanent facility alternative.

Consistency with Local Policies. Countywide planning efforts have determined that the combination of a mobile unit and a permanent facility for HHW collection appears to be the alternative that best meets the needs of the participating cities.

This alternative appears to be consistent with the Tanner Plan recommendations for ongoing, convenient, and immediate need services. A "high" rating was assigned to this alternative.

Absence of Institutional Barriers. No institutional barriers are known that would prevent the implementation of the combination alternative. A rating of "high" was assigned.

Estimated Cost. A preliminary cost analysis for the combination mobile unit plus one permanent facility alternative indicates that this alternative might be implemented at a cost similar to the cost of the periodic events alternative, the mobile collection program alternative, or the five permanent facility alternatives.

A preliminary cost analysis for a permanent facility indicates that the cost of this alternative is dependent, to a large extent, on two factors; availability of sites and facility design.

If an appropriate site could be located that did not require purchase of land, the cost of this alternative would be significantly lower. It might be possible to site a permanent HHW facility at an existing landfill, wastewater treatment plant, materials recovery facility or public works facility. However, if siting a permanent facility requires the purchase of property, or if nearby residents oppose the siting of a facility, a significant increase in cost would result.

The second factor that would affect the cost is the actual design of the facility. A range of options exists for structural design and equipment for permanent HHW facilities. These factors would influence cost of implementing this alternative.

It is estimated that it may be possible to implement the mobile unit plus one permanent facility alternative at a cost similar to costs for the other HHW collection alternatives under consideration (periodic, mobile, and five permanent facilities). Costs of all options are driven primarily by waste disposal and event staffing. It was estimated that the cost per vehicle served for all four of these options would be within the \$90 - \$110 range. However, the unknown factors regarding facility siting and design could significantly change this estimate.

End Uses (Recyclability and Redistribution Potential. The permanent facility has the potential for facilitating waste exchange activities due to its ability to store valuable, usable products found in the waste stream. The mobile unit has a similar redistribution potential but lacks storage capability of the permanent facility. A "high" rating was assigned to the combination alternative.

ALTERNATIVE 5 - CURBSIDE MOTOR OIL COLLECTION

Used motor oil is collected at the curbside by several private companies that collect garbage from unincorporated area residents. In the past, used motor oil has often been improperly disposed of into storm sewers, into the trash or onto the ground by residents who service their own vehicles. Therefore, motor oil collection is an effective means of reducing improper disposal of one type of HHW.

Waste Diversion Potential. The curbside oil collection programs in the unincorporated area can serve most households that subscribe to garbage service. Curbside motor oil collection was rated "high" in waste diversion potential.

Absence of Hazard. The potential exists that oil set at the curb for collection could be disturbed by children, pets, or vehicles. However, residents generally use the curbside oil collection program as directed and existing programs experience minimal problems. Curbside motor oil collection was rated "medium" for absence of hazard.

Flexibility. The curbside oil collection alternative can meet growing demand by expanding into previously unserved neighborhoods and multi-family dwellings. Curbside motor oil collection was rated "high" in flexibility.

Availability of Service (Nearby and Frequent Service). This alternative requires no travel to a disposal event. Curbside motor oil collection was rated "high" for availability of service.

Provides Immediate Need Disposal Service. Curbside motor oil collection programs generally provide weekly service, thereby providing disposal services to residents preparing to move or otherwise in need of immediate disposal. A "high" rating was assigned.

Limited Shift in Waste Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. The County of Santa Clara has required private garbage companies to include used motor oil collection in service agreements for most portions of the unincorporated area. Therefore this HHW management alternative was rated "high."

Facility Needs. Curbside collection of used motor oil was rated "high" as it does not require additional facilities.

Consistency with Local Policies. Curbside motor oil collection is consistent with local and state policies that encourage HHW collection and recycling.

Programs collecting used motor oil do not need a hazardous waste permit. Effective January 1, 1991, pursuant to AB 2597, HHW collection agencies will no longer need a hazardous waste permit if materials accepted are limited to latex paint, used oil, antifreeze, spent lead-acid batteries, and nickel-cadmium, alkaline, carbon-zinc and other small batteries. A "high" rating was assigned.

Absence of Institutional Barriers. Used motor oil collection programs have been implemented in portions of the unincorporated area. In the portions of the unincorporated area currently without this service, curbside oil collection will be considered for implementation when existing contracts expire. A "high" rating was assigned.

Estimated Cost. The cost of curbside oil collection is included in garbage and curbside recycling rates.

End Uses (Recyclability and Redistribution Potential). Markets for used motor oil are well-established. Used oil from the unincorporated area of Santa Clara County is sent to Evergreen Oil Inc. located in Newark, California. The company re-refines the oil and then sells it for use again as a lubricating oil. Used motor oil collection received a "high" rating for recyclability.

ALTERNATIVE 6 - DOOR-TO-DOOR PICKUP FOR ELDERLY AND DISABLED RESIDENTS

A door-to-door pickup program would provide HHW services to residents unable to participate in collection events. Pickup would be available by appointment only and the service dates could be coordinated with the schedules of upcoming mobile unit or periodic events or a permanent facility in the area. The wastes would be picked up by a registered hazardous waste hauler using licensed hazardous waste transport vehicles that comply with Department of Transportation (DOT) regulations. Household hazardous waste collected from homes would be transferred to either a permitted permanent HHW collection facility, to an approved treatment, storage, or disposal (TSD) facility, or transported directly to a permitted hazardous waste disposal facility.

Waste Diversion Potential. A door-to-door pickup service is designed to collect wastes from individuals who may otherwise not have the opportunity to properly dispose of their HHW. This target population, the elderly and disabled unable to participate in other HHW services, represents a relatively small percentage of households in the unincorporated area of Santa Clara County. A "high" rating was assigned to this alternative for its potential to divert HHW from this target population.

Absence of Hazard. This alternative involves slightly more transportation and handling of waste than the periodic events, mobile collection, or permanent facility alternatives. However, proper program design, equipment, and health and safety training can minimize potential hazards associated with door-to-door HHW pickup. A "medium" rating was assigned to this alternative.

Flexibility. Door-to-door collection services could be operated as an adjunct to periodic events, a mobile collection unit, or a permanent facility. The routing plan could be coordinated with the schedules of these programs. The service would operate on an appointment basis. A "high" flexibility rating was assigned to this alternative because operation schedules and routes can be easily modified.

Availability of Service (Nearby and Frequent Service). The door-to-door HHW pickup service would require no travel for elderly or disabled residents. The frequency of service would be determined by frequency of other HHW events in the area as this service would most likely operate as an adjunct to other HHW collection services. Frequency of service is also dependent upon the level of funding available. A "medium" rating was assigned to this alternative as the cost of door-to-door services may be a serious limiting factor for frequency of service.

Provides Immediate Needs Disposal Services. The door-to-door HHW pickup service is designed to operate on an appointment-only basis due to the cost of providing this service to a small number of residents. If the door-to-door HHW pickup service is operating as an adjunct to a permanent facility, with permanent staff, equipment, and storage space, the potential exists to provide immediate need services to elderly and disabled residents. A "medium" rating was assigned.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. If a door-to-door service operated in conjunction with a permanent facility, the permanent facility may need a variance to accept waste collected through door-to-door service. Collected HHW delivered to the permanent

facility could be sorted and stored to enhance recycling and reuse potential. In addition, waste could be bulked to reduce disposal costs. Another method of providing door-to-door service would be to contract with a licensed hazardous waste management company which would transport collected HHW directly to a disposal facility.

It is anticipated that door-to-door HHW pickup service could be implemented in the medium-term planning period (after 1995), either as an adjunct to other HHW collection services or by contracting for services of a private hazardous waste disposal company. A "medium" rating was assigned to this alternative.

Facility Needs. Door-to-door HHW pickup services require the use of trucks equipped to transport and store hazardous materials. Space is also needed to store the collected materials unless the wastes are delivered directly to a disposal facility. It is possible that this service could be obtained on a contract basis from a licensed hazardous waste management company. A "medium" rating was assigned.

Consistency with Local Policies. Door-to-door HHW collection does not appear to be incompatible with local policies. The County of Santa Clara supports the provision of services to its residents regardless of handicap or physical limitation. A "high" rating was assigned.

Absence of Institutional Barriers. There do not appear to be any existing contracts or agreements that would prevent the implementation of a door-to-door HHW pickup service for elderly and disabled residents. A "high" rating was assigned.

Estimated Cost. Door-to-door HHW pickup programs have been sponsored by the Cities of Burbank and San Diego. In Burbank, a licensed private waste hauler collected HHW from approximately 200 elderly and disabled residents. The service was operated in conjunction with a city-sponsored HHW drop-off event. The routing schedule was prepared by city staff. The collected HHW was delivered to the drop-off event. The cost for this service was \$8000. This cost includes only the actual collection of the HHW from the elderly and disabled residents, and does not include planning time or waste disposal costs which were included with the costs of operating the drop-off event.

End Uses (Recyclability and Redistribution Potential). Recyclability and redistribution potential of HHW collected in a door-to-door service would depend on whether or not the service was associated with other HHW collection programs. If collected HHW was delivered to a permanent facility, recyclable and reusable materials could be retrieved. However, if the door-to-door service was operated

independent of other HHW programs, the collected wastes would be delivered directly to a hazardous waste disposal facility and the wastes would be disposed of. A "medium" rating was assigned to this alternative.

ALTERNATIVE 7 - HAZARDOUS WASTE EXCLUSION PROGRAM/LOAD CHECKING

The purpose of hazardous waste exclusion and load checking programs is to detect and deter attempts to dispose of prohibited waste in landfills. All landfills are required by the state to operate load checking programs.

Load checking involves visual inspection for hazardous waste at the entrance of the landfill and at the working face. If prohibited waste is identified, the generator is notified and becomes responsible for removing the waste. If the generator cannot be found, the waste is removed and properly disposed of.

Other hazardous waste exclusion activities include sign posting and employee training. In addition, some waste haulers notify customers about the prohibited disposal of hazardous waste in the landfill by posting signs on dumpsters, including messages in utility bills and by training employees to inspect incoming waste for hazardous materials.

Waste Diversion Potential. The load-checking program diverts a small amount of HHW from landfill disposal. However, load checking and the other hazardous waste exclusion programs educate generators, haulers, disposal facility personnel, and the public about the proper disposal of hazardous waste. An effective hazardous waste exclusion program reduces disposal of HHW in landfills, and was, therefore, rated "medium."

Absence of Hazard. The potential hazards involved in a load checking program include the risk from exposure while inspecting and handling waste. Proper equipment, training and management of the load checking program can reduce hazards. Other hazardous waste exclusion activities such as sign posting, training, and notification of proper HHW disposal procedures pose minimal hazards. The overall hazardous waste exclusion program alternative was rated "medium."

Flexibility. A landfill load checking program is mandated by the state. Additional inspections and notifications could be added to strengthen existing programs. Hazardous waste exclusion activities are judged to have "medium" flexibility, as landfill operators and waste haulers may expand upon the state-mandated load

checking programs.

Availability of Service. This criterion is not applicable because it is a landfill-based operational program which does not provide direct services to the public.

Provides Immediate Need Services. This criterion is not applicable because it is a landfill-based operational program which does not provide direct services to the public.

Limited Shift in Waste Type Generation. A hazardous waste exclusion program might result in a desirable shift in waste type generation. By deterring illegal landfill disposal of hazardous waste, residents may be more likely to purchase and use less hazardous substitutes.

It is possible that, while helping to prevent landfill disposal of hazardous waste, load checking may, at the same time result in an increase in illegal disposal elsewhere. It is anticipated, however, that illegal disposal will decrease as legal disposal options become more widely available and awareness increases about environmental impacts of improper disposal. This alternative was rated "medium."

Ease of Implementation. The hazardous waste exclusion program was rated "high" as it is currently in place at all landfills in the County of Santa Clara. Landfill operators are responsible to implement these activities. Since the County does not own or operate any landfills, the County's responsibility is limited to enforcement of the load checking requirements.

Facility Needs. No new facilities are needed for the load checking programs. A "high" rating was assigned to this alternative.

Consistency with Local Policies. The hazardous waste exclusion program is consistent with local and state policies to keep prohibited wastes from entering the landfill. A load checking program is required at all landfills in California. The State Water Resources Control Board requires landfills to operate hazardous waste load checking programs (Section 2523, Title 23, California Code of Regulations (CCR). The Department of Health Services and the California Integrated Waste Management Board require solid waste facilities to follow certain procedures regarding their load checking programs. The Department of Health Services requires a solid waste facility with a hazardous waste load checking program to obtain an identification number as a hazardous waste generator. Hazardous waste must be stored for less than 90 days in accordance with a hazardous waste permit issued by the Department of Health Services. If hazardous waste will be stored for

more than 90 days, the solid waste facility must apply to the Department of Health Services for a hazardous waste facility permit or a variance. Hazardous waste exclusion programs were rated "high" for consistency with local policies.

Absence of Institutional Barriers. No contractual or other institutional barriers are known that would interfere with the continuation of hazardous waste exclusion programs. A "high" rating was assigned.

Estimated Cost. Hazardous waste exclusion programs are implemented by landfill operators and waste haulers in accordance with State requirements. Landfill-related costs are included in disposal rates; collection-related costs are included in collection rates. The City of San Jose is currently responsible for enforcement of the landfill load checking requirements for landfills in San Jose. The County is responsible for enforcement of the landfill load checking requirements for landfills in other jurisdictions in the County. County Environmental Health Services has reported expending \$40,000 during the period when it was responsible for monitoring load checking programs at all of the landfills in the county. The enforcement program is funded by fees charged to landfills.

End Uses (Recyclability and Redistribution Potential). It is unlikely that significant amounts of HHW in good condition would be retrieved in the load checking program. Efforts by waste haulers to identify and reject HHW might encourage residents to use proper disposal methods, including recycling materials such as automotive batteries, latex paint and motor oil. Landfill sign posting and utility bill notices also encourage residents to use the city-sponsored HHW collection system that will separate a number of materials for recycling and redistribution. The hazardous waste exclusion program was rated "low" in recyclability/redistribution potential.

ALTERNATIVE 8 - HHW RECYCLING COMPONENT

An HHW Recycling Component would result in the implementation of recycling procedures at HHW collection programs. Oil, auto batteries, antifreeze and latex paint are currently recyclable.

Waste Diversion Potential. Markets are already established for waste oil, auto batteries, antifreeze and latex paint. Strong community support exists for the concept of recycling. HHW recycling diverts wastes from both solid waste landfills and hazardous waste landfills. Therefore, the waste diversion potential of the HHW recycling component is rated "high."

Absence of Hazard. Some hazards are associated with collection and handling of latex paint. Latex paint that has been stored for many years may contain mercury and/or lead. Older latex paint, improperly labeled paint, paint not in its original container, and possibly contaminated paint should be sent for disposal instead of recycling. Collection of used auto batteries may present hazards if batteries are cracked and leaking. Oil collection presents hazards of accidental spillage or exposure during curbside collection, at oil drop-off centers, and at HHW events. However, recycling programs for latex paint, motor oil, and auto batteries are well-established in several Santa Clara County communities and have operated safely. Proper staff training and operating procedures can reduce potential hazards. A "medium" rating was assigned.

Flexibility. As more residents use the HHW programs, additional collection opportunities and space for storage and handling may be required. This alternative was rated "high" in flexibility. Increasing amounts of recyclable materials can be accommodated without major changes in the program.

Availability of Service. The HHW recycling component could be incorporated into mobile collection, periodic events and the permanent facility alternatives. A "high" rating was assigned.

Provides Immediate Need Services. Recyclable HHW can be accepted at a mobile unit, periodic event, at a permanent HHW disposal facility or at a recycling center or materials recovery facility that chooses to collect these recyclable materials. All of these alternatives are capable, at varying degrees, of accommodating residents requesting immediate HHW disposal service. A "high" rating was assigned.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. Recycling of oil, auto batteries, and latex paint are well-established components of collection programs and will also be incorporated into the Countywide HHW Program. No obstacles are known that would hinder the implementation of new recycling procedures for addition materials. The HHW recycling component alternative was rated "high."

Facility Needs. A "high" rating was assigned as no additional facilities are required to operate the recycling component of a HHW collection program. However, adequate space for consolidation of materials and for storage of partially-filled drums of recyclable materials greatly facilitates recycling of HHW.

Consistency with Local Policies. The County of Santa Clara encourages recycling of solid and hazardous waste. The County Hazardous Waste Management (Tanner) Plan ascribes to the waste management hierarchy in which recycling is one of the desirable management options. In addition, state regulations encourage the collection and recycling of latex paint, used oil, antifreeze, and lead-acid batteries. HHW recycling was therefore rated "high" in consistency with local policies.

Absence of Institutional Barriers. There are no known long-term contracts or franchise agreements that would interfere with recycling of HHW. A "high" rating was assigned.

Estimated Cost. The cost of HHW recycling was included in the \$90-\$110 per vehicle cost estimate for the various household hazardous waste collection program alternatives evaluated above. Recycling of HHW is not considered an additional cost. While separation of materials for recycling requires more staff time, the more expensive HHW landfill or incineration disposal costs are avoided by sending recyclable materials for recovery, reprocessing, and re-use.

End Uses (Recyclability and Redistribution Potential). A "high" rating was assigned, as recycling options for motor oil, automotive batteries, and latex paint are well-established. Common methods for recycling HHW, as well as limitations of recycling, are described below.

- Latex paint can be collected, sorted, consolidated, blended, repackaged, and sold or given to local public agencies and nonprofit groups. It is commonly used by government agencies to cover graffiti. It can be sent to a paint company to be re-manufactured and even sold in paint stores as re-conditioned paint.
- Used oil is a valuable resource. Recycling used oil saves energy and natural resources. Used oil can be refined into lubricating oil, reused as motor oil, or reprocessed and used as fuel in industrial burners and boilers. The Environmental Protection Agency estimates that only 1 gallon of used oil is needed to make 2.5 quarts of lubricating oil, compared to 42 gallons of raw crude oil.
- According to the CIWMB, 70 percent of spent lead-acid batteries are recycled nationwide. In California, state law requires battery retailers to accept their customer's used battery. Consumers can also deliver batteries to lead-acid battery recyclers, some scrap metal businesses and to HHW programs.

The average lead-acid battery contains 17.5 pounds of lead and 1.5 pounds of sulfuric acid. After the lead is separated from the non-metallic components of the battery, it

is smelted to produce soft lead and lead alloys. The non-metallic materials include sulfuric acid, which is neutralized and released into the sewer, and other non-recyclable, non-hazardous materials are disposed of. (*Household Hazardous Waste, Lead-Acid Batteries, CIWMB, September, 1990*).

- Used antifreeze can be recycled for use by the mining and glycol industries. Antifreeze is sprayed on coal to inhibit sticking. Antifreeze can also be used for airplane de-icing solution, cement grinding and brake fluid. (*Household Hazardous Waste, Antifreeze, CIWMB, September, 1990*).
- Recycling options for small household batteries are very limited at this time. Silver oxide button batteries may be recycled, but substantial obstacles exist to collecting and sorting these batteries. Consumer nickel cadmium battery recycling may be available in the near future. Recycling options for small household batteries are currently under study by the CIWMB. Results of this study and related research will be monitored and resulting recommendations will be considered for implementation.

ALTERNATIVE 9 - HHW WASTE EXCHANGE COMPONENT

A waste exchange program recovers valuable materials from the HHW waste stream and makes these materials available for use. The County Division of Environmental Health Services estimates that approximately 5% of incoming waste can be diverted for use by residents or public agencies. Waste exchange activities can take place at periodic events, mobile collection unit events, and at permanent facilities. A permanent facility allows for storage of valuable products thereby enhancing waste exchange activities.

Waste Diversion Potential. Usable materials can be diverted from disposal and made available to participating residents, voluntary organizations and public agencies. A HHW waste exchange program has a "high" waste diversion potential because a portion of the incoming waste stream could be diverted for reuse.

Absence of Hazard. Waste exchange takes place under the supervision of HHW program staff, thereby limiting hazards. However, staff must ensure that outdated, banned, or contaminated products are not redistributed. Before accepting reusable products, residents should be required to sign a waiver-of-liability form, thereby releasing the Program from liability. Waste exchange was rated "medium" in absence of hazard.

Flexibility. An HHW waste exchange component can be implemented or eliminated depending on available space, staff and demand. Waste exchange was rated "high" in flexibility.

Availability of Service. The HHW waste exchange activities can be added to periodic events, mobile collection or at a permanent facility. A "high" rating was assigned.

Provides Immediate Need Disposal Services. This criterion is not applicable because this alternative does not affect the ability of the HHW Collection Program to provide immediate service to residents.

Limited Shift in Waste Type Generation. This alternative is not expected to change the type or amount of waste generated. This alternative rates "high."

Ease of Implementation. An HHW waste exchange component involves examination of incoming waste and segregation of usable materials for distribution to residents or public agencies. The implementation of waste exchange activities is tied to the operation of periodic, drop-off mobile, or permanent facility, the first two of which can be implemented in the short-term planning period (before 1995). Although a permanent facility is not likely to begin operation before 1995, because waste exchanges are easy to implement and incorporate into a mobile drop-off program, a "high" rating was assigned.

Facility Needs. No new facilities would be required to implement a HHW waste exchange component. However, the ability to store valuable, usable products between events at the permanent facility will increase the program's ability to redistribute products. A "high" rating was assigned.

Consistent With Local Policies. The County of Santa Clara supports efforts to reduce the volume and toxicity of the waste stream. Waste exchange efforts were therefore rated "high."

Absence of Institutional Barriers. There are no known institutional barriers, such as contracts or franchise agreements, that would interfere with implementation of waste exchange activities as a component of HHW collection programs. A "high" rating was assigned.

Estimated Cost. Waste exchange activities are not expected to add to the cost of HHW collection. In fact, this alternative has the potential to reduce waste disposal costs by distributing valuable products to residents and agencies.

End Uses (Recyclability and Redistribution Potential)

An HHW waste exchange component was rated "high" in recyclability/redistribution potential as the purpose of this component is the redistribution of usable products.

Table 3
Evaluation of Household Hazardous Waste Management Alternatives

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8	Alt. 9
	Periodic Drop-Off Events	Five Permanent Facilities	Mobile Collection	Mobile Unit plus Permanent	Curbside Motor Oil Collection	Pick-up Elderly/ Disabled	HHW Exclusion Program	HHW Recycling Component	Waste Exchange Component
Waste Diversion Potential	High	High	High	High	High	High	Medium	High	High
Absence of Hazard	Medium	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Flexibility	Medium	High	High	High	High	High	Medium	High	High
Availability of Service	Medium	High	High	High	High	Medium	N/A	High	High
Immediate Need Services	Low	High	High	High	High	Medium	N/A	High	N/A
Limited Shift Waste Type	High	High	High	High	High	High	Medium	High	High
Ease of Implementation	High	Medium	High	Medium	High	Medium	High	High	High
Facility Needs	High	Low	High	Medium	High	Medium	High	High	High
Consistent w/ Local Policies	Medium	Medium	High	High	High	High	High	High	High
Absence of Inst. Barriers	High	High	High	High	High	High	High	High	High
Estimated Cost	90 - 110 per car	90 - 110 per car	90 - 110 per car	90 - 110 per car	Included in rates	40 per household	Funded by landfill fees	No added cost	No added cost
End Uses	Medium	High	Medium	High	High	Medium	Low	High	High

SELECTION OF HOUSEHOLD HAZARDOUS WASTE PROGRAM

ALTERNATIVES SELECTED

The selection of HHW management alternatives for the unincorporated area of Santa Clara County was based on the results of the waste characterization studies and the evaluation described beginning on page 23. The evaluation is summarized below.

Short-Term Planning Period

The following alternatives were selected to properly manage HHW during the short-term planning period (1991-1995) in the County of Santa Clara.

Alternative 5	Curbside Motor Oil Collection
Alternative 7	Hazardous Waste Exclusion Program
Alternative 8	Household Hazardous Waste Recycling Component
Alternative 9	Household Hazardous Waste Exchange Component

Alternative 5: Curbside Motor Oil Collection, was selected due to its potential to divert large quantities of one of the most prevalent types of HHW. Existing programs will be continued. In some areas, new programs may be implemented.

Alternative 7: Hazardous Waste Exclusion Program, diverts incoming HHW from disposal at the landfill. This alternative also helps to educate residents and waste haulers about proper disposal of HHW. Hazardous waste exclusion programs are mandated by the state, and are already in place at all landfills in Santa Clara County.

Alternative 8: Household Hazardous Waste Recycling Component, was selected for inclusion in the operation of the permanent facility and mobile collection unit. Materials such as latex paint, motor oil, antifreeze and automotive batteries can be easily separated from the incoming HHW and sent for recycling instead of disposal. The recycling component has the potential to reduce the costs of the HHW collection program as there will be a reduction in the amount of HHW sent for more expensive hazardous waste disposal. Recyclable HHW materials will be sent only to permitted facilities and environmental compliance records will be maintained on file for all waste haulers and treatment, storage, and disposal companies.

Alternative 9: Household Hazardous Waste Exchange Component, was selected due to its ability to divert usable HHW from disposal by making it available for redistribution to residents, public agencies, and non-profit organizations. Waste exchange activities can take place at both the mobile collection unit and the permanent facility. The HHW waste exchange component is not expected to add to program cost, and, in fact, may reduce costs by reducing the amount of HHW sent for disposal.

Medium-Term Planning Period

The following programs were selected to manage HHW during the medium-term planning period (1995-2000):

Alternative 4	Combination Mobile Unit Plus Permanent Facility
Alternative 5	Curbside Motor Oil Collection
Alternative 6	Door-to-Door HHW Pickup for Elderly and Disabled
Alternative 7	Hazardous Waste Exclusion Program
Alternative 8	Household Hazardous Waste Recycling Component
Alternative 9	Household Hazardous Waste Exchange Component

Alternative 4: Combination Mobile Unit Plus One Permanent Facility was selected. The mobile collection unit has the ability to provide convenient, cost-effective services to a large geographical area. The unit will operate within a 20 minute commute of most residents in participating jurisdictions. A mobile collection program is highly flexible, as both location and frequency of operation can be changed to accommodate variations in demand or shifts in population density. Residents requesting immediate disposal services can be accommodated at the next scheduled location of the mobile unit. The mobile unit will be operated on an appointment basis. Residents arriving at the mobile unit without an appointment will be accommodated when possible. The pilot mobile HHW disposal program modeled after this alternative began in November 1991 and has continued into fiscal year 1992-1993.

The permanent collection facility can provide convenient, cost-effective services for a densely-populated, centralized portion of the county. The permanent facility can also meet the needs of residents throughout the county who are moving and request immediate disposal services.

A permanent facility can process participants efficiently and safely due to the presence of permanent staff; proper equipment; and storage capabilities. Options for

reuse and recycling of collected materials are enhanced due to space for storage. A permanent facility is flexible in that the hours of operation can increase as demand for HHW disposal services increases.

Depending on the complexity of the siting, environmental review, and permitting process, the facility should be operational during the medium-term planning period (after January 1, 1995). The planning process is already underway for a permanent facility and it is anticipated that the facility may open in one to two years.

Additional advantages of this alternative over the periodic events alternative are as follows: The multijurisdictional Countywide HHW Program would relieve participating jurisdictions of the burden of planning and staffing HHW events. Waste disposal and planning costs may be lower due to an economy-of-scale. The combination of two methods of HHW collection, a mobile unit plus one permanent facility, can provide service at multiple locations, offers frequent service, is consistent with local policies, and has the ability to provide immediate need service.

Alternative 6: Door-to-Door Pickup for Elderly and Disabled Residents, was selected due to its potential to divert HHW from a small target population that would otherwise not have the opportunity to participate in the HHW collection programs. This service could be offered in conjunction with the operation of the permanent facility or the service could be contracted with a private company.

All alternatives chosen for the short-term planning period are expected to continue into the medium-term planning period. Additional source reduction educational activities and the feasibility of additional permanent facilities will be explored for implementation in the medium-term planning period.

TYPES AND QUANTITIES OF HOUSEHOLD HAZARDOUS WASTE ANTICIPATED TO BE COLLECTED, RECYCLED, AND/OR DISPOSED

The amount of HHW to be collected, recycled or disposed from 1991 to 2000 in the County of Santa Clara is dependent on several factors: convenience, accessibility, and efficiency of the collection services, funding available to operate the services, and the success of source reduction efforts. It is anticipated that demand for HHW services will grow as more residents become aware of proper disposal procedures and as the population of the county increases. At the same time, public education should result in changes in purchasing habits that result in a decrease in HHW generation. Using 1990 as the baseline year, it is expected that implementation of

the programs described in this element will result in annually-increasing diversion of HHW from the municipal waste stream in the unincorporated area of Santa Clara County.

Each year, the County will evaluate participation rates and demand for services. In addition, the amount of HHW diverted and the amount of HHW remaining in the solid waste stream will be monitored periodically by waste characterization studies. Based on these evaluations, additional HHW services may be provided as funds become available. Potential sources of additional funding include additional surcharges on garbage collection fees and advance disposal fees added to product purchase prices.

The end uses for diverted materials are described in the evaluation of the alternatives beginning on page 23.

At present, it is not possible to determine the amount of HHW that will be diverted by source reduction and education programs. Methods for evaluating the success of source reduction activities are currently under development. Possible methods include monitoring of changes in purchasing habits using industry marketing data, random telephone surveys, and questionnaires at collection events. Programs should not be evaluated solely on the basis of self-reported data from surveys. Survey results can be easily biased by the wording of the questions, respondents' inability to recall details about past purchasing habits, and a tendency to report the desired behavior. The linguistic and cultural diversity of the community would further complicate use of survey tools to accurately measure source reduction.

The county intends to support legislative efforts, as outlined in the County Hazardous Waste Management (Tanner) Plan, to encourage the development of less-or non-hazardous products. As new products become available that replace products that generate HHW, it may be possible to quantify the resulting reduction in HHW generation for specific products or materials.

FACILITIES NEEDED FOR IMPLEMENTATION

The permanent facility could be a lower-cost operation utilizing roll-off bins, fencing, and spill/run-off containment structures. Other options include the use of a modified existing structure or a specially designed and constructed building. A permanent facility should have separate storage bays or bins, explosion proofing, ground columns, proper containment, sufficient ventilation and adequate emergency response and safety equipment. It should be situated on an impervious surface and be fenced for security.

HANDLING AND DISPOSAL METHODS

Handling and disposal methods are regulated by local, state and federal agencies. The mobile unit and permanent facility will be staffed by professionals trained to handle hazardous materials. Regulations will be monitored for changes and HHW programs will be modified accordingly.

Contractors who will haul and dispose of waste collected by the Countywide HHW Program must be licensed hazardous waste haulers. Environmental compliance of treatment, storage and disposal facilities will be monitored by the Santa Clara County Division of Environmental Health Services. To the maximum extent feasible, collected HHW will be diverted from disposal for recycling or reuse.

MULTIJURISDICTIONAL HHW EFFORTS

As described in the Introduction section of this document, the County of Santa Clara intends to participate in the Countywide HHW Program for collection services for the unincorporated area. Multijurisdictional public education programs are described in detail in the Education and Public Information Section (page 61). This multijurisdictional collection and education effort is expected to provide convenient, accessible, and cost-effective services for residents of participating jurisdictions throughout the county.

Representatives from all cities as well as County staff participated in the Household Hazardous Materials Working Group planning process which resulted in the development of the Countywide HHW Program. The program has been reviewed and endorsed by the Santa Clara County Solid Waste Technical Advisory Committee (TAC), the County Solid Waste Commission (formerly, the Intergovernmental Council (IGC) Solid Waste Committee), and the IGC. County departments received the approval to administer the Program from the Board of Supervisors on 2/26/91. In 1991, a memoranda of understanding (MOU) between participating cities and the County for HHW collection services was developed. A copy of a typical MOU (between the County and the City of Campbell) is included as Attachment C. Since the County operated the collection program, a formal MOU was not developed for providing services to the unincorporated area.

Implementing the Countywide HHW Program will promote regional cooperation and expand services to residents of all participating jurisdictions. Providing

convenient, year-round access to service on a countywide basis will maximize the amount of HHW diverted from the municipal waste stream and meet the demands for ongoing HHW disposal services.

REUSE, RECYCLING, AND END USES FOR DIVERTED MATERIALS

In 1990, approximately 60% of the HHW collected in the County of Santa Clara was sent for disposal and approximately 40% was sent for recycling. This includes motor oil collected by the curbside program and oil, paint and automotive batteries collected at HHW events. Less than 1% of collected HHW was distributed to residents or public and non-profit agencies in the HHW waste exchange program.

It is anticipated that the Countywide HHW Program will recycle a greater percentage of total HHW collected in the unincorporated area. Improvements in waste handling techniques are expected to result in increased recycling. For recycling methods for specific wastes, see the Evaluation of Alternative 8 (page 39).

A HHW waste exchange component will be included at the mobile collection unit and permanent facility to further divert reusable materials from disposal. The material should be in its original container, and, if opened, the program staff must judge the contents to be sound and uncontaminated. The party accepting material for reuse should be required to sign a liability waiver releasing the facility operator from responsibility.

End uses for materials diverted through HHW recycling or reuse efforts were described in the section Evaluation of HHW Management Alternatives under the "End Uses" criteria (beginning on page 23).

PROGRAM IMPLEMENTATION

This section describes the responsible parties, necessary tasks, estimated costs, and sources of funding for the implementation of the selected HHW program.

GOVERNMENT AGENCIES RESPONSIBLE FOR IMPLEMENTATION

The Countywide HHW Program will be administered by the County of Santa Clara Division of Environmental Health Services and the Department of Planning and Development. The Division of Environmental Health Services will serve as the lead agency for the implementation of the HHW collection program. Hazardous materials and environmental health specialists will be utilized for development and initial implementation of the collection program. Health Department in-house support services include an industrial hygienist, a toxicologist, and a chemist. A public health laboratory is available for use in identifying unlabeled wastes. Staff will contract for transportation, recycling, and disposal services.

The Department of Planning and Development will serve as the lead agency for public education. Staff will coordinate the educational efforts with participating cities, County Environmental Health, the Santa Clara Valley Water District, the wastewater treatment facilities, schools, and non-profit agencies.

IMPLEMENTATION TASKS AND SCHEDULE FOR SHORT-TERM AND MEDIUM-TERM PLANNING PERIODS

The schedule for implementation for the selected HHW programs are included in Table 4. Once established, it is anticipated that these programs will continue during the short- and medium-term planning periods. However, each program will undergo an annual evaluation and may be modified to meet the changing needs of the residents of the unincorporated area. The completion dates included in Table 4 are estimates and may be modified.

TABLE 4

IMPLEMENTATION TASKS AND SCHEDULES FOR SHORT-AND MEDIUM-TERM PLANNING PERIODS

TASK	COMPLETION DATE
<u>Mobile Collection Unit</u>	
• Formalize Interjurisdictional Relationships for HHW Services	1991
• Select Mobile Sites	1991
• Obtain Permits	1991-1992
• Purchase Equipment and Supplies	1991
• Recruit and Train Staff	1991, ongoing
• Develop Collection Program Schedule	1991, annually
• Develop Record Keeping System	1991
• Evaluate Environmental Compliance of Contractors	1991, ongoing
• Contract for Waste Transportation, Recycling and Disposal Services	1991
• Develop and Advertise Telephone Appointment and Information Line	1991
• Advertise Mobile Unit Schedule	1991, ongoing
• Conduct Mobile Collection Events	1991, ongoing
• Conduct Annual Evaluation of Mobile Unit Program	1992, annually
• Adjust Program and Service Based on Desired Level of Participation and Feedback from Cities and Residents	1992, annually
<u>Permanent Facility</u>	
• Identify Potential Sites	1994
• Evaluate Staffing and Operational Alternatives	1994-1995
• Identify Permit Requirements	1994-1995
• Select Site	1995-1996
• Obtain Permits, Variances	1995
• Develop Agreement Between County and Site Location	1995
• Construct/Modify the Facility	1995-1996
• Obtain Equipment and Supplies	1995-1996
• Evaluate Environmental Compliance of Contractors	1995, ongoing
• Contract for Waste Transportation, Recycling, and Disposal Services	1995, ongoing
• Recruit and Train Staff	1995, ongoing
• Develop Record Keeping System	1995-1996
• Advertise Permanent Site Location and Hours	ongoing
• Open Permanent Facility	1995
• Conduct Evaluation of Permanent Facility	annually
• Adjust Program and Service Based on Cities' Desired Level of Participation and Feedback From City and County Residents	annually
<u>Curbside Motor Oil Collection</u>	
• Continue operation of curbside motor oil collection	ongoing
• Explore options for expansion of curbside collection	1991, ongoing
<u>Hazardous Waste Exclusion Program</u>	
• Continue Operation of Hazardous Waste Exclusion Program	ongoing
• Include Report on Hazardous Waste Exclusion Program in Annual Evaluations	annually

TABLE 4(continued)

IMPLEMENTATION TASKS AND SCHEDULES FOR SHORT- AND MEDIUM-TERM PLANNING PERIODS

TASK	COMPLETION DATE
<u>HHW Recycling Component</u>	
<ul style="list-style-type: none"> Evaluate Environmental Compliance Records of HHW Recycling Contractors Contract for Recycling Services for Collected HHW Re-evaluate and Update Recycling Options Annually 	1991, ongoing 1991, ongoing 1991, annually
<u>HHW Waste Exchange Component</u>	
<ul style="list-style-type: none"> Include HHW Waste Exchange Procedures in Staff Training Develop Waiver for Residents to Sign Before Accepting Materials Include Additional Table and Storage at Mobile Unit and Permanent Facility 	1991, ongoing 1991 1991, ongoing
<u>HHW Pick-up for Elderly and Disabled Residents</u>	
<ul style="list-style-type: none"> Determine Need for Special Collection Services Obtain Estimated Costs for Service Evaluate Feasibility of Special Collection Services If Service is Considered to be Feasible, Begin Implementation Steps: Obtain Required Approvals from City Councils Identify and Obtain Funding Coordinate Service with Countywide HHW Program Schedule Hire or Contract Collection Services Establish Telephone Appointment System Advertise Service Provide Collection Service 	1996 1996 1996 1996 1996 1996-1997 1996-1997 1996-1997 1996-1997 1996-1997 1997, ongoing
<u>Monitoring and Evaluation of HHW Program</u>	
<ul style="list-style-type: none"> Obtain Records from Mobile Unit and Permanent Facility Administrator Obtain Records from Hazardous Waste Exclusion Programs Obtain Records from City-Sponsored HHW Programs Conduct Survey of Participating City HHW Program Administrators Conduct Survey of Residents Analyze Participation Data for under-representation Evaluate Adequacy of Services Write and Distribute Annual Report Modify Programs as Necessary 	1992, annually 1992, annually 1992, annually 1992, annually 1992, annually 1992, annually 1992, annually 1992, annually 1992, annually

COST OF PROGRAMS

The estimated annual costs in 1991 for HHW programs for the unincorporated area are summarized in Table 5. Each year, the County staff will review the HHW services, including service provided through Countywide HHW Program as well as used motor oil collection programs and hazardous waste exclusion programs at the landfills.

Table 5

Costs for HHW Programs for the Unincorporated Area, 1991

Program	Estimated Annual Costs	Source of Funding
Combination Mobile Unit and Permanent Facility Operations	7,000**	Use fee paid by County through garbage rate surcharge
Curbside Oil Collection	N/A	Included in garbage rates
Door-to-Door Pick-up for Elderly and Disabled	N/A	Garbage rate surcharge
Hazardous Waste Exclusion Program	\$40,000	County Environmental Health
HHW Recycling	Included in \$100 per vehicle	
HHW Waste Exchange Program	No additional cost anticipated	

**The above estimate was derived by multiplying the anticipated 70 vehicles to be served by an estimated \$100 per vehicle cost. The \$100 per car is the estimated cost for operating the pilot program in fiscal '91-'92. The \$100 per vehicle cost can be broken down as follows: Labor, \$24; Disposal/Hauling, \$39; Supplies, \$7; Training, Advertising, Equipment and Administrative, \$30.

SOURCES OF FUNDING FOR IMPLEMENTATION OF HHW PROGRAM

The Countywide HHW Program has several sources of funding. Each city participating in the program will pay for services on a per-car basis. Funds for serving county unincorporated residents will come from garbage surcharge fees.

MONITORING AND EVALUATION

METHODS TO QUANTIFY AND MONITOR ACHIEVEMENT OF SHORT-TERM PLANNING PERIOD OBJECTIVES

Objective 1: Provide residents of unincorporated area with access to convenient household hazardous waste collection services.

Evaluation Method 1 - Participation records will be kept at all events and programs. Results will be compiled for inclusion in annual reports.

Evaluation Method 2 - Analyses will be done of the geographical distribution of collection event participants. If communities or neighborhoods are found to be under-utilizing the services, obstacles will be identified and appropriate steps will be taken to improve participation. Results of this analysis will be included in annual reports.

Evaluation Method 3 - Progress on siting, permitting, and constructing a permanent HHW collection facility will be monitored by the County Health Services Administrator every 3 months to assure the project is progressing on schedule. A progress report on the development and operation of the permanent facility will be included in the annual reports.

Evaluation Method 4 - A survey of participants will be done annually to determine the level of satisfaction and to identify problems. Participants will be queried regarding ease in obtaining information about the program, length of wait for appointment, convenience of collection location, length of wait at collection site, the service provided by the collection event staff, and convenience of operating hours.

Evaluation Method 5 - The amount (tonnage) of material collected by all HHW programs will be recorded. This data will be compiled and included in annual reports.

It should be noted that the total waste collected figures can be misleading for use as a program evaluation criterion. A number of factors can affect these figures, making year-to-year comparisons difficult. For example, successful source reduction efforts will reduce the amount of HHW generated per household. Furthermore, many households' first drop-off is likely to be larger than subsequent drop-offs because it includes the items that have been stored for extended periods of time. Therefore, while HHW collection programs will become more accessible and efficient, the amount of HHW collected per household may actually decline over time. These effects may be particularly noticeable during the medium-term planning period (1995-2000).

Despite these limitations, the total amount collected is an important element in evaluating the success of the program. Every effort will be made to collect accurate data on amounts of HHW collected. The Countywide HHW Program's efforts to standardize HHW measurement methods will increase the accuracy of these evaluation efforts.

Evaluation Method 6 - The baseline data from the 1991 waste characterization studies will be compared to subsequent waste characterization studies to evaluate the amount of HHW entering the landfill.

This type of comparison should be used with caution. In addition to the limitations described above, the percentage of the waste stream that is HHW in future waste characterization studies may not be an accurate means of evaluating the HHW program. The solid waste recycling, composting and source reduction programs will substantially reduce the overall amount of solid waste in the short-term planning period. The amount of HHW entering the landfill is expected to decline, but may not decline at the same rate as solid waste. This may result in an increase in the percentage of HHW in the solid waste stream, while the amount of HHW may actually be decreasing. Adjustments should be made to account for these factors.

Objective 2: Expand motor oil collection programs, to the maximum extent possible, to include all single and multi-family dwellings in the unincorporated area of Santa Clara County.

Evaluation Method 1 - The amount of motor oil collected by the curbside collection program will be included in the annual report. The number of households eligible

and the number of households participating in curbside oil collection will be included.

Evaluation Method 2 - The curbside motor oil collection program expansion plans and expansion progress will be included in the annual report.

Objective 3: Minimize disposal of collected Household Hazardous Waste through distribution of reusable materials and Household Hazardous Waste recycling.

Evaluation Method 1 - Each type of HHW diverted for recycling will be tracked to determine the total amount of waste recycled. The data will be included in annual reports.

Evaluation Method 2 - The types and amounts of HHW redistributed to non-profit groups and public agencies will be recorded for inclusion in annual reports.

Evaluation Method 3 - The amount of HHW redistributed to residents at HHW events will be recorded for inclusion in annual reports.

Objective 4: Improve monitoring and evaluation of Household Hazardous Waste programs.

Evaluation Method 1 - At the end of the first year of operation, new measurement methods will be evaluated by participating cities and agencies.

Objective 5: Limit improper disposal of Hazardous Waste at solid waste landfills by continuing state-mandated hazardous waste exclusion programs.

Evaluation Method 1 - The Division of Environmental Health Service's annual reports on the hazardous waste exclusion program will be incorporated into the annual HHW program reports.

Evaluation Method 2 - The quantities of HHW discovered in the load checking program will be charted in order to monitor increases or decreases from previous years.

Objective 6: Increase efficiency and effectiveness of Household Hazardous Waste collection services and public education by coordinating programs with other jurisdictions and agencies whenever feasible.

Evaluation Method 1 - Annual surveys of officials from participating jurisdictions will be done to determine overall level of satisfaction and to identify problems in the collection and public education programs.

Evaluation Method 2 - Annual surveys of agencies and organizations participating in the Countywide HHW Program will be done to assess satisfaction with the cooperative HHW collection and public education efforts.

Objective 7: Decrease potential short- and long-term liability risks by monitoring environmental compliance records and proof of insurance of contract waste haulers and contract treatment, storage and disposal facilities.

Evaluation Method 1 - An environmental compliance file will be maintained for each hazardous waste management and recycling firm utilized by the program. The file will be reviewed and updated annually to include environmental compliance records, results of on-site audits, and proof of liability insurance. A summary of these activities will be included in the annual reports.

Objective 8: Increase source reduction options for residents by supporting legislative efforts aimed at development of safer products and safer Household Hazardous Waste management methods.

Evaluation Method 1 - The annual HHW management report will include a summary of legislative efforts sponsored or endorsed by participating cities and the County for the unincorporated area.

METHODS TO QUANTIFY AND MONITOR ACHIEVEMENT OF MEDIUM- TERM PLANNING PERIOD OBJECTIVES

Objective 1: Continue the objectives developed for the short-term planning period into the medium-term planning period.

Evaluation Method 1 - The evaluation methods described above for the short-term planning period objectives will be continued into the medium-term planning period.

Objective 2: Increase source reduction efforts.

Evaluation Method 1 - At the beginning of the medium-term planning period, additional strategies for promoting source reduction will be considered.

WRITTEN CRITERIA FOR EVALUATING PROGRAM'S EFFECTIVENESS

The Countywide HHW Program will prepare annual reports based on the evaluation outlined above. Also included in the reports will be jurisdiction-specific data for each jurisdiction participating in the program. For each city and the unincorporated area of the County, the total amount of HHW diverted, the amount recycled, the number of residents utilizing the programs, and the cost per ton, yard, or drum to divert HHW will be included. When future waste characterization studies are done, the amount of HHW remaining in the waste stream will be included in the annual report.

Additional information describing the markets for recyclable HHW materials will be included in the annual report. The markets for recyclable materials will be monitored to determine if additional materials can be sent for recycling.

The annual report will also include an overall evaluation of the adequacy of HHW collection services. Increases in demand for services and increases in population will warrant adjustments in the operating schedule of the mobile collection unit and the permanent facility. In addition, under-utilization in specific communities or neighborhoods will be addressed.

RESPONSIBLE PARTIES FOR MONITORING, EVALUATION, AND REPORTING

The Santa Clara County Solid Waste Program and the County Division of Environmental Health Services will monitor and evaluate the Countywide HHW Program described above. The Division of Environmental Health Services will implement and monitor the mobile and permanent facility collection activities and the landfill load checking programs, and prepare the annual reports on the Countywide HHW Program. The County Solid Waste Program intends to assist in preparation of the annual reports.

FUNDING REQUIREMENTS FOR MONITORING AND EVALUATION

Monitoring and evaluation of HHW management in the unincorporated area of Santa Clara County will be funded through an existing surcharge on garbage

collection. The County Solid Waste Program budget includes funding for administrative activities such as record keeping and annual report-writing. The County Division of Environmental Health Services household hazardous waste and landfill load checking programs include record keeping and reporting procedures.

CONTINGENCY MEASURES

If the programs described above fail to meet the goal of diverting HHW from landfill disposal, the following tasks can be implemented:

- Analyze existing programs for obstacles to successful implementation
- Increase or improve education and advertising efforts
- Increase the number of sites for the mobile collection unit
- Increase the hours of operation at the permanent facility and mobile collection unit
- Increase funding and staff
- Modify program objectives
- Increase enforcement efforts
- Increase penalties for improper disposal
- Increase frequency of program monitoring and review

EDUCATION AND PUBLIC INFORMATION

OBJECTIVES FOR SHORT AND MEDIUM TERM PLANNING PERIOD

Objective 1: Increase resident's awareness of source reduction, safer use and proper disposal of Household Hazardous Waste.

Multijurisdictional Education and Public Information Program

The Countywide HHW Program plans to coordinate public education efforts with participating cities as well as the Santa Clara Valley Water District's Nonpoint Source Pollution Control Program, the wastewater treatment plants' education programs, the school science education programs, and non-profit educational organizations.

Source Reduction

Residents will be informed of the availability of less- or non-hazardous substitutes to common household products that contain hazardous materials. The need for public support for development of products which do not result in the generation of household hazardous waste will be included in public education materials.

Proper Use and Storage

Residents will be informed about the hazardous nature of some products and methods for proper use and storage of such products.

Proper Disposal

Residents will be informed of the environmental hazards associated with improper disposal of HHW, and will receive guidance on proper disposal methods.

Objective 2: Increase the accuracy and uniformity of Household Hazardous Waste source reduction and disposal public information disseminated by public agencies.

Distribution of Guidebook and Training for Use of Guidebook

Employees of public agencies and organizations in Santa Clara County who respond to public inquiries regarding HHW will be eligible to receive a copy of the "Guidebook for Proper Management of Household Hazardous Waste" and may participate in training on the use of this directory. Approximately 250 agencies and organizations will receive this publication in the spring of 1991.

Guidebook Updates

The County Hazardous Waste Planning staff will oversee preparation of updates or supplements to the manual as necessary.

EXISTING EDUCATION AND PUBLIC INFORMATION PROGRAMS

County-sponsored Education Efforts

The County of Santa Clara has sponsored educational efforts to inform residents of proper disposal methods of HHW. Residents have received guidance on how to

generate less hazardous waste by using less- and non-hazardous alternatives. These efforts include:

- Publication and distribution of "Take Me Shopping - A Consumer Guide To Safer Alternatives For Household Hazardous Products"
- Phone inquiries from residents regarding HHW disposal and alternative products are answered by County staff.
- Advertising was done in preparation for collection events.
- Presentations were made to community groups.

Non-profit and Volunteer Organization Efforts

League of Women Voters

In 1990, the League of Women Voters sponsored the production and distribution of a video entitled "Cleaning Up Toxics at Home." The League distributed copies of the video to 16 libraries, 15 city governments, the County Hazardous Waste Management Program, 7 junior colleges, 3 universities, and 8 perinatal education groups in Santa Clara County.

In 1990, the League also printed and distributed 4000 copies of "Take Me Shopping - A Consumer Guide To Safer Alternatives For Household Hazardous Products" and a flyer entitled "Cleaning Up Toxics."

Public Agency -Sponsored Programs

Nonpoint Source Pollution Control (NPS) Program

The NPS Program, a project of the Santa Clara Valley Water District, sponsors several educational efforts. Nonpoint source water pollution refers to pollutants which run-off from a broad area of land rather than entering the water through a discrete pipe or conduit. The purpose of the NPS Program is to reduce stormwater-borne pollutants entering the southern San Francisco Bay. Specific pollutants of concern, in order of priority, are heavy metals (cadmium, copper, lead, mercury, nickel, silver, and selenium); hydrocarbons (contained in oil and grease); pesticides and herbicides; suspended sediments; and organic pollutants.

The NPS Program Public Information/Participation Plan aims to inform the public about the causes and origins of nonpoint source pollution, explain the correct practices for controlling pollutants at their source, and involve the active support of the public in implementing these practices. The NPS Program aims to reduce improper disposal of HHW into nonpoint pathways and at the same time discourage disposal of HHW into the solid waste stream.

In 1991, the NPS Program began its public educational efforts with publication of a brochure entitled "The Bay Begins at Your Front Door!" The brochure explains how residents can prevent pollution of the San Francisco Bay by keeping hazardous materials from entering the storm drain system. The NPS Program plans to distribute this brochure and several pollutant specific brochures focussing on motor oil and pesticides. Additional educational programs are under development.

Wastewater Treatment Plants

The Palo Alto Regional Water Quality Control Plant, is located in the City of Palo Alto and serves the Cities of Palo Alto, East Palo Alto, Mountain View, Los Altos, the Town of Los Altos Hills, as well as Stanford University in the unincorporated area of the County. Beginning in 1990, the Plant has sponsored a special public education effort aimed at reducing the accumulation of silver in the San Francisco Bay. Residents are urged to deliver spent photographic fixer and other HHW to household hazardous waste collection events.

The Sunnyvale Water Pollution Control Plant serves the Cities of Sunnyvale and Cupertino, as well as the Rancho Rinconada community in the Cupertino unincorporated area and a portion of Moffett Field Naval Air Station in the unincorporated area. The Plant has co-sponsored HHW collection events and participates in the NPS Program's educational efforts.

The San Jose/Santa Clara Water Pollution Control Plant serves the Cities of San Jose, Santa Clara, and Milpitas; the Cupertino Sanitary District, County Sanitation District 2-3, the West Valley Sanitation District serving the Cities of Campbell, Los Gatos, Monte Sereno and Saratoga; the Sunol and Burbank Sanitary Districts of the unincorporated area. The plant sponsors a public education effort aimed at reducing the discharge of hazardous wastes into the sanitary sewer system. Residents are informed of proper disposal methods for hazardous materials and urged to use the HHW collection days for household-generated wastes. The San Jose/Santa Clara Water Pollution Control Plant is planning a public education and waste minimization program.

Santa Clara County Office of Education

The County Office of Education oversees the implementation of the State Department of Education's mandated Science Framework in the 37 school districts in Santa Clara County. A revised science curriculum is being phased into the schools in 1990 and 1991 and contains lessons on hazardous materials for grades K-12.

Santa Clara County Hazardous Waste Management Plan (Tanner Plan)

The Hazardous Waste Management Plan was formally approved by the County of Santa Clara and will be adopted by each city upon approval of the Plan by the State Department of Health Services. The Santa Clara County Tanner Committee developed the following three public education policies, which are included in the Plan, for management of HHW.

Public Education Policy 1

"The County and Cities shall coordinate the development of a program for the proper management and disposal of household hazardous waste on a countywide basis in accordance with the waste management hierarchy and considering existing programs and conditions."

This policy resulted in the formation of the Household Hazardous Materials Working Group. The Working Group is composed of representatives from each of the cities; County hazardous waste, solid waste, and environmental health staff; private solid waste contractors; and community advisory members. The Working Group conducted a thorough evaluation of HHW management alternatives. This evaluation resulted in a decision to implement a pilot countywide HHW collection and public education program in fiscal year 1991-1992.

Public Education Policy 2

"The County, in coordination with the Cities, shall initiate a public education campaign which will inform all county residents about the potential hazards associated with household products, how to dispose of them safely, and safe substitute products and practices that can be used in place of hazardous substances."

In keeping with this policy, several educational publications have been produced:
"Take Me Shopping - A Consumer Guide To Safer Alternatives For Household

Hazardous Products" and "The Guidebook for Proper Management of Hazardous Wastes". Additional countywide educational activities are currently under development and are described in detail in this document.

Public Education Policy 3

"The County, in coordination with the Cities and industry, shall engage in direct public education concerning hazardous waste reduction and management such as workshops, utilization of the media, school programs, and information dissemination."

As a result of this policy, industry-specific waste minimization workshops have been held in the county. Workshops for the metal finishing industry and the automotive service industry provided up-to-date waste minimization and regulatory compliance information to over 500 local businesses as of March 15, 1991. In addition, one jurisdiction is working with its local industry in developing a pilot educational program to provide waste minimization information to all types of hazardous waste generators. Business and industry associations are also participating in these efforts. In addition, an effort to coordinate hazardous waste public education programs with local schools is underway, and includes the participation of several local community colleges.

IMPLEMENTATION OF EDUCATION AND PUBLIC INFORMATION PROGRAM IN THE SHORT- AND MEDIUM-TERM PLANNING PERIODS

Program Description

Countywide Efforts

The Countywide HHW Program includes an education component which will inform residents how to properly use, store, and dispose of household hazardous waste. Source reduction information will be included to promote fewer hazardous alternatives and thereby reduce generation of HHW.

The Countywide HHW Program will coordinate educational efforts with participating cities, non-profit organizations, and public agencies such as the NPS Program, wastewater treatment plants, local schools and non-profit agencies.

A summary of public education activities to be carried out in the short-term planning period follows. It is anticipated that these programs will be continued into the medium-term planning periods.

- HHW appointment/information telephone line.
- Printing and Distribution of "Take Me Shopping" booklet at HHW events and upon request.
- Use of "The Guidebook for Proper Management of Hazardous Wastes" by staff of public agencies.
- Advertising in local papers and on the radio, public service announcements.
- Non-Point Source Pollutant Specific Public Education brochures and posters.

COMMUNITY AUDIENCES TO BE TARGETED

The County intends to provide HHW collection services and source reduction public information for all unincorporated area residents. However, in order to achieve this goal, it is useful to identify the various "publics" or audiences that exist within the population of the unincorporated area. When preparing and disseminating educational materials designed to promote source reduction and proper disposal, factors such as potential language barriers will be taken into account. The County plans to provide multilingual messages and publications.

AGENCIES RESPONSIBLE FOR IMPLEMENTATION OF EDUCATION AND PUBLIC INFORMATION PROGRAM

The County Department of Planning and Development will serve as the lead agency for public education. The Planning Department will coordinate the educational efforts with participating cities, County Division of Environmental Health Services, Santa Clara Valley Water District, the wastewater treatment facilities, schools, and non-profit agencies.

IMPLEMENTATION TASKS

Public Education

- | | |
|--|---------------|
| • Develop and Distribute Event Advertisements | 1991, ongoing |
| • Develop and Distribute "The Guidebook" to Public Agencies | 1991 |
| • Provide Training for Staff Using "The Guidebook" | 1991 |
| • Review and, If Needed, Update "The Guidebook" | annually |
| • Reproduce and Distribute the "Take Me Shopping" booklet | 1991, ongoing |
| • Establish County HHW Telephone Information/ Appointment Line | 1991 |
| • Participate in Ongoing Multi-agency HHW Public Education Efforts | 1992, ongoing |
| • Develop and Disseminate Source Reduction and Product-Specific Information Messages | 1991, ongoing |

COSTS AND SOURCES OF FUNDING FOR IMPLEMENTATION OF EDUCATION AND PUBLIC INFORMATION PROGRAMS

Public Information

Each participating city and the County for the unincorporated area will pay for services in the Countywide HHW Program on a per-vehicle basis. The cost of publicizing the mobile and permanent facility services was included in the \$90 to \$100 per vehicle cost. The source of funds for serving county unincorporated residents comes from surcharges on garbage collection fees.

Education

The budget for implementing education programs is currently under development. The Countywide HHW Program is in the process of coordinating its educational efforts with participating cities, public agencies, and non-profit organizations. Surcharges on garbage residential garbage rates in the unincorporated area will provide revenue needed for public education programs.

MONITORING AND EVALUATION

Evaluation Methods

The methods described below will be used to measure achievement of the education and public information objectives.

Objective 1 - Increase residents' awareness of source reduction, safer use, and proper disposal of Household Hazardous Waste.

Evaluation Method 1 - Annual surveys of residents will be done to determine the extent to which buying habits have changed to reduce generation of HHW, and to determine the percent of residents aware of safe use and disposal practices. Results of the surveys will be included in the annual program reports. When possible, changes in purchasing behavior may also be monitored using locally-obtained retail sales data or regional marketing data.

Evaluation Method 2 - The collection event summaries containing both the number of participants and geographic distribution of participants will be analyzed to determine the adequacy of HHW program advertising and education efforts.

Evaluation Method 3 - An annual survey of several retail businesses located in, or adjacent to, the unincorporated area will be done to monitor availability of less-hazardous alternatives to specific products.

Objective 2 - Increase the accuracy and uniformity of Household Hazardous Waste source reduction and disposal public information disseminated by public agencies.

Evaluation Method 1 - Annual surveys of public and non-profit agencies using the Guidebook for Proper Management of Household Waste for the Protection of Our Local Environment will be done to determine level of satisfaction and need for changes.

Evaluation Method 2 - Periodic updates of "The Guidebook" will be done, if deemed necessary, to accommodate changes in HHW management.

Written Criteria for Evaluating Program Effectiveness

The County HHW Program, in conjunction with the County of Santa Clara Solid Waste Program, will prepare annual reports describing the results of the evaluation outlined above. Education and public information programs will be evaluated to determine changes in purchasing habits, level of awareness of proper use and disposal, level of participation, geographic distribution of participants, and changes in availability of less-hazardous products. Criteria for evaluating the Guidebook include the level of satisfaction among users and a determination regarding the need for revision.

Agencies Responsible for Monitoring, Evaluating, and Reporting

The agencies responsible for monitoring, evaluation and reporting include the County of Santa Clara Department of Planning and Development Solid Waste Program and the County Division of Environmental Health Services.

Funding Requirements and Sources for Monitoring and Evaluating

Monitoring and evaluation of HHW management in the County of Santa Clara will be funded through a surcharge on garbage fees in the unincorporated area. The County Solid Waste Program budget includes funding for administrative activities such as record keeping, monitoring recyclable materials markets, tracking the demographics of participants utilizing the program, and annual report-writing. The County Environmental Health Department included record keeping and reporting procedures in the development of the HHW collection program budget.

Contingency Measures

In the event that the annual evaluations indicate a shortfall in attainment of the education and public information objectives, the following measures may be implemented.

- Analyze existing programs for obstacles to successful implementation
- Increase or improve education and advertising efforts
- Increase funding and staff
- Modify objectives
- Increase frequency of program monitoring and review

Program Monitoring and Reporting Schedule

Annual reports will be written and distributed at the end of each 12 month period of operation of the Countywide HHW Program. It is anticipated that the first annual report will be written in October, 1992.

FUNDING

PROGRAM COSTS AND ALLOCATION OF RESOURCES

The County of Santa Clara must demonstrate that there is sufficient funding and allocation of resources for program planning and development and implementation of required programs.

Cost estimates for programs scheduled for implementation, as well as revenue sources to support these programs, are contained in Tables 4 and 5 (page 53 and page 55) of this element. In addition, more detailed descriptions of estimated program costs are "Evaluation of Household Hazardous Waste Management Alternatives."

CONTINGENCY FUNDING

In the event that adequate funding is not available from the revenue sources identified in Table 5 the County of Santa Clara may consider new or additional garbage surcharge fees, landfill tipping fees, or advance disposal fees.

Attachment A

Section 25117 of the Health and Safety Code

25117. (a) "Hazardous waste" means either of the following:

(1) 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.

(2) A waste which meets any of the criteria for the identification of a hazardous waste adopted by the department pursuant to Section 25141.

(b) "Hazardous waste" includes, but is not limited to, RCRA hazardous waste.

Attachment B

CIWMB Form 303

Household Hazardous Waste Collection Information

Form 303 Household Hazardous Waste Collection Information

Purpose of this form

This form is to be completed by each jurisdiction in California that is required by the California Integrated Waste Management Board to report information annually about the collection of household hazardous waste. This form is specifically intended to fulfill reporting requirements of the Household Hazardous Waste Element of the Countywide Integrated Waste Management Plans.

The completed form for the previous fiscal year ending June 30 is due on the first Monday of October.

Instructions

Detailed instructions have been written to help you complete this form. Please refer to the instructions titled "Instructions for Completing Form 303 Household Hazardous Waste Collection Information" on pages 3 through 5.

Send to

Household Hazardous Waste Section
 California Integrated Waste Management
 8800 Cal Center Drive
 Sacramento, CA 95826

A. Jurisdiction

Reporting Source
 Address
 City/State/Zip
 Contact Person
 Phone
 Location of event

Santa Clara County-Dept. of Environmental Health
2220 Moorpark Avenue
San Jose, CA 95128
Sharon Dowell
(408) 299-6930
various locations in participating cities

B. Sponsors

(Check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> County | <input type="checkbox"/> Contractor |
| <input checked="" type="checkbox"/> City | <input type="checkbox"/> Joint (public/private) |
| <input type="checkbox"/> Private company | <input type="checkbox"/> Non-profit group |
| <input type="checkbox"/> Other _____ | |

C. Report Period

Start date (mm/dd/yy)
 End date (mm/dd/yy)

7/1/92
6/30/93

D. Program Type

(Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Permanent | <input type="checkbox"/> Mobile |
| <input checked="" type="checkbox"/> Periodic (Temporary) | <input type="checkbox"/> Recycle only program |
| <input type="checkbox"/> Other _____ | |

E. Location

(Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> One site | <input type="checkbox"/> At a transfer station |
| <input checked="" type="checkbox"/> Multiple sites | <input checked="" type="checkbox"/> On city property |
| <input type="checkbox"/> Curbside | <input checked="" type="checkbox"/> On county property |
| <input type="checkbox"/> At a sanitary landfill | <input checked="" type="checkbox"/> On private property |
| <input type="checkbox"/> Other _____ | |

F. Participation

Number of participants
 Number of days open
 Operating times each day
 Population of service area

6576	participants
24	days
Opening time 9:00 a.m.	Closing time 2:00 p.m.
1,448,065	people

G. Waste Volumes Collected

		Actual Weight (in pounds)	Number of drums shipped	Management Method(s) Include percentage if more than one method was used
1. Flammable & Poison	Flammable solid/liquid	17,659	114	DI
	Bulked flammable liquids	141,000	235	FI
	Oil-base paint	included as flammable liquids		
	Poison (excl. aerosols)	23,799	184	DI
	Reactive and explosive	40	1	DI
	Subtotal	182,498	533	
2. Acid	Inorganic acid	4,103	34	DI-83% N-17%
	Organic acid	599	6	DI-71% N-29%
	Subtotal	4,702	40	
3. Base	Inorganic base	4,793	39	DI-92% N-8%
	Organic base	728	7	DI
	Subtotal	5,521	45	
4. Oxidizer	Neutral oxidizers	225	5	DI
	Organic peroxides	10	1	DI
	Oxidizing acid	202	4	DI
	Oxidizing base	42	1	DI
	Subtotal	479	11	
5. PCB-containing	PCB-containing paint	0		
	Other PCB waste	0		
	Subtotal	0		
6. Aerosol	Corrosive aerosols	0	0	
	Flammable aerosols	5,215	44	DI
	Poison aerosols	890	6	DI
	Subtotal	6,105	50	
7. Reclaimable	Antifreeze	7,500	17	RC
	Car batteries (8# each)	5,536		RC
	Fluorescent bulbs	0		
	Latex paint	106,100	189	RC
	Motor oil/oil products	36,840	82	RC
	Oil filters	included as flammable solid		
	Mercury (metallic)	0	0	
	Subtotal	155,976	301	
8. Other	Medical waste	0	0	
	Household batteries	included as base		
	Other	0	0	
	Subtotal	0	0	
9. Asbestos	(cubic yards)	0		
10. Grand Total	(excluding asbestos)	355,281	976.5	

Attachment C

Memorandum of Understanding

between

County of Santa Clara and City of Campbell

**AGENCY AGREEMENT FOR COUNTYWIDE
HOUSEHOLD HAZARDOUS WASTE COLLECTION PROGRAM**

This Agreement is made by and between the City of Campbell
(City) and County of Santa Clara (County) on the 6th day
of December, 1991.

RECITALS

A. The County Board of Supervisors has approved a one year pilot Countywide Household Hazardous Waste Collection Program whereby residents of the county and participating jurisdictions will have an opportunity to safely dispose of household hazardous wastes on an appointment or emergency basis regardless of the specific location at which an event has been scheduled.

B. The participating jurisdictions desire to provide residents with convenient opportunities to safely dispose of their household hazardous waste in order to encourage the proper disposal of toxic products and avoid unauthorized or improper disposal in the garbage, sanitary sewer, storm drain system, or on the ground, in a manner which creates a health or environmental hazard.

C. The participating jurisdictions desire to provide a safe, convenient, and economical means for the residents of Campbell, and residents of unincorporated County areas to dispose of household hazardous wastes. These wastes include, but are not limited to, common household products such as household cleaning products, spot remover, furniture polish, solvents, oven cleaner, insecticides, oil base paints, motor oil, antifreeze and car batteries. Residents of the areas listed above will be eligible to bring household hazardous wastes to a household hazardous waste collection event where these wastes will be accepted for proper disposal as described below.

D. The participating jurisdictions desire to schedule Household Hazardous Waste Collection Events during fiscal year 91-92.

NOW, THEREFORE, CITY OF CAMPBELL and COUNTY OF SANTA CLARA AGREE AS FOLLOWS:

1. PURPOSE

The purpose of this Agreement is to state the terms and conditions under which each of the jurisdictions will participate in the Household Hazardous Waste Collection Program (Program) available to the residents of the City of Campbell, residents of County unincorporated areas, and residents of other participating jurisdictions.

2. SERVICES PROVIDED BY COUNTY

The County shall conduct Household Hazardous Waste Collection Events (Events) at various sites located in Santa Clara County. The County shall obtain all necessary permits and licenses and shall provide or secure the services of properly trained personnel, hazardous waste haulers, equipment, and supplies to properly receive, package, label, haul, recycle and dispose of the residential hazardous wastes collected at Events. Insurance requirements for transporters and hazardous waste treatment or disposal services shall have the following minimum limits: General Comprehensive--\$1 million per occurrence, \$2 million aggregate; Auto--\$1 million; workers comp.--statutory limits established by law; and environmental impairment liability --\$1 million per occurrence, \$2 million aggregate. Other services to be provided by the County include establishing and operating a telephone hotline to schedule appointments for the Events and to provide information about household hazardous materials. The telephone hotline shall be operated 5 days a week, Monday through Friday, from the hours of 8:30 a.m. to 4:30 p.m., excluding holidays.

County intends to schedule Events during four collection periods as indicated in Attachment A, "Preliminary Schedule For Mobile HHW Collection Events".

3. ROLE OF CITY

A. Scheduling: The City shall work with the County to determine the date(s) of the Events. Although every effort will be made to accommodate City requests to schedule an Event on specified dates, County shall determine the final dates if there are conflicting requests from Cities participating in the Program.

B. Site Selection: The City shall coordinate with the County in locating and securing sites for the Events. It is recognized that

some of the cities participating in the Program may not have appropriate sites available.

4. WASTES NOT ACCEPTED

Certain hazardous waste materials shall not be accepted for collection and disposal. These include compressed gas cylinders, radioactive materials, and explosives. Other wastes not accepted are wastes produced in the course of operating a business, including a business operated out of a house.

5. TRACKING OF WASTES ACCEPTED

Following each collection period, the County will provide a report to the City regarding the types and quantities of Household Hazardous Waste accepted by the Program. The report will include the amount of waste diverted for reuse or recycling, the waste management method for each waste stream and associated costs for transportation and disposal.

It will be assumed for billing and reporting purposes that each city is contributing to the waste stream proportional to the number of residents served. The County will sample the types and quantities of waste contributed by residents of each jurisdiction to study the equity of sharing program costs based on an average per vehicle fee. A report on the results of the sampling will be provided to each city as part of a final Program report.

6. ADVERTISING/PUBLIC INFORMATION

The parties shall cooperate to inform the public of the Program and schedule. Each party shall be primarily responsible for advertising the availability of the Program within its jurisdiction.

7. COLLECTION APPOINTMENT SYSTEM

A. Scheduling Options: The County shall establish a "Hotline" to schedule appointments for Events. Three options are available for scheduling:

1. All applicants screened by city representatives prior to scheduling a Program appointment;
2. Allotted appointment evenly distributed throughout the year and County makes all appointments;
3. Appointment scheduled as residents call "Hotline", City notified when indicated participation limit is approached.

City elects option 3 as its choice in utilizing the "Hotline" services for scheduling appointments.

B. Reservation of Appointments for City residents: Each city or combination of cities that have previously sponsored household hazardous waste collection events shall have 75% of the planned appointments reserved for residents of the area in which the Event is scheduled. The appointments will be reserved by the County for up to three (3) weeks before the Event. After this time all remaining appointments may be filled by residents of other jurisdictions.

8. CITY FUNDING COMMITMENT

City agrees to commit up to \$ 25,000 (Twenty-five thousand dollars) to the Program during FY91-92 to enable the County to serve 250 households from City at an average cost of \$100 per car.

9. COST OF PROGRAM

A. Start-Up Costs: Start Up Costs are defined as the cost of equipment purchases needed to begin the Program. Start-Up Costs to each of the participating jurisdictions shall be a one time fee of \$.025 per-household within its jurisdiction. For non-census years, household population shall be determined by the State Department of Finance, Demographic Research Unit. Any city that joins the Program after the first year shall be required to pay a start-up cost of \$.025 (annually adjusted for inflation) per household within the city. The Start-Up cost per household shall be adjusted as of July 1, 1992 and annually thereafter to reflect changes in the San Francisco-Oakland-San Jose Metropolitan Area Consumer Price Index (All Urban Consumers; 1982-84 = 100) compiled and published by the United States Department of Labor, Bureau of Labor Statistics.

City Start-Up Costs are \$ 385.00

B. Event Costs (permits, licenses, service and supplies, transportation and disposal): The Event Costs shall be initially set at a flat per vehicle fee of \$100 per household that shows up at an event regardless of the quantity, volume, quality, or character of the hazardous waste collected from a resident, within the limits set forth herein. The Program will accept household hazardous wastes, within the limits set forth herein, from households who come to an

event without an appointment. The jurisdiction from which the households who come to an event without an appointment will be charged the same per vehicle rate as regular appointments.

C. Actual Average Cost: The County will provide City with interim cost reports following each collection period (October-December, January-February, March-April, May-June). If the interim cost reports show Event Costs are greater than projected, future Event Costs shall be adjusted to reflect this higher cost and fewer households will be served or City may elect to increase its financial commitment to the Program. If costs are less than projected, the City may elect to receive credit for a continuing program or a refund after final program costs have been computed. At the end of the fiscal year, actual costs of providing service will be used to calculate the final average per vehicle cost.

10. PAYMENT TO COUNTY

The City shall pay County for Start-up Costs and Event Costs as follows:

A. Start-Up Costs: County will compute each participating city's Start-Up Costs. Start-Up Costs are due within 30 days from the date of this Agreement.

B. Event Costs: Payments for Event Costs are due in four (4) equal installments. Each jurisdiction will be billed 25% of its total financial commitment to the Program as identified in Paragraph 8 (A) of this document. Payment for the first collection period is due within 30 days from the date of this Agreement. The County will invoice the City 30 days before each of the subsequent collection periods. Payment for subsequent collection periods will be due on January 1, 1992, March 1, 1992, and May 1, 1992.

11. ACCOUNTING

The County shall employ means to verify the place of residence of all participants in the Program and provide a record to the City of its participating residents within two weeks following the collection period.

12. TERM OF AGREEMENT

This Agreement shall be effective upon signing by both City and County and shall remain in full force and effect until terminated by any party hereto upon thirty (30) days written notice to each of the other parties or until midnight June 30, 1992, whichever comes

first. This Agreement may be extended from year to year upon written agreement of County and City.

13. HOLD HARMLESS AND INDEMNIFICATION

County shall indemnify, hold harmless, and defend City, its officers, agents, and employees with respect to any loss, damage, liability, cost or expenses, including attorney's fees, arising from failure to comply with any provision of this Agreement by County and/or its subcontractors or arising from performance of any of the work or providing any of the services under this Agreement, including negligent acts, except as required by the special provisions in the following paragraph.

City shall indemnify County for its apportioned share of any liability incurred and attributed to the Program for the transportation, treatment, or disposal of the household hazardous waste, once the waste has been accepted by a licensed hazardous waste hauler. Apportionment for disposal liability shall be determined by the City's pro rata proportion of household participation in the Program. Apportionment for transportation and treatment liability shall be determined by the City's pro rata household participation at the event where the waste was generated. Unless there is no primarily responsible party, no liability shall be apportioned to the City unless the resources (including insurance) of any primary responsible hauler or responsible disposal facility operator are insufficient or unavailable to pay the necessary cost of remediation.

14. NOTICES

All notices and communications herein required shall be in writing to the other party as follows, unless expressly changed in writing:

City of Campbell

Thomas Frutchey
City Manager
City of Campbell
70 N. First Street
Campbell, CA 95008

ATTACHMENT A

ENVIRONMENTAL HEALTH OFFICE OF TOXICS ENFORCEMENT
PRELIMINARY SCHEDULE FOR MOBILE HHW COLLECTION EVENTS*

JURISDICTION	(400 CAR EVENTS) Oct-Dec	(400 CAR EVENTS) Jan-Feb	(600 CAR EVENTS) Mar-Apr	(600 CAR EVENTS) May-Jun	Total
West Valley (1260) Campbell (250) Los Gatos (400) Monte Sereno (110) Saratoga (500)	1	1	1	0	3
North County (2000) Cupertino (300) Los Altos (600) Los Altos Hills (100) Mountain View (1000)	1	1	1	1	4
San Jose (3900)	1	2	2	3	8
Milpitas, Sunnyvale, Santa Clara (1200) Milpitas (500) Santa Clara (100) Sunnyvale (600)	0	1	1	1	3
Unincorporated (1000)	0	0	0	1	1
TOTAL EVENTS	3	5	5	6	19
CARS X EVENTS	(400 X 3) + (400 X 5) + (600 X 5) + (600 X 6) = 9,800				

* A mobile collection event may be have appointments scheduled for two consecutive days in accordance with the proposed Permit by Rule Regulations.

Santa Clara County

Lee Esquibel, Director
Environmental Health
Department of Public Health
County of Santa Clara
2220 Moorpark Avenue
San Jose, CA 95128

IN WITNESS WHEREOF, the parties have executed this Agreement.

"CITY"

"COUNTY"

CITY OF CAMPBELL,
a municipal corporation.

COUNTY OF SANTA CLARA, a political
subdivision of the State of California.

By:

Thomas Fritchey
Mayor/City Manager

Dianne McKenna
Chairperson, Board of Supervisor
Dianne McKenna

Attest:

Attest:

Barbara Cleesby
City Clerk

Donald M. Rains
Clerk, Board of Supervisors
DONALD M. RAINS

APPROVED AS TO FORM:

APPROVED AS TO FORM AND LEGALITY:

[Signature]
City Attorney

Karin Cutchman
Deputy County Counsel

FIRST AMENDMENT TO AGREEMENT

This is the first amendment to that certain agreement between the City of Campbell (City) and County of Santa Clara (County) entitled AGENCY AGREEMENT FOR COUNTYWIDE HOUSEHOLD WASTE COLLECTION PROGRAM, entered into on the 6th day of December, 1991.

The parties agree that:

1. Section 2, SERVICES PROVIDED BY COUNTY, is amended in full to read:

SERVICES PROVIDED BY THE COUNTY

The County shall conduct Household Hazardous Waste Collection Events (Events) at various sites located in Santa Clara County. The County shall obtain all necessary permits and licenses required for the Events and shall provide or contract for the services of properly trained, qualified personnel and/or hazardous waste haulers, and shall provide or secure suitable equipment, and supplies to properly receive, package, label, haul, recycle and dispose of the household hazardous wastes collected at Events. Contractors who provide hazardous waste transportation, treatment, or disposal services shall have insurance with the following minimum limits: General Comprehensive-- \$1 million per occurrence, \$2 million aggregate; Auto--\$1 million; workers comp.--statutory limits established by law; and environmental impairment liability --\$1 million per occurrence, \$2 million aggregate. Other contractors shall have insurance in amounts to be determined by the County Insurance Manager, after consultation with City. All insurance certificates shall name the City, its officers and employees as additional insureds. Other services to be provided by the County include establishing and operating a telephone hotline to schedule appointments for the Events and to provide information about household hazardous materials. The telephone hotline shall be operated 5 days a week, Monday through Friday, from the hours of 8:30 a.m. to 4:30 p.m., excluding holidays.

County intends to schedule Events during four collection periods as indicated in Attachment A, "Preliminary Schedule For Mobile HHW

Collection Events”.

2. Section 5, TRACKING OF WASTES ACCEPTED, is amended in full to read:

TRACKING OF WASTES ACCEPTED

Following each collection period, the County will provide a report to the City regarding the types and quantities of Household Hazardous Waste accepted by the Program. The report will include the amount of waste diverted for reuse or recycling, the waste management method for each waste stream and associated costs for transportation and disposal.

It will be assumed for billing and reporting purposes that each city is contributing to the waste stream proportional to the number of residents served. For purposes of any potential disposal liability, each participating jurisdiction shall be deemed a discharger of only its pro rata proportion of household participation in the Program.

The County will sample the types and quantities of waste contributed by residents of each jurisdiction to study the equity of sharing program costs based on an average per vehicle fee. A report on the results of the sampling will be provided to each city as part of a final Program report.

3. Section 9B, EVENT COSTS, is amended fully to read:

Event Costs (permits, licenses, service and supplies, transportation, disposal, and costs of providing insurance as required by Program):
The Event Costs shall be initially set at a flat per vehicle fee of \$100 per household that shows up at an event regardless of the quantity, volume, quality, or character of the hazardous waste collected from a resident, within the limits set forth herein. The Program will accept household hazardous wastes, within the limits set forth herein, from households who come to an event without an appointment. The jurisdiction of the households who come to an event without an appointment will be charged the same per vehicle rate as regular appointments.

4. Except as amended herein, all terms and conditions of said agreement shall remain in full force and effect.

WHEREFORE the parties have entered into this amendment to agreement on the dates shown below:

"CITY"

"COUNTY"

CITY OF CAMPBELL,
a municipal corporation.

COUNTY OF SANTA CLARA, a political
subdivision of the State of California.

DATE 12/6/91

DATE DEC 17 1991

By:

Thomas Brutsche
Mayor/City Manager

Dianne McKenna
Chairperson, Board of Supervisor
Dianne McKenna

Attest:

Barbara Clancy
City Clerk

Attest:

Donald M. Rains
Clerk, Board of Supervisors
DONALD M. RAINS

APPROVED AS TO FORM:

[Signature]
City Attorney

APPROVED AS TO FORM AND LEGALITY:

Kathy Cretchmer
Deputy County Counsel

