

**MODERATE RISK  
HAZARDOUS WASTE MANAGEMENT PLAN  
SKAGIT COUNTY, WASHINGTON**

**Prepared for:  
Skagit County Council of Governments**

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## 1.1 PURPOSE

The State Hazardous Waste Management Act requires a plan for managing wastes not currently regulated by the Washington State Department of Ecology (Ecology) under the Dangerous Waste Regulations. The purpose of this plan is to develop a strategy for properly managing small quantities of hazardous waste generated in Skagit County, thereby protecting the natural resources and people of Skagit County. The plan is intended to satisfy the County's responsibility under the State's Hazardous Waste Management Act. This county-wide hazardous waste management plan is mandated to provide direction and to control categorically exempt household hazardous wastes and conditionally exempt small quantity generator wastes.

The Plan emphasizes public education, waste reduction, recycling, waste treatment, storage, disposal programs, and facilities. The goal of the Plan is to implement programs which will reduce the amount of toxic or otherwise hazardous materials being discharged to the environment or entering the solid and liquid waste streams, for the protection of public health and the environment in Skagit County.

This Plan was developed in response to state legislation requiring all local governments to submit plans and to begin implementation by December 31, 1991 (Revised Code of Washington (RCW) 70.105.220). Preparation of this Plan was aided by a grant from hazardous waste planning funds allocated by Ecology, as agent for the State of Washington under the Washington Administrative Code (WAC) 173-309.

## 1.2 AUTHORITY

In 1976, the U.S. Congress passed the Resource Conservation and Recovery Act (RCRA) to regulate hazardous and solid waste. That act established a priority to deal with the major generators of hazardous waste. Household hazardous waste and commercial/industrial hazardous waste generated in quantities less than 220 pounds per month are generally exempt from the RCRA regulations.

Through RCRA, the EPA has delegated authority for hazardous waste management to the State. The State law regulates all hazardous waste in Washington because it supersedes RCRA. Hazardous waste generated in Washington is regulated under the Hazardous Waste Management Act of 1976 (Chapter 70.105 RCW) as implemented by the Dangerous Waste Regulations (WAC 173-303).

Since RCRA and the Hazardous Waste Management Act were adopted, most attention has been directed toward managing the larger quantity industrial hazardous waste generators at both the federal and state levels. However, small quantity business and household hazardous wastes have recently begun to receive attention, with local governments designated as the responsible agencies. Responding to this new emphasis, counties, cities and other agencies began to develop programs to manage these wastes.

In 1985 the Washington Legislature adopted amendments to Chapter 70.105 RCW, the State Hazardous Waste Management Act, that require each local government, or combination of contiguous local governments, to prepare a Local Hazardous Waste Plan to manage those wastes not currently regulated by Ecology due to their small quantity or household origin (RCW 70.105.220(1)). After guidelines for these plans were developed in July of 1987, municipalities within Skagit County in concert with Skagit County itself agreed to prepare a single plan for the entire Skagit County area. This alternative was adopted rather than having to develop individual plans for each incorporated city and unincorporated Skagit County.

### 1.3 POLITICAL JURISDICTIONS

#### 1.3.1 Geographical Description

Skagit County is located on the northeastern side of Puget Sound and is bounded on the north by Whatcom County, on the east by Okanogan and Chelan Counties, on the south by Snohomish County, and on the west by Puget Sound (see Figure 1-1). The geographic land area of Skagit County is 1,734 square miles (1,244,160 acres), of which approximately 50 percent is federal forest or commercial forest land and unavailable for development in the foreseeable future. Approximately 35 square miles of land are occupied by Skagit County's eight incorporated cities and rural towns: Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon, and Sedro Woolley.

At the present time, Skagit County represents approximately 1.6 percent of the total State population. As of the 1990 Census, the total population of Skagit County was 79,600. Of this total, approximately 52 percent live in the incorporated cities and towns, and the remaining 48 percent live in unincorporated areas (Office of Financial Management, 1988). Table 1-1 lists the incorporated towns and cities of Skagit County and their 1990 populations and areas.

#### 1.3.2 Comprehensive Plans

Solid waste management in Skagit County follows the regional Skagit County Comprehensive Solid Waste Management Plan (SWMP) (adopted pursuant to RCW 70.95). The original SWMP for Skagit County was adopted in mid-1973. A revision of the SWMP was conducted in 1981 and again in 1987 to reflect the social and legislative changes that had taken place and the technical improvements that had been made during the years since 1973.

At present, land use in the County is guided by five comprehensive plans, one each for the Islands, Northwest, North Central, and Eastern Planning districts, and a combined Plan for the Southwest and South Central Planning District.

# SKAGIT COUNTY

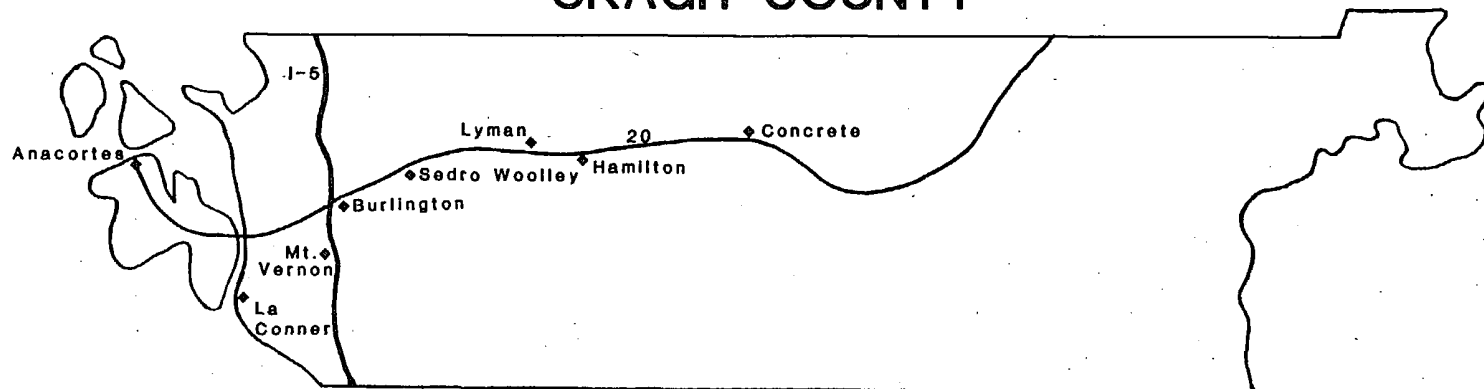


Figure 1-1. Skagit County Map

TABLE 1-1. 1990 POPULATION AND AREAS OF INCORPORATED CITIES AND TOWNS IN SKAGIT COUNTY

	<u>Population</u>	<u>Area (sq. mi.)</u>
Skagit County (Total)	79,600	1,734.6
Unincorporated	32,209	1,699.2
Incorporated	47,346	35.4
Anacortes	12,548	8.5
Burlington	6,929	3.0
LaConner	1,034	1.5
Mount Vernon	19,050	8.9
Sedro Woolley	7,785	3.5

Source: *Skagit County Coordinated Water System Plan Population Forecast Methodology*, utilizing the High Population Forecast, March 14, 1991.



#### 1.4 ROLES AND RELATIONSHIPS

This Plan has been developed cooperatively by the Skagit County Department of Public Works, and the Skagit County Council of Governments (SCOG) as the representative of all cities and towns.

The 1987 Solid Waste Management Plan authorized Skagit County to provide the engineering, financing, and manpower necessary to develop and manage the solid waste disposal system under RCW 36.58. The Skagit County Board of Commissioners has appointed the Director of Public Works responsible for implementing this system within the Department of Public Works. This Department has the responsibility of developing, managing, and operating the solid waste disposal system in the County. The solid waste section is responsible for design and operation of the solid waste facilities, including the MSW incinerator, the Inman Landfill, and the Sauk Transfer Station. The Skagit County Board of County Commissioners is responsible for setting user rates by which the system is financed. The management system is required to operate in conformance with the Washington State Constitution, the Revised Code of Washington, and Washington Administrative Code, and within the Skagit County Conditional Use Permit requirements.

The collection system in Skagit County is a mix of private and municipal operations. The unincorporated areas of the County are served by two private firms: Rural Skagit Sanitation and North Cascade Disposal Company. The cities of Anacortes, Burlington, Mount Vernon, and Sedro Woolley provide solid waste collection as a municipal service.

The Washington State Utilities and Transportation Commission regulates the private garbage and/or refuse collection companies' collection and unloading activities. The Commission is responsible for the supervision and regulation of franchised collectors, including: determining rates, regulating the service and safety of the operations, requiring filing of annual reports, and overseeing all matters affecting the relationship between the franchise and the public.

In Skagit County, the 1981 Interlocal Agreement assigns to the County Department of Public Health the responsibility for adopting rules and regulations governing solid waste handling and facilities, pursuant to the authority of RCW 70.05.160. These rules and regulations govern the storage, collection, transportation, treatment, utilization, processing, final disposal, and the issuance of permits in order to preserve, promote, and improve public health, as well as to ensure consistency with the SWMP.

Sewer districts serve the cities and towns of Anacortes, Burlington, Mount Vernon, Sedro Woolley, Concrete, and LaConner, as well as the residential areas of Skyline, Shelter Bay, Big Lake, and Hope Island. Homes and businesses located outside of these areas are served by on-site septic tank/drain field systems. Sewage pumped from septic tanks around the County is hauled away by a private contractor.

Areas of concern related to the hazardous waste planning process include potential effects of hazardous wastes on:

- Operations at the solid waste incinerator, the five County compactor box sites, the transfer station, and the landfills.
- Workers at the incinerator, compactor box sites, transfer station, and landfills.
- The groundwater, the Skagit River and its tributaries, and the freshwater and saltwater bodies of water within the County.
- Operations of the ten wastewater treatment plants and their workers.
- Equipment at the incinerator.
- Air emissions from the incinerator.
- Equipment, liners, and leachate collection systems at the landfills.
- Plans for recycling and other future waste management options.

## 1.5 REGULATIONS

Hazardous wastes (termed "dangerous wastes" in Washington State regulations) from larger quantity generators fall under federal and state regulation. At generation rates greater than 220 pounds per month or per batch, ignitable, corrosive, reactive, and toxic materials are regulated by Ecology through a program approved and supervised by the U.S. Environmental Protection Agency (EPA).

Washington State's regulations also require that dangerous wastes generated at rates over 220 pounds per month be disposed of at a permitted hazardous waste disposal facility. Under Washington State regulations, "extremely hazardous wastes", such as DDT, are regulated in quantities as small as 2.2 pounds per month or per batch, and must be disposed of in a secure hazardous waste landfill or other approved hazardous waste facility, as must any dangerous waste generated above the threshold. A list of these extremely hazardous wastes is found in Chapter 173-303 WAC.

Small Quantity Generators (SQGs) are defined under State regulations as those facilities that generate dangerous wastes in quantities below 220 pounds of waste per month or accumulate dangerous wastes up to 220 pounds at any one time. Those SQGs, including many industrial, commercial and institutional operations, are *conditionally exempt* from full state and federal regulations. Throughout this Plan, all businesses and institutions that fall into this category will be referred to as **Small Quantity Generators**, or **SQGs**. Although these wastes are not fully regulated, they can be detrimental to the environment and the health and safety of workers in the solid waste and wastewater systems.

Small quantity generators must meet the conditions set forth in the Dangerous Waste Regulations, WAC 173-303-070, paragraph 8. This paragraph states that a small quantity generator will not be subject to the full requirements of the Dangerous Waste Regulations if the generator properly characterizes the waste; submits an annual report to the Department of Ecology; and disposes of the waste either in an on-site facility, a permitted hazardous waste off-site facility, a recycling facility, or a facility permitted to manage industrial or municipal solid wastes.

Household hazardous wastes are those waste consumer products that have hazardous properties. They are *categorically exempt* from federal and state regulations. Figure 1-2 shows the contribution of fully regulated and *conditionally or categorically exempt* hazardous wastes to the municipal waste stream.

The definition of "hazardous waste" does not include radioactive, explosive, or infectious wastes. These are addressed by separate laws, regulations and management programs.

## 1.6 OVERVIEW OF THE LOCAL HAZARDOUS WASTE MANAGEMENT PLAN PROCESS

In Skagit County, a joint management system was formed to develop the Local Hazardous Waste Management Plan. The SCOG and the Skagit County Department of Public Works worked cooperatively to draft this Plan for all of incorporated and unincorporated Skagit County, with participation of local governments, businesses, community groups, and individual citizens.

A schedule and scope of work were drafted by the SCOG and Public Works Department. A technical advisory committee was formed to periodically provide technical input and review the elements drafted by these two agencies. This technical advisory committee is made up of six individuals: a representative each from the Skagit County Public Health, Public Works, and Emergency Management Departments; a representative from the Skagit Council of Governments; the mayor of the City of Mount Vernon; and the owner of Rural Skagit Sanitation, a private waste hauling firm serving the Town of LaConner and unincorporated areas of the County.

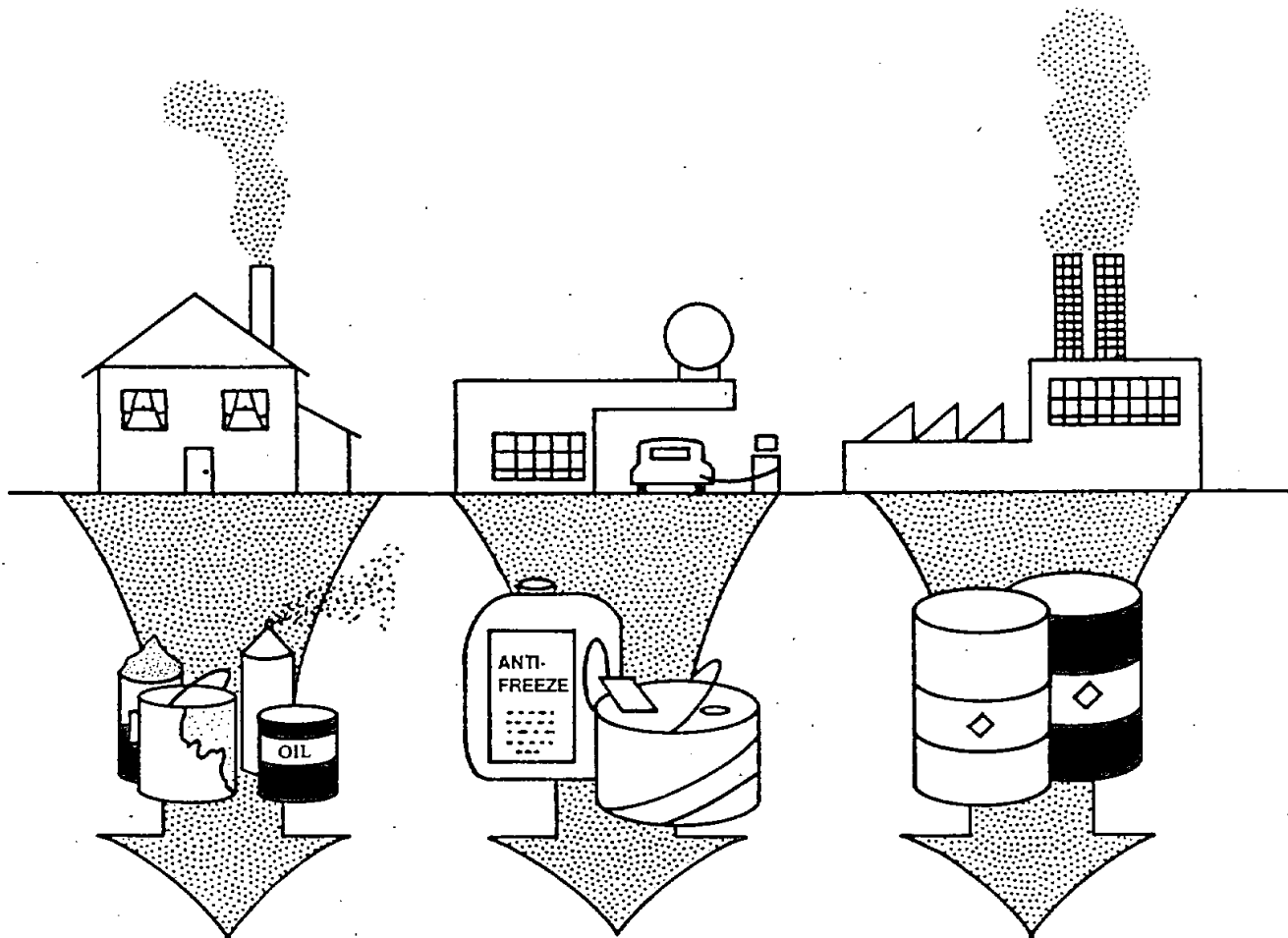
## 1.7 PUBLIC PARTICIPATION PROCESS

### 1.7.1 The Public Participation Process Used in Developing the Plan

The two main purposes of the public participation program developed for the Local Hazardous Waste Management Plan are: 1) to ensure that the Plan embodies a complete assessment of the facts and issues involved; and 2) that the citizens and agencies using or affected by the Plan have maximum input to its development. The process involved two established forums: the Skagit County Council of Governments (SCOG) and the Solid Waste Advisory Committee (SWAC).

# HAZARDOUS WASTES

Toxic – Corrosive – Ignitable – Reactive



HOUSEHOLD WASTES  
categorically exempt  
"HHW"  
**UNREGULATED**

COMMERCIAL AND INDUSTRIAL WASTES  
less than 220 pounds  
per month or batch  
"SQG"  
**CATEGORICALLY  
EXEMPT**

greater than 220 pounds  
per month or batch  
**REGULATED**

Figure 1-2. Contribution of Regulated and Unregulated Hazardous Wastes to the Municipal Waste Stream

(Adapted From: King County, et al., 1989.)

Formal presentations were made to the SCOG at several points during Plan development. A memorandum was sent to each member in March of 1990 to solicit further input from each member's respective constituents. See Appendix F, Public Participation Documents, for document copy. Mr. Bob Ruby, Executive Director to the SCOG and project liaison for the Plan also made numerous informal comments to the SCOG to keep them advised of the process.

When the Draft Plan was available for review, Mr. Ruby also contacted the cities of Anacortes, LaConner, Mount Vernon, Burlington, Sedro Woolley, and Concrete and offered them a Plan presentation at their regular council meetings. On April 23, 1990, Mr. Ruby presented the Draft Plan to the Sedro Woolley Council. On March 10, 1992, Skagit County Public Works personnel presented the Draft Plan to the Cities of Anacortes and Burlington. On March 25, 1992, Skagit County Public Works and Health Department personnel presented the Draft Plan to the Town of Concrete.

In addition to communication with the County via this established political body, a special Technical Advisory Committee was formed to assist in the technical development of the Plan. The minutes of several of these meetings can also be found in Appendix F.

After the Draft Plan was made available, review copies were placed in the libraries of Mount Vernon, Anacortes, and Sedro Woolley. A sign-out sheet was included in these copies to monitor the attention received. At the time of the Public Meeting on May 24, 1990, no one had checked out the documents. Although several SWAC members dropped by on the night of the Public Meeting, there were no participants from the public. This low level of participation was anticipated as the Plan was not a controversial topic. Advertisements for the meeting and plan availability were placed in the Skagit Argus.

The final section of the Plan outlined hazardous waste problems and proposed solutions. This document was modified to serve as a questionnaire and sent to a broad range of the public including the SWAC and the Agricultural Coordinating Council. The complete mailing list is included in Appendix F, as is a copy of the request for response. Other than the Technical Advisory Committee, no returns were received.

In October of 1991, the Skagit County Planning Department circulated the Draft Plan for a 15-day comment period to comply with the SEPA public review process.

#### 1.7.2 The Public Participation Process Used in Implementing the Plan

An ongoing public information and involvement program is included as an implementation measure for the recommended Local Hazardous Waste Management Plan. This program is described in Section 6 of this Plan.

public. Ultimately, this list was shortened to a preferred set of program elements applicable to Skagit County. These program elements were then combined into a recommended program in order to best address the problems identified in Section 4 by meeting the objectives identified in Section 5.

This five-year recommended program includes program elements for education/training, collection, disposal, regulation, and evaluation/amendments. Emphasis is on education to encourage waste reduction, recycling, and reuse. Collection and disposal programs will be implemented to allow for proper management of the local hazardous waste that is produced. Regulation programs will be implemented to encourage proper management of wastes once the other programs are in place. Evaluation programs will be implemented to assess the success of the implementation of the plan.

Three alternative implementation strategies have been identified for the recommended moderate risk waste implementation program. One strategy assumes that the program is implemented with local funds only. The other two strategies assume current and 50 percent reduction levels of state financial assistance.

Planned funding sources for implementation of the programs described in the Plan include the Department of Ecology's implementation grant funding program and Coordinated Prevention Grants program, and an increase in the solid waste tipping fees. The estimated impact on the tipping fee for funding implementation of the plan over the five-year period would be approximately \$1.10 per ton.

If grant funds are unavailable, the program, which will be a reduced version of the recommended program, will still address the basic goals and objectives of the Plan. Emphasis will be placed on education and training programs, small quantity generator technical assistance, and a permanent primary collection facility for household hazardous waste.

other areas outside of Skagit County have been used to augment the limited local data.

## 2.4 PLAN OBJECTIVES

The following objectives were developed to address problems identified through researching the existing local conditions regarding hazardous waste management.

- Reduce the input of hazardous substances to the municipal solid waste and wastewater streams by a significant, measurable amount. This would minimize effects on the environment and accidents resulting in worker and public exposure to hazardous waste.
- Reduce the use of household products containing solvents and other chemicals of concern and eliminate disposal of these chemicals into septic systems.
- Eliminate all direct dumping of any household hazardous wastes into storm drains.
- Identify and establish a stable source of funding for future local hazardous waste planning and implementation programs.
- Emphasize education and technical assistance over enforcement as a means of attaining compliance.
- Provide the public, industry, agriculture, and local government with the information needed to take rational steps to minimize, recycle, treat, dispose, and otherwise manage hazardous wastes in Skagit County.
- Develop clear, consistent regulations at the local level for the management of small quantity generator waste and household hazardous waste.
- Develop and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous wastes generated in Skagit County to aid in management planning and emergency response.
- Involve all key parties, public and community organizations, state and local public agencies, small businesses, and hazardous waste management companies in development and implementation of the plan.

## 2.5 PLAN RECOMMENDATIONS

In order to achieve these objectives, a comprehensive list of program elements was drafted and researched. These program elements were then evaluated by the Technical Advisory Committee, Skagit Council of Governments, Skagit County Department of Public Works, and the general

solid waste and wastewater treatment facilities. This section also identifies any problems and needs related to moderate risk hazardous waste.

Section 5 summarizes hazardous waste problem areas discussed in Section 4 and identifies plan objectives and alternatives to address these problem areas. The objectives and alternatives have been developed to manage previously unregulated hazardous wastes. Section 6 provides recommended programs and actions, including preferred programs, agency responsibilities, cost estimates, funding strategies, and provisions for program evaluation and plan update.

### 2.3 KEY FINDINGS

- Hazardous waste is currently being disposed of in the solid waste stream by small quantity generators and households. The cumulative contribution of hazardous chemicals to the waste stream poses a potential safety threat to workers in the solid and wastewater facilities, as well as a potential threat to the environment in Skagit County.
- Possible groundwater pollution may occur by the disposal of hazardous substances into septic systems.
- Direct dumping of unwanted household wastes down storm drains may be adversely impacting local water environments.
- Skagit County held its first household hazardous waste collection day on October 21, 1989. Over 30 tons of hazardous waste were collected during the day-long round-up. Subsequent collection days in the fall of 1990 and 1991 have proven increasingly successful.
- In November 1988, Skagit County began a battery buy-back program to encourage residents to separate out used car batteries and dry cell batteries so they do not remain in the waste stream for the solid waste incinerator. Approximately 1,200 pounds of household batteries and 6 tons of auto batteries are collected monthly in the buy-back program.
- The public is often unaware of what options they have for managing their hazardous waste. Information and education programs for proper management of small quantity generator waste and household hazardous waste are needed.
- A waste stream composition study was conducted to provide baseline data for this Plan. The study determined that approximately 0.7 percent of the total Skagit County waste stream was found to be hazardous waste. Since this study represented only a single sampling event that may not be representative of the quantity and composition of hazardous wastes in the County, further definition of quantities, composition, sources, and disposal practices for small quantity generator waste and household hazardous waste in Skagit County may be needed. For purposes of this plan, data from



## 2.1 INTRODUCTION

This document is a five-year moderate risk hazardous waste management plan for the unincorporated and incorporated areas of Skagit County, Washington, including the cities and towns of Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon, and Sedro Woolley. The plan was developed in response to state legislation requiring all local governments to submit plans and to begin implementation them by December 31, 1991 (RCW 70.105.220). The County applied to Ecology for a variance until July 31, 1992. This variance was granted on March 4, 1992.

This county-wide hazardous waste planning process is mandated to provide direction and to control the otherwise unregulated household hazardous wastes and small quantity generator wastes. The Plan focuses on wastes considered to be of moderate risk due to their household origin or small quantity. The Plan elements address generation and management of non-regulated quantities of hazardous wastes from businesses and households, as well as regulated quantities of business wastes that are nevertheless showing up in the solid and liquid municipal waste streams.

Households and small businesses have generally disposed of their waste in the solid waste system, the wastewater treatment systems, indefinite storage on the properties, or by dumping onto the land. While all these methods may be "legal", they will be greatly influenced by the management techniques to be implemented through this planning process. Due to the nature of the planning area, it is important to develop programs to successfully capture this waste.

The Plan emphasizes public education, waste reduction, recycling, waste treatment, storage, disposal programs, and facilities. The goal of the Plan is to implement programs which will reduce the amount of toxic or otherwise hazardous materials entering the solid and liquid waste streams, for the protection of public health and the environment in Skagit County.

A Technical Advisory Committee, formed during development of the draft plan, is providing review and input throughout the planning process. The draft plan was reviewed and commented on by this committee. The draft plan was also made available for review by participating jurisdictions, the Skagit Council of Governments, the public, the Department of Ecology, and other interested agencies and individuals. This final plan incorporates comments received.

## 2.2 PLAN SUMMARY

Section 1 introduces the purpose of the plan, the planning process, and the planning area, including information about political jurisdiction, geographical description, and state and federal legislation and regulations pertaining to moderate risk waste. This section (Section 2) is a brief summary of the rest of the plan. Section 3 gives a general background of the planning area, including population, employment, and land use. Section 4 reviews the existing and future local waste management system, including

### 3.1 PHYSICAL CHARACTERISTICS

Skagit County is located on the northeastern side of Puget Sound. The County is bounded on the west by Puget Sound and on the east by the summit line of the Cascade Mountain range. It is bounded by Whatcom County on the north and by Snohomish County on the south.

Geologically, Skagit County lies within the topographic regions of the Puget Sound Trough and the Cascade Mountains. Most of the low lying areas are located within the Puget Sound Trough, and are characterized by extensive delta flood plain, alluvial flats, glacial outwash plain, and a few lateral or frontal moraines. The elevation of the lowlands range from sea level to approximately 400 feet, except for several rock outcroppings that rise above the surrounding terrain.

The mountains consist of ancient folded sediments, generally metamorphosed, with igneous intrusions. The summit line of the Cascade range reaches elevations predominantly ranging from 6,000 to 8,000 feet. Rugged and weathered peaks extend well above these elevations. Alpine glaciers remain plentiful at elevations extending above 5,000 feet.

The soils of the County can be divided into two primary groups; the alluvial soils and the upland soils. Most of the alluvial soils are quite fertile and produce good crops, whereas the upland soils are considerably less productive. Consequently, future residential and commercial development outside the perimeters of the cities are being encouraged to locate in the upland areas. Where practical, agricultural activities are being encouraged in the alluvial soils of the Puget Sound Trough.

The Skagit River (the second largest river in the state) and its main tributaries, the Sauk, Suiattle, Cascade, and Baker Rivers, wind through the County forming narrow valleys. In 1978, Congress added the Skagit River, along with the Cascade, Sauk, and Suiattle Rivers, to the National Wild and Scenic River System, in order to preserve the outstanding values of these selected free flowing rivers.

The major bodies of saltwater within Skagit County include Skagit Bay, Rosario Strait, Similk Bay, Burrrows Bay, Fidalgo Bay, Padilla Bay, Samish Bay, Guemes Channel, and Bellingham Channel. Major freshwater lakes include Big Lake, Lake Cavanaugh, Clear Lake, Lake Campbell, Lake McMurray, and Lake Shannon.

More than 50 percent of Skagit County's total land area is under state or federal jurisdiction. The Skagit County area under federal management lies within the Mount Baker-Snoqualmie National Forest (approximately 360,000 acres), Glacier Peak Wilderness Area (approximately 104,000 acres), and the North Cascades National Park (approximately 129,000 acres). (Skagit County Planning Dept., 1982; Paul, 1990)

In addition, the Padilla Bay National Estuarine Reserve, located near Bay View, was formed by the widened mouth of the river valley, where fresh water comes into contact with tidal seawater. The Skagit River Bald Eagle Natural Area, located near Rockport, is one of five bald eagle wintering areas in the contiguous 48 states. The Skagit Wildlife Area, a 13,000 acre preserve of which 10,000 acres lie within Skagit County, consists of extensive tidal flats, cattail salt marshes, wooded stream banks, and farmlands, and is a nesting and wintering area for over 26 duck species, as well as swans and geese.

Skagit County has the west coast marine climate typical of western Washington. The maritime air moderates both the winter and summer seasons, producing a definite rainy season during the winter, and a short dry summer. The Cascades shield the Skagit basin from cold air masses, while the Olympic and Coast Ranges offer protection from the intense winter storms which buffet the coast.

### 3.2 POPULATION

The population of Skagit County has grown steadily since the turn of the century, although the rate of growth has not always been constant. After a decade of minimal growth from 1960 to 1970, the population from 1970 to 1980 jumped 22.4 percent, slightly greater than the state gain of 21 percent during that decade. Between 1980 and 1990, the population jumped 24 percent, growing from 64,138 to 79,600.

In the last 15 years, population growth in the County has been based in the larger cities; the unincorporated areas have not grown as fast, while many of the smaller towns have actually experienced declines in population. In addition, the majority of the population is concentrated in the lowland areas, particularly along the I-5 corridor. Population estimates for Skagit County indicate that the County has and will continue to experience growth for at least the next decade. Table 3-1 shows estimates and forecasts of population for Skagit County.

TABLE 3-1. ESTIMATES AND FORECASTS OF POPULATION FOR SKAGIT COUNTY

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1980 Census	1985 Estimate	1990 Estimate	1995 Forecast	2000 Forecast
64,138	68,206	79,600	95,500	111,500

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Source: *Don't Waste Skagit County! A Report to the Community, 1992*, Skagit County Solid Waste Division, Winter 1992.

In Skagit County, approximately 74 percent (or 23,397 units) of the total housing units (31,640 units) are single family units (Office of Financial Management, 1988); fifty percent of the single family units are located in unincorporated Skagit County. In 1988, Skagit County permitted the construction of 221 new single family housing units; for comparison, 195 permits for new single family housing units were issued in 1982 (Office of Financial Management, 1988).

### 3.3 EMPLOYMENT

In general, the Skagit County economy relies heavily on natural resources (such as arable land, fisheries, and timber) and visual/recreational resources (utilized and important to the travel, tourism, and hospitality industries). Approximately 23 percent of the County's workforce is employed in the three industries of farming (including livestock), tourism, and timber alone (Washington State Department of Employment Security, 1989a).

Interestingly, a greater proportion of the County's population is employed in agricultural production (crops) now than in the past. Approximately 7.5 percent were employed in crops in 1982, versus 9.5 percent in 1989. This runs counter to the fact that fewer acres within Skagit County are being utilized as farms today than in 1982.

The predominance of agriculture and food processing in the western portion of the County has led to a stable pattern of demand for labor in this area. A permanent work force is required for year-round farm activities. This is provided by farm occupants, primarily owners and secondarily by tenants, supplemented by permanent employees. In addition, a temporary but relatively large work force is needed for crop harvesting. This is provided by migrant farm workers. A seasonal but relatively skilled work force is also required for operation of the food processing plants in the County. This is provided primarily by permanent residents, predominantly female.

With the closing of fresh produce canning operations in Mount Vernon in 1980, farm crops have changed to specialty crops such as seed raising. Traditional crops include fresh vegetables for local trade and flowering bulbs which are generally sold throughout the United States and Europe. Grain crops are generally raised for beef cattle and dairy livestock.

Commercial activity and, therefore, employment in trade and service industries, follows the same seasonal pattern as primary agricultural employment. A permanent work force for year-round activity is provided by permanent residents. Peak employment requirements generated by seasonal agricultural operations and tourist influx are met by migrant farm workers and seasonal employees who are primarily permanent residents of the County.

The majority of non-seasonal industrial employees are in oil refining or related industries with lesser numbers being employed in foundry casting. Seasonal or demand type of work consists of construction of fishing vessels and prefabricated on-field type of construction. Other long-standing

seasonal work includes logging, log exporting, and small mill and shingle works.

As of July 1, 1989, approximately 1,893 businesses in Skagit County employed fewer than 50 persons each (Washington State Department of Employment Security, 1989b). Utilizing a roster of businesses in Skagit County provided by the Washington State Department of Revenue, an analysis of SIC codes indicates that approximately 2,534 businesses and farms within Skagit County are potential SQGs. Of this number, 806 of the potential SQGs are farms, and 1,728 are non-farm businesses.

### 3.4 LAND USE

Skagit County is made up of approximately 1,734 square miles (1,244,160 acres), from Puget Sound on the west to the Cascade Mountains on the east. Of the total land area, approximately 50 percent is federal forest or commercial forest land that currently is unavailable for development. Approximately 35 square miles of land are occupied by Skagit County's eight incorporated cities and rural towns.

The area of land dedicated to agricultural use has declined in the last seven years. In 1982, 109,834 acres (or 9.9 percent) of Skagit County was dedicated to agricultural production; this number declined to 95,357 acres (or 8.6 percent) in 1987. This represents a 13.4 percent reduction in farm acreage in Skagit County for the period 1982 to 1987. For comparison, total state farm acreage dropped only 2.2 percent over the same 5-year period (U.S. Department of Commerce, 1987).

For hazardous waste planning, it is important to know where hazardous waste generators are located. Land use planning and controls, as they evolve in Skagit County, will be the guiding influence of the location of residences, commercial and industrial uses, and recreational activities. At present, land use in the County is guided by five comprehensive plans, one each for the Islands, Northwest, North Central, and Eastern Planning districts, and a combined Plan for the Southwest and South Central Planning District.

Zoning for hazardous waste facilities is controlled by the Skagit County Zoning Ordinance, Chapter 14.04 of the Skagit County Code. This zoning ordinance directs coordinated local zoning which permits off-site treatment and storage facilities in one jurisdiction to serve the off-site facility needs of other jurisdictions.

Chapter 14.04 identifies the Industrial Districts at Bay View and March's Point, south of SR-20, and the Skagit Regional Airport Industrial Area as the only off-site hazardous waste treatment and storage zones in Skagit County (see Figure 3-1). This Chapter also states that these two zones "shall serve as the coordinated off-site hazardous waste zones for all

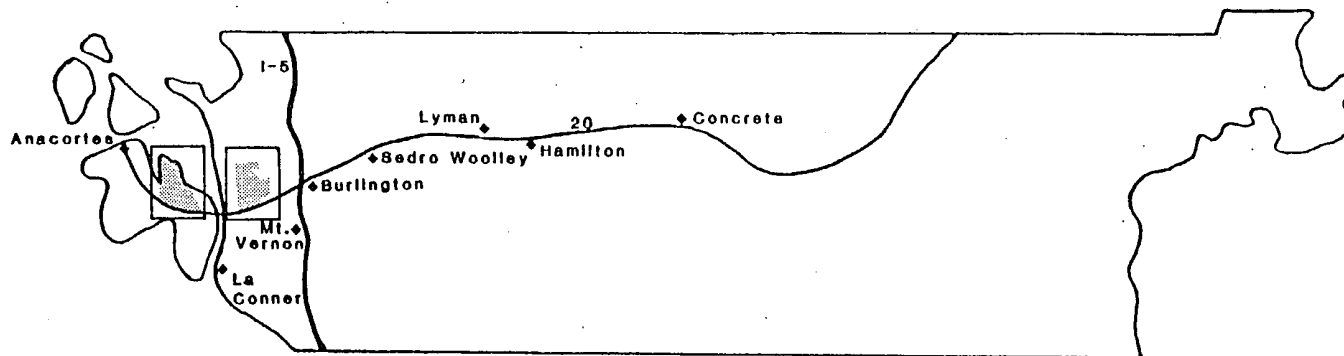
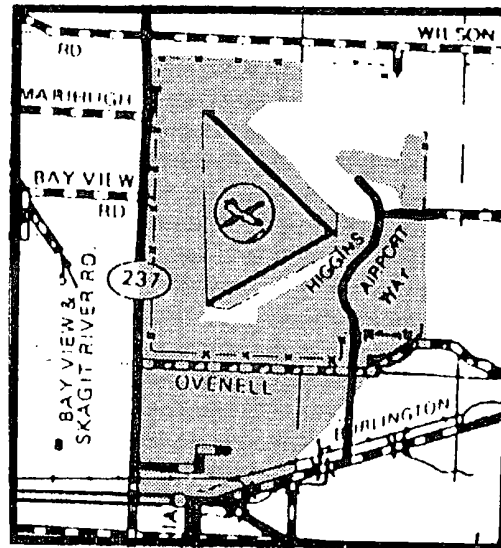
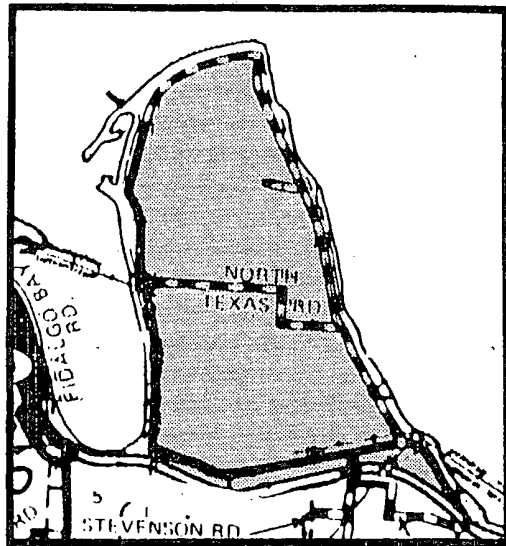


Figure 3-1. Skagit County Hazardous Waste Treatment and Storage Zones

Skagit County jurisdictions which have signed agreements with Skagit County to designate these zones as their off-site zone designations".

Jurisdictions which have signed these agreements include Anacortes, Mount Vernon, Burlington, LaConner, Sedro Woolley, Concrete, Lyman, and Hamilton.

The County's primary land use management objective is to protect the resource productive areas of the County. A secondary management objective is to facilitate growth in and by the cities. The County does not encourage urban-type growth in rural areas. Therefore, it is reasonable to assume that residential, commercial, and industrial hazardous waste producers will continue to be centered along I-5 and in the vicinity of the four largest communities: Anacortes, Burlington, Mt. Vernon, and Sedro Woolley.

### 3.5 IMPLICATIONS FOR LOCAL HAZARDOUS WASTE

#### 3.5.1 The Natural Environment

A variety of chemicals are used in households and small businesses, such as cleaners, pesticides, paints and solvents, many of which are toxic or otherwise hazardous. Although many households and businesses dispose of their hazardous wastes properly, other disposal practices are potentially harmful to the environment. Disposal practices that present environmental concerns include: disposal into a sewage treatment system, disposal into an on-site septic system, disposal into storm drains or on the ground, burning in backyard burn barrels, disposal into the incinerator, and landfill disposal.

Contaminant releases to groundwater can occur by design, by accident, or by neglect. Most groundwater contamination incidents involve substances released at or only slightly below the land surface. Consequently, it is shallow groundwater that is affected initially by contaminant releases. Hazardous waste infiltration through soils is probably the most common means of groundwater contamination (U.S. EPA, 1987). As water from rain and snow infiltrates downward through the soil, it may dissolve certain kinds of wastes it comes in contact with, forming a contaminated liquid referred to as leachate. The leachate can continue to migrate downward until groundwater is reached. These contaminated waters can travel to other aquifers when a contaminated aquifer mixes with uncontaminated groundwater. Contaminated groundwaters also can enter streams, lakes, or Puget Sound.

In general, poorly draining soils, such as those in Skagit County formed from cemented glacial till, may act to contain hazardous wastes, or at least slow wastes' movement through the soil into the groundwater. Poorly draining soils could also become saturated, enabling the waste to run off into streams and ponds. Conversely, soils and underlying deposits that have a high permeability could allow hazardous wastes to enter groundwaters and more rapidly disperse from the site of origin.

If contaminated groundwaters or surface runoff release hazardous substances into surface waters, the contaminants can enter Puget Sound or "closed" lakes and ponds that do not have the tidal ability to dilute concentrations. Once even very dilute concentrations of hazardous substances reach surface waters, there is an increased likelihood of their entering the food chain.

### 3.5.2 The Built Environment

The current laws and regulations have focused on managing those wastes which are produced by larger industrial and commercial operations. However, a system needs to be established to better manage the waste from residences and small businesses. The type and quantity of these wastes are influenced by such factors as population, population density, growth in employment by small businesses, family income, level of knowledge about moderate risk waste, and other factors.

Households and small businesses have generally disposed of their waste in the solid waste system, the wastewater treatment systems, backyard burn barrels, indefinite storage on the properties, or by dumping onto the land. While these methods may not be expressly "illegal", they will be greatly influenced by the management techniques to be implemented through this planning process. The nature of the planning area is important to develop programs to successfully capture this waste.

Small quantity generators of hazardous waste (i.e., those generators that produce less than 220 pounds of waste per month) are conditionally exempt from regulations. The types and quantities of these wastes can be predicted for planning purposes, based on general development patterns within the planning area. These SQGs tend to be service-oriented industries that serve the general population, as opposed to manufacturing operations.



This section provides a discussion of the existing situation in Skagit County in terms of the quantity and nature of hazardous waste produced, the waste streams affected by hazardous waste disposal, and available hazardous waste facilities for properly managing wastes. This section also identifies the problems and needs associated with both household hazardous waste management and small quantity generator waste management in the County.

#### 4.1 WASTE FACILITIES AND TRANSPORTATION SYSTEMS

The purpose of this section is to identify the existing waste facilities and associated transportation facilities that handle HHW and SQG wastes. The adequacy of these facilities will be assessed and recommendations will be made regarding future program and policy needs in Skagit County.

##### 4.1.1 Background

As federal and state hazardous waste regulations were implemented in the 1970s and early 1980s, large quantity generators were required to dispose of their wastes through regulated hazardous waste facilities. In the 1984 amendments to RCRA, the minimum Federal regulatory limit for small quantities of hazardous waste was lowered from 2,200 pounds per month to 220 pounds per month. Under RCRA, small quantities of waste generated at rates less than 220 pounds per month could be disposed of at state-approved municipal or industrial solid waste facilities instead of hazardous waste facilities. However, unregulated small businesses and households continued to dispose much of their hazardous materials in the solid waste stream and the sewer system.

In the past, there have been many public and private facilities in Skagit County that unknowingly collect, treat, recycle, transport, and dispose of small quantities of hazardous waste. Since much of the HHW and SQG waste is disposed of in the solid waste stream or in the sewer system, public facilities in the County that handle the majority of these wastes include the Municipal Solid Waste (MSW) incinerator, sewage treatment plants, transfer stations, solid waste compactor box sites, and landfills.

Private hazardous waste management facilities that handle regulated hazardous wastes are also available to provide service for HHW and minimal quantities of SQG waste. These private facilities include waste brokers, recyclers, reclaimers, and clean-up contractors, some of which are located outside of Skagit County.

##### 4.1.2 Current and Future Conditions

Public facilities in the Skagit County area that collect, treat, transport, and dispose of SQG waste and HHW include primarily solid waste handling facilities and wastewater treatment plants. This is due to the fact that, in general, most SQG waste and HHW at the present time gets dumped in the trash or down the drain (King County, 1989).

As shown in Figure 4-1, the existing solid and liquid waste disposal systems in Skagit County includes:

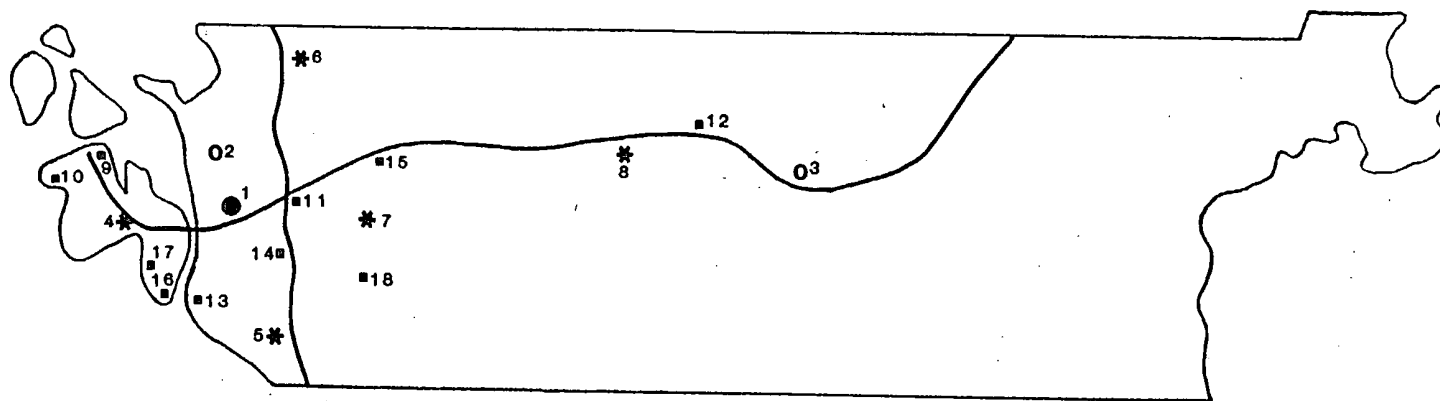
- The MSW incinerator, owned and operated by Skagit County.
- The Inman Landfill, owned and operated by the County.
- The Sauk Transfer Station, owned and operated by the County. (This site was previously a landfill, which was converted to a transfer station in mid-1989.)
- Five compactor collection boxes, maintained and transported by Skagit County: Similk, Conway, Alger, Clear Lake, and Birdsvew.
- Ten sewage treatment plants, owned by municipalities within the Skagit County area: Anacortes Plant and Skyline Plant (operated by the City of Anacortes); City of Burlington Plant; Town of Concrete Plant; Town of LaConner Plant; City of Mount Vernon Plant; City of Sedro Woolley Plant; Shelter Bay Plant; Hope Island Plant; and Big Lake Plant.

The collection system in Skagit County is a mix of private and municipal operations. The unincorporated area of Skagit County is served by two solid waste collection firms which are licensed by the Washington Utilities and Transportation Commission (WUTC). Rural Skagit Sanitation serves all of the unincorporated County including Guemes Island and the towns of Hamilton and LaConner, and hauls all of its waste to the County incinerator. The North Cascade Disposal Company collects refuse in the Town of Concrete, as well as in some of the recreational areas east of Concrete, and currently hauls its waste to the County incinerator. The cities of Anacortes, Burlington, Mount Vernon and Sedro Woolley have their own collection trucks and personnel to provide refuse collection and disposal within their respective jurisdictions.

Recycling centers, independent operators, and community organizations in the County collect a variety of recyclable materials from both residential and commercial/industrial sources. One of the collectors (Skagit River Steel and Recycling) is also a processor of recyclables.

Skagit County has established full-service recycling stations at the incinerator, the Inman Landfill, the Sauk Transfer Station, and all five compactor box sites. In addition, private recycling centers include:

- JET Recycling, which operates a buy-back center in Mount Vernon that handles a range of recyclable materials.
- Skagit River Steel and Recycling, which is a Burlington full service recycling operation which includes processing of scrap metals.



● 1 Skagit County Incinerator

○ 2 Inman Landfill

○ 3 Sauk Transfer Station

\* 4 Similk Compactor

\* 5 Conway Compactor

\* 6 Alger Compactor

\* 7 Clear Lake Compactor

\* 8 Birdsvew Compactor

■ 9 Anacortes WWTP

■ 10 Skyline WWTP

■ 11 Burlington WWTP

■ 12 Concrete WWTP

■ 13 La Conner WWTP

■ 14 Mt. Vernon WWTP

■ 15 Sedro Woolley WWTP

■ 16 Shelter Bay WWTP

■ 17 Hope Island WWTP

■ 18 Big Lake WWTP

Figure 4-1. Skagit County Waste Facilities

- Larry's Auto & Truck Parts, which is a buy-back center for all types of non-ferrous metals, select ferrous metals, auto bodies, and appliances.

Several community groups sponsor newspaper drop-off stations around the County. In addition, occasional newspaper drives are conducted by groups such as the Boy Scouts and certain schools and churches. The Elks and Rotary Clubs collect small amounts of aluminum cans. The cities of Anacortes, Mount Vernon, and Sedro Woolley provide sites for residents to dump grass clippings and sod.

Two companies, Vintage Oil and Al's Auto Supply in Mount Vernon, currently accept used motor oil from homeowners. The City of Sedro Woolley Maintenance Shop accepts used motor oil from city residents only. In addition, Skagit County Public Works Department plans to have used motor oil collection containers available at the incinerator, Sauk Transfer Station, and Clear Lake Compactor site in the near future (Voerman, 1990; Boge, 1991).

The County has operated three landfills until recently, when the Sauk and Gibraltar landfills were closed. The Gibraltar Landfill was permanently closed in January 1989. In September 1989, the Sauk Landfill was converted to a transfer station, serving the residents of the eastern portion of the County. The Sauk Transfer Station currently receives approximately 2,500 tons of waste per year. The Inman Landfill, which receives an average of 7,200 tons per year (excluding incinerator ash), is the only remaining active landfill in the County. Waste currently going to the Inman Landfill is limited to the incinerator ash (approximately 1,200 tons per month), demolition debris, and other bypass wastes that cannot be processed at the incinerator (Ness, 1990; Resource Integration Systems, 1989).

Skagit County began receiving and burning waste at its solid waste incinerator in June of 1988. The incinerator currently receives an average of 50,000 tons of waste per year. All of the waste collected by the municipal and private collection firms within the County is hauled directly to the incinerator, except waste that is considered to be unacceptable with regard to incineration (e.g., auto bodies, demolition debris, rocks, and stumps).

Skagit County operates five compactor boxes which serve the rural areas and small towns within the County. The County is responsible for maintaining the drop boxes and arranging for disposal when they reach capacity. The sites consist of several 28-cubic yard hydraulic compactor boxes, which are set up to allow customers to drive to the compactor through a coin-operated system. When the compactors reach capacity, the full container is hauled to the incinerator by Rural Skagit Sanitation.

Currently there are ten wastewater treatment plants in Skagit County: Anacortes Plant and Skyline Plant (operated by the City of Anacortes); City of Burlington Plant; Town of Concrete Plant; Town of LaConner Plant; Shelter Bay Plant; Hope Island Plant; City of Mount Vernon Plant; City of Sedro Woolley Plant; and Big Lake Plant. These plants are owned and operated by the individual municipalities that they serve, with the exception of the LaConner, Shelter Bay, Hope Island, and Big Lake plants, which each contract out the operation of the plants.

In 1992, a new wastewater treatment plant opened in Anacortes, replacing both the Skyline and current Anacortes plants. Sewers in the Skyline area are piped directly to the new plant. All combined sewer/storm drains in the service area were eliminated at that time. This new treatment plant consists of secondary treatment and includes an on-site incinerator for the sludge. No energy recovery from the sludge incineration is planned. Ash from the incinerator will be disposed of in a dedicated ash landfill to be developed by the County.

The municipal wastewater treatment facilities receive and treat wastewater from residential, commercial, and industrial sources. The municipal wastewater is thus a composite of sewage, laundry and bath washwaters, food-processing organic material, commercial and industrial process wastes and anything else that goes down the drain. At the primary treatment plants (Concrete and Hope Island), wastewater is screened, treated in a primary system (gravity settling and skimming), and disinfected to kill remaining microorganisms. The treated, disinfected effluent is then discharged into nearby surface waters. The Concrete Plant discharges into the Baker River, and the Hope Island Plant discharges into Skagit Bay. The sludge is further treated then hauled away by a private contractor for use in land application around the County as a soil amendment.

Anacortes, Burlington, Mount Vernon, Sedro Woolley, LaConner, Big Lake, and Shelter Bay all have secondary treatment plants. Secondary treatment generally consists of primary treatment and biological oxidation using activated sludge or trickling filtration, followed by clarification. This secondary treatment process generally attains at least 85 percent removal of both BOD (biochemical oxygen demand) and suspended solids. The treated, disinfected effluent from the secondary plant is also discharged into nearby surface waters. The Anacortes Plant discharges into Guemes Channel; the Burlington, Sedro Woolley, and Mount Vernon plants all discharge to the Skagit River; the LaConner and Shelter Bay plants discharge to the Swinomish Channel; and the Big Lake Plant discharges to the South Fork of the Skagit River.

#### 4.1.2.1 Hazardous Waste Facilities

Existing household hazardous waste disposal options are limited. One way to safely dispose of this waste is by a collection day (or round-up). During a round-up or collection day, residents bring their household

hazardous wastes to a designated location for safe disposal. Trained personnel accept and handle these wastes, and package them for recycling, reprocessing, or disposal at licensed hazardous waste facilities. Several communities in Washington have held successful household hazardous waste collection days, which demonstrated growing public demand for disposal services. This type of collection service is recognized as the first step in household hazardous waste management and is very useful in educating the public. Some of the benefits of a collection day include:

- Home safety - removal of poisons and potential fire hazards.
- Worker safety - the improper disposal of SQG wastes and HHW in the garbage and sewers may present a threat to safety of workers.
- Public education and increased awareness of dangers in SQG wastes and HHW.
- Public involvement in addressing non-point pollution.
- Removal of hazardous wastes from local waste disposal facilities.
- Avoiding potential clean-up costs.

Skagit County held its first household hazardous waste round-up on Saturday, October 21, 1989. Over 30 tons of hazardous waste were collected during the day-long round-up. Approximately 350 households participated in the survey taken at the site. Two subsequent collection day efforts have proven increasingly successful.

There are currently no formal services available within Skagit County for individuals seeking disposal information for small quantity generator or household hazardous wastes. When requested, the County Department of Public Works and Department of Health provide support to generators and handlers of small quantities of hazardous waste by assisting them in identifying recycling options, disposal sites outside the County, or other appropriate options. Prior to the Household Hazardous Waste Round-up held in October 1989, a temporary toll-free number (1-800-826-1962) was implemented to provide information on the collection day. In addition, a number of agencies around the State offer assistance in those areas:

- Ecology has a Technical Resource Center (1-800-822-9933) to obtain information on ways to reduce or recycle hazardous wastes from your business.
- The Recycling Hotline (1-800-RECYCLE) is available for locations of recyclers of used oil, batteries, household hazardous wastes, and non-hazardous solid wastes in Washington.
- The Hazardous Substances Information Hotline (1-800-633-7585) is helpful in obtaining, among other things, information on hazardous waste regulations that apply to small businesses.

- In King County, the Seattle/King County Department of Public Health operates the HAZARDS LINE (296-4692) which offers information on HHW recycling or disposal options.

There are a number of private firms in the state involved in the handling of SQG waste and HHW. All firms handling hazardous wastes must be registered with the State of Washington, and must use the uniform hazardous waste manifest form to ship hazardous wastes off-site. These firms must also comply with regulations issued by the EPA and the State of Washington. There are no such firms in Skagit County.

Other private facilities recycle materials commonly generated by small quantity generators and may accept small quantities from the general public. No formal program for waste collection exists for these facilities. Appendix A contains a Hazardous Waste Assistance List produced by the Washington Department of Ecology which identifies companies which deal with hazardous wastes, including household and small quantity generator wastes.

There are currently provisions in Skagit County to accept and remove batteries from the waste stream entering the incinerator. In November 1988, Skagit County began a battery buy-back program to encourage residents to separate out used car batteries and dry cell batteries so they do not remain in the waste stream for the incinerator. Batteries do not burn evenly and can produce uncontrolled hot spots within the combustion chamber of the incinerator. In addition, heavy metals, including lead and mercury, can cause problems with the emissions control equipment and ash residue from these facilities. Buy-back locations include the Skagit County incinerator, the Inman Landfill, the Sauk Transfer Station, and all five compactor box sites.

#### 4.1.2.2 Transportation System

Currently, SQG waste and HHW transportation issues are generally related to the solid waste and wastewater transportation issues because most of the waste that is being transported is contained in those waste streams at the present time. The solid waste transportation system starts with the collection of waste by private firms at each home or business and includes delivery of waste to the incinerator. Two other significant solid waste transport systems in Skagit County include: waste generators hauling their waste directly to the compactor box sites, the Sauk Transfer Station, the Inman Landfill, and the MSW incinerator; and the transport of the compactor boxes from the sites to the incinerator. With the exception of the Clear Lake site, these compactor box sites are located within approximately one mile of Highway 20 or the I-5 corridor.

Incorporated cities within Skagit County are allowed to regulate the collection of waste within their boundaries or haul the waste themselves. Waste collection in the unincorporated areas of the County are regulated by the Washington Utilities and Transportation Commission. Waste generators are not required to use the services of commercial collection firms.

SQG waste and HHW are commonly mixed with the trash and set out for collection. The collection is accomplished by employees picking up bags or cans and emptying them into a compactor truck. Bottles and other containers are often crushed during this operation and can create hazardous conditions for the employee who often cannot see the hazardous materials in the waste.

#### 4.1.2.2.1 State and Federal Laws for Transporting Hazardous Waste.

Existing state and federal laws regulate many aspects of hazardous materials and wastes transportation. For example, the federal government regulates vehicle safety and driver training through the U.S. Department of Transportation Bureau of Motor Carrier Safety (BMCS). Regulations on the packaging, handling, and placarding of hazardous material shipments have also been promulgated by the U.S. Department of Transportation in the Code of Federal Regulations (49 CFR).

Other regulations require that generators of hazardous waste complete a manifest before the waste can be removed from their property and that only licensed hazardous transporters are allowed to haul this material. Many of these regulations exempt SQG waste and HHW, but hazardous waste treatment facilities will not accept materials that do not comply with these regulations regardless of the quantity.

As new waste management programs are implemented, such as permanent collection facilities at transfer stations and additional collection programs, transportation of the collected wastes from collection areas to treatment or disposal facilities must be considered. Transportation of the collected hazardous wastes must meet all applicable federal and state regulations including safety, equipment standards, packaging, labeling, training, and manifests. In addition, preferred waste transportation routes should be designated, especially for permanent facilities.

#### 4.1.2.2.2 Transport System for Wastewater.

The transport system for the wastewater treatment plants in Skagit County consists of many miles of pipes and pump stations that connect the houses and commercial properties to the treatment facilities. In Skagit County, ten cities or local sewerage districts comprise the wastewater system. Sewage treatment plant sludge and grit is collected from the treatment operations and hauled away by a private contractor in a tank truck for use in land application as a soil amendment.

As with the treatment plants, these collection systems are susceptible to damage from the release of large volumes of hazardous materials, but are less susceptible to damage from SQG waste and HHW because of the small quantities of waste compared to the very large quantity of water in the system. Exceptions to this general rule include collection systems that have suffered damage from explosions caused by relatively small quantities of highly flammable materials, and treatment plants that have been shut down due to hazardous chemicals killing off the bacteria in the system.



### 4.1.3 Identified Problems and Needs

#### 4.1.3.1 Waste Facilities

Currently, Skagit County does not knowingly accept any quantities of hazardous waste at the compactor box sites, MSW incinerator, transfer station, or the County landfill. Therefore, generators of hazardous waste, even in quantities less than those regulated by the state and federal laws, must find other ways to dispose of their wastes. However, there is a lack of public and private facilities capable of managing hazardous waste. In addition, the existing public and private facilities and programs designed to manage SQG waste and HHW are not effective at keeping this waste out of the municipal solid waste system and wastewater treatment plants. There are currently no formal programs to identify small quantity hazardous waste generators, in order to provide them with guidance in handling their wastes so that public health and the environment are protected from improper disposal procedures.

It is possible that significant quantities of potentially dangerous materials are entering the environment via storm and sanitary sewer systems. In addition, some dangerous material may actually be going to the County incinerator and landfill because it is virtually impossible for the attendants to exclude small quantities of hazardous waste if they are enclosed inside a bag, box, or dumpster of general refuse. Beyond the potential risk of contamination in the discharges from these facilities, an additional risk with the current system for handling SQG waste and HHW is the potential hazardous waste exposure of employees and customers of the solid waste facilities.

Currently, there are only a few private facilities that intentionally handle SQG waste and HHW and provide proper disposal. Although none of these firms are located within Skagit County, Seattle firms could potentially provide service to the Skagit County area. A list of these facilities is included in Appendix A.

There are no permanent facilities in Skagit County that will accept SQG waste or HHW for no charge. Burlington Environmental in Seattle currently sponsors a Small Quantity Generator Waste Acceptance Program, where, for a minimal charge per gallon, SQGs can drop off their hazardous wastes (up to 55 gallons) on the last Tuesday of each month between 10 a.m. and 3 p.m. Burlington Environmental also sponsors a Household Hazardous Waste Program that allows homeowners to drop off their household hazardous waste free of charge every Thursday between 10 a.m. and 3 p.m. There is a limit of 15 containers or 25 gallons, whichever is less.

Other facilities that handle hazardous waste from regulated generators also handle SQG waste and HHW, but the cost of disposal for small quantities is high in comparison to disposal in the solid waste or wastewater systems. Even though most people may want to do the proper thing if they know what that is, in a competitive market where the lowest cost and easiest

alternative is to dispose of the waste in the trash or sewer, this is usually where it goes. In order to avoid this reaction, additional education and reasonably convenient disposal options must be made available.

It would be beneficial to implement a permanent household hazardous waste collection facility at a central waste disposal location in the County. A dedicated operation could be provided at the public receiving area at the incinerator to properly handle and dispose of HHW. These facilities are expected to have the greatest impact on "self-haul" wastes. In addition to the incinerator, SQG waste and HHW collection facilities can be located at fire stations. The continuation of hazardous waste collection days would also help to reduce hazardous wastes in the sewer and County landfill.

The advent of public sector development of collection days or permanent services for accepting SQG waste and HHW could impact the private sector businesses that now provide the service on a limited basis. However, since the private sector services are on such a limited basis at this time, this is not expected to be a significant impact. Nevertheless, close coordination and cooperation with the private sector waste management businesses are recommended to achieve the desired goal of safely disposing of the waste products.

With the implementation of new waste management programs, such as permanent collection facilities at centralized locations and additional collection day programs, transportation of the collected wastes from collection areas to treatment or disposal facilities will come under the regulation for hazardous wastes.

#### 4.1.3.1.1 Potential Problems With SQG Waste and HHW at the Incinerator.

Solid waste that is burned in incinerators can produce complex air emissions. The presence of toxic compounds in the waste stream could generate toxic emissions. Heavy metals, such as lead from car batteries and some printing dyes, and mercury from certain household batteries can have a deleterious effect on the incinerator, causing problems with the emissions control equipment and ash residue from the facility.

It is important to note, however, that the ash disposal system at the incinerator includes a magnetic ferrous metal recovery system which allows the recovered metals to be baled and shipped to a recovery facility. In addition, the incinerator ash system contains several design features to reduce both the quantity of ash produced and permanently contain the potentially toxic materials. Fly ash from the air pollution control equipment is not mixed with bottom ash at this facility. Fly ash is stored in a silo on the site. It is mixed with water to form a paste and hauled to the Inman Landfill.

Other problems with hazardous waste entering the waste stream to the incinerator include the potential for spontaneous fires and explosions to occur, the added risk to operators of solid waste collection equipment, the added risk to employees at the incinerator, and the danger posed to the public from leakage from collection and transfer vehicles. At the

incinerator, signs are provided stating that no hazardous waste is allowed. However, enforcement of the prohibition of SQG waste and HHW is difficult because most of the waste is thoroughly mixed in the large compactor trucks.

4.1.3.1.2 Potential Problems With SQG Waste and HHW at the Landfill. The only active landfill currently serving Skagit County is the Inman Landfill. The County owns or leases 51 acres at this site. The County operates the scalehouse and the main disposal portions of the site with its own employees and equipment. In 1985, Skagit County expanded the Inman Landfill and made several improvements, including an 80 mil high-density polyethylene liner, a leachate collection and transportation system, a groundwater monitoring system, and other environmental controls. The liner systems have been installed in compliance with the Washington State Minimum Functional Standards and should provide a high degree of protection to the groundwater under the Inman Landfill. The greatest risk of contamination of the groundwater in the region of the landfill is from the unlined areas of the site filled prior to 1985.

Waste currently entering the Inman Landfill is limited to bottom and fly ash generated during the operation of the incinerator, and bypass wastes that can not be processed at the incinerator. Therefore, with primary waste disposal being accommodated at the incinerator, risks associated with waste handling will not be as great at the landfill site.

Currently, there are no special procedures for handling SQG waste and HHW at the Inman Landfill other than inspections by the site personnel. The landfill posts signs which inform customers that hazardous materials are not allowed; however, this rule is very difficult to enforce. The recently-closed Gibraltar and Sauk Landfills and the Inman Landfill probably inadvertently accepted household and small quantity generator hazardous waste.

4.1.3.1.3 Potential Problems With SQG Waste and HHW at the Compactor Box Sites. Currently, the Clear Lake site is the only compactor box site that is manned full-time during operating hours. For the other sites, maintenance is provided by a local resident who tends the gates and gathers litter. This person also notifies the County when the boxes are full. Signs are posted instructing customers to call this person when the container is full or if a customer encounters any problems.

In general, SQG waste and HHW are a potential problem at the compactor box sites due to the potential for employees or customers coming in contact with them. There is also a potential impact to the environment due to the lack of safeguards on what is deposited at the sites, since there are no special procedures for handling hazardous waste other than inspections by the site personnel. In addition, as the waste is discharged from the compaction trailers at the incinerator, containers of hazardous waste can break open and either spray directly onto employees or customers or become airborne.

Additional problems include the possibility of hazardous waste leaking out of the trucks during transport, leaking into storm or wastewater systems, and increasing potential dangers from fires or explosions. County facilities provide large signs stating that no hazardous waste is allowed, but in reality it is very difficult to control this waste stream.

4.1.3.1.4 Potential Problems With SQG Waste and HHW at Wastewater Treatment Plants. The environmental impacts of SQG waste and HHW on a wastewater treatment system are primarily associated with the residual metals and other compounds that are discharged in the sludges and effluents from the plants. Currently, the level of contaminants in both the sludges (solids) and the liquid effluents from the wastewater treatment plants meets the standards established by Washington State and the EPA.

Large slugs of hazardous materials can cause significant damage to the treatment plants, but the materials received from household and small quantity hazardous waste generators are greatly diluted before they reach a treatment plant and are unlikely to cause immediate or acute problems such as explosions, equipment damage, or worker injury. However, there are some types of hazardous materials that can disrupt sewage treatment processes.

Sludge generated at the plants within the County is regularly monitored for metals, pesticides, and organics using the EP TOX and TCLP (Toxicity Characteristic Leaching Procedure--landfill simulation tests based on acid leaching and analysis of leachate) tests. Concentrations of compounds in the sludge are well below hazardous threshold levels, but the continued addition of SQG waste and HHW materials should be minimized because the majority of the sludge produced by these facilities is ultimately reclaimed and used as a soil amendment on agricultural and green belt areas around the County.

4.1.3.1.5 Potential Problems With SQG Waste and HHW at Recycling Facilities. Currently the residents of Skagit County recycle more than 20,000 tons annually (Washington State Department of Ecology, 1990). Of all the material recycled in the County, approximately 75 percent is from commercial sources and 25 percent is from residential sources. Municipal solid waste disposal in Skagit County, excluding appliances and auto bodies, is approximately 65,000 tons per year. The amount of material currently being recycled is estimated to be approximately 25 to 30 percent of the total waste stream (Parametrix, 1992). The remainder goes either to the incinerator or is landfilled.

The majority of the recycled material is currently being handled by municipalities and private recycling firms, such as Skagit River Steel and Recycling. A portion of the recycled material is being handled by community organizations, such as senior citizen centers, the American Legion, the Elks Club, and the Rotary Club. In addition, independent operators throughout the County periodically collect commercially generated loads of corrugated cardboard.

The 1989 Skagit County Comprehensive Recycling Plan made several recommendations for implementation and operation of recycling systems within the County. A full-time recycling coordinator was hired, as recommended in the Plan, to educate businesses and citizens of all ages about waste reduction and recycling; to implement source reduction and curbside collection programs; and to establish a rural drop-off system. The goal of these programs is to increase residential recycling by at least seven to nine percent over the current level of participation.

The methods selected to achieve these waste reduction goals could potentially increase the problems associated with SQG waste and HHW materials in the solid waste stream. For example, if manual sorting were involved, the workers would be closer to the wastes and therefore more susceptible to injuries. However, manual sorting is not expected to be used at recycling facilities in Skagit County, except possibly for selected known high-grade generators (Voerman, 1990).

Another problem associated with recycling SQG waste and HHW materials has to do with the removal of capacitors and switches from the motors of many older household appliances. Many were insulated with an oil containing PCBs. In terms of residential waste streams, PCB-contaminated capacitors installed in older clothes washers and dryers, stoves and ovens, dishwashers, trash compactors, and some refrigerators and freezers pose a potential widespread risk. In order to raise the demand for the metal, the unwanted elements such as PCB-laden capacitors, insulation, copper parts, and mercury-containing electrical switches need to be removed from the appliances.

Another issue affecting appliance disposal is controlling Freon, the cooling gas used in refrigerators and air conditioners. Freon contains chlorofluorocarbons (CFCs), which harm the Earth's ozone layer. Washington State has recently passed a law (RCW 70.94.970 - 990) that will go into effect July 1, 1992 regarding disposal of appliances containing Freon. This law requires that the County must recover all Freon from appliances before disposing of them.

Haulers and landfills can't afford to handle white goods, not only because of their potentially toxic components, but because the units are so bulky; the cost of transporting them is high, and the units can't be compacted or shredded unless the processor is certain that capacitors and other elements have been removed. On the scrap dealer's end, the bulk of the units isn't a problem, but removing unwanted elements is. (Goldberg, 1989)

#### 4.1.3.2 Transportation System

Current SQG waste and HHW transportation issues are generally the same as solid waste transportation issues because most of the SQG waste and HHW that is being transported is in the solid waste stream at the present time. Efforts aimed at reducing the amount of SQG waste and HHW in the solid waste stream, to date, have targeted public information, battery collection, and hazardous waste collection days. No specific programs have been implemented to improve the transportation system for SQG waste and

HHW. However, as SQG waste and HHW is handled more as a separate component of the waste stream, transportation issues such as routing, safety, and scheduling must be addressed to ensure safe handling and transportation in the community.

SQG waste and HHW could create problems in the transport system for the wastewater treatment system if the waste became concentrated in one location. However, compared to the solid waste transportation system, this problem is relatively minor, since most SQG waste and HHW discharges to the wastewater system are small and readily diluted.

#### 4.2 HOUSEHOLD HAZARDOUS WASTES IN SOLID WASTE AND WASTEWATER

Four different disposal routes or waste streams are commonly used for disposal of household hazardous wastes. These four include:

- Solid waste stream.
- Wastewater system.
- Storm drainage system.
- On-site disposal/storage (including those HHW buried, stored in homeowners' basements or garages, burned in burn barrels, or dumped on the ground).

This section addresses all four of the above-mentioned waste streams.

Many products that are used in and around the home may be hazardous in nature if disposed of improperly. These include products which have the following characteristics: poisonous, caustic, corrosive, explosive, reactive, flammable, toxic, or suspected cancer causing agents. Some chemicals are also persistent, in other words they remain in the environment for long periods of time and can accumulate in organisms. These materials can also present hazards to households, including risks of fire and accidental poisoning.

Because household hazardous waste comes from many small, diverse sources rather than a few large, localized sources, they are difficult to control. Every day, throughout the County literally tons of these chemicals are washed down drains or dumped in the household trash. When these products are no longer wanted or useful, they become hazardous waste that may be a threat to health and environment if disposed of improperly.

##### 4.2.1 Solid Waste Stream

This section discusses household hazardous waste contributions to the solid waste stream in the Skagit County planning area.

##### 4.2.1.1 Background and Current Conditions

Limited information on the quantities and nature of household hazardous wastes in the solid waste stream has been developed for Skagit County. County specific information has been derived from a solid waste sort and household hazardous waste collection days. In addition, information from other studies of household hazardous waste generation has been used to augment the specific but limited data from these sources. All of these information sources are discussed in more detail below.

4.2.1.1.1 Household Hazardous Waste Collection Program. Skagit County began organizing Household Hazardous Waste Round-Ups in October of 1989. Since then, two more collection days have been held; one each in September

of 1990 and 1991. These events have been gaining popularity and are showing increasingly successful results.

Approximately 34 tons of waste were collected at the first round-up. The majority of material collected was paint (13.8 tons), pesticides (6 tons), batteries (5.2 tons), and used oil (3.8 tons). Table 4-1 summarizes waste composition results from the 1989 Skagit County HHW round-up. The round-up generated 86 55-gallon drum equivalents of paint, approximately 40 percent of total collections.

Data from the household hazardous waste collection project is useful for planning purposes but is not likely to be representative of the household hazardous wastes present in the solid waste stream. Household hazardous waste collection days represent disposal of waste materials that have been accumulated and stored for long periods before disposal occurs. Preliminary tabulated results for the Skagit County round-ups showed that the average length of time a product was stored in the home was approximately 12 years. In addition, almost seven percent of the households participating in the survey reported that their oldest product was more than 30 years old. Homeowner perceptions of what is or is not hazardous often differ from regulatory definitions. Therefore, what is brought to a collection center may not be truly representative of all hazardous wastes generated. Therefore, information from studies done in other counties and cities was reviewed to supplement this information.

**4.2.1.1.2 Waste Stream Composition Study.** A solid waste stream composition study was performed for the County in early 1990 (R.W. Beck, 1990). As part of this study, hazardous wastes that were part of the residential, commercial, and self-haul waste streams were segregated and characterized by type and weight.

Because the waste stream composition study was a single sampling event it may not be representative of the actual amount and type of hazardous waste that is currently being disposed of in the solid waste stream. Studies have shown that the volume and composition of waste streams vary with the seasons and with local economic conditions (SCS Engineers, 1987). However, the results of the study are summarized here and the findings have been incorporated into the planning process.

Ninety-two vehicles were selected and their loads sampled by hand-sorting into eight categories and 63 subcategories. The "Hazardous Material" category included the following 19 subcategories:

- Waste paint, thinners, printing inks, alcohol
- Solvents, degreasers, dry cleaning solutions
- Cleaning agents, detergents, disinfectants, polishes
- Adhesives, glues, pigments, resins, caulking compounds
- Used oil, greases



TABLE 4-1. HOUSEHOLD HAZARDOUS WASTE COMPOSITION IN SKAGIT COUNTY  
(Derived from results of the 1989 Hazardous Waste  
Collection Day)

	Percent of HHW stream (by weight)
Acid Liquids	1
Aerosol Cans	1
Aerosol Drum - propane cylinder	<1
Alkaline Liquids	2
Asbestos	<1
Batteries, Auto	2
Batteries, Drycell	13
Dioxin, Liquid	1
Dioxin, Solid	<1
Gasoline	1
Oxidizers	<1
Paint, Enamel	30
Paint, Latex	11
Pesticides, Liquid	9
Pesticides, Solid	9
Petroleum Products	7
Solvents, Chlorinated	<1
Solvents, Non-Chlorinated	1
Used Motor Oil	11

- Waste gasoline, diesel
- Antifreeze
- Household batteries
- Vehicle batteries
- Acid, caustics, corrosives
- Photographic chemicals, developers, fixers
- Pesticides, herbicides, insecticides, fungicides, rodenticides, wood preservatives, creosote products
- Strong bleaches, pool or hot tub chemicals, hypochlorites, HTH, peroxides, fertilizers
- Fluorescent light ballasts, capacitors, transformers and oils, PCBs
- Laboratory, hospital, or clinical chemicals
- Toxic metal wastes, lead compounds, mercury, plating waste, slag
- Cyanide compounds or other toxic wastes
- Compressed gases, freon, deicers, propane, starter fluid, paint spray cans
- Explosives, ammunition, gun powder, reactive wastes

Hazardous waste accounted for less than one percent of the waste stream by weight in all three generator types (commercial, residential, and self-haul/rural compactors). Adhesives (caulking compounds, roofing tar), waste paint, laboratory waste, and compressed gasses (fire extinguishers, freon, propane) made up the majority of the household and small quantity generator hazardous waste in Skagit County. Household batteries were present in a large number of samples but did not contribute as a large percentage in the overall waste stream.

The hazardous waste component category was identified for the total waste stream, as shown in Figure 4-2. Approximately 0.7 percent of the total waste stream was found to be hazardous waste. Figures 4-3 and 4-4 show the residential (0.8 percent) and self-haul (0.6 percent) proportions of hazardous wastes encountered in the composition study.

The waste composition study was conducted in order to help determine hazardous waste components of the waste stream; identify those improperly disposing of hazardous wastes in the solid waste stream; provide direction for future public education programs targeting waste streams; and help

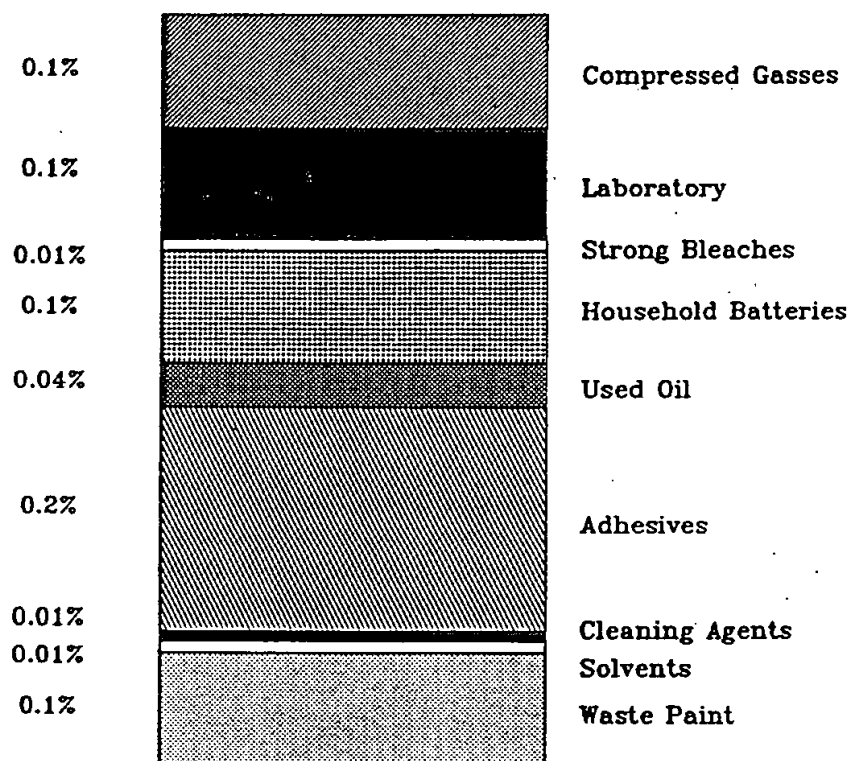


Figure 4-2. Skagit County Hazardous Wastes in the Waste Stream  
(Adapted From: R.W.Beck, 1990)

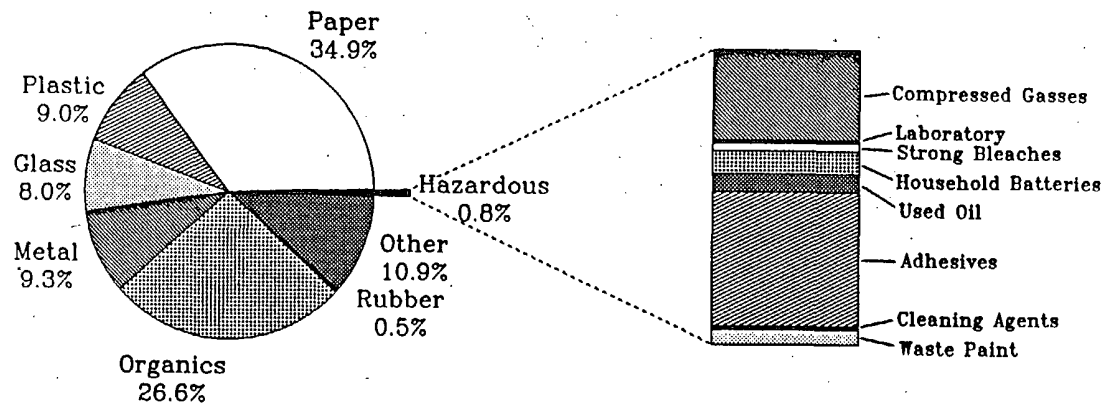


Figure 4-3. Skagit County Residential Waste Stream Composition with Hazardous Waste Components  
(Adapted From: R.W.Beck, 1990)

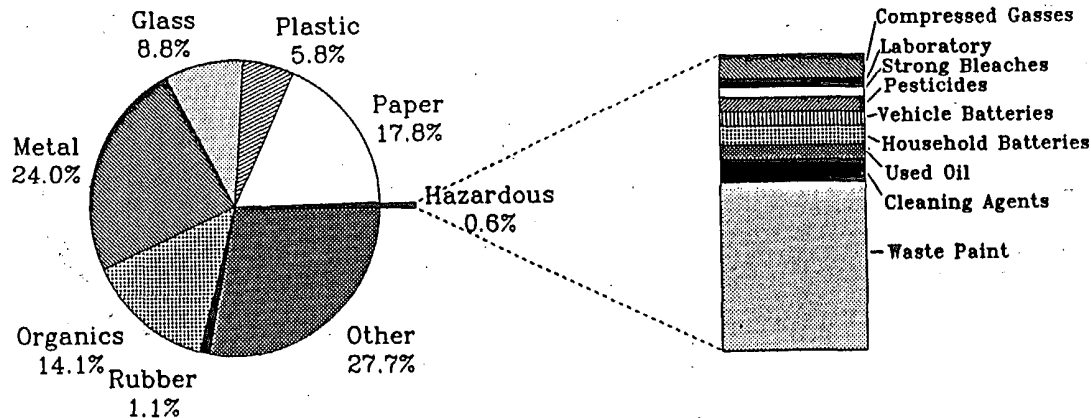


Figure 4-4. Skagit County Self-Haul Waste Stream Composition with Hazardous Waste Components  
(Adapted From: R.W.Beck, 1990)

focus efforts aimed at achieving a reduction in hazardous wastes disposed of in the solid waste stream.

**4.2.1.1.3 Other Household Hazardous Waste Studies.** The characteristics of household hazardous waste around the country have been addressed in numerous studies over the past years. The percentage of household hazardous wastes found in the solid waste streams was generally less than one percent, with one study concluding that the household hazardous waste generation rate is equivalent to five pounds per year per household (Rathje, 1987; Morley & Associates, 1988; SCS Engineers, 1986; Envirosphere, 1985; PSCOG/Cal-Recovery Systems, 1985). Preliminary results from a recent Snohomish County waste characterization study reported the total hazardous waste component at approximately one percent of the total waste stream. This sort included commercial and industrial wastes. The residential hazardous waste was not reported separately.

Available data on HHW composition are less consistent than generation rate data. Results from numerous waste composition studies conducted around the country show wide ranges of waste type percentages. Based on studies in San Bernardino and Los Angeles County, CA, Albuquerque, NM, and Fairfax County, VA, HHW composition data have shown the following ranges (SCS Engineers, 1988):

- Waste oil - 3-60 percent
- Paints - 11-63 percent
- Pesticides/herbicides - 1-28 percent
- Cleaners/solvents - 9-21 percent

Table 4-2 summarizes waste composition results from six other studies. The waste percentages shown for the PSCOG study were calculated from the projected annual hazardous waste tonnages reported for residential and self-haul wastes, assuming that only 50 percent of the self-haul waste was residential in origin. All data presented in Table 4-2 is for household hazardous wastes in the solid waste stream only.

In the Puget Sound Council of Governments (PSCOG) municipal solid waste sort conducted in King County in 1985, the largest quantities of household hazardous wastes disposed were found to be paints, followed closely by bases, then solvents, oil and grease, batteries, adhesives, and cleaners. A significant finding was that self-haul wastes (those wastes brought directly to a transfer station) contained some of the most toxic and the largest amount of several categories of hazardous waste. Self-haulers disposed of 82 percent of the paints, 78 percent of the car and floor waxes, 78 percent of the pesticides, 95 percent of the adhesives, and 72 percent of the aerosols by weight (Cal-Recovery Systems, 1985).

A survey of round-up programs nationally indicates paint comprises 60 to 80 percent of disposed household hazardous wastes collected. A King County round-up generated approximately 500 55-gallon drum equivalents of paint, approximately 70 percent of total collections (Conlin, 1987).

TABLE 4-2. HOUSEHOLD HAZARDOUS WASTE COMPOSITION IN MUNICIPAL SOLID WASTE

	PSCOG	ABAG	REDWING	SRI	New Orleans	Marin	Range	
							Low	High
Cleaners	9.5%	6.0%	0.4%		13.2%	15.0%	0.4%	15.0%
Solvents	7.1%		15.8%	0.1%	0.6%	2.7%	0.1%	15.8%
Paints	46.5%	53.0%	27.5%	16.0%	21.7%	11.9%	11.9%	53.0%
Oils	10.1%	27.0%	26.0%	2.0%	18.9%	8.3%	2.0%	27.0%
Acids	0.1%		3.8%				0.1%	3.8%
Bases	0.7%		4.3%				0.7%	4.3%
Pesticides	1.9%		0.0%	0.0%	1.0%	8.8%	0.0%	8.8%
Aerosols	1.2%		2.6%				1.2%	2.6%
Batteries	10.3%		5.9%	80.5%	11.9%	26.6%	5.9%	80.5%
Cosmetics	2.4%		0.8%		5.0%	3.8%	0.8%	5.0%
Medicine	0.9%		0.4%		1.1%	3.2%	0.4%	3.2%
Alcohols	0.5%		0.2%	1.5%	1.5%		0.2%	1.5%
Waxes	1.1%		0.0%		0.2%	0.9%	0.0%	1.1%
Adhesives	7.3%		2.8%		2.0%	1.7%	1.7%	7.3%
Inks	0.2%		0.1%				0.1%	0.2%
Other		14.0%	9.3%		23.1%	17.1%	9.3%	23.1%

Source: PSCOG (Cal Recovery, 1985)  
 ABAG (Reported in SCS Engineers, 1988)  
 REDWING (Reported in Ridgley, 1987)  
 SRI (Bomberger, 1987)  
 New Orleans (Rathje et al., 1987)  
 Marin (Rathje et al., 1987)

Local Skagit and King County collection day program results and the PSCOG study all suggest that large quantities of household hazardous wastes are stored for long periods and then disposed of in single large batches, either by hauling to transfer stations or landfills or by disposing of during collection days. Thus, self-haul wastes can represent a significant quantity of the household hazardous wastes found in the solid waste stream. Another study also found that self-haul wastes accounted for approximately 28 percent of the total hazardous wastes in the household waste stream and the collected waste approximately 72 percent (Bomberger, 1987). This compares to values calculated from the PSCOG study results of 63 percent self-haul and 37 percent collection for household hazardous wastes. This difference could be the result of any number of factors including but not necessarily limited to availability of self-haul facilities and/or seasonal influences.

These studies give an indication of the types and amounts of household hazardous substances entering the solid waste streams, but do not take into account the amount of wastes people have stored in their homes, discarded down the sewer or storm drain, or buried in the backyard. Wastes discharged to sewers, storm drains, and septic systems are discussed further in Section 4.2.2, Wastewater System.

#### 4.2.1.2 Household Hazardous Waste Quantity Projections

Household hazardous waste future quantity projections are based primarily on information about current conditions and anticipated effects of management practices on current waste generation rates. For projecting household hazardous waste quantities in the solid waste stream, many studies have looked at the waste composition and quantity at collection or at the transfer stations and landfills. Other approaches include surveying homeowners about their waste disposal habits or surveying participants during hazardous waste collection day programs, and applying the information to population and other demographic forecasts.

Statewide solid waste surveys and sorts, as well as nationwide surveys, have reported values for the hazardous waste fraction of municipal solid waste ranging from less than 0.1 percent to over 1.0 percent by weight. For the purposes of this Plan, a value of 1.0 percent is assumed. Surveys specifically targeted at HHW have reported values in the 0.3 to 0.4 percent range. The best available data indicate that HHW represents about one-third of the hazardous waste found in Skagit County's solid waste stream, or about 0.33 percent of the total solid waste stream. The remaining two-thirds is from small quantity generators as discussed in Section 4.3.

Approximately 80 percent of the household hazardous waste is found in the solid waste stream, with the other 20 percent being disposed of in the sanitary sewer system. These assumptions are based on a technical review of the available literature and data on household hazardous waste generation as described above.

Based on the above assumptions, current HHW load in the County's solid waste is approximately 200 tons per year, which represents approximately 12



pounds per household in the County or 5 pounds per person per year. By correlating these same percentages with predictions of future solid waste generation rates in Skagit County that already take into account population, economic and other demographic factors, projections for future hazardous waste contributions to the solid waste stream were developed. The results of these projections are shown in Table 4-3.

Waste quantity projections also assume generation rates similar to those experienced during the mid 1980s when most of the household hazardous waste generation data was collected. Since then, two programs have been implemented that are expected to reduce the amount of household hazardous waste in the solid waste stream. These include waste collection days and a battery recycling program. Both of these programs, as well as other programs resulting from this Plan, are expected to have an effect on the household hazardous waste stream.

#### 4.2.2 Wastewater System

##### 4.2.2.1 Background and Current Conditions

While the improper disposal of household hazardous wastes is often thought of as a solid waste problem, many hazardous chemicals from consumer products end up being poured down the drain. Households are thus a potentially significant source of hazardous chemicals in the liquid waste stream, both through everyday use of consumer products and through direct disposal of unwanted or waste products. The liquid waste stream is a potentially significant avenue for the current disposal of household as well as small quantity commercial hazardous wastes.

The liquid waste stream can be divided into three types: wastewaters in municipal sewerage systems, which include household hazardous wastes from residential drains, leachate from the County landfill, and septage; on-site wastewater treatment systems, primarily septic tanks and drain fields; and wastes that are washed or directly poured into storm drainage systems. Each of these components will be discussed separately.

Hazardous wastes enter the liquid waste stream from daily events in and around the home. Chemicals are washed down the drain during routine cleaning, washing, and food preparation. The kitchen, bathroom and utility sinks may also receive quantities of products that are no longer used or wanted. Spills may occur outdoors where hazardous substances are washed directly into the environment to enter surface and groundwaters. Or some wastes, typically used motor oil, antifreeze, and car washwaters, are put directly into storm drains.

Sewerage, on-site and storm drainage systems were not historically and are still not designed to degrade many toxic compounds or heavy metals. Some of these chemicals are "treated" in that they are removed from the liquid waste stream, but in doing so are released to the air through evaporation, or are concentrated in the solids or sludge. Many chemicals remain in the liquid and are thus discharged into surface waters.

TABLE 4-3. PROJECTED HOUSEHOLD HAZARDOUS WASTE CONTRIBUTION TO THE SOLID WASTE STREAM USING CURRENT GENERATION RATES

YEAR	TOTAL SOLID WASTE (TONS/YEAR) <sup>1</sup>	HOUSEHOLD HAZARDOUS WASTE (TONS/YEAR)
1988	58,900 <sup>2</sup>	196
1990	59,070	197
1995	62,780	209
2000	67,130	224
2005	71,777	239

<sup>1</sup> Projected using the population projections in Section 3.2 and the 1988 4.5 lbs/day per capita generation rate.

<sup>2</sup> Actual solid waste disposal rate for 1988.

4.2.2.1.1 Municipal Sewerage Systems. Approximately 70 percent of the 5.5 MGD flow entering treatment plants in Skagit County is from residential sources, with the remaining 30 percent from industrial and commercial sources.

Studies that have looked at the contribution to wastewater systems by residential sources of hazardous constituents have shown that domestic sources do contribute hazardous chemicals to treatment facilities, both heavy metals and toxic organic compounds. The U.S. Environmental Protection Agency's "Domestic Sewage Study" (U.S. EPA, 1986) found residential sources to be a "small but significant" source of the total hazardous constituent loadings to municipal treatment plants nationwide. Certain constituents such as zinc, copper, chromium and cadmium were detected at high concentrations. Metro's Toxicant Pretreatment Planning Study (Galvin et al., 1984) also concluded that non-industrial sources, which include residential and commercial sources, contribute substantially to total treatment plant loadings for both metals and organics in the Seattle-King County system.

A number of trace elements are considered hazardous at relatively low levels of exposure. These "heavy metals" include arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver and zinc. These metals are likely derived from a few household items, such as bath soaps, dishwashing detergents, kitchen cleaners, and powdered laundry cleaners. Mercury, as well as cadmium, copper, and zinc, may be found in trace amounts in food as well as numerous products.

Organic chemicals are carbon compounds, many of which are petroleum-derived. Hazardous organic compounds include solvents, paint thinners and degreasers such as trichloroethylene, methylene chloride, benzene and toluene, pesticides such as DDT, incomplete combustion products called polyaromatic hydrocarbons (PAHs), and plastic components known as phthalates, among others.

Residential wastewater has been found to be a major source of the organics. The EPA found that, as a national average, 7.5 percent of the priority organic compounds in influent wastewaters were from residential areas (U.S. EPA, 1986). These organic compounds included phenols, naphthalene, phthalates, and many volatile compounds. Phenols are found in medical ointments, cleaners, and disinfectants; naphthalene is found in cleaners, detergents and deodorants; phthalates are common components of flexible plastics, lubricants and cosmetics; and volatiles are common ingredients in cleaners, degreasers, deodorants, shampoos, paints, thinners, and solvents.

Other sources of toxic compounds in household wastewater are from cleaning products and cosmetics. Examples of cleaning products are toilet bowl cleaners, drain pipe cleaners, septic tank cleaners, bath, sink and tile cleaners, and oven cleaners. The major group of toxic compounds in these products are solvents (such as toluene, trichloroethylene and tetrachloroethylene), phenols, and heavy metals (such as cadmium, lead, nickel and zinc).

It appears that the majority of toxic compounds found in residential wastewater are from commonly used products, from both everyday use and improper disposal.

4.2.2.1.1.1 Leachate. Approximately 12 percent of all the municipal solid waste generated in Skagit County is currently disposed of at the Inman Landfill (Ness, 1989), the only County landfill currently operating. Household hazardous wastes in the solid waste stream were discussed previously in Section 4.2.1 of this Plan. However, of interest to wastewater and water quality concerns is the leachate produced by landfills. The Inman Landfill has a leachate collection system that discharges into Burlington's Wastewater Treatment Plant.

As water percolates through solid waste in a landfill, organic and inorganic compounds are dissolved in and/or carried with the water, producing leachates of varying quality. The composition and quantity of leachate varies and is governed by several factors: solid waste composition, climate, hydrological conditions at the landfill site, the age of the landfill, and the design and condition of containment and leachate collection systems.

Although the primary constituents of leachate are not hazardous, certain toxic compounds are commonly found in leachate. Many of these organic compounds are components of solvents and are used in their pure forms in such consumer and industry products as paint thinners or removers, cements, cleaners, degreasers, refrigerants, or drying agents. They are also components of other products such as inks, paints, dyes, varnishes, preservatives, pesticides, fire retardants, even shampoos and detergents (Hathaway, 1980; Ridgley, 1982). Although municipal landfills may receive materials from sources other than households, the leachate produced contains chemicals that are commonly found in household and commercial products.

Although there are no leachate collection systems at the now closed Gibraltar and Sauk landfills, leachate from the Inman Landfill is collected, pretreated on site, and sent to Burlington's Wastewater Treatment Plant. The total amount of leachate entering Burlington is small compared to the rest of the wastewater volume, representing approximately one percent of the flow (10,000 gallons per day). However, the concentration of some compounds, especially the organics, is relatively high in the leachates.

4.2.2.1.2 Septic Tanks and Drain Fields. A septic tank and drain field, or "on-site" sewage treatment system, is an alternative disposal system for wastewater from households. Septic tanks are generally used in rural, less developed areas. The system provides initial treatment of domestic wastes before they are further purified by the filtering action of the soil.

The septic tank collects and holds the waste, allowing heavy suspended materials to sink to the bottom and be decomposed by the bacteria in the sludge. The wastewater then flows from the tank to the drain field. The

drain field is a large area of soil which acts like a filter removing remaining suspended substances and some pollutants and bacteria.

Septage is the liquid and sludge that accumulates in a septic tank. Septage removal usually occurs every two to four years or more often as needed depending on the wastewater loading of the unit. In the Skagit County area, septage is taken to the Burlington and Anacortes plants for secondary wastewater treatment. In 1989, these three treatment plants treated and disposed of approximately 4,200,000 gallons of septage.

Household cleaning products and other hazardous chemicals that are poured into drains end up in septic tank systems. Solvents or other chemicals are also sometimes used to periodically clean out septic systems. These systems are not designed to handle hazardous chemicals. Many chemicals, therefore, enter the drainfields and can percolate into groundwater. A portion of the hazardous chemicals can also be associated with the septage and, therefore, are introduced into the sewage treatment plants.

In Skagit County, approximately 12,000 septic tank systems have been permitted between January 1, 1959 and July 1, 1989. No permits were required to install septic systems prior to 1959. In addition, it is estimated that the overwhelming majority of new residential construction units in unincorporated Skagit County are utilizing septic systems as the mode of wastewater treatment, based on permitting activity (Skagit County Planning and Permit Department, personal communication, 1989). Thus, improper disposal of hazardous chemicals into septic systems is potentially a significant source of groundwater contamination and of additional chemical loading to the sewage treatment plants.

4.2.2.1.3 Storm Drains and Runoff. Another avenue for the entry of household hazardous wastes into the environment is through storm drainage systems. Almost all storm drains in the Skagit County region are separate from the sanitary sewers and discharge stormwater runoff from streets and parking lots directly into the nearest stream, river, lake, or bay. For essentially all of this region, whatever goes down a catch basin or storm drain goes untreated into local waters.

The exception to this is the Hope Island service area and a few older storm drains in the Anacortes and Mount Vernon service areas. The majority of storm drains in the Anacortes service area discharge to Guemes Channel or Fidalgo Bay. Newer storm drains in the Mount Vernon area discharge directly to the Skagit River. Skyline storm drains discharge to Burrows Bay; LaConner and Shelter Bay storm drains discharge to the Swinomish Channel; Concrete storm drains discharge to tributaries of the Baker and Skagit Rivers; Big Lake's discharge to Big Lake; Sedro Woolley's discharge to the Skagit River; and Burlington's discharge to Gages Slough, which empties into the Skagit River.

A variety of potentially hazardous materials may be dumped down storm drains. Most common are used motor oil, antifreeze, gasoline, car washwater, paints, and pesticides. In addition to adverse effects on aquatic environments from storm drain disposal of hazardous wastes, serious

and damage can be caused by explosions from flammable materials poured into storm drains, such as gasoline.

In addition, stormwater runoff picks up fertilizers, herbicides, and insecticides washed off lawns and gardens, moss killer and wood preservatives from roofs, buildings, decks and fence posts, and the products of normal automobile traffic, such as lead, zinc, oil and PAHs, from streets and driveways.

#### 4.2.3 Existing Programs for Managing Household Hazardous Waste

Existing programs for managing household hazardous waste in Skagit County have been limited.

Regional household hazardous waste collection events have been held in the fall of 1989, 1990, and 1991. Residents brought their HHW to a designated location in the County. Trained personnel accepted and packaged the wastes for reprocessing and disposal at licensed hazardous waste facilities.

Automobile and household batteries are also being recycled. In November of 1988, Skagit County began a battery buy-back program to encourage residents to separate out used car batteries and other household batteries so they do not remain in the feed stock for the incinerator. Currently, residents are paid \$0.50 for each auto battery and \$0.05 for each small battery. Buy-back locations include the Skagit County incinerator, the Inman Landfill, the Sauk Transfer Station, and all five compactor box sites. Approximately 1,200 pounds of household batteries and 6 tons of auto batteries are collected monthly in the buy-back program.

There are no permanent facilities in Skagit County that will accept HHW for no charge from homeowners. However, Burlington Environmental in Seattle currently sponsors a Household Hazardous Waste Program that allows homeowners to drop off their household hazardous waste free of charge every Thursday between 10 a.m. and 3 p.m. There is a limit of 15 containers or 25 gallons, whichever is less.

Several existing programs within Washington State provide information to households on good hazardous waste management practices, although they are limited in nature. Ecology sponsors the statewide "Hazardous Substance Information Hotline" that answers questions about hazardous substances in general. Ecology also sponsors a "Recycle Hotline" that provides information on local recycling options and HHW.

Public and private agencies have prepared general and targeted educational materials such as brochures, newsletters, mailings, and media spots on HHW. Ecology's Hazardous Substances Information and Education Office acts as a clearinghouse for many educational materials. The Public Education Subcommittee of the King County Hazardous Waste Interagency Coordinating Committee has completed a bibliography of various audio/visual and printed information on HHW (King County, et al., 1989).

#### 4.2.4 Identified Problems and Needs

##### 4.2.4.1 Potential Problems and Chemicals of Concern in the Solid Waste Stream

Many previous studies have documented that some hazardous chemicals are found in the solid waste stream coming from households. These small amounts of hazardous wastes can add up to sizeable quantities and have been shown to or have the potential to cause a variety of problems, both to human health and safety and to the environment.

One of the first potential exposures of these wastes in the municipal solid waste is to the workers who collect this residential trash or the business or industrial dumpster-loads, as well as workers at the Sauk Transfer Station, the five compactor box sites, the Inman Landfill, and the MSW incinerator. In addition, solid waste handling equipment can be damaged by fires or explosions resulting from chemical reactions in the solid waste.

Landfill leachate contains chemicals that are in household products, as well as commercial and industrial wastes. Some of these chemicals have the potential to cause problems in the leachate treatment system or in groundwater if they exist at elevated concentrations in the landfill. While the leachate at the Inman Landfill currently meets permit limits, reductions in the metals and organic chemicals in the solid waste would make long-term management of the landfill easier.

Resource recovery incineration of solid wastes is currently taking place in Skagit County. Potential issues include the levels of hazardous chemicals in the emissions of the incinerator, as well as in the bottom and fly ash that must be disposed of. Again, reduced amounts of SQG waste and household hazardous waste would serve to mitigate these concerns and improve management options.

Criteria for targeting specific sources and types of household hazardous wastes for special management strategies include:

- Quantity of waste
- Type of hazard
- Degree of hazard
- Public demand for services

4.2.4.1.1 Targeted Household Hazardous Wastes. Based on the findings of the solid waste stream composition study, data from household hazardous waste collection days, and information from household hazardous waste characterization studies from other jurisdictions, the following wastes have been identified as potential targeted household hazardous wastes in Skagit County:

- Paints
- Pesticides and other yard care products
- Batteries
- Waste motor oil

- Asbestos
- Freon

Although data obtained in the Skagit County waste stream composition study indicated that paint made up less than 0.1 percent of the residential waste stream and 0.4 percent of the rural/self-haul waste stream, the Skagit County round-up program indicated that paint comprised 40 percent of disposed household hazardous waste. Also, the Department of Ecology Recycling Hotline receives more requests for information about the disposal of old and unwanted paints than for any other waste. Paints are typically a high volume waste in the household wastestream, may contain hazardous constituents, and generate a high public demand for services.

Hazardous constituents in paints may include the solvent in oil-based paints, pigments including lead and chromium, and additives such as mercuric fungicides (Morley and Associates, 1987). On the other hand, a large percentage of the modern latex (water-based) paints are not considered hazardous although they are often perceived as being hazardous by the general public. However, many latex paints still contain mercury as a fungicide.

The amount and kinds of products that people bring to a collection event is an indication of what is being stored. Many highly toxic and banned pesticides were collected at the Skagit County round-up.

In addition, due to their chlorine components, pesticides and chlorinated solvents have become a major concern since the construction of the incinerator. It is believed that, in general, potentially toxic chlorinated compounds found in the effluent and ash from municipal incinerators resulted from the incomplete combustion of chlorinated compounds (Skagit County, 1986).

Batteries are also a major concern, particularly since construction of the incinerator. Batteries contain lead, silver oxide, mercury, lithium, cadmium, and other heavy metal compounds that may create ash toxicity problems in solid waste incineration. Batteries also contain corrosive acids that could create safety hazards at landfills and transfer stations. Batteries are commonly found in the solid waste stream; however, the relative quantity is uncertain. The Skagit county waste stream composition study indicated that less than 0.1 percent of the residential and rural/self-haul waste streams consisted of household or automotive batteries (although household batteries were present in a large number of samples). During the 1989 Skagit County round-up, approximately 15.2 percent of the waste collected consisted of drycell and automobile batteries. Previous studies (see Table 4-2) have reported batteries at from 6 to 80 percent of the household hazardous waste by weight in the solid waste stream. Skagit County has implemented a battery collection and recycling program to begin the process of eliminating batteries from the solid waste stream.

A negligible percentage of the waste stream composition study consisted of waste oils. However, a large percentage of the wastes collected during the



round-up was waste oils. Although the incinerator is designed to handle waste oil and it may increase the BTU value in the incinerator (Ness, 1989), it can be messy during the collection of solid wastes. Waste oil containers can rupture and leak during handling, collection, and transport to the transfer station or incinerator. In addition, waste oils can create problems if disposed of in the wastewater stream (discussed in Section 4.2.2) or the Inman Landfill. Therefore, it may be desirable to remove these wastes from the solid and liquid waste stream, in order to recycle them or route them directly into the feed stock for the incinerator.

Asbestos has been identified as a targeted waste due to the handling concern if it were inadvertently disposed of in the incinerator. This concern applies to handling both during disposal to the incinerator, as well as in handling the disposal of the ash after incineration.

Freon has also been identified as a targeted waste in Skagit County's waste stream. Freon, a cooling gas used in refrigerators and air conditioners, contains chlorofluorocarbons (CFCs), which harm the Earth's ozone layer. Due to implementation of recent state regulations under the Clean Air Act, the County is being required to recover freon from disposed appliances.

Another significant category of waste identified in Skagit County's waste stream composition study was roofing tars and caulking compounds. None of these types of wastes was turned in at the round-up. Since the composition study represented only a single sampling event, it is uncertain whether this waste type is truly representative of the household hazardous waste stream in Skagit County.

#### 4.2.4.2 Potential Problems and Chemicals of Concern in the Wastewater System

A variety of hazardous chemicals enter the liquid waste stream through everyday use and improper disposal of household products. All of these chemicals have a potential to cause harm to the waste system and the environment. Certain chemicals, however, are of special concern in the liquid waste stream.

Several criteria have been developed to select targeted substances. They are chemicals that meet at least two of the following criteria:

- Known human carcinogen
- Persistent in the environment, do not readily degrade
- Frequently detected in water samples
- Toxic to invertebrates and vertebrates
- Are known to enter the environment in large amounts
- Controllable

4.2.4.2.1 Municipal Sewerage System. The small amounts of hazardous wastes that enter wastewater treatment systems have been shown to or have the potential to cause a variety of problems, both to human health and to the environment. Acids and caustics, as well as ignitables such as gasoline, can damage pipes. These types of wastes, plus toxic fumes, can

endanger workers who must enter the sewerage system for inspections or repairs.

It is highly unlikely that household contributions to the sanitary sewer would cause a treatment plant upset because of the sheer dilution volumes in the systems. However, the number of residences in the Skagit County area could add up to a significant total load of many hazardous chemicals into the treatment plants. Approximately 70 percent of the flow to the wastewater treatment plants in Skagit County is from residential sources. It is this cumulative effect of many small sources that adds up to a potentially significant issue. Primary and secondary treatment processes decrease the concentration of most hazardous chemicals in the water effluent that is discharged to local rivers, but the environment will still receive many of those chemicals via other routes, such as in the air and sludge. The most cost-effective way to control toxicants of concern is to not allow them to get into the wastewater or environment in the first place.

Solvents are the primary generic category of products that are of concern in the municipal sewerage system. Solvents are included in the following categories of the State's hazardous household substances list: repair and remodeling; auto, boat and equipment maintenance; cleaning agents; and hobby and recreation supplies. These include paints, thinners, degreasers, spot removers, strippers and cleaners. These types of products are of concern because they contain toxic chemicals such as benzene, methylene chloride, toluene, 1,1,1-trichloroethane, trichloroethylene, and tetrachloroethylene.

Solvents that enter the municipal sewerage system are not generally removed from wastewater by primary treatment. On the average, approximately 70 percent of the solvents are removed by the secondary treatment process which, for the most part, transfers them to the air through volatilization rather than actually breaking down the chemical compounds. Secondary treatment at the Burlington, Mount Vernon, Sedro Woolley, LaConner, Big Lake, and Shelter Bay plants using the complete mix activated sludge process "treats" many of the more volatile organic solvents by evaporating them unchanged into the air. These volatile organic compounds are more likely to be broken down by photo-oxidation in the atmosphere than, for example, if they remain in the water or enter the soil. Reductions in solvents and other volatile organic compounds could result in fewer aerosol emissions from secondary treatment plants.

Other chemicals of concern in the municipal sewerage system include concentrated sources of heavy metals, particularly cadmium, lead, and mercury; all pesticides but especially old, banned items such as DDT, arsenate and pentachlorophenol; PCB oils such as those in fluorescent light ballasts manufactured before 1978; used automotive oil; and gasoline. Primary treatment removes almost half the metals, while secondary treatment removes more than 70 percent of the metals. Heavy metals, phthalates, pesticides and PCBs tend to settle out with solid particles in the sludge. While secondary sludge is comparable in quality (i.e. concentration of chemicals) to primary sludge, the secondary process produces almost twice

as much sludge for subsequent management. The majority of Skagit County's sludge, over 4,000,000 gallons per year, is used primarily in land application as a soil enhancer.

Effluent discharges from the municipal treatment plants in the region are regulated by State NPDES (National Pollutant Discharge Elimination System) permits. All current permit conditions for the ten treatment plants are being met for effluent discharges to surface waters. Sludge quality also meets current criteria for land application in forestry or soil improvement. Cadmium levels restrict long-term reapplication rates to land, and cadmium also restricts some composting options for the sludge. A decrease in metals in general (particularly cadmium, lead, and zinc) plus such organic compounds as pesticides and PCBs, would make sludge easier to handle in existing uses, more readily available for other uses, and possibly more acceptable to the public. Reduced amounts of heavy metals and organic compounds coming into the treatment plants in the wastewater would translate directly into lower levels discharged. Such reductions would improve plant operations and reduce potential safety hazards.

4.2.4.2.2 Septic Tanks and Drain Fields. Similar problems can occur and the same chemicals are of concern in on-site systems as in municipal sewers. Potential pollutants from septic tank effluent are similar to those associated with domestic wastewater with the addition of chemicals contained in septic system cleaning products.

Septic tank systems, even more so than municipal sewerage systems, are not designed to handle hazardous chemicals. Pouring a hazardous waste down the drain in a home connected to a septic tank can have two harmful effects. First, some wastes can kill off the organisms in the septic tank that degrade wastes. Second, some hazardous wastes (certain toxic solvents, for example), pass through the system unchanged, percolate through the soil of the drain field, and migrate to underground aquifers.

Chemicals that pass through septic systems largely untreated have the potential to become a significant source of groundwater contamination. Many systems are old and are no longer working properly, and the usage of synthetic organic chemicals in households and for system cleaning is increasing. In addition, proper operating efficiency depends on the amount of wastewater flow, the soil percolation rate, septic tank density, and the average life of the septic tank system.

Solvents are even more of a problem in septic systems than in municipal sewers. Septic systems are not designed to remove solvent chemicals, and as a result, they pass straight through. Because solvents are mobile in soil and do not have a chance to evaporate into the air, they are the most likely chemicals to cause problems by traveling through the soil into groundwater, possibly contaminating drinking water sources.

Of particular concern are the volatile organic compounds: a class of chemicals commonly found in household solvents and septic tank cleaning solutions. The chemicals in some of the products designed for cleaning septic systems are of special concern because they are introduced directly to the system in large amounts. These compounds do not readily degrade in

the underground environment, do not attach to soil particles, and are therefore highly mobile.

Metals from domestic on-site systems have also been found to be responsible for contamination of groundwater supplies (Canter and Knox, 1985).

**4.2.4.2.3 Storm Drains.** Direct dumping of unwanted household items down storm drains represents an immediate problem. Household hazardous wastes that enter the environment via storm drains are frequently automotive products such as gasoline, motor oil, antifreeze, and car washwaters, as well as other liquid products such as thinners and paints. In addition to improper disposal, products such as pesticides and car wash detergents enter the storm drains through runoff during storm events.

Used motor oil is a product of particular concern because of the large amounts that are frequently dumped down storm drains. The reasons citizens dump used motor oil down a storm drain is because it is easy to do, proper means of collection or recycling of the oil are either not known or not considered readily accessible and convenient, and many people do not understand that storm drains are direct conduits to surface waters such as creeks, rivers, and lakes. Fish kills can occur as a result of direct dumping of a hazardous substance down the storm drains. National surveys have determined that only approximately 15 percent of used oil is properly handled by recycling, and that more than one-third of people admit to dumping the "waste" oil directly into a storm drain, ditch, or onto the ground (Galvin et al., 1982; Ridgley and Galvin, 1982). Many communities around the United States have programs for collecting used motor oil at either designated stations for drop-off or through door-to-door curbside service along with normal recycling or garbage collection.

Basically, all chemicals in household hazardous wastes are of concern in storm drains. No wastes should be dumped into the drainage systems.

#### 4.3 MAJOR AND MINOR SMALL QUANTITY GENERATORS IN SOLID WASTE AND WASTEWATER

There frequently is confusion as to whether a company is classified as a Small Quantity Generator (SQG), since different regulatory agencies have varying definitions based upon the quantity of hazardous waste and the chemical compounds within that waste. The common element in a variety of federal, state, and local laws is weight, or how many pounds of waste are produced during each month or waste producing cycle, generally referred to as a batch.

Businesses that generate hazardous wastes have been regulated through the federal Resource Conservation and Recovery Act (RCRA), the federal Clean Water Act, and the Washington State Hazardous Waste Management Act for over a decade. However, any business that generates less than 220 pounds per month of dangerous waste is *conditionally exempt* from state and federal hazardous waste regulations. Such businesses are termed "Small Quantity Generators", or SQGs. They are exempt from some of the paperwork associated with the regulations. However, many companies erroneously believe that since they do not produce sufficient waste to be classified as a regulated generator, they are not subject to proper waste management procedures. This incorrect assumption may lead to waste handling practices which are detrimental to the environment and may also lead to fines and possible criminal convictions for the corporate officers of the company.

An SQG may be either a small or a large business. It produces wastes which may contain chemicals and/or heavy metal contaminants in small quantities. The typical profile of an SQG is a business that:

- Employs 50 or fewer people. In Washington, more than 90 percent of all businesses fall into this category. In Skagit County, 1,893 businesses are estimated to fall into this category (Washington Department of Employment Security, 1989a).
- Produces quantities of hazardous waste that would take more than two months to fill a 55-gallon drum. This roughly translates to generating less than 220 pounds per month.
- Produces hazardous wastes in small enough quantities, that neither the company nor regulators know its status, be it a regulated or unregulated generator.
- As an unregulated generator of hazardous waste, does not know which regulatory agencies to contact, which guidelines to follow, nor which waste management options are available to them.
- Is hesitant to inquire to the regulatory agencies for waste management information, for fear that their questions may bring enforcement actions against them.

In addition, an SQG may be either a minor or major SQG. Minor SQGs are businesses that generate hazardous wastes occasionally, but not on a regular basis. Products that are damaged in transit are a common example. Others are products that might be discarded as a discontinued product line. Some products have a marked shelf life or expiration date, after which they cannot be sold. Customer returns and trade-ins are other sources.

Major SQGs are businesses that use, handle, or dispose of hazardous substances on a regular basis. Types of hazardous wastes used by major SQGs include pesticides; dyes, paints, thinners, solvents, cleaning fluids, and coolants; oils and other petroleum products; and flammable materials.

Table 4-4 provides a general list of those business types in Skagit County most likely to generate hazardous waste. Appendix B contains a detailed list of these potential small quantity generators within Skagit County. This list was provided by the Washington State Department of Revenue, and is the 2nd quarter 1989 listing of licensed businesses in Skagit County. Appendix C describes hazardous wastes that are typical of various businesses.

Out of 807 "Agricultural Production" businesses, the majority are cropland farms used for producing crops such as wheat, barley, potatoes, hay, vegetables, apples, and flowers. In addition to the cropland farms, 103 dairy farms are located in Skagit County (Mathews, 1990). There are also a small number of farms raising pigs, sheep, and/or poultry.

#### 4.3.1 Solid Waste Stream

##### 4.3.1.1 Background and Current Conditions

This section describes information from other states, other counties within Washington State, and Skagit County associated with the management of Small Quantity Generators of hazardous waste.

4.3.1.1.1 Other States. Other states including Alaska, California, Connecticut, Florida, Minnesota, and New York have been dealing with SQGs and their related management problems over the last three to four years. They have identified specific types and volumes of small quantity hazardous waste being improperly disposed of by a variety of businesses. The most common types of wastes found were lubricating oils, non-halogenated solvents, paint and paint sludges, acids and caustics, photoprocessing chemicals, halogenated solvents including perchloroethylene, and pesticides.

The businesses found responsible for generating these wastes include auto repair and maintenance shops, auto painting facilities, metal plating and fabricators, machine shops, photoprocessing establishments, construction companies, dry cleaners, and a variety of other industry types.

The most common avenues of disposal used by the SQGs were landfilling and discharge into available sewers. These two disposal methods accounted for approximately 60 to 80 percent of the small quantity hazardous waste

TABLE 4-4. SMALL BUSINESS TYPES MOST LIKELY TO PRODUCE HAZARDOUS WASTE

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<u>Business Type</u>	<u>No. of Businesses in Skagit Co.</u>
Agricultural Production	807
Construction	431
Vehicle Maintenance	404
Equipment Repair	181
Beauty Salons	168
Analytical/Clinical Labs (including medical and dental clinics)	123
Furniture/Wood Manufacturing and Refinishing	80
Boat Repair and Maintenance	62
Other Services	54
Pesticides Application Services	53
Photography	42
Metal Manufacturing	37
Printing/Ceramics	29
Wholesale and Retail Sales	21
Graphic Arts	20
Laundries	17
Vocational Shops	4
Chemical Manufacturing	1
Total number of businesses	2,534

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Source: *Washington State Department of Revenue, B&O Tax Database; U.S. Department of Commerce, 1987 Census of Agriculture.*

generated, according to reports from other states. Other, more acceptable disposal practices such as recycling, reuse, on-site treatment, and shipment to licensed Treatment, Storage, and Disposal (TSD) facilities were being utilized by a comparatively smaller number of SQGs.

**4.3.1.1.2 Other Counties.** Numerous counties in Washington State are well on their way to finalizing and implementing a Local Hazardous Waste Management Plan. Although some counties have limited experience in dealing with SQGs, only a few have developed comprehensive programs to regulate them. However, they are all in various stages of progress towards developing plans.

Within the past few years several programs in King County have monitored SQGs in the Puget Sound region. In 1986, one of these programs surveyed small quantity hazardous waste generators in a three-county area (Baroga, et al., 1986). Questionnaires were sent out to 18,000 businesses within King, Pierce, and Thurston Counties to obtain information on their waste disposal practices. The businesses were selected using the Standard Industrial Classification (SIC) codes developed by the federal Office of Management and Budget.

The SIC codes are four digit numbers, standardized nationwide to help various agencies identify the types of services provided by businesses for tax and other purposes. In this case, these classifications help match businesses with the types of potentially hazardous materials often used in similar industrial groupings.

A previous study identified 21 categories of businesses that generate similar types of wastes (SCS Engineers, 1984b). These 21 categories of businesses were used for the three-county survey. From the original target group of 18,000 firms within the three counties, 25 companies per county were selected randomly from each of the 22 categories. Follow-up phone surveys were made to these companies to assess their waste disposal practices. A total of 785 businesses were contacted.

Dry cleaners were identified as having the most questionable waste disposal practices. The survey showed that three waste types are commonly found in the dry cleaning industry and that all three are being disposed of improperly. Improper management methods include disposal into the solid waste stream, into sewer and storm drains, on the ground, and storage of quantities of waste greater than 220 pounds. The survey demonstrated nearly 100 percent of these wastes end up a local landfills.

The second industry identified as having a common problem was the photofinishing industry. Approximately 37 percent of the fixer disposed contains silver, a heavy metal. In most instances, if silver is reclaimed from the waste, there is no problem in disposing the remaining waste fixer in the sanitary sewer (Baroga et al., 1986).

Heavy metal sludges are most often encountered in metal manufacturing and the automotive industry. Approximately 12 percent of the metal-laden sludges were being disposed improperly; on the ground or in the dumpster.



4.3.1.1.3 Skagit County. There are currently no programs in Skagit County which identify or deal specifically with SQGs. Neither the County nor any incorporated city within the County have developed comprehensive programs to regulate them. When requested, the County Department of Public Works and Department of Health provide support to generators and handlers of small quantities of hazardous waste by assisting them in identifying recycling options, disposal sites outside the County, or other appropriate options.

#### 4.3.1.2 Waste Characterization and Quantities

The wide range of businesses and business types within Skagit County makes the task of characterizing and quantifying the hazardous wastes generated by SQGs difficult. A waste characterization study conducted for the County in 1990 provided some limited information on the hazardous wastes introduced into the solid waste stream by commercial activities, and studies have been undertaken both nationally and within the State.

The methods and general findings of the waste characterization study are summarized in Section 4.2. Part of the study involved collecting data on hazardous wastes present in the commercial waste stream. The study indicated that 0.5 percent of the commercial wastes in the sort were hazardous wastes. Of this, paints and thinners comprised the largest proportion. The categories of hazardous wastes found are shown in Figure 4-5.

Across the nation, the primary wastes typically generated by SQGs include solvents, acids and alkalies, and lead-acid batteries (U.S. EPA, 1985). It is important to note that 90 percent of lead batteries are recycled. This number may be even higher in Skagit County since the implementation of their battery recycling program. Other wastes include lubricating oil, paint and paint sludges, halogenated solvents such as tetrachloroethylene, and pesticides.

In King County, results from surveys and audits to date indicate the major commercial contributor of hazardous waste to the solid waste stream is the dry cleaning industry (Yerkes, et al.).

Due to the large number of cropland farms in Skagit County, a relatively large quantity of waste pesticide, pesticide solutions, and empty pesticide containers would be expected to be produced in the County, as compared to a more urban area. Because of this, disposal of hazardous waste produced by cropland farms may have a substantial impact on Skagit County's environment. Due to their chlorine components, pesticides and chlorinated solvents have become a major concern since the construction of the incinerator. In addition, pesticides such as those containing arsenic or mercury can have a deleterious effect on the incinerator, causing problems with the emissions control equipment and ash residue from the facility.

Chemicals used at dairy farms in the County include iodine solutions, chlorine, and detergents (Mathews, 1990), all of which are used when washing down the cows and milking machines. Runoff from these processes is collected in animal waste holding facilities for future land application.

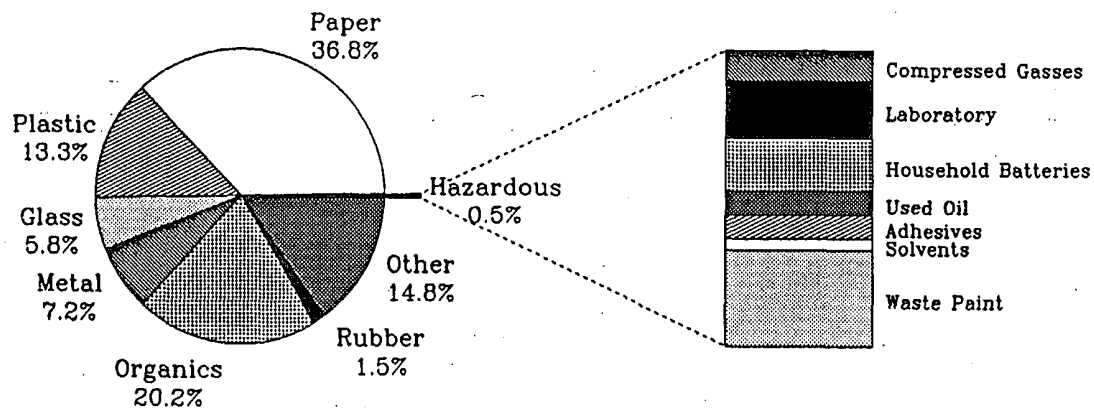


Figure 4-5. Skagit County Commercial Waste Stream Composition with Hazardous Waste Components  
(Adapted From: R.W.Beck, 1990)

It is likely that most agricultural operations are not small quantity generators, but are fully regulated as hazardous waste generators in Washington. Therefore, these wastes have not been included in estimates of SQG waste generation and are not targeted as wastes of concern for SQGs.

Large quantities of paint and other construction waste would be expected to be produced due to the high number of construction businesses within the County. Hazardous constituents in paints may include the solvent in oil-based paints, pigments including lead and chromium, and additives such as mercuric fungicides (Morley and Associates, 1987). These chemicals can be detrimental to the operation of the incinerator.

Vehicle maintenance facilities produce wastes containing paint, solvents, and acids and alkalis. The large number of vehicle maintenance facilities within Skagit County would indicate that substantial quantities of these types of waste would be produced by businesses within the County.

The quantity of hazardous waste which is not currently disposed of in a proper manner by SQGs within Skagit County can be estimated. As discussed for HHW in Section 4.2, for the purposes of this Plan, a value of 1.0 percent for the hazardous waste fraction of municipal solid waste is assumed. The best available data indicate that HHW represents about one-third of the hazardous waste found in Skagit County's solid waste stream, or about 0.33 percent of the total solid waste stream. Therefore, the remaining two-thirds is from small quantity generators.

Based on the above assumptions, current SQG waste load in the County's solid waste is approximately 400 tons per year. By correlating these same percentages with predictions of future solid waste generation rates in Skagit County that already take into account population, economic and other demographic factors, projections for future hazardous waste contributions to the solid waste stream were developed. The results of these projections are shown in Table 4-5.

As the business profile of Skagit County changes over time, so will both the quantity and character of the hazardous waste stream. It is important to note that many businesses which fit the profile of the SQG may already be implementing hazardous waste reduction and recycling efforts.

#### 4.3.2 Wastewater Stream

This section describes hazardous chemical compounds potentially attributable to Small Quantity Generator commercial and industrial sources detected in the liquid waste stream, and discusses the significance of SQG contributions to the wastewater system.

##### 4.3.2.1 Background and Current Conditions

When the Clean Water Act came into effect in 1972 it was assumed that controlling the primary "significant" industrial sources of contaminants would effectively eliminate the problem of toxicant loading to the sanitary sewer system. Large industries were regulated with permits, site inspections, and routine sampling programs. Industrial waste permits have

TABLE 4-5. PROJECTED SMALL QUANTITY GENERATOR WASTE CONTRIBUTION TO THE SOLID WASTE STREAM USING CURRENT GENERATION RATES

YEAR	TOTAL SOLID WASTE (TONS/YEAR) <sup>1</sup>	SMALL QUANTITY GENERATOR WASTE (TONS/YEAR)
1988	58,900 <sup>2</sup>	393
1990	59,070	394
1995	62,780	418
2000	67,130	448
2005	71,777	479

<sup>1</sup> Projected using the population projections in Section 3.2 and the 1988 4.5 lbs/day per capita generation rate.

<sup>2</sup> Actual solid waste disposal rate for 1988.

been written for large industries since the early 1970s. In this time period the contaminant loading for those industries has decreased significantly.

Although septic systems are the rule rather than the exception for residences in Skagit County, it is important to bear in mind that the vast majority of businesses in Skagit County are located within areas that are serviced by sewer systems. Because of this, the opportunity exists to at least partially treat hazardous waste disposed of as part of the wastewater stream. Therefore, the potential for groundwater contamination is greatly decreased.

There are less than a dozen major companies presently under permit in Skagit County. In addition to these companies, there are a number of other companies which, because of the nature of their business, have a high probability of discharging pollutants to the sewer or septic system even though they are not presently permitted. Many of these are small businesses, often non-manufacturing in nature. A list of these is shown in Table 4-6.

The percentage of total flow received in the Skagit County sanitary sewer systems from commercial/industrial SQG sources is extremely difficult to quantify due to the immediate mixing with other inputs. Information collected from the individual treatment plants within the County indicated that the wastewater attributable to commercial/industrial sources is estimated to be approximately 30 percent of the total wastewater volume in the County. Table 4-7 shows the total estimated flows broken out between commercial/industrial and residential for the ten treatment plants.

Similar chemicals are found in wastewaters from large and small hazardous waste generators and household wastes. Unlike the solid waste stream, discharged wastes into the sewer cannot be identified as to their source. It is difficult to identify specific wastes at every source of input without measuring them prior to discharge.

King County has been conducting a Key Manhole program which involves sampling at selected locations throughout the Metro sewerage system (King County, 1989). These samples are then analyzed and are used to determine which drainage basins are experiencing problems due to improper hazardous waste management practices as evidenced by high or unusual contaminant levels. These data indicate that chemical compounds generally associated with industries are found in both industrial and non-industrial areas. While the concentrations may vary throughout the system, the samples indicate their disposal is common in both commercial/industrial and household discharges.

Examples of chemicals with applications in the commercial/industrial and household uses are: Methylene chloride, which can be found in degreasing solvents, oven cleaners, spray deodorant, and paint preparations; toluene, which is a constituent of paint thinner, carburetor cleaners, perfumes, and contact cements; and tetrachloroethylene, which is used as a cleaning agent for both metals and fabrics (i.e., degreasing and dry cleaning), as well as in pesticides, dyes, polishes, and paint strippers.

TABLE 4-6. "HIGH PROBABILITY" DISCHARGERS OF CONTAMINANTS BY INDUSTRY TYPE

- 
- Food and Kindred Products
  - Printing and Publishing Industries
  - Chemical Products
  - Petroleum Refining and Related Industries
  - Stone, Clay, Glass, and Concrete Products
  - Primary Metal Industries
  - Fabricated Metal Products, except Machinery and Transportation Equipment
  - Machinery, except Electrical
  - Electrical and Electrical Machinery, Equipment, and Supplies
  - Measuring, Analyzing, and Controlling Instruments
  - Transportation Equipment
  - Photographic, Medical and Optical Goods, Watches, and Clocks
  - Miscellaneous Manufacturing Industries
  - Railroad Transportation
  - Motor Freight Transportation and Warehousing
  - Water Transportation
  - Air Transportation
  - Electric, Gas, and Sanitary Services
  - Automotive Dealers and Gasoline Service Stations
  - Personal Services
  - Business Services
  - Automotive Repair, Services and Garages
  - Miscellaneous Repair Services
- 

Source: Adapted From King County, 1989.

TABLE 4-7. TOTAL CURRENT WASTEWATER TREATMENT PLANT FLOW IN SKAGIT COUNTY

<u>Plant</u>	<u>Residential</u> <u>(gals/day)</u>	<u>(%)</u>	<u>Commercial/Industrial</u> <u>(gals/day)</u>	<u>(%)</u>	<u>Total Flow</u> <u>(gals/day)</u>
Concrete	66,500	95	3,500	5	70,000
Shelter Bay	70,000	100	0	0	70,000
Hope Island	20,000	100	0	0	20,000
Big Lake	59,400	99	600	1	60,000
LaConner	75,000	50	75,000	50	150,000
Anacortes	1,252,500	75	417,500	25	1,670,000
Mt. Vernon	1,500,000	60	1,000,000	40	2,500,000
Sedro Woolley	540,000	90	60,000	10	600,000
Burlington	680,000	80	170,000	20	850,000
TOTAL	4,263,400	71	1,726,600	29	5,990,000

Source: Compiled from information gathered during telephone communications with treatment plant operators, 1990, 1992.

As mentioned earlier in Section 4.2.2, solvents are a major concern in the wastewater sewerage system. Those which enter the system are not removed by primary treatment, since this involves a settling process. On average, approximately 70 percent of the solvents are removed by the secondary treatment process, which aerates them rather than breaking down the actual chemical compounds. These volatile organic compounds are more likely to be broken down by photo-oxidation in the atmosphere, than if they were to remain in water or soil. However, atmospheric releases can contribute to local air pollution. The remaining 30 percent is discharged with the liquid effluent into the environment (Hasselman, et al., 1984).

#### 4.3.3 Existing Programs for Managing SQG Hazardous Waste

Several existing programs within Washington State provide information to businesses on good hazardous waste management practices, although they are limited in nature. Ecology sponsors the statewide "Hazardous Substance Information Hotline" that answers questions about hazardous substances in general. Ecology also sponsors a "Recycle Hotline" that provides information on local recycling options and HHW.

Ecology's Waste Reduction, Recycling, and Litter Control Program, as well as EPA's "Pollution Prevention Pays" Program, provide technical assistance to businesses.

Both private and public agencies have educational materials specifically targeting SQGs. Several trade associations have made efforts to inform their members of regulations concerning proper waste disposal. Ecology has offered workshops and seminars, and additional state-funded workshops are being offered by organizations such as the Waste Information Network. The Intergovernmental Resource Center in Vancouver, Washington has a two-year grant to run a technical resource center for SQGs. This state-funded program provides SQGs with access to technical publications on waste reduction and disposal. The telephone information line begun by the Intergovernmental Resource Center has been moved to Ecology.

Private facilities that handle regulated hazardous wastes are also available to small quantity generators. The private companies include waste brokers, recyclers, reclaimers, and clean-up contractors, in addition to licensed treatment, storage and disposal (TSD) facilities.

Although there are no permanent facilities in Skagit County that will accept SQG waste for no charge, Burlington Environmental in Seattle currently sponsors a Small Quantity Generator Waste Acceptance Program. This program allows SQGs, for a minimal charge per gallon, to drop off their hazardous wastes (up to 55 gallons) on the last Tuesday of each month between 10 a.m. and 3 p.m. Unknown wastes are not accepted under this program, and SQGs are requested to bring wastes in their original containers, as well as to bring a copy of the Material Safety Data Sheets (MSDS) for any product they drop off. (Burlington Environmental, 1990)



Hazardous waste brokers offer collection service to SQGs, including consultation about regulations, identification of hazardous wastes, and transport of hazardous wastes to TSD facilities. However, TSD facilities require hazardous waste profiles (laboratory tests to classify the wastes) before accepting wastes for treatment or disposal. These tests can be very expensive for the small volumes of wastes brought in by the SQGs. For this reason, as well as the fact that many SQGs may be completely unaware of TSDs, many SQGs choose not to use the TSD service.

At least two SQG collection day events have been held in Washington State (Toteff, 1990). A SQG turn-in day was held in conjunction with a HHW collection day in Jefferson County in 1989. The TSD facility that handled collection and disposal of the HHW was "invited" by Jefferson County to hold the same type of program for SQGs on County property adjacent to the HHW collection site. Due to liability reasons, Jefferson County did not sponsor the SQG turn-in program; the program was operated completely by the TSD facility.

Eight businesses participated in the turn-in day in Jefferson County. However, three were rejected because they were not SQGs. These businesses were instructed on how to properly dispose of their hazardous waste. Out of the remaining five businesses, one was a government agency; the other four were legitimate SQGs.

In Tacoma, the Automotive Service Association (ASA) held a hazardous waste disposal project aimed primarily at the members of the trade association. This project was financed on a public involvement education grant by the Water Quality Authority, and was held at a local TSD facility. A total of 225 gallons of hazardous waste was collected from 12 participants. The majority of waste collected included waste oil, antifreeze, carburetor cleaners, and paint thinners.

#### 4.3.4 Identified Problems and Needs

##### 4.3.4.1 SQG Compliance with Hazardous Waste Regulations

Small businesses face several problems in dealing with their hazardous wastes. Among these are being aware of the regulations and the problems they may be creating, understanding the regulations, determining effective waste management options, affording the cost of proper waste management of their wastes, and knowing where to go for help. Conclusions drawn from other surveys indicate that improper waste management practices are the result of ignorance, lack of convenience, high costs of proper waste management, and lack of suitable options (Russell, 1985).

Small companies usually lack the time, personnel, and knowledge to keep up-to-date with regulations pertaining to hazardous waste management. In addition, they are usually uninformed when it comes to issues of liability and procedures of proper waste management practices. In cases where SQGs are unaware of appropriate disposal options, wastes may accumulate over a period of months. This practice puts SQGs at risk for enforcement actions when accumulation exceeds the thresholds that designate regulated generators. Long-term storage of hazardous chemicals can also lead to

property damage and site contamination. As real estate, financial, and insurance institutions become more aware of the financial risks associated with contaminated properties, these properties can become substantial liabilities for business owners.

Often there is a lack of financial incentives for small business owners to manage wastes legally. Many small generators are faced with paying relatively high rates for disposing of small amounts of hazardous waste at TSD facilities. These high costs are not encouraging to businesses, especially when they know of competitors that do not have to absorb these costs. The alternative which many generators utilize is to dispose of their wastes down the drain or into a dumpster. This option is a short-term solution with long-term environmental consequences.

Knowing where to go for help can also be a major problem. From a business standpoint, there are several basic difficulties with the present information reporting and waste handling system. A typical statement made to regulatory personnel at industry seminars is, "If I call and ask questions, then you know who I am, and you will bring enforcement action against me, not help me." While this statement may be incorrect, it is the predominant feeling of many SQGs.

An additional problem area is the lack of current information on SQGs in Skagit County. There is a necessity for SQG solid waste stream and wastewater characterization studies, especially in industries of high concern. One of these areas of concern is the pest control industry. The chemicals used by this industry are some of the most hazardous materials used by small quantity generators. Improper management practices of these substances could have severe consequences.

Unfortunately, the lack of information and a feeling of mistrust allows hazardous wastes to continue to enter all of the waste streams, even when there are viable management options available to these companies.

#### 4.3.4.2 Targeted Small Quantity Generator Wastes

Based on the review of the categories of businesses located in Skagit County, information from Ecology regarding reported waste generated in the County in 1988, information obtained from the solid waste characterization study, and information from studies in other states, the following wastes have been identified as potential targeted small quantity generator hazardous wastes in Skagit County:

- Solvents
- Cleaning agents
- Photoprocessing chemicals
- Paints and thinners
- Electroplating wastes
- Batteries
- Waste oil

#### 4.4 ROLES, RESPONSIBILITIES, AND REGULATIONS

This section describes the various regulatory, planning, and management roles and responsibilities of federal, state, and local government agencies, as well as current regulations pertaining to SQG waste and HHW.

##### 4.4.1 Background

The first federal regulation of hazardous waste began in 1976 with the Resource Conservation and Recovery Act (RCRA). RCRA defined hazardous wastes according to physical and chemical characteristics, such as corrosivity, reactivity, toxicity, and flammability. In addition, wastes containing specific "listed" constituents were defined as hazardous. The EPA established regulations governing the storage, treatment and disposal of such wastes. Initially, however, only those businesses that generated more than 2,200 pounds of hazardous waste per month were regulated under RCRA. "Small quantity generators", by federal definition at the time, were those businesses that generated less than 2,200 pounds per month. Businesses and households that generated less than this amount were exempted from the reporting regulations.

The EPA rules provided minimum standards; individual states could operate programs in lieu of the federal government as long as their regulations were at least as strict as the federal rules. Washington State's rules covered all industry and businesses that generated more than 400 pounds of hazardous waste per month, and thus were stricter than the federal requirements.

The 1984 Hazardous and Solid Waste Amendments to RCRA tightened the limitations even further, dropping the threshold to 220 pounds per month, above which regulatory requirements were triggered. The new amendments also gave priority to waste reduction over disposal in the management of hazardous waste. The Act requires generators to certify that programs to reduce toxicity and volume or quantity of waste have been implemented, and sets a specific timetable that progressively restricts land disposal of hazardous wastes unless the EPA finds the wastes will not endanger human health and the environment.

Washington State established specific state priorities for management of hazardous waste in the 1983 amendments to the State Hazardous Waste Management Act. Waste reduction is top priority, followed by recycling, treatment and disposal options, including incineration, with land disposal as the lowest priority.

Thus, over time, the regulatory trend at the state and federal level has been to regulate smaller quantities of hazardous waste and to encourage waste reduction and better management of the waste that is generated. By addressing hazardous waste which is not fully regulated by the State and the State waste management priorities, this Plan is another step toward the goal of reducing the threat of damage to the environment by hazardous waste.

#### 4.4.2 Current Regulatory Conditions

This section describes regulations and programs that currently address the management of SQG waste and HHW at the federal, state, and local levels.

##### 4.4.2.1 Federal Government Regulations

There are six significant Federal Acts that govern hazardous waste management, including transportation of hazardous wastes. The EPA is responsible for enforcement of environmental laws and regulations at the federal level. Although small quantities of hazardous waste are generally exempt from federal regulation, the EPA does regulate those who generate more than 220 pounds per month and all treatment, storage, and disposal facilities (TSDs) under RCRA. Authority for hazardous waste regulation has been delegated to the State of Washington by EPA.

4.4.2.1.1 CERCLA. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, also called "Superfund") of 1980, addresses the cleanup of inactive or abandoned hazardous waste sites. In 1986, the Superfund program was reauthorized and expanded through the Emergency Planning and Community Right-to-Know Act (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986).

SARA established requirements for federal, state, and local governments and industry regarding emergency planning and "community right-to-know" reporting on hazardous and toxic chemicals. The planning requirements call for the development of emergency response plans for spills, leaks, and accidents involving hazardous materials.

The reporting obligation requires companies to report the identity, location, and quantities of chemicals in a plant; reports of emergency or accidental releases of chemicals to the environment; and annual mass balance reports of all chemicals used in production and released to the environment or transported off-site.

In addition to planning and reporting, SARA requires that states provide assurances of adequate capacity to manage hazardous waste for the next 20 years. The Act also directs states to conduct inventories of underground storage tanks (USTs) for petroleum and regulated chemical substances and the EPA to develop UST regulations.

The following federal laws may also affect the regulation of hazardous waste, although less directly than RCRA, CERCLA, or SARA Title III.

4.4.2.1.2 Clean Water Act. The federal Clean Water Act, formerly the "Water Pollution Control Act", controls pollutant discharges to water from industrial sources, municipal sewage treatment plants, urban runoff and spills. The Clean Water Act sets national standards for ambient water quality as well as for industrial and commercial discharges of hazardous chemicals into municipal wastewater treatment systems. The Act also requires all municipal systems to upgrade to a minimum of secondary

treatment. The Water Quality Act of 1987 amended the Clean Water Act to, among other things, establish a national policy for the control of non-point sources of pollution. Under this policy, states must submit a program for the regulation of municipal storm water (urban runoff) discharges.

4.4.2.1.3 Hazardous Materials Transportation Act. As administered by the U.S. Department of Transportation, the purpose of this Act has been to protect employees and the general public from mishandling of certain chemical products. The regulations implementing this act require classification of hazardous materials and wastes, the use of approved containers for shipping, proper labelling and marking, and paperwork to clearly identify the hazardous contents of shipments and track their disposition.

Under the Clean Water Act, the role of Departments of Transportation (DOT) in directing the transport of hazardous materials has been increased due to recent regulations promulgated under this Act. DOT now has an extended regulatory role in both intra and interstate commerce and for materials not previously regulated (Other Regulated Materials Group E, ORM-E).

4.4.2.1.4 Toxics Substances Control Act. The Toxics Substances Control Act (TSCA) gives the EPA additional authority to regulate highly toxic materials. While TSCA was originally designated to deal with the hazards of polychlorinated biphenyls (PCBs) and asbestos, it gives the EPA administrator the power to propose regulations for the registration and testing of any kind of chemical. As of December 1988, over 7,000 chemicals had been classified by the EPA. The regulations require testing of new chemicals and reporting on the health effects of existing chemicals and contain requirements for the proper management of PCBs and asbestos.

4.4.2.1.5 Occupational Safety and Health Act. The Occupational Safety and Health Act (OSHA) requires development of a Material Safety Data Sheet (MSDS) for distribution of chemicals. Under this law, manufacturers or importers of chemicals must develop an MSDS for each chemical product and must pass that document to distributors and customers. Employers are required to make the MSDSs available to employees and to inform employees of the hazards of chemicals used in the workplace.

The Act also requires that hazardous waste workers receive a minimum of 40 hours basic health and safety training with annual refresher courses.

4.4.2.1.6 Other Federal Laws. The federal Clean Air Act of 1977 authorizes the EPA to establish emission standards for air pollutants that increase mortality or serious irreversible illnesses. Hazardous materials may also be regulated under the Federal Insecticide, Fungicide, and Rodenticide Act.

#### 4.4.2.2 State of Washington Regulations

This section discusses the role of the Washington Department of Ecology (Ecology) and several state laws which govern hazardous waste management, solid waste handling, waste reduction, toxics control, and employee safety. The EPA has delegated authority for hazardous waste management to the State. The State law regulates all hazardous waste in Washington because it is stricter than RCRA. Hazardous waste generated in Washington is regulated under the Hazardous Waste Management Act as implemented by the Dangerous Waste Regulations (WAC 173-303).

Ecology also controls (issues permits for) businesses that operate hazardous waste TSD facilities under the Dangerous Waste Regulations. Ecology is developing a screening process for siting new TSD facilities. The permitting procedure involves the participation of local governments and the general public. In addition, facility owners are required to obtain an EPA/State ID number, and must comply with the Department's standards concerning dangerous waste acceptance, transport and delivery, general waste analysis, security, inspections and personnel training.

4.4.2.2.1 Hazardous Waste Management Act (HWMA) (RCW 70.105). This Act requires local governments to prepare moderate risk hazardous waste management plans and establishes four major objectives for addressing hazardous waste management. These objectives include encouraging management practices with waste reduction, waste recycling, and treatment processes as alternatives to land disposal; provide the authority for development and administration of regulatory measures for the control and disposal of hazardous wastes; provide the authority for the development of a State disposal site for hazardous wastes that are not recycled; and designate Ecology as the State agency responsible for implementing RCRA.

To meet these objectives, Ecology has developed Dangerous Waste Regulations and has an on-going program of permits, inspections, and enforcement for generators, transporters, and treatment, storage, and disposal facilities.

The following categories of waste are defined in HWMA: a) "dangerous waste"; b) "extremely hazardous waste"; and c) "moderate risk waste", which exhibits the same properties as dangerous waste or extremely hazardous waste, but is generated in quantities below defined regulatory thresholds of 220 or 2.2 pounds per month, respectively. Hazardous wastes generated by SQGs or households fall into this category.

The HWMA also calls for local government planning requirements for addressing moderate risk hazardous waste. The Act directs local governments to prepare and adopt plans based on State guidelines to manage moderate risk wastes and to provide on-going public education plans. Grants are available to local governments for the local planning process under the HWMA [RCW 70.105.235]. Additional monies are available from the State Toxics Control Fund [RCW 70.105B.220]. The money is generated from taxes levied on hazardous substances under the Model Toxics Control Act.

The HWMA also authorizes the state to establish criteria for the siting of hazardous waste management facilities and to adopt rules for treatment facility permits.

4.4.2.2.2 Hazardous Waste Cleanup Act of 1987 [RCW 70.105B.220].

The Hazardous Waste Cleanup Act (HWCA) was passed in 1987 and adopted a financial program to provide for hazardous waste cleanup as well as additional provisions for control of toxics. This measure was defeated in the November 1988 General Election in favor of Initiative 97.

4.4.2.2.3 Model Toxics Control Act. Effective March 1, 1989, the Model Toxics Control Act (MTCA), which is the codified version of Initiative 97, superseded the Hazardous Waste Cleanup Act of 1987 and amended RCW 43.21B.--; added new chapters to Titles 70 RCW and Title 82 RCW; and new sections to chapters 70.105RCW, 70.105A, and 90.48 RCW and repealed RCW 90.48.460. The Act was primarily intended to address releases of hazardous substances caused by past activities although its provisions may be applied to potential and ongoing releases of hazardous substances from current activities.

In addition to the household and business hazardous waste programs included in the HWCA, MTCA authorizes State programs for waste reduction, recycling, and disposal of household, small business and agricultural hazardous waste. The Initiative also decreases the hazardous waste substances tax rate from 0.08 percent to 0.07 percent and eliminates the tax exclusion for petroleum industries.

Other changes include eliminating State funding of incinerators, decreasing the number of industries exempt from cleanup actions, increasing penalties, providing for increased review of Ecology decisions, increasing public participation, and tightening of liability requirements for parties responsible for creating hazardous waste cleanup sites.

Under MTCA Ecology has established a hazard ranking system for hazardous waste sites and minimum clean-up standards for remediations. Every other year, Ecology must provide a ranked list of remediation projects to the Legislature with recommendations for appropriation from both the State and Local Toxics Control Accounts. A Scientific Advisory Board has also been established to render advice to the Department with respect to the hazard ranking system, clean-up standards, remedial actions, deadlines, monitoring, and substance classification.

4.4.2.2.4 Waste Reduction Act of 1988 [RCW 70.105]. The Waste Reduction Act was implemented to encourage "voluntary efforts to redesign industrial, commercial, production, and other processes to result in the reduction or elimination of waste by-products and to maximize the in-process reuse or reclamation of valuable spent material". This objective was to be achieved by establishing a non-regulatory office within Ecology, the office of Waste Reduction, to serve as a waste reduction consultation center.

Under this Act, any waste generator can ask Ecology for advice and consultation on waste reduction techniques. In addition, the Office of

Waste Reduction will sponsor technical workshops and seminars on waste reduction techniques, maintain a statewide waste reduction hotline with the capacity to refer waste generators and the public to sources of information on specific waste reduction techniques, and establish a data base of proven waste reduction techniques and case studies.

4.4.2.2.5 Solid Waste Handling Act [RCW 70.95]. RCW 70.95 was originally adopted in 1969 and has been amended in 1975, 1984, 1985, and 1986. The provisions of this chapter include requirements for solid waste planning and authorization for the development of standards for handling solid waste. The requirements that pertain directly to moderate risk hazardous waste are the minimum functional standards for the operation of solid waste facilities [WAC 173.304].

The minimum functional standards represent minimum requirements for solid waste handling and require local ordinances to be at least as stringent as the statewide standards. The standards most directly applicable to moderate risk hazardous waste planning include: 1) a prohibition on disposal of non-containerized liquids or sludges containing free liquids unless approved by the jurisdictional health department; 2) owners and operators of landfills shall maintain and operate the facility to conform with an approved plan of operation; 3) groundwater must be monitored consistent with a design approved by the jurisdictional health department; 4) owners or operators of landfills shall not knowingly dispose, treat, store, or otherwise handle dangerous waste unless the owner or operator complies with the requirements of the dangerous waste regulations; 5) all owners or operators of landfills at which the general public delivers household solid waste shall provide the opportunity for the general public to recycle cans, bottles, paper, and other materials for which a market exists; and 6) closure of the landfill must be conducted in compliance with WAC 173-304-405 (b).

4.4.2.2.6 The Washington Industrial Safety and Health Act [RCW 49.17]. This act was passed in 1973 with the purpose of creating, maintaining, continuing and enhancing State industrial safety and health programs. Through this act, the Department of Labor (WDLI) has the authority to issue citations and/or restraining orders if any employer creates a condition where substantial probability that death or serious physical harm could result to any employee. The orders can restrain any such condition, practice, method, process or means in the work place, and may require such steps to be taken as may be necessary to avoid, correct, or remove such damage. Such dangerous conditions may result from improper or inappropriate machinery and industry process containing or utilizing hazardous materials. WDLI has also issued regulations governing health and safety practices for workers at hazardous waste facilities or sites. These regulations are similar to Federal OSHA standards for personnel protection.

4.4.2.2.7 Other Applicable State Laws. Other state laws which regulate the discharge of hazardous materials into the environment include the Water Pollution Control Act [RCW 90.48] which delegates authority to Ecology to issue National Pollutant Discharge Elimination System (NPDES) permits to industries discharging wastewater directly into receiving waters. It also



authorizes pretreatment regulations which require industries and commercial businesses to pretreat their wastes prior to discharge into a municipal wastewater treatment system. Chapter 90.48.080 prohibits discharge of polluting matter into waters of the State. Oil is specifically prohibited from entering the waters of the State.

Under the Waste Oil Legislation [RCW 19.114] it is required that signs with information about recycling used automotive crankcase oil be posted at the point of sale for new automotive oil.

To comply with 2SSB 5591 passed by the Washington State Legislature in 1991, the County must amend this Moderate Risk Hazardous Waste Management Plan to include a used oil recycling section. Ecology expects guidelines to be available by July 1, 1992.

Passed in the 1988 legislative session, Washington State Law, 1987 Ch. 67 which amends RCW 43.21A and directs Ecology to develop and implement an "Environmental Awards Program" recognizing products labeled in a manner that helps ensure environmental protection. Washington State Law, 1987 Ch. 115 amending RCW 70.95.040, establishes a "Governor's Award of Excellence" for outstanding achievement by an industry, company or individual in the area of solid waste or hazardous waste management.

Of further interest to local hazardous waste management is the issue concerning disposal of incinerator ash residues. The newly codified RCW 70.138 creates disposal requirements for special incinerator ash that otherwise would be regulated as hazardous waste in RCW 70.105, the Hazardous Waste Management Act.

4.4.2.2.7.1 Other Related Programs. Ecology also sponsors several special information programs, as follows:

- Hazardous Substance Information and Education Office: Provides information and educational assistance to businesses and industry, as well as the public, concerning the best available disposal methods for hazardous substances.
- Toll Free Hotline: Operated by the Hazardous Substance Information Office, provides businesses and the public access to existing information on hazardous substances within the community.
- Recycling Hot Line: Operated by the Litter Control and Recycling Program, provides waste oil recycling recommendations and other recycling information, as well as information on HHW.

4.4.2.2.7.2 Inspections/Enforcement. The Department of Ecology regional offices inspect facilities that use, handle, store, transport or generate dangerous wastes. SQGs of hazardous waste are inspected only upon request or as needed. Ecology permits and inspects TSD facilities.

#### 4.4.2.3 Local Government Regulations

In Skagit County, the local government entities currently responsible for waste management include the County Public Works Department, the County Public Health Department, and City Public Works Departments. Prior to the development of this Plan, no local entity had specific regulations pertaining to the management of moderate risk hazardous waste.

Furthermore, none of these entities had developed on-going programs.

However, when requested, the County Public Works Department and Department of Health informally provide some help to generators and handlers of small quantities of hazardous waste by assisting them in identifying appropriate recycling options or disposal sites outside the County.

4.4.2.3.1 Skagit County Department of Public Works. The Public Works Department is responsible for running the County's transfer station, compactor box sites, landfill, and incinerator. At the present time, the County does not monitor what is disposed of at the incinerator. However, the Public Works Department did initiate a household/car battery collection program in 1988 in an attempt to reduce the amount of lead and other metals in the ash.

The County also sponsored Household Hazardous Waste Collection Days in the fall of 1989, 1990, and 1991. This was seen as the first step in making the public more aware of the types of household materials considered hazardous and the alternatives to disposal.

The County is currently planning to build at least one collection and storage facility at the incinerator during 1992 (Boge, 1991). As is the case in Whatcom and Island Counties, the facility will be used to properly store hazardous materials brought to the facility by County residents. When storage containers are full, the County will contract for proper disposal of the materials.

4.4.2.3.2 Skagit County Department of Public Health. The Health Department is responsible for enforcing State public health statutes, rules and regulations of the State Board of Health and of the Secretary of the Department of Social and Health Services, as well as all local health rules, regulations, and ordinances.

The Health Department has broad authority to enforce existing State hazardous waste requirements and to adopt additional regulations pertaining to hazardous waste as it affects public health issues. The Department has authority to regulate some aspects of solid waste to include regulating sludge disposal.

The Health Department has not yet adopted local regulations governing the proper disposal of household hazardous waste or small quantity generator waste. Rather, the Department has viewed its position as one of assisting individuals interested in properly disposing of household hazardous waste and providing education as it can. The County currently does not maintain drop-off facilities for household hazardous waste. Thus, if an individual calls seeking information regarding the proper disposal of a hazardous

waste, the Health Department will recommend finding either an individual or organization that might be able to use the product. However, it is up to the individual to find a source; the Health Department does not maintain a list of potential users. If an individual wants to dispose of a product, the Department suggests contacting a firm which will take hazardous waste.

This course of action has been adopted due to the lack of personnel and funding to develop regulations, provide inspections, and provide facilities.

4.4.2.3.3 Overlaps. The Health Department may notify the regional Department of Ecology of hazardous waste incidents including emergency response situations. Involvement in these situations is limited. At times, the Health Department may work with either local fire districts or the County Public Works Department if a situation appears to threaten public health. There are no City Health Departments with which the County Department coordinates.

4.4.2.3.4 Gaps. There are currently no regulations in Skagit County regarding the handling and disposal of household hazardous wastes. The Skagit County Solid Waste Code does not address hazardous waste, SQG waste, or household hazardous waste.

4.4.2.3.5 Incorporated Cities. None of the incorporated cities in Skagit County have regulations regarding hazardous waste disposal. Should a problem arise, the cities will try to coordinate with the County Public Works Department or Ecology. None of the cities have established public information programs available to the public should a citizen call with handling/disposal questions.

#### 4.4.3 Identified Problems and Needs

Many small quantity generators are not aware that regulations exist for proper disposal of their hazardous wastes. This is due to a number of reasons, the main one being the confusing nature of the current regulatory mechanism. Traditionally, hazardous waste was treated as a solid waste problem. Regulations prohibiting dangerous wastes from the solid and liquid waste streams were developed under different circumstances, for different purposes, and therefore do not always complement each other.

The regulatory mechanism is comprised of various public agencies that are responsible for regulating separate elements of the solid and liquid waste streams. The complex interwoven nature of the agencies creates a potential for gaps and overlaps within the regulations. Since the regulations were written and programs were developed before SQGs were defined as a separate category of hazardous waste generators, it is not clear if the regulations address SQGs, in part or at all. Because of the general vagueness of existing regulations, they often go unheeded by the public.

Presently, there are no local regulations regarding handling/disposal of household hazardous waste or wastes from SQGs. Unfortunately, even if there were regulations, most local agencies have insufficient funds and staff to provide enforcement or conduct adequate inspections.

Information and education programs for proper management of SQG waste and HHW are needed. For example, local officials in Skagit County may be unsure what constitutes a hazardous waste. In addition, there may be a general understanding among the concerned public that "hazardous substances" should not be disposed of down the drain, onto the ground, or in the dumpster, but appropriate alternatives are not known and/or are not readily available.

Economically feasible options for SQG waste management are limited. Transport and disposal of hazardous waste is costly. SQGs perceive waste reduction technology as expensive and time consuming to implement, as it often is. Recycling options are limited to selected types of wastes. Given there are no regulations, let alone enforcement/inspection, there is little motivation for SQGs to adopt acceptable waste reduction or disposal practices.

## 4.5 FINANCING PRACTICES

### 4.5.1 Overview

This section discusses past and present financing practices used around the country, as well as in Washington State, and identifies any problems or shortcomings in the current system.

Household hazardous waste management programs around the country have been funded through a variety of measures, including federal and state grants, local government funds, user subsidies, solid waste and wastewater user fees, toxic substances tax, and in-kind contributions of labor, materials, and/or equipment.

In Washington State, the passage of the Model Toxics Control Act in 1989 placed an excise tax on hazardous substances that Ecology can allocate in the form of grants. These grants can be used for state hazardous and solid waste management programs, assistance for local government solid and hazardous waste planning, hazardous waste cleanup programs, public funding to assist voluntary cleanups, and other programs. Under the grant planning guidelines, local governments may apply for up to 75 percent state matching funds for local hazardous waste planning and implementation.

All of Washington State's counties applied for grant assistance to help develop hazardous waste management plans. In addition, for the fiscal year beginning July 1990, Ecology allocated three million dollars to this grant account to assist counties in implementing portions of their plans (Swenson, 1990). Amounts allocated for each county are determined using a base amount for every county plus an additional amount which is dependant on the population of the county. Skagit County's allocation under this program is approximately \$72,000 for fiscal year 1991.

Currently, there is little non-grant funding available in Skagit County. The Health Department receives \$0.50/ton or approximately \$35,500 per year from the Solid Waste Tipping Fee at the incinerator. This money is not specifically channeled for use in educating or inspecting for hazardous waste. The County did receive grants, as well as in-kind contributions from local businesses, for the Household Hazardous Waste Collection Days held in 1989, 1990, and 1991.

### 4.5.2 Background

Until 1985, local hazardous wastes were considered to be a subset of solid waste covered in RCW 70.95. The State Department of Ecology required that local comprehensive solid waste management plans include a hazardous waste element. In 1985, changes in State law clarified local government responsibilities for local hazardous waste management and planning.

Until that time, active programs tended to come from the facilities which were at risk from handling local hazardous waste such as solid waste facilities, wastewater treatment plants, and fire departments. Since

adequate funding was not readily available from the state or federal agencies, most local governments only funded minimal programs when addressing the local hazardous waste problem.

Prior to 1987, local agencies generally paid for most of their own local hazardous waste programs, since there were only limited state and federal grants available to fund these activities. Federal grants through the Environmental Protection Agency have been available in the past for funding some individual projects. In 1987, Ecology began to provide grants for up to 75 percent matching funds for local hazardous waste programs.

#### 4.5.2.1 Financing Methods Used Around the Country

Most household hazardous waste collection programs have been funded through a variety (and combination) of measures that include the following:

- Federally-funded projects
- State-funded pilot projects
- State trust funds
- State subsidies
- User subsidies
- Local government funds
- Foundation grant awards
- Solid waste user fees
- Wastewater user fees
- Toxic substances tax
- Donation/in-kind contributions of labor, materials, and/or equipment

Private sponsorship is also a method of funding programs. The most active single organization across the country in household hazardous waste collection programs has been the League of Women Voters. It has helped organize collection programs in over 80 towns in Massachusetts alone and numerous other localities across the nation. Funds for programs sponsored by public interest groups come from the groups themselves and are often supplemented with donations from individuals or other service organizations. Quite often, services are donated such as the use of a collection site, the use of equipment, or chemical expertise to identify wastes. Similarly, local governments will often make allocations of funds to these programs.

Private firms also sponsor local collection efforts. Sponsors have most frequently included commercial hazardous waste management firms and chemical manufacturers. Funds are sometimes strictly those of the sponsoring company, but may also include donations of services and monetary contributions from public service groups, governments, public interest groups, and private organizations.

The following is a summary of financing mechanisms used by various states around the country.

4.5.2.1.1 California. Assembly Bill No. 2948, approved in September of 1986, created a Hazardous Waste Management Planning Sub-Account within the Hazardous Waste Control Account in the General Fund. This authorizes the expenditure of the monies in the sub-account to pay for the following types of costs:

- Costs of administration of hazardous waste management programs;
- Grants to councils of governments, counties, and cities to carry out the programs; and
- Preparing regional and county hazardous waste management plans.

These funds are distributed to the counties on a prorated basis based on the amount of hazardous waste produced in each county in proportion to the amount of hazardous waste produced in the state. A city or two or more cities within a county are eligible to receive funding if the county in which they are located elects not to prepare a plan. (SCS Engineers, 1986)

4.5.2.1.2 Connecticut. Hazardous waste collection programs in Connecticut are funded through grants appropriated through the State of Connecticut legislature as a part of the Department of Environmental Conservation's annual budget. It provides grants to local communities that operate HHW collection projects.

The State grants pay 50 percent of the collection and disposal costs. All other costs are borne by the community through public funds or donations. Connecticut provides written guidelines pertaining to HHW collection days for communities applying for the grants. The State of Connecticut itself does not get involved with regulation of HHW, citing the expense, difficulty in enforcement, and lack of manpower as some of the reasons (SCS Engineers, 1986).

4.5.2.1.3 Florida. Florida was the first state to fund and operate a state-wide HHW collection program, which was established by Florida's Water Quality Assurance Act in 1983. This Act directed the Department of Environmental Regulation to establish and conduct collection programs throughout the state, including small businesses and institutions as well as residential sources.

This program was initially funded for three years. Funds came from a Water Quality Assurance Trust Fund. Limitations on expenses included a five percent ceiling on administrative costs and the same limit on public education. The remainder paid for the actual collection and disposal activities which were contracted (SCS Engineers, 1986).

4.5.2.1.4 New York. New York State has the Environmental Facilities Corporation Industrial Finance Program, which is available to New York's businesses and municipalities to provide tax-exempt low-interest loans for environmental improvement, water supply and management, and waste management projects. This program has helped clients manage their wastes and comply with environmental regulations since 1976. Projects eligible

for this tax-exempt financing include the following types of facilities: hazardous waste treatment, resource recovery, solid waste disposal, water supply and water management, as well as sewage treatment works (New York, 1988).

4.5.2.1.5 Rhode Island. Rhode Island has a hazardous waste collection program which includes participation by educational institutions and local government agencies, in addition to households. It is designed and operated by the Department of Environmental Management Air and Hazardous Materials Section, and is funded by a bond issue. The annual program is repeated until the funds are exhausted. At that time, another bond referendum is voted upon (SCS Engineers, 1986).

4.5.2.1.6 Minnesota. The State of Minnesota recently conducted a three-phase, two-year study to assess the operations and effectiveness of local hazardous waste collection programs. In the first phase, the State provided funds for local HHW collection programs. In addition, publicity and public education portions of the State's HHW program were funded by a U.S. Environmental Protection Agency Grant of \$25,000 (under RCRA, Section 8001 FY 1985 grant).

The second phase involved repeating the programs in selected locations. Funding was shared between the state and local communities. Data collected during the first two phases was analyzed in the third phase. Results of the study were presented to the Minnesota Legislature and used as the basis for future decisions related to HHW collection programs (SCS Engineers, 1986).

On November 8, 1988, Minnesota voters voted to establish an environmental trust fund to finance environmental projects. It would be funded primarily by a state-operated lottery. Estimates indicate it would take two or more years to implement the program (Environmental Reporter, 1988).

4.5.2.1.7 Iowa. The State of Iowa requires that retailers who sell hazardous products (including motor oil) obtain a permit. The cost of the permit is based on the retailers gross sales of all products. (Hazardous Waste News, 1988)

#### 4.5.3 Current Conditions in Washington State and Skagit County

##### 4.5.3.1 Existing State/Federal Funding Sources

The Model Toxics Control Act of 1989 affects local hazardous waste management in two significant ways: It sets a precedent for an excise tax on hazardous substances in Washington State, which raises significant revenues (approximately \$17 million annually) and it establishes local hazardous waste management as a high priority to receive funds from the tax. Under the Act, the tax is imposed on the possession of hazardous substances at the rate of seven tenths of one percent, applied to the wholesale value of the substance. Taxable substances include federally



designated hazardous substances or those classified by the director of Ecology, as well as petroleum products and pesticides.

Revenues from the hazardous substance tax are deposited in the Toxics Control Account, together with penalties, cost recovery amounts, and other monies appropriated by the Legislature. Monies in the account may be used for the State hazardous and solid waste management programs, the hazardous waste cleanup program, assistance for local government solid and hazardous waste planning and implementation, public funding to assist voluntary cleanups, the public participation program, and other programs.

Ecology may agree as part of a settlement to provide State funds for a portion of cleanup costs if it will expedite or enhance cleanup operations or achieve greater fairness in payment of cleanup costs. Ecology also considers the extent to which public funding will prevent or mitigate economic hardship. This decision of Ecology whether or not to provide State funds is not subject to review.

Fifty-three percent of these tax funds are allocated to a Local Toxics Control Account. While Section 22(4) of the Hazardous Waste Cleanup Act establishes the first priority for allocating these funds for local cleanup efforts, the second priority is to help fund the preparation, implementation, and/or updating of local hazardous waste plans.

Ecology has planning grant guidelines available to assist local government in applying for grants. Under these guidelines, local government may apply for up to 75 percent State grants for undertaking hazardous waste planning. As determined under RCW 70.105.235, local governments, or combinations of contiguous local governments, are required to provide matching funds for local hazardous waste management to secure the State funds. The matching funds can be in-kind contributions of staff or other direct and indirect cost incurred by the local governments.

Additionally, Ecology recently developed a grant program which replaces the current implementation grants and is made available to local governments to implement county solid waste plans and local hazardous waste management plans, once they are approved by Ecology. The new grant program, known as the Coordinated Prevention Grant (CPG) program, also draws on the Toxics Control Account and provides up to between 60 and 65 percent grant funds for planning and implementation of solid and hazardous waste programs. Skagit County is planning to apply for a CPG program grant.

#### 4.5.3.2 Existing Local Funding Sources

**4.5.3.2.1 General Funds.** General revenues collected from property taxes are used to operate most County programs. The funds are not targeted for specific programs and each year departments must submit requests for funding. The competition with other departments and agencies subjects the program to an annual review of the priorities and politically "hot" issues which may endanger a program.

4.5.3.2.2 Sales Tax. Increasing the County's sales tax could have been one method of raising revenues to finance a hazardous waste program. However, the County is currently at the one percent limit mandated by the State and cannot raise taxes at this time.

4.5.3.2.3 Solid Waste Tipping Fees. Utility fees, such as solid waste, are generally subject to less competition than general funds. The solid waste funds are restricted to solid waste activities, so local hazardous waste programs are only in competition with other solid waste programs, such as landfill operations and waste reduction programs. It is also generally easier to increase solid waste tipping fees than it is to raise taxes, thereby making it easier to cover increasing costs of local hazardous waste management and implementation. The relative size of the annual solid waste funds compared to the requirements for local hazardous waste programs also influences the prioritization of budgets.

4.5.3.2.4 Garbage Collection/Sewer Fees. Collection fees are currently levied at the city level in Skagit County. An increase in these fees to pay for a hazardous waste management program could be justified because hazardous wastes from small quantity generators and households are often disposed of in the solid waste and wastewater systems. Hazardous wastes impose added costs onto the maintenance of these systems. Therefore, those responsible for operating the systems should be able to charge residents and businesses the costs of developing ways of minimizing the amount of hazardous waste in the solid waste or wastewater streams. Since garbage collection is regulated by either cities or the State Utilities and Transportation Commission, it may be administratively difficult to institute and coordinate fee increases for the entire County. A tipping fee increase levied by the County may be easier to administer.

4.5.3.2.5 Business License Fee or Tax. The business license fee or business and occupation taxes paid by local businesses could be another funding source for local hazardous waste programs. As with collection franchise fees, these types of taxes and fees are administered only by cities and towns; counties cannot legally levy any type of general fees or taxes against businesses. Thus, all the cities and towns in the County would have to approve of these fee increases to adequately fund a county-wide hazardous waste program. Additionally, because some industrial, residential, and commercial development is located in unincorporated areas in the County, a large number of businesses could avoid paying the fee or tax.

#### 4.5.4 Identified Problems and Needs

One major problem in managing local hazardous waste in the future will be establishing a secure funding base. This will become critical as programs are developed or expanded and require monies to implement and to maintain. To develop an effective long-term management plan, a stable source of funding needs to be identified.

Another problem arises when the financing source for the programs are the general fund budgets of local governments. The competition with other

departments and agencies subjects the program to an annual review of the priorities and politically "hot" issues which may endanger a program. The local hazardous waste plan will require a long-term commitment to be effective and change the disposal habits of the general public. Thus, reliance on this funding source may not be wise for long-term programs, but rather may be more appropriate for one-time events.

In addition, there are several problems associated with relying on State grant monies. The competition for funds is very stiff and few programs are "guaranteed" funding. Secondly, grant programs may or may not be on-going; Ecology generally provides "starter" money only, making it impossible to rely solely on grants to fund and continue a program on a yearly basis. Finally, while the Hazardous Substance Tax should provide a base for funding the local hazardous waste programs, local governments must generate at least a matching portion of 25 to 50 percent and potentially more as the demands for the State funds grows. One option to generate these funds would be a similar tax on hazardous materials in Skagit County. Implementation could be facilitated if the State would collect the monies along with its own taxes.

#### 4.6 REMEDIAL ACTION

Ecology maintains a list of contaminated sites needing cleanup action. Currently, the sites listed in Table 4-8 have been identified in Skagit County by either the EPA or Ecology. Of the ten sites listed, moderate risk hazardous wastes (i.e., wastes from small quantity generators and household waste with hazardous characteristics) may have been a contributing source at half the sites. In the other cases, contaminants may have originated from major industrial sources now regulated.

The following is a short description of each of the ten sites listed in Table 4-8. This information was obtained from files at the Northwest Regional Office of Ecology (Sammons, 1990). No information was available on the Sakuma Brothers Birdsvew Berry Farm site.

EDB 2 Skagit County (Birdsvew Berry Farm) Site. This site involves wells at approximately 15 homes in the Birdsvew area that, prior to 1987, were allegedly contaminated by ethylene dibromide (EDB), a pesticide used in growing strawberries. Ecology is working to determine the size and location of the toxic plume, as well as working with the local water district to produce a permanent water supply to the 70 homes in the Birdsvew area. Small quantity generators are a potential source of contamination at this site.

LTV Energy Products Company. Also prior to 1987, a study conducted at this site in Sedro Woolley turned up small amounts of contamination in the groundwater on-site. The source of contamination is still unknown; however, several underground gasoline storage tanks existed on the property in the past. According to Ecology, most of the tanks have been removed. Although small amounts of benzene, toluene, total xylenes, and chloroform were found, Ecology determined that the concentrations are within existing drinking water standards and represent no threat to human health or the environment.

Mt. Vernon Gasoline Spill. This site consists of a confirmed petroleum products spill on a piece of city-owned property at the southeast corner of College Way and Freeway Drive in Mount Vernon. As of March of 1989, a gas extraction blower and stack are operating on the property, with field measurements still showing product. The source of the spill is still unknown.

Northwest Petrochemical Corporation. This involves a chemical plant that has been in operation at its March Point site since 1958. The facility recycles refinery and pulp/paper wastes to make solvents, pine oil, cresylic acid, and other chemicals. The facility claims to have no waste stream; by-products from recycling are burned in a boiler for fuel. Waste sludge accumulated in a pond on-site during the 1960s, but was removed by 1970. Phenol release to ditches was reported in the past by Ecology.

Site runoff is collected in a clay-lined pond, treated, and discharged to an injection well. This well may be of substandard construction and there

TABLE 4-8. SKAGIT COUNTY HAZARDOUS WASTE CLEANUP SITES

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<u>Name</u>	<u>Type of Site</u>
EDB 2 Skagit County (Birdsview Berry Farm)	Confirmed Site
LTV Energy Products	Potential Site
Mt. Vernon Gasoline Spill (College Way & Freeway Drive)	Confirmed Site
Northwest Petrochemical Corp.	Confirmed Site
Olympic Pipe Line - Allen Station	Monitoring Cleanup
P.M. Northwest Dump (Highway 20)	Potential Site
Sakuma Bros. Birdsview Berry Fields	Potential Site
Sedro Woolley Gas Spill/Leak	Confirmed Site
Septic Tank Lagoon (Burlington)	Confirmed Site
Texaco Puget Sound Off-Site (March's Point)	Potential Site

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Source: *Confirmed and Suspected Hazardous Waste Sites*, Washington Department of Ecology, Hazardous Waste Investigations and Cleanup Program, July 13, 1989.

is a risk of leakage of phenol-containing wastewaters from the well. Inspectors noticed an odor of mercaptans and other organic chemicals on-site. These vapors can be toxic. There is a potential for contamination of drinking water from treated wastewaters injected into the on-site well. However, phenol levels so far have been below detectable levels. Ecology's recommendation in 1985 was for groundwater monitoring or deep soil borings near the injection well to determine the presence or migration of phenols.

Olympic Pipe Line. On August 14, 1983, an estimated 1,000 bbl diesel spill occurred at the Allen Pump Station in Burlington due to a flange gasket failure. As of January 1986, approximately 80 percent of the product had been recovered. Long-term monitoring is currently taking place at the site. Additional testing in April of 1989 showed that all samples tested exhibited total petroleum hydrocarbons below the 5.0 ppm detection limit.

P.M. Northwest Dump. This site operated as a petroleum refinery waste disposal area from approximately 1960 to 1970. Petroleum wastes were disposed of at three on-site ponds. The site is now inactive; it has not been used since 1970. The three waste disposal areas, totaling approximately seven acres, have revegetated since the dump was closed.

Soil samples collected in 1986 showed the presence of PAHs, aliphatic hydrocarbons, and low levels of volatile aromatic hydrocarbons. The concentrations were below levels designated by Ecology as Extremely Hazardous Waste. Surface water runoff from the site appears not to be significantly contaminated. The groundwater contamination potential is still unknown. In a 1987 report, the EPA stated it does not anticipate any further action under Superfund.

Sedro Woolley Gas Spill/Leak. In 1985, Ecology was alerted to a fume leak at Ferry and Borseth Streets when a major sewer line was replaced. In June of 1986, two vacuum extraction units were installed to suck up the fumes. As of October, 1987, Ecology hadn't determined the source of the gas seepage, but numerous sources could be responsible, such as several nearby service stations, a gasoline bulk plant, and a car dealership equipped with a gasoline storage tank.

Septic Tank Lagoon (Burlington). Septic tank and chemical toilet waste had been deposited in the lagoon located north of Kelleher Road by Old Highway 99. The site is owned and operated by the County. In 1985, it was determined that no known hazardous chemicals were disposed of in the lagoon. Local wells were tested monthly by the County for any contamination which might be caused by the lagoon. No contamination was found. At that time, there were no known pollutant pathways resulting from the lagoon, and no further action was recommended.

However, chemical analysis performed in 1989 prompted Ecology to change the site from "suspected contaminated site" to "confirmed contaminated site". They recommended the following actions: any liquid in the lagoon be removed and taken to the wastewater treatment plant; install a 20 mil HDPE liner between septage and the clean dirt used for cover; and install

groundwater monitoring wells to assess impacts of the lagoon on the underlying groundwater.

Texaco Puget Sound Off-Site (March's Point). This site consists of an old landfill located in tidelands owned by the Department of Natural Resources. It was used as a public dump since the 1950s. The dump was operated by Skagit County Public Works Department from 1961 to 1973. At that time it was closed and covered, and has since revegetated naturally. However, leachate is surfacing, particularly on the eastern boundary.

It is unknown what waste types or quantities other than municipal wastes were disposed of at the landfill. Four major chemical industries are located on March Point, west and north of the site, and have been in business as long as the fill has been there. Texaco is known to have dumped unknown substances at the landfill.

The greatest risk is through groundwater and surface water contamination. There is a highly suspected problem due to the proximity of the industries and the time period of unregulated dumping. A priority pollutant scan was run on surfacing leachate. In a site inspection report by Ecology in 1986, it was determined that the sampling data do not show a significant problem at this landfill to warrant further sampling or remedial actions. They recommended that no further hazardous waste sampling or remedial action be required.

## 4.7 EMPLOYEE TRAINING AND REPORTING

### 4.7.1 Background and Current Conditions

According to Washington State Department of Labor and Industries (WDLI), regulations outlining needs for worker training and reporting for potential exposure to moderate risk waste are included in the following State laws:

- WAC 296-24-040 - Accident Prevention Program - requires a written accident prevention program including instructions on safe use of and emergency action following accidental exposure to hazardous gases, chemicals, or materials.
- WAC 296-24-045 - Safety and Health Committee Plan - requires designated safety committee composed of employer-selected and employee-selected members.
- WAC 296-24-073 - Safe Place Standard - requires that adequate safety equipment and training be provided to create a safe place of employment and to reasonably protect workers against recognized hazards.
- WAC 296-62-054 - Hazard Communication Standard - requires employers to inform and train employees about known hazardous chemicals in the workplace. Specifically, employers must: inventory hazardous chemicals, provide Material Safety Data Sheets (MSDS) for all known hazardous materials encountered in the workplace, and label all containers. However, the Hazard Communication Standard is carried out only for materials purchased by the departments. Currently, potentially hazardous waste in the solid and liquid waste stream is not identifiable and, therefore, labeling and MSDS stipulations are not carried out.
- WAC 296-62-300 through 380 - Hazardous Waste Operations and Emergency Response - requires: training for workers dealing with hazardous wastes at transfer, disposal, and treatment facilities; preparation of a written site health and safety program; and medical monitoring of personnel. This law also establishes management standards for handling hazardous materials and protecting workers.

The focus of this section is the training and reporting needs for public and private employees who may potentially encounter hazardous waste generated by the public while performing their jobs. This applies to hazardous waste not fully regulated by the Department of Ecology due to its small quantity or household origin.

Departments of local jurisdictions with employees potentially exposed to hazardous waste generated by the public while performing their jobs include:



- Skagit County Public Works Department, which operates the Sauk Transfer Station, the Inman Landfill, and five compaction box sites.
- City of Anacortes, which operates the Anacortes WWTP and is responsible for solid waste collection within the city.
- City of Burlington, which operates the Burlington WWTP and is responsible for solid waste collection within the city.
- Town of Concrete, which operates the Concrete WWTP.
- Town of Sedro Woolley, which operates the Sedro Woolley WWTP and is responsible for solid waste collection within the town.
- Town of Mount Vernon, which operates the Mount Vernon WWTP and is responsible for solid waste collection within the town.

Private companies which manage solid waste and wastewater facilities in the county include:

- Water and Wastewater Services, which operates the LaConner, Big Lake, Hope Island, and Shelter Bay wastewater treatment plants.
- Rural Skagit Sanitation, which provides refuse collection services to all of the unincorporated County including Guemes Island and the towns of Hamilton and LaConner.
- North Cascade Disposal Company, which collects refuse in the town of Concrete, as well as in some of the recreational areas east of Concrete.

#### 4.7.1.1 Solid Waste Stream

Employees working at the incinerator, Inman Landfill, and Sauk Transfer Station are instructed not to allow any visibly hazardous wastes into the facilities. They are informed about the common hazardous wastes that are found in garbage and are told not to handle them. They are trained, informally, to identify hazardous materials, and they are educated about health and safety measures that can be taken. No manual is used, nor has any formal hazardous waste training program been developed for employees at either site. There is also no formal accident and injury reporting system; however, the scale attendants at the landfill and the incinerator have telephones which could be used to summon emergency aid.

Private solid waste collection haulers in the County are instructed not to accept any hazardous waste in their collections. The County has supplied the haulers with a list of unaccepted hazardous wastes. Although there are no formal hazardous waste training programs, haulers are informally trained to identify hazardous wastes. Since batteries for the recycling program are also collected by the waste haulers, they are educated about the safe handling of batteries. (Knutzen, 1990; North Cascade Disposal Co., 1990)

Since the compactor box sites are unmanned, no employee is present to recognize and/or stop the disposal of hazardous wastes into the boxes. In addition, identification of hazardous waste at the incinerator is very difficult, since most of the waste is thoroughly mixed in the large compaction trailers.

#### 4.7.1.2 Wastewater Stream

Within Skagit County, five municipalities and one private contractor are responsible for wastewater treatment and industrial pretreatment monitoring programs. The people involved with this process may come in contact with hazardous wastes either in the wastewater itself or in and around the industrial sites they visit. Employees are made aware that hazardous materials may exist in these areas. Current training is not aimed at "handling", but rather at promoting awareness that hazardous materials may be present in wastewater and industrial waste.

None of the municipalities or private contractor provide a training program specifically targeted at hazardous materials or waste because employees do not come in contact with such materials on a regular basis. In general, the sewer districts have a general safety program set up for workers, and some of the issues covered in this program may be applicable to hazardous wastes. Employees are provided with safety training in a number of areas including managing chlorine emergencies, working within confined spaces, and using breathing apparatus and other safety equipment. The larger treatment plants have established Chlorine Spill Response Teams. There are also internal accident reporting procedures in place at the sewage treatment facilities.

#### 4.7.2 Identified Problems and Needs

It is assumed that hazardous waste is disposed improperly through both the local sewer systems and the solid waste collection and disposal system. At this point, neither the sewer or solid waste system is designed to separate, treat, or dispose of this waste.

The biggest barrier to protecting workers from exposure is the inability to determine what substances or quantities of hazardous waste may be entering the solid or liquid waste streams. Protection against hazards is best carried out when the hazards can be identified and quantified. Testing for hazardous substances can be technically difficult and very expensive. This is particularly true when testing for substances that are present in very low concentrations.

Worker exposure to hazardous waste is difficult to measure in both solid waste and sewer systems. Two types of exposure are of concern:

- 1) Acute exposure to a dangerously high level of a hazardous substance.
- 2) On-going exposure to low level hazardous substances.

Requirements for emergency procedures in case of accidents are covered by both WAC 296-62 and WAC 296-24, which outline the requirements for accident prevention and adequate training to handle hazardous materials. WAC 296-24, the Accident Prevention Program, outlines required procedures for all accidents, including reporting requirements. These standards apply to any accident, including accidents involving hazardous materials. The Department of Labor and Industries does not anticipate any new requirements specific to hazardous materials to be instituted as part of new Superfund legislation.

According to current occupational standards [WAC 296-62], the work environment at the incinerator, landfill, transfer station, and compactor box sites is probably not dangerous. There is no evidence that these facilities are out of compliance with current regulatory limits on exposure to hazardous substances. Nonetheless, management has implemented safety programs and provided equipment for the workers in an attempt to protect them from at least some of the potential hazards. Workers are provided with ear plugs, paper particle-masks, half-face respirators, and hard hats, and they are trained in evacuation procedures for emergencies.

Although employees in the solid waste environment are trained to identify hazardous wastes, there is currently no formal training related to actually handling the waste. Since hazardous wastes are often mixed within solid waste streams, it is highly probable that workers will come in contact with such wastes despite attempts to screen waste. Given the inconspicuous nature of these hazardous wastes, the risk of exposure to the employees is fairly great. Therefore, employees in this area are in need of additional training to assure that they know what precautions and steps to take when encountering hazardous wastes. A formalized accident reporting system is also needed at the solid waste handling facilities.

Although sewage treatment workers in the County do not receive specific hazardous materials and waste training, they do receive formal safety training. Further, these workers do not normally come into direct contact with hazardous wastes as do solid waste employees. This is especially true for Skagit County, where only about 30 percent of the wastewater flow is from commercial/industrial sources, with the majority of that coming from the commercial rather than industrial sector.

In addition to training, general good working habits can help to reduce worker exposure to hazardous wastes. Workers should be instructed to be very careful to wash before smoking, eating, or making any contact with their nose, mouth, or eyes.

#### 4.8 STATE REGULATED DANGEROUS WASTE PROGRAM

Based on 1988 data from Ecology, 2,273,813 tons of regulated hazardous wastes (non-wastewater) were produced in Washington State in 1988 (WSDOE, June 1991). Of this quantity, 9,174 tons were generated in Skagit County. These figures include both small quantity generator wastes and fully regulated generator wastes.

Table 4-9 summarizes by company the amount of hazardous waste generated by regulated generators in Skagit County during 1988. The tonnages represented in Table 4-9 may represent tons of wastewater or soil contaminated by a chemical and not necessarily tons of pure chemical itself.

TABLE 4-9. HAZARDOUS WASTE GENERATED IN SKAGIT COUNTY IN 1988

<u>Generator</u>	<u>Location</u>	<u>Hazardous Waste</u>	<u>Amount (tons)</u>
Anacortes School Dist. 103	Anacortes	Ignitable/Lab Waste	0.01
		Corrosive/Lab Waste	0.00
		Lab Waste	0.01
		Lab Waste	0.00
Avon Body Shop	Mount Vernon	Ignitable	0.46
Blade Chevrolet, Inc.	Mount Vernon	Ignitable/ Non halogenated solvents	0.40
Burlington-Edison Public Schools	Burlington	Ignitable/Lab Waste	0.01
		Mercury/Lab Waste	0.02
		Tetrachloromethane/ Lab Waste	0.01
		Lab Waste	0.05
		Lab Waste	0.02
		Lab Waste	0.02
Cascades Job Corps Center	Sedro Woolley	Halogenated solvents	0.91
Concrete School District	Concrete	Ignitable/lab Waste	0.00
		Lab Waste	0.00
Dally's Sales & Service	Mount Vernon	Ignitable/Toxic/ Non-halogenated solvents	0.41
Delta Resources, Inc.	Sedro Woolley	Ignitable	0.77
		Ignitable/ Non-halogenated solvents	0.20
		Barium/Chromium/Lead/ Non-halogenated solvents	0.34
Fibrex Corporation	Burlington	Non-halogenated solvents	4.30
		Ignitable/ Non-halogenated solvents	45.71
Foothills Pontiac/ Buick/Toyota	Burlington	Ignitable	1.08
Greg Hinton Olds/Cad/GMC	Mount Vernon	Ignitable	0.96
		Halogenated/ Non-halogenated solvents	0.07

TABLE 4-9. HAZARDOUS WASTE GENERATED IN SKAGIT COUNTY IN 1988  
(continued)

<u>Generator</u>	<u>Location</u>	<u>Hazardous Waste</u>	<u>Amount (tons)</u>
Gubrud Valley Nissan	Mount Vernon	Ignitable/ Non-halogenated solvents	0.04
Motor Trucks, Inc.	Mount Vernon	Ignitable	0.56
N.C. Machinery Co.	Mount Vernon	Ignitable	1.87
Nasty Jacks Antiques	LaConner	Halogenated/ Non-halogenated solvents	0.28
		Halogenated/Persistent Non-halogenated solvents	0.55
Northwest Petrochemical	Anacortes	Ignitable	25.76
		Corrosive	1.17
		Arsenic/Chromium/Lead	6.17
		Chromium	1.03
		Chromium/Lead	1.05
		Ignitable Chromium/Lead	26.98
		Lead	1.95
		Lead/Mercury	3.40
		Mercury/Selenium	0.23
		Ignitable Halogenated/ Non-halogenated solvents	0.18
		Persistent/ Polycyclic Aromatics	18.49
		Toxic/ Halogenated Hydrocarbons	32.27
		Toxic/Mercury/Halogenated/ Hydrocarbons	1.60
		Polychlorinated biphenals	3.30
Shell Oil Company	Anacortes	Ignitable	105.48
		Slop oil emulsion from petroleum refining ind.	72.00
		API separator sludge from petro. refining ind.	1,254.00
Skagit Pathology Inc.	Mount Vernon	Ignitable/Lab Waste	0.01
		Corrosive/Lab Waste	0.01
		Lab Waste	0.04
		Lab Waste	0.01

TABLE 4-9. HAZARDOUS WASTE GENERATED IN SKAGIT COUNTY IN 1988  
(continued)

<u>Generator</u>	<u>Location</u>	<u>Hazardous Waste</u>	<u>Amount (tons)</u>
Texaco Refining	Anacortes	Ignitable	6.05
		Ignitable Lab Waste	0.00
		Halogenated solvents	0.10
		Heat exchange bundle	
		cleaning sludge from	
		petroleum refining ind.	1.40
		Tank bottoms from	
		petroleum refining ind.	32.00
		API separator sludge from	
		petroleum refining ind.	317.20
		Toxic/Barium/Mercury/ Lab Waste	0.00
		Toxic Waste	0.00
Vern Sims Ford Inc.	Sedro Woolley	Ignitable	0.92
		Halogenated solvents	0.03
		Non-halogenated solvents	0.56
WDOT-Washington State Ferries	Anacortes	Ignitable/ Non-halogenated solvents	2.09

Source: 1988 Hazardous Waste Annual Report Summary, Washington State Department of Ecology, Solid and Hazardous Waste Program, June, 1991.

The overall goal of this Local Hazardous Waste Management Plan is to protect public health and the environment from the adverse effects of the improper handling and disposal of hazardous wastes by households and SQGs. This plan will take into consideration state hazardous waste management guidelines. These guidelines prioritize management options in the following order: waste reduction, recycling, treatment, incineration, solidification/stabilization, and landfill.

To achieve these goals, problem areas have been identified, objectives have been defined to address these problems, and alternatives have been developed which will manage previously unregulated hazardous wastes.

The following problem/needs areas for both households and SQGs have been identified in Skagit County. Following each problem, an objective is provided to address that specific problem or need. Alternative program elements are listed that meet the objective. Program elements are described in Appendix D.

## 5.1 PROBLEM 1: HAZARDOUS WASTE IN THE SOLID WASTE STREAM

### 5.1.1 Description of Problem/Need

Hazardous waste is currently being disposed of in the solid waste stream by small quantity generators and households. The cumulative contribution of hazardous chemicals to the solid waste stream poses a potential safety threat to compactor box site workers, incinerator workers, landfill workers, and solid waste haulers. There is also a potential to impact the incinerator operating system, as well as the quality of ambient air and residual ash. In addition, leachate from the landfills can have a potential impact on quality of groundwater in the area.

### 5.1.2 Objective to be Achieved

The objective to solving Problem 1 is to reduce the input of hazardous substances to the municipal solid waste stream by a significant, measurable amount. This would minimize effects on the environment and accidents resulting in worker and public exposure to hazardous waste.

### 5.1.3 Alternatives

Program element alternatives identified for Problem 1 include:

- Standardized Sorting Procedures
- Survey Local Businesses
- Incinerator Emission Monitoring
- General Public Information
- Product Labeling Program
- Garbage Can Labeling
- Education at Disposal Sites
- Product Substitution



Existing Materials Collection  
Load-Checking  
Asbestos Abatement Program  
Asbestos Enforcement  
Local Hazardous Waste Ordinances  
HHW Collection Sites  
HHW Collection Days  
Private TSD Facilities for HHW  
Used Motor Oil Recycling  
Battery Collection Program  
Point of Sale Recycling  
Citizens Waste Exchanges  
SQG Technical Assistance  
Existing Waste Exchange Programs  
Permanent TSD Collection Facilities for SQGs  
SQG Clearinghouse Programs  
Hazardous Waste Management Incentives  
Safety Programs  
Periodic Testing at Waste Facilities  
Evacuation Plan  
Asbestos Handling Procedures  
Hazardous Waste Recognition Classes  
Spill Response Procedures

## 5.2 PROBLEM 2: HAZARDOUS WASTE IN THE WASTEWATER STREAM

### 5.2.1 Description of Problem/Need

Hazardous waste is currently being disposed of in the wastewater stream by small quantity generators and households. The cumulative contribution of hazardous chemicals to the wastewater has a potential to impact municipal wastewater treatment operating systems, treatment plant worker safety, and the health of the receiving waters.

### 5.2.2 Objective to be Achieved

The objective to solving Problem 2 is to reduce the input of hazardous substances to wastewater stream by a significant, measurable amount.

### 5.2.3 Alternatives

Program element alternatives identified for Problem 2 include:

Survey Local Businesses  
General Public Information  
Product Labeling Program  
Product Substitution  
Storm Drain Awareness Program  
Existing Materials Collection  
Local Hazardous Waste Ordinances  
Local Sewer Pretreatment Ordinance

HHW Collection Sites  
HHW Collection Days  
Private TSD Facilities for HHW  
Used Motor Oil Recycling  
Point of Sale Recycling  
Citizens Waste Exchanges  
SQG Technical Assistance  
Existing Waste Exchange Programs  
Permanent TSD Collection Facilities for SQGs  
SQG Clearinghouse Programs  
Hazardous Waste Management Incentives  
Safety Programs

### 5.3 PROBLEM 3: HAZARDOUS WASTE IN THE SEPTIC SYSTEMS

#### 5.3.1 Description of Problem/Need

Possible groundwater pollution may occur by the disposal of hazardous substances into septic systems.

#### 5.3.2 Objective to be Achieved

The objective to solving Problem 3 is to reduce the use of household products containing solvents and other chemicals of concern and eliminate disposal of these chemicals into septic systems.

#### 5.3.3 Alternatives

Program element alternatives identified for Problem 3 include:

Rural Groundwater Monitoring  
General Public Information  
School Programs  
Point of Sale Information  
Product Labeling Program  
Information Phone Lines  
Citizens Waste Treatment  
Product Substitution  
Existing Materials Collection  
Health Department Mailings  
Local Hazardous Waste Ordinances  
Septic Tank Ordinance  
HHW Collection Sites  
HHW Collection Days  
Private TSD Facilities for HHW  
Point of Sale Recycling  
Citizens Waste Exchanges

#### 5.4 PROBLEM 4: HAZARDOUS WASTE IN THE STORM DRAINS

##### 5.4.1 Description of Problem/Need

Direct dumping of unwanted household wastes down storm drains can adversely impact local water environments.

##### 5.4.2 Objective to be Achieved

The objective to solving Problem 4 is to eliminate all direct dumping of any household hazardous wastes into storm drains.

##### 5.4.3 Alternatives

Program element alternatives identified for Problem 4 include:

- General Public Information
- School Programs
- Product Labeling Program
- Information Phone Lines
- Citizens Waste Treatment
- Product Substitution
- Storm Drain Awareness Program
- Existing Materials Collection
- Health Department Mailings
- Local Hazardous Waste Ordinances
- Trouble Call System
- HHW Collection Sites
- HHW Collection Days
- Private TSD Facilities for HHW
- Used Motor Oil Recycling
- Citizens Waste Exchanges

#### 5.5 PROBLEM 5: LACK OF LOCAL HAZARDOUS WASTE REGULATION COMPLIANCE

##### 5.5.1 Description of Problem/Need

Small Quantity Generators do not comply with hazardous waste regulations due to lack of information, ignorance of the regulations, economic hardship, lack of enforcement by regulators, and lack of alternatives for proper waste management.

##### 5.5.2 Objective to be Achieved

The objective to solving Problem 5 is to emphasize education and technical assistance over enforcement as a means of attaining compliance.

### 5.5.3 Alternatives

Program element alternatives identified for Problem 5 include:

- General Public Information
- School Programs
- Point of Sale Information
- Product Labeling Program
- Information Phone Lines
- Citizens Waste Treatment
- Education at Disposal Sites
- Product Substitution
- Storm Drain Awareness Program
- SQG Education
- County Staff Work Session
- Existing Materials Collection
- Health Department Mailings
- Public Appearances
- Hazardous Waste Management Incentives

## 5.6 PROBLEM 6: LACK OF KNOWLEDGE OF HAZARDOUS WASTE MANAGEMENT OPTIONS

### 5.6.1 Description of Problem/Need

The public is often unaware of what options they have for managing their hazardous waste or what hazardous waste requirements currently exist. Conclusions drawn from national surveys indicate that improper waste management practices are the result of lack of information, lack of convenience, and lack of suitable options.

### 5.6.2 Objective to be Achieved

The objective to solving Problem 6 is to provide the public, industry, and local government with the information needed to take rational steps to minimize, recycle, treat, dispose, and otherwise manage hazardous wastes in Skagit County. This includes fostering an ethic of personal responsibility for waste management decisions among the public, businesses, and government.

### 5.6.3 Alternatives

Program element alternatives identified for Problem 6 include:

- General Public Information
- School Programs
- Point of Sale Information
- Product Labeling Program
- Information Phone Lines
- Citizens Waste Treatment
- Education at Disposal Sites
- Product Substitution
- Storm Drain Awareness Program

SQG Education  
Clearinghouse Program  
County Staff Work Session  
Existing Materials Collection  
Health Department Mailings  
Public Appearances

## 5.7 PROBLEM 7: UNCLEAR AND CONFUSING REGULATORY MECHANISM

### 5.7.1 Description of Problem/Need

The regulatory mechanism is unclear and confusing. There are currently no local regulations for regarding handling/disposal of household hazardous waste or wastes from SQGs.

### 5.7.2 Objective to be Achieved

The objective to solving Problem 7 is to develop clear, consistent regulations at the local level for the management of small quantity generator waste and household hazardous waste.

### 5.7.3 Alternatives

Program element alternatives identified for Problem 7 include:

Asbestos Abatement Program  
Asbestos Enforcement  
Local Hazardous Waste Ordinances  
Local Sewer Pretreatment Ordinance

## 5.8 PROBLEM 8: LACK OF WASTE COMPOSITION DATA

### 5.8.1 Description of Problem/Need

Current information on the quantities, composition, sources, and disposal practices for small quantity generator waste and household hazardous waste in Skagit County need further definition.

### 5.8.2 Objective to be Achieved

The objective to solving Problem 8 is to develop and maintain more complete and accurate information on the types, quantities, sources, and management of all hazardous wastes generated in Skagit County to aid in management planning and emergency response.

### 5.8.3 Alternatives

Program element alternatives identified for Problem 8 include:

Standardized Sorting Procedures  
Wastewater Treatment Plant Sampling  
Survey Local Businesses

## 5.9 PROBLEM 9: POTENTIAL DIFFICULTY OF PLAN IMPLEMENTATION

### 5.9.1 Description of Problem/Need

Implementation of a county-wide hazardous waste management plan could be difficult because of the number of different agencies and governments involved.

### 5.9.2 Objective to be Achieved

The objective to solving Problem 9 is to involve all key parties, public and community organizations, state and local public agencies, small businesses, and hazardous waste management companies in development and implementation of the plan. This includes identifying practical resources and support to ensure implementation while recognizing the unique capabilities and limitations of different governments.

### 5.9.3 Alternatives

Program element alternatives identified for Problem 9 include:

General Public Information  
County Staff Work Session  
Existing Materials Collection  
Public Appearances

## 5.10 EVALUATION PROCESS AND DEVELOPMENT OF RECOMMENDED PROGRAM

Selection of the final recommended program for the Skagit County Hazardous Waste Plan was based on an evaluation of individual program elements. Factors considered in this evaluation included:

- ability of the program element to achieve one or more of the objectives for solving a particular local hazardous waste problem;
- degree to which the program element complies with the State waste management priorities;
- acceptance of the program element by the County, SCOG, local jurisdictions, and the public; and
- cost effectiveness.

The program elements as described in Appendix D were matched to the particular problems and objectives identified for Skagit County. Some of the initial program elements were eliminated from further consideration at this point due to feasibility concerns or lack of applicability to Skagit County's problems and objectives.

This list of problems, objectives, and alternatives was then submitted for review to the Technical Advisory Committee, the SCOG, local jurisdictions and the general public. This resulted in a recommended program, as described in Section 6, consisting of selected program elements. Comments on the draft plan and on the recommended program were evaluated and incorporated in this final plan, as appropriate, for submittal to Ecology.

## 6.1 INTRODUCTION

Section 6 provides recommended programs and actions, including selected program elements, agency responsibilities, cost estimates, funding strategies, and provisions for program evaluation and Plan update. This section presents a recommended program that will help solve the problems identified in Section 4 by meeting the objectives identified in Section 5. This program will also meet the minimum requirements as specified by the State Planning Guidelines for Local Hazardous Waste Management Plans. The program is designed to provide Skagit County with the flexibility to phase implementation of the program elements and address evolving needs and changing priorities. The various program elements will be implemented as funds from State grants or other sources permit. The emphasis placed on programs may vary from year to year based on evaluation of the results achieved by certain programs and their cost effectiveness.

The recommended Plan takes into consideration the state hazardous waste priorities in all program elements and proposed activities. The program emphasizes education and information programs to encourage waste reduction and recycling. Also included in the Plan are provisions for development of waste collection facilities leading to treatment, storage, and disposal of the remaining wastes that are not amenable to waste reduction or recycling programs. Monitoring, surveillance, and enforcement programs are also included in the Plan to be implemented during the five-year planning period.

The goal of the Plan is to implement programs which will eliminate hazardous wastes from the wastewater stream and reduce the amount of toxic or otherwise hazardous materials entering the solid waste stream. Since virtually all of the solid waste collected in Skagit County is incinerated prior to landfilling, the hazards from landfilling of hazardous materials in the solid waste stream are limited primarily to inorganic metals. Although incineration is the method of choice for treating solid waste in Skagit County, this is not considered a treatment method for the hazardous waste present in the solid waste stream. Therefore, the emphasis of this local hazardous waste program is on removal of wastes from the solid waste stream by using waste reduction, recycling, and proper waste treatment and disposal methodologies.

In order to achieve the Plan objectives presented in Section 5, a comprehensive list of program elements was drafted and researched. These program elements were provided to the Technical Advisory Committee, Skagit Council of Governments, the Skagit County Department of Public Works, and the general public for evaluation. Based on this evaluation and input, this list was shortened to a preferred set of program elements applicable to Skagit County. These program elements have been combined into a recommended program that best addresses the problems and objectives discussed in Section 5 and meets the requirements of the State Planning Guidelines.



## 6.2 RECOMMENDED PROGRAM DESCRIPTION

This section presents the recommended elements for the first five-year program. These include education and training, hazardous waste collection, hazardous waste disposal, regulatory and monitoring activities, and evaluation and amendments. Emphasis is on education to encourage waste reduction, recycling, and reuse. Collection, treatment, and disposal programs will be implemented to allow for proper management of the local hazardous waste that is produced. Regulation and monitoring programs will be implemented to encourage proper management of wastes once the other programs are in place. Evaluation programs will be implemented to assess the success of the implementation of the Plan.

The recommended program elements respond to the needs and problems identified in Sections 4 and 5 of this Plan, based on current, available information. Skagit County recognizes that needs may change over time and that the mix of program elements or the level of effort expended within each program category may require modification to address newly identified needs or to respond to changes in funding. The proposed program allows for flexibility in responding to new needs and offers alternatives to ensure that the goals and objectives of the Plan are addressed in each year of the program.

The program elements are discussed below and are summarized in Table 6-1.

### 6.2.1 Education and Training Programs

The recommended education and training programs have been divided into the following four categories:

- Public education programs targeting household hazardous wastes;
- Small quantity generator education programs targeting small quantity generator business;
- Continuation of existing employee safety and training programs for workers in the solid waste and sewer utilities that may come in contact with the wastes; and
- Training to operators of the hazardous waste collection facilities to ensure the protection of worker health and safety and to meet state and federal health and safety requirements.

Household hazardous waste public information and education program elements proposed as part of the five-year Plan include:

- General Public Information
- Education at Disposal Sites
- Storm Drain Awareness
- School Programs
- Point of Sale Information

TABLE 6-1. MODERATE RISK HAZARDOUS WASTE MANAGEMENT PLAN  
PROGRAM ELEMENTS

#### RECOMMENDED EDUCATION/TRAINING PROGRAMS

Household Hazardous Waste Public Information Program  
School Programs  
Storm Drain Awareness Program  
Small Quantity Generator Training Seminars  
Small Quantity Generator Technical Assistance  
Solid Waste Handler Training  
Moderate Risk Hazardous Waste Personnel Training  
Asbestos Abatement Information Program  
Point of Sale Information Program  
Product Labeling Program  
Information Telephone Lines  
Other Programs as Necessary

#### RECOMMENDED COLLECTION PROGRAMS

Household Hazardous Waste Collection Day  
Permanent Primary TSD Collection Facility (modular prefabricated storage system)  
Permanent Satellite Collection Facility for outlying areas  
Battery Collection Program (existing program)  
Small Quantity Generator Waste Clearinghouse/Assistance Program  
Used Motor Oil Recycling (includes purchase and installation of three above ground tanks placed at waste collection facilities).  
Hazardous Materials Exchange Program  
Paint Swaps  
Freon Recapture Program  
Other Programs as Necessary

#### RECOMMENDED DISPOSAL PROGRAMS

Transportation, Treatment, Disposal of Collected Household Hazardous Wastes  
Waste Recycling Programs Wherever Feasible  
Consideration of Feasibility Study for Incineration of Waste Paint and Implementation if Appropriate  
Other Programs as Necessary

TABLE 6-1. (continued)

**RECOMMENDED REGULATORY/MONITORING PROGRAMS**

Local Moderate Risk Hazardous Waste Ordinances

Sewer Pretreatment Ordinances

Department of Health Enforcement Activities

SQG Surveys and Audits

Groundwater Monitoring (rural water systems, abandoned waste sites, etc.)

Incinerator Emissions Monitoring

Other Programs as Necessary

Descriptions of the specific program elements are provided in Appendix D.

Small quantity generator information and education program elements proposed as part of the five-year Plan include:

- SQG Education and Technical Assistance
- SQG Training Seminars
- Point of Sale Information

These programs will target the small business generators in Skagit County. Waste minimization will be emphasized through the use of brochures, fact sheets, seminars, workshops, and videos.

Employee safety and training information and education programs that are part of the five-year Plan include:

- Safety Programs
- Evacuation Plan
- Solid Waste Handler Training (to recognize hazardous wastes)
- Hazardous Waste Personnel Training (to comply with OSHA and WDLI Requirements)
- Spill Response Procedures

These safety programs are a continuation of and supplement to existing worker safety programs for workers in the solid waste and sewer utilities that may come in contact with improperly disposed of hazardous wastes. Although exposure to hazardous wastes in the waste stream is not a serious problem, additional educational measures to ensure workers recognize and know how to deal with hazards that may arise will help prevent accidents and injuries. In addition, personnel operating hazardous waste collection facilities will receive a minimum of 40 hours of initial hazardous materials training and annual 8 hour refresher courses, in compliance with Occupational Safety and Health Administration (OSHA) regulations and Washington Department of Labor and Industries (WDLI) requirements.

#### 6.2.2 Collection Programs

Collection, disposal, and treatment programs will be implemented to ensure that the public and businesses have alternatives for the safe and legal disposal of moderate risk waste. These programs, which will be implemented as funding becomes available include:

- HHW Collection Days
- Primary and Satellite HHW Collection Facilities
- Battery Collection Program
- Used Oil Collection Programs
- Hazardous Materials/Paint Exchange Programs
- Used Oil Recycling
- Freon Recovery Program

A household hazardous waste collection and paint swap event took place in 1991.

#### 6.4.4 Local Governments and Sewer Districts

Local governments that have a wastewater treatment plant under their jurisdiction will be responsible for development of moderate risk waste sewer ordinances. The County's Hazardous Waste Specialist and Health Department staff will be available to assist in drafting these ordinances. The sewer districts will also be responsible for ensuring that worker safety programs address hazards of moderate risk waste in the wastewater stream. Local governments will be called on by the Hazardous Waste Specialist to assist in distribution of informational material as part of education programs.

#### 6.5 COST ESTIMATES

Tables 6-2, 6-3 and 6-4 show the cost estimates for each of the moderate risk waste programs included in the Plan over the five-year planning period. Three alternative implementation strategies have been identified for the recommended moderate risk waste implementation program. One strategy assumes that the program is implemented with local funds only (Table 6-4). The other two strategies assume current and 50 percent reduction levels of state financial assistance (Tables 6-2 and 6-3, respectively).

If grant funds are unavailable, the program, which will be a reduced version of the recommended program, will still address the basic goals and objectives of the Plan. Emphasis will be placed on education and training programs, small quantity generator technical assistance, and household hazardous waste collection. These functions will be coordinated by the hazardous waste specialist that the County is proposing to hire.

#### 6.6 FUNDING STRATEGIES

Planned funding sources for implementation of the programs described in the Plan include the following:

- Department of Ecology Grants
- Increase in Solid Waste Tipping Fees

Skagit County has applied for Department of Ecology grant funding for plan implementation through the Toxics Control Account and the Hazardous Waste Assistance Account. The County's Plan must be approved by Ecology before funds will be granted. The projected 1991 allotment for Skagit County is approximately \$72,000. A 25 percent match is required. The latter account can only be used for SQG programs.

A source of future grant funding is the Department of Ecology's Coordinated Prevention Grants program. This program will provide financial assistance to local governments for local hazardous waste programs and solid waste plans and programs. It will replace the implementation grant funding program as well as several other individual grant programs in 1992. Priority is placed on hazardous waste programs. Local governments with

and Sedro Woolley will also play a role in its successful implementation. Following is a recommended plan for distribution of the specific responsibilities for program implementation for each of the responsible agencies or jurisdictions.

#### 6.4.1 Skagit County Department of Public Works

The Skagit County Department of Public Works will take the lead in implementing all programs, except monitoring and enforcement. In order to carry out these programs, Public Works will hire a full-time Hazardous Waste Specialist. This person will be responsible for implementation of the education programs and overseeing implementation of the other County programs including:

- Development of a Household Hazardous Waste Information Program;
- Direction of program for education at disposal sites;
- Development of SQG Education and Technical Assistance Program;
- Collection and distribution of information on waste exchange and private waste collection and disposal programs;
- Operate SQG Clearinghouse program;
- Assist with employee safety and training programs;
- HHW collection facilities planning and implementation; and
- Paint Swap event planning and implementation.

Other Public Works responsibilities will include:

- Implementation of safety programs at solid waste facilities;
- Design and construction of HHW collection facility;
- Staff primary and satellite household hazardous waste collection facilities;
- Implementation of Load Checking Program;
- Continuation of Battery Collection Program; and
- Plan review and revision in 1995 for development of 20-year plan.

#### 6.4.2 Skagit County Health Department

The Health Department will take the lead role in monitoring and enforcement. The Health Department will prepare and enforce hazardous waste ordinances, implement incinerator emissions monitoring, and implement sewage monitoring. In addition, the Health Department will be responsible for groundwater, surface water, abandoned waste site, and other environmental monitoring.

#### 6.4.3 Skagit Council of Governments

The Skagit Council of Governments (SCOG) will be responsible for facilitating communication among local governments and the agencies involved in implementing this Plan. The SCOG will be responsible for acquiring approval of this Plan from local governments. It will also serve as a forum for local governments to be briefed on the progress of implementation and for local governments to evaluate selected program elements to respond to emerging needs.

## Year Three, 1993

- Continue education and training programs
- Continue technical assistance to small quantity generators
- Solid waste handlers training
- Continue battery collection and waste oil collection
- Begin operation of primary hazardous waste collection facility
- Begin SQG clearinghouse program
- Site a satellite household hazardous waste collection facility
- Begin hazardous materials swap programs
- Conduct SQG surveys and audits
- Continue monitoring programs
- Complete development of and adopt hazardous waste ordinance
- Evaluate effectiveness of existing programs, determine need for additional programs
- Sponsor paint swap event
- Continue Freon recovery

## Year Four, 1994

- Continue education and training programs
- Continue technical assistance to small quantity generators
- Continue battery collection and waste oil collection
- Continue operation of primary hazardous waste collection facility
- Continue SQG clearinghouse program
- Begin operation of satellite collection facility
- Continue hazardous materials swap programs
- Continue monitoring programs
- Sponsor paint swap event
- Continue Freon recovery

## Year Five, 1995

- Continue education and training programs
- Continue technical assistance to small quantity generators
- Continue battery collection and waste oil collection
- Continue operation of primary hazardous waste collection facility
- Continue SQG clearinghouse program
- Continue operation of satellite collection facility
- Continue hazardous materials swap programs
- Conduct audit and enforcement activities
- Continue monitoring programs
- Evaluate effectiveness of existing programs, determine need for additional programs
- Revise plan
- Sponsor paint swap event
- Continue Freon recovery

## 6.4 PLAN IMPLEMENTATION

This Plan will be administered by the Skagit County Department of Public Works, as the lead agency. The Skagit County Health Department, Skagit Council of Governments, and the eight incorporated cities and towns of Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon,

individual SQG compliance with waste management regulations. The survey of potential small quantity generators provided in Appendix B will serve as a starting point for SQG surveys and audits.

Programs to monitor environmental conditions are also part of the recommended plan. Monitoring of rural groundwater supply systems for hazardous constituents and of groundwater at abandoned waste sites will be carried out as necessary. Analyses of air emissions and ash composition at the incinerator will be performed as a method of monitoring the effectiveness of the Moderate Risk Hazardous Waste Management Program in removing hazardous wastes from the solid waste stream.

Additional data on the characteristics of hazardous wastes in the solid waste stream will be collected as part of ongoing solid waste composition studies. These will provide information to supplement that obtained from the household hazardous waste round-up and from the waste stream composition study in 1990. These data will also assist in monitoring the effectiveness of the Moderate Risk Hazardous Waste Management Program.

### 6.3 PROGRAM SCHEDULE

Following is a proposed schedule for implementation of this Plan over the first five years. The State requires that Skagit County begin implementation of this Plan by December 31, 1991. However, the County has applied for a variance to extend the deadline for Plan approval to July 31, 1992. Ecology approved this variance on March 4, 1992. The County's program for plan implementation is intended to be flexible. Therefore, this schedule is a general guideline only; program elements will be implemented as funds permit and as changing needs dictate.

#### Year One, 1991

- Begin education and training programs
- Continue existing battery collection and waste oil collection
- Sponsor household hazardous waste collection day
- Sponsor paint swap event
- Continue groundwater monitoring programs

#### Year Two, 1992

- Hire Hazardous Waste Specialist
- Continue and expand education and training programs
- Begin technical assistance to small quantity generators
- Moderate risk hazardous waste personnel training
- Continue existing battery collection and waste oil collection
- Construct primary hazardous waste collection facility
- Purchase and install three used oil collection tanks
- Sponsor paint swap event
- Conduct SQG surveys and audits, as funds permit
- Develop draft hazardous waste ordinances
- Continue groundwater and possible surface water monitoring programs
- Begin air emission and continue sewage monitoring
- Begin Freon recovery



companies that currently only offer these services outside the County, are expected to move into the region.

The County may also evaluate the possibility of incinerating waste paint at the municipal solid waste incinerator. If paint is incinerated, the appropriate emissions treatment facilities must be capable of removing all hazardous constituents, such as heavy metals. A feasibility study would first be conducted to determine the requirements, benefits, and costs of such treatment.

#### 6.2.4 Regulatory/Monitoring Programs

Regulatory and monitoring programs will include but not be limited to the following:

- Establishment of Local Moderate Risk Waste Ordinances
- Enforcement of Ordinances
- Load-Checking
- Surveys of SQGs and Audits of Targeted Commercial Generators
- Groundwater, Air Emissions, and Sewer Discharge Monitoring
- Collection of Additional Sort Data

The local moderate risk waste ordinances will prohibit improper disposal of moderate risk hazardous waste in either the trash or sewer. They will address proper handling and disposal of both household and commercial wastes. Due to the potential hazards of trace metals in incinerator ash, bans of specific items such as batteries from the solid waste stream will be considered. Enforcement will be an integral part of implementation of this plan in the later years of the plan.

Load checking at the incinerator and transfer station will be implemented to educate self-haulers of potential hazardous components in their waste and to divert these components to a collection or treatment facility.

Surveys of small quantity generators and audits of selected generators will be performed to obtain more information about small quantity generator's hazardous waste management practices and needs. Surveys target all businesses in a defined geographic area to identify businesses that might have waste management problems. Audits target specific industries (such as dry cleaners or auto repair shops) for an in-depth analysis of waste management practices. The primary purpose of the survey and audit program is to help the County identify businesses that do not participate in education activities or otherwise seek out waste management information.

In addition, these surveys and audits will help to educate generators on priority waste management practices such as waste minimization and recycling. These programs will also inform generators of alternative disposal programs for properly treating or disposing of moderate risk wastes. Information gathered during these surveys and audits will be used to evaluate the effectiveness of the overall education and technical assistance programs, thus allowing the programs to be revised to best serve the community. Audits can also be used as an enforcement tool to monitor

A permanent primary collection facility for the collection of household hazardous wastes is proposed for construction in 1992. The permanent facility will consist of a commercially available prefabricated storage unit that provides secondary containment and personnel safety equipment. A satellite collection facility in the eastern portion of Skagit County is planned for 1993.

The battery and used oil collection programs will continue and are expected to see increased participation as a result of the education programs. As part of the used oil collection program, the purchase and installation of three above ground tanks for storing used oil is proposed. One tank each would be placed at the incinerator site, the Sauk Transfer Station, and the Clear Lake Compactor Site. If warranted, a curb-side used oil pick-up program may be implemented in the later years of the management program.

Another collection program that is planned is a Freon recapture program to safely remove and recycle Freon from discarded refrigerators and freezers containing Freon.

#### 6.2.3 Disposal/Recycling Programs

Programs to ensure the proper transportation, storage, treatment, and recycling or disposal of moderate risk hazardous wastes will be implemented. Recommended program elements include, but are not limited to:

- Contracts with Permitted TSDFs
- Recycling Programs
- SQG Clearinghouse to Encourage Use of Private Facilities for Collection and Disposal of SQG wastes
- Possible Incineration of Waste Paint

The County will contract with permitted commercial hazardous waste facilities for transportation, treatment and disposal or recycling of household hazardous wastes received during collection days, at the primary or satellite collection facilities or from mobile facilities.

Recycling programs will include the recycling of used oil that is collected at the incinerator site, transfer facility, and compactor box site; recycling of batteries; recycling of antifreeze; and possible recycling of Freon. The materials will be recycled through commercial recyclers.

Transportation, storage, treatment, and disposal of collected moderate risk waste from small quantity generators is expected to be performed by commercial operators as a natural extension to the service they already offer to regulated generators in the County. The County will serve as a clearinghouse to assist SQGs to coordinate the transportation, treatment and disposal of hazardous wastes with other SQGs. This is expected to help reduce the costs of such services and to encourage SQG compliance with regulations. As the clearinghouse program and education and regulatory programs increase awareness and need for local moderate risk waste collection, treatment, and disposal facilities, private commercial

**TABLE 6-2**  
**Implementation Schedule and Cost Estimates**  
**Projecting Current Level of State Funding Assistance**

(includes: 1991 HHW Collection Event Grant; 1991 MRHW Implementation Grant; CPG)

Programs	1991	1992	1993	1994	1995	TOTAL
<b>Education/Training</b>						
- Public Works Staff Training	\$0	\$6,000	\$3,600	\$3,000	\$3,000	\$15,600
- Solid Waste Handlers Training	\$0	\$0	\$4,150	\$3,000	\$3,000	\$10,150
- School Programs	\$3,000	\$6,500	\$5,200	\$7,000	\$8,000	\$29,700
- Other Community Programs	\$4,000	\$9,000	\$9,350	\$12,000	\$13,000	\$47,350
- SQG Seminars/Workshops	\$0	\$12,500	\$8,250	\$8,000	\$10,000	\$38,750
- SQG Informational Materials	\$0	\$9,000	\$8,200	\$8,000	\$8,000	\$33,200
- SQG Audits/Surveys/Consultants	\$0	\$6,000	\$6,500	\$6,000	\$6,000	\$24,500
- SQG - Health Department Staff Training	\$0	\$1,250	\$1,250	\$0	\$1,000	\$3,500
<b>Education/Training Subtotal</b>	<b>\$7,000</b>	<b>\$50,250</b>	<b>\$46,500</b>	<b>\$47,000</b>	<b>\$52,000</b>	<b>\$202,750</b>
<b>Collection</b>						
- Household Hazardous Waste Collection Days	\$40,000	\$0	\$0	\$0	\$0	\$40,000
- Primary Collection Facility	\$0	\$94,300	\$12,650	\$20,000	\$20,000	\$146,950
- Satellite Collection Facility	\$0	\$0	\$12,150	\$10,000	\$12,000	\$34,150
- Used Oil Collection Tanks	\$0	\$12,150	\$0	\$0	\$0	\$12,150
- Paint Swap Activities	\$0	\$13,000	\$14,500	\$16,000	\$18,000	\$61,500
- SQG Clearinghouse	\$0	\$3,000	\$9,500	\$12,000	\$14,000	\$38,500
<b>Collection Subtotal</b>	<b>\$40,000</b>	<b>\$122,450</b>	<b>\$48,800</b>	<b>\$58,000</b>	<b>\$64,000</b>	<b>\$333,250</b>
<b>Disposal</b>						
- Household Hazardous Waste Collection Days	\$83,000	\$0	\$0	\$0	\$0	\$83,000
- Primary Collection Facility	\$0	\$0	\$40,000	\$40,000	\$45,000	\$125,000
- Paint Swap Activities	\$0	\$17,000	\$17,000	\$10,000	\$10,000	\$54,000
<b>Disposal Subtotal</b>	<b>\$83,000</b>	<b>\$17,000</b>	<b>\$57,000</b>	<b>\$50,000</b>	<b>\$55,000</b>	<b>\$262,000</b>
<b>Regulation</b>						
- Regulation Development/Monitoring	\$0	\$5,900	\$0	\$5,000	\$5,000	\$15,900
- SQG Development and Enforcement of Ordinances	\$0	\$12,300	\$36,900	\$22,500	\$25,000	\$96,700
<b>Regulation Subtotal</b>	<b>\$0</b>	<b>\$18,200</b>	<b>\$36,900</b>	<b>\$27,500</b>	<b>\$30,000</b>	<b>\$112,600</b>
<b>Evaluation/Amendments</b>						
- Planning Requirements Regarding Used Oil	\$0	\$0	\$5,600	\$0	\$0	\$5,600
- Moderate Risk Hazardous Waste Plan Evaluation	\$0	\$0	\$5,600	\$0	\$10,000	\$15,600
<b>Evaluation/Amendments Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,200</b>	<b>\$0</b>	<b>\$10,000</b>	<b>\$21,200</b>
<b>TOTALS</b>	<b>\$130,000</b>	<b>\$207,900</b>	<b>\$200,400</b>	<b>\$182,500</b>	<b>\$211,000</b>	<b>\$931,800</b>

TOTAL COUNTY DOLLARS = \$372,700  
TOTAL STATE DOLLARS = \$559,100  
TOTAL = \$931,800

**TABLE 6-3**  
**Implementation Schedule and Cost Estimates**  
**Projecting 50% Reduction From Current Level of State Funding Assistance**  
 (includes: 1991 HHW Collection Event Grant; 1991 MRHW Implementation Grant; CPG)

Programs	1991	1992	1993	1994	1995	TOTAL
<b>Education/Training</b>						
- Public Works Staff Training	\$0	\$3,700	\$2,500	\$1,500	\$1,500	\$9,200
- School Programs	\$3,000	\$4,000	\$3,500	\$4,000	\$5,500	\$20,000
- Other Community Programs	\$4,000	\$5,300	\$5,500	\$8,000	\$8,000	\$30,800
- SQG Seminars/Workshops	\$0	\$7,600	\$5,700	\$5,600	\$6,000	\$24,900
- SQG Informational Materials	\$0	\$5,500	\$6,200	\$5,100	\$5,700	\$22,500
- SQG Audits/Surveys/Consultants	\$0	\$3,500	\$3,700	\$3,700	\$4,200	\$15,100
- SQG - Health Department Staff Training	\$0	\$600	\$500	\$0	\$500	\$1,600
<b>Education/Training Subtotal</b>	<b>\$7,000</b>	<b>\$30,200</b>	<b>\$27,600</b>	<b>\$27,900</b>	<b>\$31,400</b>	<b>\$124,100</b>
<b>Collection</b>						
- Household Hazardous Waste Collection Days	\$40,000	\$0	\$0	\$0	\$0	\$40,000
- Primary Collection Facility	\$0	\$73,000	\$12,600	\$18,000	\$18,000	\$121,600
- Satellite Collection Facility	\$0	\$0	\$10,100	\$10,000	\$12,000	\$32,100
- Used Oil Collection Tanks	\$0	\$6,000	\$0	\$0	\$0	\$6,000
- SQG Clearinghouse	\$0	\$5,000	\$9,500	\$10,600	\$12,800	\$37,900
<b>Collection Subtotal</b>	<b>\$40,000</b>	<b>\$84,000</b>	<b>\$32,200</b>	<b>\$38,600</b>	<b>\$42,800</b>	<b>\$237,600</b>
<b>Disposal</b>						
- Household Hazardous Waste Collection Days	\$83,000	\$0	\$0	\$0	\$0	\$83,000
- Primary Collection Facility	\$0	\$10,900	\$38,900	\$34,000	\$37,500	\$121,300
<b>Disposal Subtotal</b>	<b>\$83,000</b>	<b>\$10,900</b>	<b>\$38,900</b>	<b>\$34,000</b>	<b>\$37,500</b>	<b>\$204,300</b>
<b>Regulation</b>						
- Regulation Development/Monitoring	\$0	\$4,000	\$0	\$4,000	\$4,000	\$12,000
- SQG Development and Enforcement of Ordinances	\$0	\$6,900	\$24,000	\$13,600	\$15,000	\$59,500
<b>Regulation Subtotal</b>	<b>\$0</b>	<b>\$10,900</b>	<b>\$24,000</b>	<b>\$17,600</b>	<b>\$19,000</b>	<b>\$71,500</b>
<b>Evaluation/Amendments</b>						
- Planning Requirements Regarding Used Oil	\$0	\$0	\$3,800	\$0	\$0	\$3,800
- Moderate Risk Hazardous Waste Plan Evaluation	\$0	\$0	\$4,000	\$0	\$7,000	\$11,000
<b>Evaluation/Amendments Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,800</b>	<b>\$0</b>	<b>\$7,000</b>	<b>\$14,800</b>
<b>TOTALS</b>	<b>\$130,000</b>	<b>\$136,000</b>	<b>\$130,500</b>	<b>\$118,100</b>	<b>\$137,700</b>	<b>\$652,300</b>

TOTAL COUNTY DOLLARS = \$372,700  
 TOTAL STATE DOLLARS = \$279,600  
 TOTAL = \$652,300

Note: 1991 Totals include \$57,000 State money already received.

**TABLE 6-4**  
**Implementation Schedule and Cost Estimates**  
**Local Funding Only**

Programs	1991	1992	1993	1994	1995	TOTAL
<b>Education/Training</b>						
- Public Works Staff Training	\$0	\$1,500	\$1,500	\$500	\$1,000	\$4,500
- School Programs	\$3,000	\$2,000	\$2,500	\$3,000	\$3,500	\$14,000
- Other Community Programs	\$4,000	\$3,700	\$4,000	\$5,500	\$5,500	\$22,700
- SQG Seminars/Workshops	\$0	\$5,000	\$4,000	\$3,800	\$4,000	\$16,800
- SQG Informational Materials	\$0	\$5,000	\$3,500	\$3,500	\$3,700	\$15,700
- SQG - Health Department Staff Training	\$0	\$400	\$500	\$0	\$500	\$1,400
<b>Education/Training Subtotal</b>	<b>\$7,000</b>	<b>\$17,600</b>	<b>\$16,000</b>	<b>\$16,300</b>	<b>\$18,200</b>	<b>\$75,100</b>
<b>Collection</b>						
- Household Hazardous Waste Collection Days	\$40,000	\$0	\$0	\$0	\$0	\$40,000
- Primary Collection Facility	\$0	\$42,100	\$11,500	\$16,500	\$17,000	\$87,100
- Used Oil Collection Tanks	\$0	\$3,000	\$0	\$0	\$0	\$3,000
- SQG Clearinghouse	\$0	\$2,000	\$7,000	\$5,700	\$7,600	\$22,300
<b>Collection Subtotal</b>	<b>\$40,000</b>	<b>\$47,100</b>	<b>\$18,500</b>	<b>\$22,200</b>	<b>\$24,600</b>	<b>\$152,400</b>
<b>Disposal</b>						
- Household Hazardous Waste Collection Days	\$83,000	\$0	\$0	\$0	\$0	\$83,000
- Primary Collection Facility	\$0	\$6,300	\$22,300	\$19,500	\$21,500	\$69,600
<b>Disposal Subtotal</b>	<b>\$83,000</b>	<b>\$6,300</b>	<b>\$22,300</b>	<b>\$19,500</b>	<b>\$21,500</b>	<b>\$152,600</b>
<b>Regulation</b>						
- Regulation Development/Monitoring	\$0	\$1,500	\$0	\$2,000	\$2,000	\$5,500
- SQG Development and Enforcement of Ordinances	\$0	\$4,800	\$13,800	\$8,000	\$9,000	\$35,600
<b>Regulation Subtotal</b>	<b>\$0</b>	<b>\$6,300</b>	<b>\$13,800</b>	<b>\$10,000</b>	<b>\$11,000</b>	<b>\$41,100</b>
<b>Evaluation/Amendments</b>						
- Planning Requirements Regarding Used Oil	\$0	\$0	\$2,000	\$0	\$0	\$2,000
- Moderate Risk Hazardous Waste Plan Evaluation	\$0	\$0	\$2,500	\$0	\$4,000	\$6,500
<b>Evaluation/Amendments Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,500</b>	<b>\$0</b>	<b>\$4,000</b>	<b>\$8,500</b>
<b>TOTALS</b>	<b>\$130,000</b>	<b>\$77,300</b>	<b>\$75,100</b>	<b>\$68,000</b>	<b>\$79,300</b>	<b>\$429,700</b>

TOTAL COUNTY DOLLARS = \$372,700  
TOTAL STATE DOLLARS = \$57,000  
TOTAL = \$429,700

Note: 1991 Totals include \$57,000 State money already received.

approved local hazardous waste plans are eligible to apply for the grant. Eligible costs can be funded up to 60 percent with the local government expected to provide a 40 percent match. Counties that submit unified applications (i.e. local governments within the county have agreed on the projects and allocations) can receive funding up to 65 percent or a grant amount 10 percent greater than the base funding level.

The County placed a surcharge on tipping fees at the incinerator to help cover the matching costs for preparation of this Plan. The County will adjust tipping fees at County operated disposal facilities to sufficiently cover the County match requirements for Department of Ecology grants to implement the program elements of this plan.

Assuming a conservative municipal solid waste tonnage projection over the five-year implementation period, and that all programs are implemented according to the budgeted estimates shown on Table 6-2, the impact on the tipping fee over the five-year period will be \$2.75 per ton. Of that \$931,800 spent, approximately \$559,100 would be reimbursed by the State to the County through Ecology grants, or \$1.65 per ton. The net cost to the County would be approximately \$1.10 per ton.

Budgeted estimates shown on Table 6-3 will have an impact on the tipping fee over the five-year period of approximately \$1.93 per ton. Of that \$652,300 spent, approximately \$279,600 would be reimbursed by the State to the County through Ecology grants, or \$0.83 per ton. The net cost to the county would still be approximately \$1.10 per ton.

Budgeted estimates shown on Table 6-4 will have an impact on the tipping fee over the five-year period of approximately \$1.27 per ton. A total of \$57,000 (or \$0.17 per ton) for 1991 has already been received by the County from State grants. Assuming local funding only, the remaining total of \$372,700 would not be reimbursed by the State; therefore, the net cost to the County would also be approximately \$1.10 per ton.

The incinerator tipping surcharge and Department of Ecology grant funding will provide the bulk of funding to implement programs during the five years of the plan. The programs will be implemented as funds become available.

Although not currently planned, it may be necessary in the future to charge generators for the use of services developed as a result of implementing this plan. To acquire sufficient funds for implementation, households could be charged a fee to bring HHWs to the primary or satellite hazardous waste collection facilities and SQGs could be charged a fee for the County to coordinate the handling of their wastes with other SQG wastes. (Note: the costs of collection and disposal of SQG wastes will be paid entirely by the SQGs.)

## 6.7 PROGRAM EVALUATION AND PLAN UPDATES

In the third and fifth years of the planning period, an evaluation of the progress of the Plan's programs and actions will be performed by the Public Works Department. After the five-year evaluation, a 20-year plan will be developed. Evaluations will involve determining how well the recommendations are being implemented and whether they are achieving the objectives of the Plan.

There are three steps to creating an effective evaluation program. The first step is to set goals; where you want to go with these implemented programs, such as achieving a certain percentage for recycling or reduction, or a certain percentage for participation in collection day events, etc. The objectives stated in Section 5 of this plan are goals the County wants to meet.

The second step is to measure the progress and evaluate the effectiveness of the implementation program. There are a number of different ways this can be documented:

- Telephone or mail-in surveys of the general public and small quantity generators can illustrate their change in hazardous waste awareness due to publicity for hazardous waste collection days, the battery recycling program, paint swaps, etc.
- Participant surveys collected during hazardous waste collection day events, at a permanent collection facility, or during other hazardous waste events can provide public input and opinions on the effectiveness of the implementation program.
- An increase in the number of cars participating in collection day events or using a permanent collection facility and the number of tons collected can illustrate a greater public awareness due to household education programs and publicity. Records of participation in collection days and at a collection facility, as well as the amounts of waste collected should be kept for purposes of Plan evaluation.
- A decrease in "old" products being collected at collection day events could indicate that citizens have turned in products that they had been storing for years and, therefore, less products are now being stored in households.
- Measurements of the solid waste stream could show decreasing tonnages, which could indicate an increase in recycling or reuse of products, or an increase in proper disposal practices for hazardous products.
- Records from the Skagit County Public Works and Health Departments of the type and nature of requests for assistance and information from both businesses and the general public could be useful in

evaluation of the success of the various education and information programs.

- Reductions in the number of workers injured at solid waste collection facilities can indicate that decreasing amounts of hazardous wastes are making their way into the solid waste stream.
- Reductions in child poisonings can indicate the public's increased awareness of household hazardous wastes.
- Changes in product sales with an increase toward less toxic products versus the previously used "hazardous" products can indicate increased public awareness of hazardous wastes.

The third step is to take the information gained from Step 2, evaluating the progress and effectiveness of the program, and feed it back into the implementation program. The information collected in Step 2 is no good unless it is used to fine-tune the program to better achieve the goals and objectives set forth in Step 1.

Based on on-going evaluation of the programs by the Department of Public Works and local jurisdictions, revisions in the program may be sought within the five-year planning period. All requests for Plan modifications will be directed to the County Public Works Director or the County's hazardous waste specialist. These requests will be referred to a subcommittee of the Solid Waste Advisory Committee (SWAC), taking the place of the Technical Advisory Committee on overseeing the implementation process, for review and action. Public Works will draft all formal changes to the Plan and present all changes at a SCOG meeting for local government approval prior to filing with the Department of Ecology.

Following the first five-year planning period, the SWAC subcommittee including the Public Works Director and the County's hazardous waste specialist will review each of the programs to determine need for modification, addition, or elimination of individual programs. During this review process, the State guidelines for waste management and the guidelines for local hazardous waste planning will be considered to ensure that the Plan continues to meet all of the requirements specified. The Skagit County Public Works Department will take the lead on developing the 20-year plan.

## 6.8 STATE PLANNING GUIDELINE REQUIREMENTS

The State Planning Guidelines list minimum requirements for programs and actions that all Local Hazardous Waste Management Plans must include. This section lists these requirements and lists the proposed programs and actions that will satisfy these requirements. As a minimum, all Local Hazardous Waste Management Plans must contain programs and actions for each of the following 12 points.



1. Consideration of State hazardous waste priorities in all programs and activities.

This requirement is addressed in the Introduction to Section 6, in the discussion of Plan priorities, and in individual program elements.

2. Public and business information and education programs that address the following:

- Legal requirements and sanctions for moderate risk waste generators;
- Available alternatives for waste collection and disposal;
- Health and environmental hazards of mismanagement of moderate risk waste;
- Proper methods of handling, reducing, recycling, and disposing of moderate risk waste;
- Ways to encourage and motivate the public and business to pursue waste minimization as standard practice;
- Ways to promote participation in moderate risk waste collection, recycling, and waste reduction programs;
- The need to remove moderate risk waste from homes and businesses, thus reducing exposure and potential injury; and
- Ways for households and businesses to reduce danger to refuse collectors and sanitation workers.

The following program elements will address all of the required education and information issues: General Public Information; Education at Disposal Sites; and SQG Education and Technical Assistance.

3. Moderate risk waste ordinances that address proper handling and disposal of household and commercial wastes through the solid waste stream and sanitary sewer. Ordinances should address such factors as the definition of moderate risk waste, illegal disposal, landfill or waste discharge bans on specific chemicals and products, penalties, and assignment of enforcement responsibility.

The Local Hazardous Waste Ordinance to be developed by the Skagit County Health Department and Local Sewer Pretreatment Ordinances will address this requirement.

4. Provision of a network or system for storage, treatment, and disposal of all moderate risk waste envisioned to be diverted from the solid waste and wastewater streams.

Storage, treatment and disposal of collected moderate risk waste is expected to be performed by commercial operators as a natural extension to the service they already offer to regulated generators in the County. Temporary short-term storage facilities will also be provided at the hazardous waste collection facility located at the incinerator for household hazardous waste.

The planned SQG clearinghouse to assist SQGs in properly disposing of their wastes will also address this issue.

As education and regulatory programs increase awareness and need for local moderate risk waste collection/treatment/disposal facilities, private commercial companies that currently only offer these services outside the County are expected to move into the region. If at the time of the five-year Plan evaluation, local private waste disposal and treatment firms have not established a regional presence, consideration will be given to establishment of a regional multi-county collection/storage facility for business and agricultural moderate risk waste. This could provide a more economical alternative for moderate risk waste disposal than use of out-of-county firms by individual businesses by consolidating the wastes from many businesses in a single location for pick-up. Cost savings and reduced risk to the small quantity generators will be realized by not having to store small quantities of waste at the business location until a sufficient quantity has accumulated to make a collection trip by a commercial disposal company from outside the County cost effective.

5. Establishment of moderate risk waste diversion programs to prevent wastes from improper disposal.

Use of HHW collection days and ultimately the hazardous waste collection facility at the incinerator will provide the necessary programs for HHW. Businesses and SQGs will be required to use commercially available services but will be offered assistance in identifying these services and in coordinating the services with other businesses to achieve economies of scale.

Load-Checking will be implemented at the incinerator, transfer station, and compactor box sites to divert self-haul hazardous wastes from the solid waste stream.

The Washington State Department of Agriculture Waste Pesticide Identification and Disposal Program will be available to the farmers and agricultural community. Subject to funding availability, a regional multi-county mobile collection program may be implemented for business and agricultural moderate risk waste.

6. On-site audits of targeted commercial moderate risk waste generators to:

- Educate generators on higher priority management methods and proper waste handling and disposal practices;
- Discover and correct improper handling and disposal practices;
- Evaluate effectiveness of generator education and technical assistance efforts; and
- Establish an enforcement "presence" as a backup to voluntary compliance.

The SQG Technical Assistance and SQG inventory programs would include audits for purposes of education initially, followed, if necessary, by enforcement of ordinances.

7. Establishment of a moderate risk waste generator and facility monitoring, surveillance, and enforcement program.

Training of county solid and hazardous waste personnel as well as sewage treatment plant personnel is an important element of the Plan. This will serve to enhance enforcement of moderate risk waste ordinances. Particular emphasis will be on training health department, sewer utility, and solid waste utility workers as the first line of defense against illegal waste disposal practices.

These education sessions will ensure that all County personnel understand the moderate risk waste regulations and apply these during enforcement activities. County Department of Public Health will also take an active role in inspection and enforcement after adoption of a hazardous waste ordinance.

8. Establishment of a minimum level of household hazardous waste collection of at least annual collection days and/or drop-off facilities.

A general HHW Collection Day will be scheduled in the first year of the Plan. After the permanent HHW collection facility is operational in the second year of the Plan, only "mini" collection days will be scheduled to serve outlying areas of the County. Initially, the Plan will include only a single collection facility at the incinerator. If additional funding becomes available, collection facilities could be added to the staffed transfer station and compactor box locations as well. The feasibility of a mobile collection facility will also be explored.

Used motor oil programs and battery collection programs will also be continued.

9. Programs that target selected wastes and waste sources that pose the greatest potential risk, and those that can be most efficiently managed.

A list of wastes for both the household hazardous waste stream and the SQG waste stream have been identified as part of this Plan. The collection facility for HHW at the incinerator (and additional collection facilities subject to funding) will target self-haul HHW as well as provide a convenient facility for those who want to properly dispose of HHW.

For Skagit County, the waste components of most concern are trace metals due to their undesirable properties in the incinerator ash and chlorinated compounds due to the potential emissions

byproducts. The existing battery collection program coupled with extensive public and business education program elements will focus on keeping the metals and other hazardous constituents out of the waste stream.

The largest industry in Skagit County is agriculture. Programs such as the WSDA Waste Pesticide Identification and Disposal Program, and the Cooperative Extension educational programs will focus on the agricultural waste sources, first from the perspective of waste minimization, but also stressing proper waste management as well.

10. Assignment to a single agency the lead responsibility for coordinating and monitoring Plan implementation.

The Skagit County Department of Public Works will be responsible for coordinating and monitoring Plan implementation. Specific responsibilities of all participating agencies and jurisdictions together with the authority of the Public Works Department for coordination and monitoring is discussed in Section 6.4.

11. Assignment of responsibility and timeframes for implementing all programs and activities to specific agencies and departments in each applicable local government.

This requirement is addressed in Section 6.4, Plan Implementation.

12. A description of the process for incorporating revisions to the Plan following adoption, including who can propose revisions, and the formal process for making Plan amendments.

The process for program evaluation and Plan revisions and updates is described in Section 6.7.

- Baroga, Rico, Gary Kato, Jill Lowe, Judith Lorbeir, Joan McGilton, 1986. A Survey Of Small Quantity Hazardous Waste Generators: The Puget Sound Experience. Tacoma-Pierce County Health Department, Thurston County Health Department, Seattle-King County Department of Public Health, City of Seattle-Engineering Department, Seattle, Washington, 1986.
- Beck, R.W., 1987. Skagit County Solid Waste Management Plan. R. W. Beck and Associates, March 1987.
- Beck, R.W., 1990. Final Waste Stream Composition Study for Skagit County. R. W. Beck and Associates, May 1990.
- Boge, Ric, 1991. Solid Waste/Recycling Specialist, Skagit County Public Works Department. Personal communication, May 1991 - April 1992.
- Bomberger, David C., 1987. Draft Second Semi-annual Report: Waste Characterization Study: Assessment of Recyclable and Hazardous Components. California Waste Management Board, Sacramento, California, 1987.
- Brown, Doug, 1992. Department of Ecology. Personal communication regarding Freon, April 1992.
- Burlington Environmental, 1990. Personal communication, March 1990.
- Cal Recovery Systems, 1985. Characterization and Impacts of Nonregulated Hazardous Waste in Municipal Solid Waste of King County. Puget Sound Council of Governments, Seattle, Washington, December 1985.
- Canter, L.W., and R.C. Knox, 1985. Septic Tank System Effects on Groundwater Quality. Chelsea, Michigan: Lewis.
- Colburn, Gail, 1990. Washington State Department of Ecology, Northwest Regional Office. Personal communication, March 1990.
- Colton, D., O. C. Braids, D. R. MacCallum, D. W. Miller and J. P. Sgambat, 1979. Supplemental Report to the Nassau-Suffolk Regional Planning Board on the Current Status of Ground-water Investigations for Organic Chemicals in the Nassau-Suffolk Area. Port Washington, N.Y., Geraghty and Miller, Inc., 1979.
- Conlin, Richard, 1987. Head 'em Up... Move 'em Out: The Seattle/King County Household Hazardous Waste Round-Up May 30, 1987. Metrocenter YMCA, Seattle, Washington, October 1987.
- Environmental Reporter, 1988. Volume 19, No. 29, November 18, 1988.

- Envirosphere Company, 1985. Waste Stream Projection and Sensitivity Analysis. Supporting document for the Seattle Solid Waste Management Study: Policy and Development Plan, Nonproject Environmental Impact Statement, prepared for Seattle Engineering Department, October 1985.
- Faulkner, Lee, 1990. Washington State Department of Agriculture, Pesticide Management Division. Personal communication, March 1990.
- Foster, Mike, 1990. City of Anacortes Department of Public Works. Personal communication, January 1990.
- Fuller, Bill, 1990. City of Mount Vernon. Personal communication, January 1990.
- Galvin, David V., and Richard K. Moore, 1982. Toxicants in Urban Runoff Municipality of Metropolitan Seattle. Seattle, Washington, 1982.
- Galvin, David, et al., 1984. Toxicant Pretreatment Planning Study: Summary Report. Municipality of Metropolitan Seattle, Seattle, Washington, 1984.
- Goldberg, Dan, 1989. Recycling Used Appliances. Waste Alternatives: The Magazine of Disposal Options, Vol. 2, No. 3, September 1989.
- Gurnham, Fred C., et al., 1979. Control of Heavy Metal Content of Municipal Wastewater Sludges. Washington, D.C., National Science Foundation, 1979.
- Hasselman, Steven R., M. Steve Merrill, Jr. and John J. Gall, 1984. Toxicant Pretreatment Planning Study Technical Report B: Pilot Plant Studies. Municipality of Metropolitan Seattle, Seattle, Washington.
- Hathaway, Steven W., 1980. Sources of Toxic Compounds in Household Wastewater. U.S. Environmental Protection Agency, Municipal Environmental Research Lab, #600/20-80-128, Cincinnati, Ohio.
- Havens, Dyvon, 1990. Skagit County Agricultural Cooperative Extension. Personal communication, March 1990.
- Hazardous Waste News, 1988.
- Herring, David, 1990. Town of Concrete. Personal communication, January 1990.
- Karsh, Tom, 1990. Skagit County Department of Planning and Community Development. Personal communication, March 1990.

- King County, et al., 1989. Local Hazardous Waste Management Plan for Seattle-King County: Final Plan and Environmental Impact Statement for the Management of Small Quantities of Hazardous Waste in the Seattle-King County Region. King County, Municipality of Metropolitan Seattle, City of Seattle, and Seattle-King County Department of Public Health, August 1989.
- Knutzen, Terry, 1990. Rural Skagit Sanitation. Personal communication, March 1990.
- Laak, 1986. Wastewater Engineering Design for Unsewered Areas. Lancaster, PA: Technomic.
- LaRue, Roger, 1990. City of Burlington Sewer Department. Personal communication, January 1990.
- Mathews, Dick, 1990. Snohomish County Agricultural Cooperative Extension. Personal communication, March 1990.
- Metro, 1977. Sewage Disposal Alternatives: A Look at the Problem of Failing Septic Tank Systems and Alternative Methods of Sewage Disposal for King County, Washington. Municipality of Metropolitan Seattle, Seattle, Washington.
- Metro, 1982a. Summary Report - Household Hazardous Waste Disposal Project. Metro Toxicant Program, Report No. 1A, Municipality of Metropolitan Seattle, Water Quality Division, August 1982.
- Metro, 1982b. Toxicants in Consumer Products - Household Hazardous Waste Disposal Project. Metro Toxicant Program, Report No. 1B, Municipality of Metropolitan Seattle, Water Quality Division, August 1982.
- Metro, 1982c. Public Opinions and Actions - Household Hazardous Waste Disposal Project. Metro Toxicant Program, Report No. 1C, Municipality of Metropolitan Seattle, Water Quality Division, August 1982.
- Metro, 1982d. Sleuth - Educational Activities on the Disposal of Household Hazardous Waste - Household Hazardous Waste Disposal Project. Metro Toxicant Program, Report No. 1D, Municipality of Metropolitan Seattle, Water Quality Division, August 1982.
- Metro, 1982e. Directory for Household Hazardous Waste Disposal in Seattle-King County - Household Hazardous Waste Disposal Project. Metro Toxicant Program, Report No. 1E, Municipality of Metropolitan Seattle, Water Quality Division, August 1982.
- Meyers, 1988. Environmental Hazards in City of Seattle Solid Waste Transfer Stations. January 1988.

- Morley & Associates, 1987. Household Hazardous Waste Management Evaluation Project - Task Report - Draft Needs Assessment. City of Seattle, Solid Waste Utility, Seattle, Washington, prepared by Morley & Associates in association with America North, Inc., December 1987.
- Morley & Associates, 1988. Household Hazardous Waste Management Evaluation Project - Task 4 Report - Draft Recommendations. City of Seattle, Solid Waste Utility, Seattle, Washington, prepared by Morley & Associates in association with America North, Inc., January 1988.
- Ness, Bill, 1989. Environmental/Solid Waste Engineer, Skagit County Public Works Department. Personal communication, September 1989, March 1990.
- New York State EFC, 1988. Industrial Materials Recycling Program: Status Report. Volume VIII, Number 1, New York State Environmental Facilities Corporation, Albany, New York, Winter 1988.
- North Cascade Disposal Co., 1990. Personal communication, March 1990.
- Office of Financial Management, 1988. 1988 Population Trends for Washington State. Office of Financial Management, Forecasting Division, April 1, 1988.
- O'Neil, Hugh, 1990. Washington State Department of Ecology. Personal communication, March 1990.
- Parametrix, 1992. Draft Solid Waste Management Plan Update. March 1992.
- Paul, Gary, 1990. National Forest Service, Darrington Office. Personal communication, March 1990.
- Pemberton, James, 1990. Assistant Director of Public Works, City of Anacortes Department of Public Works. Personal communication, January 1990.
- PSCOG, 1986. Puget Sound Trends No. 5 (Revised), Population - April 1986. Puget Sound Council of Governments, July 1986.
- Rathje, William L., et al., 1987. Characterization of Household Hazardous Waste From Marin County, California, and New Orleans, Louisiana. Prepared for the U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Office of Research and Development, Las Vegas, Nevada, July 1987.
- Resource Integration Systems, 1989. Skagit County Comprehensive Recycling Plan. Resource Integration Systems, Resource Conservation Consultants, and SCS Engineers, May 1989.
- Ridgley, Susan M., and D. V. Galvin, 1982. Summary Report: Household Hazardous Waste Disposal Project. Municipality of Metropolitan Seattle, Seattle, Washington.



- Ridgley, Susan M., 1987. Hazardous Waste From Minnesota Households: The Final Report of the Household Hazardous Waste Pilot Collection Project. Minnesota Pollution Control Agency, St. Paul, Minnesota, June 1987.
- Russell, Lorene Jackson, 1985. Regional Plan for Small Quantity Generators of Hazardous Waste - Element C. Association of Bay Area Governments, Metrocenter, Oakland, California, September 1985.
- Sammons, Bailey, 1990. Washington State Department of Ecology, Northwest Regional Office. Personal communication, March 1990.
- SCS Engineers, 1984a. Development of a Hazardous Waste Management Plan For Small-Quantity Generators: North Hollywood Pilot Study, Final Report, Hazardous Waste Inventory (Task A). Southern California Association of Governments, Los Angeles, California, November 1984.
- SCS Engineers, 1984b. Hazardous Waste Management Plan For Small-Quantity Generators: North Hollywood Pilot Study - Development And Investigation Of Alternative Management Scenerios. Southern California Association of Governments, Los Angeles, California, December 1984.
- SCS Engineers, 1986. A Survey of Household Hazardous Wastes and Related Collection Programs. Prepared for U.S. Environmental Protection Agency, Office of Solid Waste, Special Waste Branch, Washington, D.C., October 28, 1986.
- SCS Engineers, 1987. Waste Stream Characteristics Study. Prepared for the Solid Waste Department, Metropolitan Service District, Portland Oregon, December 1987.
- SCS Engineers, 1988. Draft - Yolo County Hazardous Waste Management Plan - Volume I. Prepared by SCS Engineers for Yolo County Department of Public Works and Transportation, Woodland, California, January 20, 1988.
- Skagit County Planning and Permit Department, 1989. Personal communication, 1989.
- Skagit County Planning Commission, 1989. Skagit County Zoning Ordinance, Chapter 14.04 of the Skagit County Code, Hazardous Waste.
- Skagit County Planning Department, 1973. Comprehensive Plan for the North Central District of Skagit County, Washington. November 1973.
- Skagit County Planning Department, 1975. Comprehensive Plan for the Islands District of Skagit County, Washington. August 1975.
- Skagit County Planning Department, 1979. Comprehensive Plans for the Southwest and South Central Planning Districts of Skagit County, Washington. June 1979.

- Skagit County Planning Department, 1982. Comprehensive Plan for the Eastern Planning District of Skagit County, Washington. May 1982.
- Skagit County Public Works Department, 1986. Supplemental Draft Environmental Impact Statement for Skagit County Solid Waste Incineration Project. April 1986.
- Skagit County PUD, 1991. Skagit County Coordinated Water System Plan Population Forecast Methodology. March 14, 1991.
- Skagit County Solid Waste Division, 1992. Don't Waste Skagit County! A Report to the Community, 1992. Winter 1992.
- Swenson, Dan, 1990. Washington State Department of Ecology, Waste Management Grants Section. Personal communication, March 1990.
- Toteff, Sally, 1990. Washington State Department of Ecology. Personal communication, March 1990.
- U.S. Department of Commerce, 1987. 1987 Census of Agriculture. U.S. Department of Commerce, 1987.
- U.S. EPA, 1985. National Small Quantity Hazardous Waste Generator Survey. U.S. Environmental Protection Agency, February 1985.
- U.S. EPA, 1986. Report to Congress on the Discharge of Hazardous Waste to Publicly Owned Treatment Works ("The Domestic Sewage Study"). U.S. Environmental Protection Agency, Washington, D.C., USEPA #530-SW-86-004.
- U.S. EPA, 1987. Handbook, Groundwater. EPA/625/6-87/016, U.S. Environmental Protection Agency, Office of Research and Development, 1987.
- U.S. EPA, 1988. Hazardous Waste Management in the Pacific Northwest - Final Report: Findings and Recommendations. Presented by the U.S. Environmental Protection Agency, Region 10 and the States of Alaska, Idaho, Oregon, and Washington, March 1988.
- Valesquez, Dale, 1990. Sedro Woolley Sewer/Sanitation Department. Personal communication, January 1990.
- Voerman, Rebecca, 1990. Skagit County Public Works Department. Personal communication, February/March 1990.
- Washington State Department of Ecology, 1987. Planning Guidelines for Local Hazardous Waste Management Plans. Washington State Department of Ecology, Solid and Hazardous Waste Program, July 1987.
- Washington State Department of Ecology, 1990. Recycling Report. 1990.

- Washington State Department of Ecology, 1991. 1988 Hazardous Waste Annual Report Summary. Washington State Department of Ecology, Solid and Hazardous Waste Program, June, 1991.
- Washington State Department of Employment Security, 1989a. Employment and Payrolls in Washington State by County and Industry. Washington State Department of Employment Security, No. 169, June 1989.
- Washington State Department of Employment Security, 1989b. Personal communication with Don Ayers. Washington State Department of Employment Security, 1989.
- Washington State Department of Revenue. B&O Tax Database.
- Willis, Ken, 1990. Skagit County Department of Public Health. Personal communication, March 1990.
- Wynn, Kelly, 1990. Water and Wastewater Services. Personal communication, January 1990.
- Yerkes, Todd W., Wallace C. Swofford, Stephanie A. Whitman, Carsten Thompsen, Terry Clements. Surveys and Audits of Major and Minor Small Quantity Business Generators in the Seattle-King County Area, Seattle-King County Department of Public Health, Seattle, Washington, unpublished.

APPENDIX A

WASHINGTON STATE DEPARTMENT OF ECOLOGY  
HAZARDOUS WASTE ASSISTANCE LIST

1 AIRO SERVICE, INC.	X	X	V	X	0	206-383-4916	X	L	L	A	L	206-303-4916	DAVE BERRENS/DA	TACOMA			
2 BARON RIAKES/ALLIED			T	S		503-252-3468						A	RANDY PATTOCK	PORTLAND			
3 BRUSCO CORP.			B			206-636-3341	X	L	W			A	HENRY BRUSCO	LONGVIEW			
4 BUDGET OIL	X		T	D		509-535-7701			E			A	509-535-7701	BILL SHANSTROM	SPokane		
5 CHEM-SECURITY SYSTEMS, INC.			A	X	X	X	503-454-2643	X	L	L	A	A	503-454-2643	RICHARD ZIEGT	ARLINGTON		
6 CHEMICAL PROCESSORS INC.	X	X	A	X	O	S	X	206-223-0500	X	L	A	A	206-223-0500	ALEX KOCH	SEATTLE		
7 CHEMICAL WASTE MANAGEMENT, INC	X	X	A	X	X	X	209-386-9711					A	209-386-9711	MARK LAIGOWSKI	KETTLEHAN CITY		
8 CHEMICAL WASTE MGMT - ENRAC D			A				503-223-1912	X	L	L	A	A	206-854-4706	RANDY FOHLER	PORTLAND		
9 CHEMPRO ENVIRONMENTAL SERVICES	X	X	V				206-402-4090	X	L	L	H	A	L	206-402-4090	ROD HUSTON	SEATTLE	
10 CROSBY AND OVERTON, INC.	X	X	X	A	X	O	S	X	206-872-8030	X	L	L	A	A	206-872-8030	TONI CREHEL	KENT
11 DON GOLDEN CO. INC.	X	X	X	X			206-474-0148	X	S			A	206-474-0148	DON GOLDEN	TACOMA		
12 ECOVA CORP.	X	X			O	S	X	206-882-4364	X	L	L	A	L	206-882-4364	JOE FOLTON	RENO/IND	
13 ENVIROSAFE SERVICES OF IDAHO I			A	X	X	X	208-384-1500	X	L	A	A		206-565-4305	RUSS SMITH	TACOMA		
14 ENVIROTECH SYSTEMS, INC.	X	X	X	X	X	A	X	S	206-363-4442	X	S	S	L	W	206-363-4442	CRAIG COUDEN	SEATTLE
15 FOSS ENVIRONMENTAL SERVICES			X				206-201-4728	X	L	W	L	H	800-562-2056	AL FRANCISCO	SEATTLE		
16 GLOBAL DIVING AND SALVAGE, INC	X	X					206-623-0621	X	L	S	L	A	206-623-0621	TON DAVIS	SEATTLE		
17 HARBOR OIL			T	X	O		503-285-4640					A		ROSE TOPPI	PORTLAND		
18 HAROLDS PETROLEUM EQUIP.SALES	X	X					206-736-0119						206-736-0119	HAROLD R. VASSA	CENTRALIA		
19 HAZCO INTERNATIONAL INC.	X	X	A	X			800-237-1333							CUSTOMER SERVIC	RESON		
20 IRIANI OIL COMPANY					O		206-694-2523							VERNON CRESAP	VANCOUVER		
21 MARINE VACUUM SERVICE, INC.	X		X	V	X	X	206-762-0240	X	L	L	L	A	L	206-762-0240	ROD OR CHARLIE	SEATTLE	
22 MCCLARY COLUMBIA-CHEMPRO	X	X		X	S	X	206-835-0743							BOB ORR	MASHUGAL		
23 NORTH AMERICAN ENVIRONMENTAL	X	X	X	X	A	X	206-272-9908	X	L	H	A	L	206-272-9908	MARY COLEMAN	TACOMA		
24 NORTHEAST ENVIROSERVICE INC.	X	X		A	X	O	S	X	206-622-1090	X	L	L	A	A	206-622-1090	JIM UNIVINETTI	SEATTLE
25 PEGASUS WASTE MANAGEMENT INC.	X	X	X	X	A	X	800-443-6134	X	S	S	H	L		DYATHE ARIALA	HILLSVILLE		
26 PETROLEUM RECLAIMING SERVICE			V	O			206-383-4474					A		DON HOODY	TACOMA		
27 REIDEL ENVIRONMENTAL SERVICES,	X	X	X	A			503-286-4656	X	L	L	A	A	A	800-334-0004	ROLAND MILLER	PORTLAND	
28 SAFCO WASTE EXCHANGE	X	X	X	X	A	X	X	206-242-3380						JIM JOHNSON	SEATTLE		
29 SNE CORP.			X	X			206-572-3822	X	L	L	L	A	X	206-572-3822	DON RUTH	TACOMA	
30 SOL PRO HAZARDOUS WASTE MGMT	X		T	O	S		206-627-4022					A		RALPH JOURIS	TACOMA		
31 VAN WATERS AND ROGERS	X		F	X	S		206-872-5000							BOB HILLIKAN	SEATTLE		
32 WASHINGTON CHEMICAL INC.	X	X	X	F	S		509-409-9176							DAVE HERRON	SPokane		
33 WESTCOAST OIL CONTAINMENT SERV	X		V				206-930-2716	X	L	W	L	A	206-930-2716	BILL SHUCK	SEATTLE		

Olympus Environmental

206-854-5094+xx

D Shabro

Kent

APPENDIX B

ROSTER OF POTENTIAL SMALL QUANTITY GENERATORS  
WITHIN SKAGIT COUNTY

SKAGIT COUNTY

Industry Group Name  
 SIC Code SIC Code Name  
 Business Name

=====

Pesticide End Users

792 Public Golf Course

SIMILK INC

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Pesticide Application Services

721 Crop Planting, Cultivating, and Protection

CASCADE AGRICULTURAL SERVICE CO  
 SKAGIT AG AIR COMPANY  
 WALTNER FARMS  
 KINDRED SPRAYING SERVICE  
 ISLAND WEED & INSECT CONTROL  
 SWANLAND-BELISLE INC  
 BROMELS CROP DUSTING & SPRAYING  
 KING SPRAY SERVICE

782 Lawn and Garden Services

KULSHAN LANDSCAPE SERVICES  
 PACIFIC CONTRACTING CO  
 HERITAGE LANDSCAPING  
 MOORES VARIETY SERVICE  
 RAINBOW SERVICES  
 CEDAR CREST BEAUTY SALON  
 NORTH SOUND LANDSCAPING & YOUNGS NURSERY  
 AMERICAN LANDSCAPES  
 HALLENBECK LANDSCAPING  
 GERRIETS ROTOTILLING  
 MR GREEN KNEES  
 GARY ZWEIFEL LANDSCAPING  
 LANDSCAPE ASSOCIATES  
 ALLDAY LANDSCAPE  
 LAWN CARE ETC  
 SMALL GARDENS  
 VALLEY MOWING  
 A C R E LANDSCAPING SERVICE  
 RICKS BOBCAT SERVICE  
 OXENHAM ROBERT M & SHARON L  
 DARNELL LANDSCAPES  
 HECK LANDSCAPING  
 WESP WILLIAM H 3RD  
 GREEN CLIFFS TRACTOR SERVICES  
 FOWLER FREYA K  
 RIGGLES ORVILLE M  
 DISTINCTIVE LANDSCAPE  
 CAPE HORN MAINTENANCE CO  
 MAGIC EARTH LANDSCAPES  
 HOLTS CUSTOM LANDSCAPES

Industry Group Name  
IC Code SIC Code Name  
Business Name

=====

MESSENGER GERRY C  
NORTHWEST GROUNDS MAINTENANCE  
THE GARDENER  
DEPENDABLE LANDSCAPE-YARD MANTNCE SVC  
SHIRESCAPES  
AMERICAN ALPS LANDSCAPING & NURSERY

83 Ornamental Shrub and Tree Services

G & K SERVICES INC  
DICKS LAWN & LANDSCAPES  
COMPLETE TREE SERVICE  
LAZER TREE SERVICE  
SKAGIT STUMP GRINDERS  
S & H TREE SERVICE  
TOPS TREE SERVICE

59 Sanitorial Services

NOR-VAC SWEEPING

42 Disinfecting and Extermination Services

TOWN & COUNTRY PEST CONTROL INC

Chemical Manufacturing

21 Plastics, Materials & Resins

FARWEST MANUFACTURING

undries

15 Coin-Operated Laundries and Cleaning

VIKING & ECONOWASH LAUNDRIES  
SPARKLE SHOP LAUNDRIES  
J & D CO  
THRIFTY WASH  
SOREN WILLIAM R

16 Drycleaning Plants, Except Rug Cleaning

MODERN CLEANERS  
DEMING CLEANERS  
GLOW CLEANERS

17 Carpet and Upholstered Cleaning

FAMILY TREE CARPET/UPHOLSTERY CLNING SVC  
GEIGERS CUSTOM CLEANING  
ALBRITE CLEANERS  
SUNDOWNER KUSTOM KLEENING



Industry Group Name  
IC Code SIC Code Name  
Business Name

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CATS CARPET CLEANERS  
A-1 CARPET CARE  
CLAUDES CARPET CARE  
RAINBOW INTNL CARPET DYEING & CLEANING CO  
LEES CHEM DRY CARPET CLEANING

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Other Services

849 Cleaning & Maintenance Services to Dwellings and Other Buildings, N

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QUALITY JANITORIAL SERVICE  
THRIFTY BUILDING MAINTENANCE  
WE DO WINDOWS  
RAINBOW CLEANING  
R L D CLEANING  
JUBILEE MAINTENANCE SERVICE  
SKAGIT CHIMNEY SWEEP  
TOMS HIGH SHINE FLOOR CARE  
SUNSHINE BUILDING MAINTENANCE  
ANDERSONS QUALITY CLEANING SERVICE  
FIELD DAY ENTERPRISE  
EVERGREEN BUILDING MAINTENANCE  
SMITH CLIFTON A & ESTHER H  
SERVICE MASTER OF ANACORTES  
SUNRISE MAINTENANCE & SUPPLY  
SKAGIT BUILDING MAINTENANCE  
MIRACLE WORKERS  
H M SERVICES  
HOME ATTENDANT CARE INC  
J R JANITORIAL SERVICES  
MASTERS WINDOW CLEANING  
JOYHILDA HOUSEKEEPING SERVICES  
THE BEST SHAKE CO  
D & L ENTERPRISES  
LEWIS PETER L  
JEFFS JANITORIAL SERVICE  
SERVPRO OF WHIDBEY ISLAND/SKAGIT COUNTY  
FAMILY BLDG MAINTENANCE  
RONALD COULTERS SERVICES  
SANTAS CHIMNEY SWEEP  
KEEP IT CLEAN  
WILAHS CLEANING SERVICE  
RICKS MULTI-CLEANING SERVICE  
L & L SERVICES  
BUR CRA PROPERTY MANAGEMENT  
ROBERTS RUSSELL D  
SHANNONS QUALITY CLEANING SERVICE  
BUSY B'S HOME CLEANING SERVICE  
BLAKESLEY CLARA B  
BLACK KNIGHT CHIMNEY SWEEP  
EL SHADDI WINDOW WASHING  
HANDI GAL SERVICE  
TWO DONNAS CLEANING  
WALLEYS CLEANING SERVICE

ndustry Group Name  
IC Code SIC Code Name  
usiness Name

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K D CLEANING  
CASCADE CABIN CARE  
FERGI 4 NORTH WEST  
EVERGREEN CLEANING SERVICE  
PIONEER MAINTENANCE  
INICH JULIE A  
HARROLD & SON MAINTENANCE  
NIELSEN CLEANING  
CAPTAIN PUGETS CLEANING  
MOPPIT CO

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hotography

946 Camera & Photographic Supply Stores

STROUD PHOTOGRAPHY  
IDEAL PHOTO & SOUND  
STACEYS CAMERA CENTER

221 Photographic Studios, Portrait

TOM FLADEBO PHOTOGRAPHY  
TOM PLANKS CLASSIC PORTRAITS SILVER PRINTS  
GATTI ALFRED J  
FIREWEED PHOTOGRAPHY  
GEO E SPRINGER FREELANCE PHOTOGRAPHER  
ELFSTROM EUGENE L  
NORTHWEST PHOTO ARTS COMPANY  
LENZE/ALEXANDER PRODUCTION  
CURBOW RONALD  
CAMERA WEST  
WENDY KEITH CREATIVE PHOTOGRAPHY  
CASCADE PHOTOGRAPHY  
KIDS PHOTO & PORTRAIT  
THE KINNEY CO  
CHRISTOFFER PHOTOGRAPHICS  
JAMES CAMERA  
MORK PHOTOGRAPHIES  
CLASSIC PHOTOGRAPHY  
RUTHS PHOTO SOUND & ART  
THE COUNTRY PHOTOGRAPHERS  
PEEPS PHOTOGRAPHY  
HUPY ART  
SILVER STAR PHOTOGRAPHY  
SUN PHOTOGRAPHY  
BUTLER CREEK BOXWORKS  
BETTY JEANS PORTRAIT STUDIO  
PHOTOGRAPHY BY MATT BROWN

7335 Commercial Photography

ACTION PHOTOGRAPHY  
PAUL MAHONEY PHOTOGRAPHER  
DAVIS PRINTING

Industry Group Name  
C Code SIC Code Name  
Business Name

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HI-GRO PHOTOGRAPHIC PRODUCTIONS  
TIM REICHERT PHOTOGRAPHER  
PHOTOGRAPHY BY RICHARD SMITHA  
RON KING PHOTOGRAPHY  
WHITE & WHITE

12 Motion Picture & Video Production

GT ISLE  
GOOD NEWS STUDIOS  
STEVENS STUDIOS

19 Services Allied to Motion Pictures

VIDEO SERVICES

Vehicle Maintenance

11 Highway and Street Construction

S & R SNOWCAT  
ONE WAY CONSTRUCTION INC  
DESERT WINDS DEVELOPMENT INC  
ARCTIC STRIPING INC  
W W & II  
C M TRUCKING & CONSTRUCTION CO  
SKAGIT COUNTY PUBLIC WORKS DEPT  
M R NILSON CONSTRUCTION INC  
CATAPULT & HEAVY CONSTRUCTION INC  
MARVIN SWANSON  
LUFRA INC

23 Water, Sewer, and Utility Lines

DOHERTY LOUIS H JR  
WALTERS S C  
MENDOZA & ASSOCIATES INC  
MT BAKER ENTERPRISES  
SNELSON COMPANIES INC  
SMYTH & ASSOCIATES  
PETROLEUM EQUIPMENT SERVICE INC

29 Heavy Construction, NEC

B N B INC  
SLOAN DOZING  
LARRYS DOZING  
NILSON MELVIN R  
EMPIRE CONSTRUCTION CO  
R & R CUPPLES  
SELECT CONTRACTORS INC  
STRAHL LANCE S  
RAMCON  
HANSON BULLDOZING

Industry Group Name  
IC Code SIC Code Name  
Business Name

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ANACORTES PILE DRIVING CO  
HOCKETT & HOCKETT  
DILLS GORDON H SR  
MARINE CONSTRUCTION & DREDGING INC

794      Excavating & Foundation Work

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SHUBERT STEPHEN M  
LEE ZURCHER EXCAVATING  
MCNEIL EXCAVATING  
SALTS BUSINESS & TAX SERVICE  
T & P COMPANY  
DANS BACKHOE & DOZER SERVICE  
WRUCHA CONCRETE CONSTRUCTION  
SKAGIT COUNTY DEVELOPMENT CORPORATION  
ADAMS EXCAVATING  
MAYER JACK I & ANITA L  
GRANTS GRADALL SERVICE  
BOBS BACKHOE SERVICE  
BULLY DOZER & EXCAVATION SERVICE  
MILLER CONSTRUCTION  
DOYLES DOZING  
COMM-EXCO CONSTRUCTION INC  
LOUIE NURMIS BACKHOE SERVICE  
HOLMGRENS BACKHOE & CONSTRUCTION SVC  
NELSON COSTRUCTION CO  
KELLY DOZING & AGGREGATE  
EXCAVATING NORTHWEST INC  
SKAGIT VALLEY MONUMENTS  
BO-MAR EXCAVATION

212      Local Trucking, without Storage

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POWELL FORD L SR & KATHLEEN R  
JIMS HAULING INC  
COFFELL TRUCKING  
HANSEN LAWRENCE  
STAR TRANSPORT  
KYLE TRUCKING  
DYKERS BROTHERS  
BROWN LINE INC  
MCRAE JAMES & JANET  
SPEARIN TRUCKING CO  
SMITH TONY L  
EARL HANSON TRUCKING COMPANY  
DEVLIEGER JOHN J  
GUFF TRUCKING  
RURAL SKAGIT SANITATION INC  
RICHARD LLOYD TRUCKING  
SUTA TRUCKING  
DAVE WILLIAMS TRUCKING  
DAHLSTEDT TRUCKING  
LAKE ERIE TRUCKING  
DELLINGER TRUCKING  
PEARSON RONALD

Industry Group Name  
 SIC Code SIC Code Name  
 Business Name

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KING MOVING SERVICE  
 NORTHERN LIME COMPANY  
 KOOPS GARY L  
 HOBICK HERMAN C  
 HORNBECK TRUCKING  
 CHUCK DAVES TRUCKING  
 JIM CLARK & SON CONSTRUCTION  
 WATTS LOGGING  
 HUMEN HAROLD E  
 CROSSMAN CONTRACTING  
 MIKE HAWKINGS TRUCKING  
 ADAMS LAWRENCE H & URSULA M  
 RICKS STOCKING  
 LAUDER JEFFERY B & GEORGIA A  
 DONALDSON HAULING  
 W R FROST DISTRIBUTION  
 B A VAN DE GRIFT INC  
 RANDY M MARTIN CONST CO  
 MOUNT SEA COMPANY  
 VIRGIL ELLESTAD TRUCKING INC  
 D J SCOTT HAULING  
 LLOYD MILL COMPANY  
 SETAB TRANSPORT  
 HIRE TRUCKING  
 S R TRANSPORTATION INC  
 E & L TRUCKING  
 NORTHWEST AIRCRAFT SALVAGE  
 A SIEBECKE DISTRIBUTING  
 SMALLWOOD CONSTRUCTION  
 L J TRUCKING

213      Trucking, Except Local

DRALLE EARL M  
 SKAGIT VALLEY TRUCKING CO INC  
 AUTO WAY INC  
 BROWN LINE  
 POLYGON DISTRIBUTING INC  
 D & A ENTERPRISES INC  
 HORIZON VAN LINES INC  
 CURBOW TRUCKING

214      Local Trucking with Storage

CENTRAL MOVING & STORAGE  
 LAKE CAVANAUGH MOUNTAIN MARKET  
 O & T TRUCKING INC  
 B F F TRUCKING INC  
 DANIELS MOVING & STORAGE INC  
 ANACORTES VAN & STORAGE INC  
 VALLEY COMMODITIES TRANSPORT  
 SKAGIT MOVING & STORAGE INC  
 NORTHWEST MOVING SERVICES INC  
 NORTHERN FREIGHT LINES  
 VALLEY MOVING & STORAGE

Industry Group Name  
IC Code SIC Code Name  
Business Name

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CURTIS LYNN E

015 Motor Vehicle Parts Used

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MUSTANG & BRONCO PARTS OUTLET  
S & W WAREHOUSE  
CHRISTENSON USED EQUIPMENT SALES  
ARTS AUTO WRECKING

271 Mobile Home dealers

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COACH CORRAL INC  
SKAGIT HOMES INC

511 New and Used Car Dealers

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BURLINGTON FORD NEWHOLLAND INC  
FOOTHILLS PONTIAC-BUICK-TOYOTA INC  
LYNN WELFRINGERS CASCADE CHRYSLER  
MOUNTAIN VIEW MOTORS INC  
KNUTSONS CLASSIC CARS  
BLADE CHEV CO INC  
BUDS TRAILERS  
SKAGIT RIVER FORD INC  
FRED NELSON CHEVROLET INC  
SIMS HONDA  
GREG HINTON OLDSMOBILE CADILLAC GMC INC  
SEASIDE CHEVROLET BUICK INC  
MCDOWELL PYGMYR  
VERN SIMS FORD INC  
FRONTIER FORD INC

521 Used Car Dealers

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GUBRUDS AUTO CREST  
LOW AUTO SALES  
ERNEST CAIRNS USED CARS  
COUNTRY MOTORS  
RALLYE AUTO SALES INC  
MANN WILLIAM S  
GUBRUDS VALLEY NISSAN  
FARWEST EQUIPMENT  
CAR FARM  
TAYLORS OLD CARS  
WESTSIDE MOTORS  
PAULS CARS  
C HAPS TRUCK INC  
THE AUTO CORNER  
AUTO CENTER  
MT VERNON BUILDING CENTER INC  
FREEWAY AUTO SALES  
UNIVERSAL SALES  
ISLAND SALES & RENTAL  
A SALES & SERVICE  
SELECT AUTO

Industry Group Name  
IC Code SIC Code Name  
Business Name

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GARY FUNKS MOTOR TREND  
SUMMIT PARK AUTO WRECKING

531 Auto and Home Supply Stores

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SKAGIT AUTO PARTS INC  
LA CONNER STATION  
LOBO AUTO PARTS  
M AND H WINGS  
A-T-V ACCESSORIES  
VALLEY AUTO SUPPLY  
WEBSTER AUTOMOTIVE INC  
BILL BAILEY FOR TIRES CO  
LARRYS AUTO & TRUCK PARTS INC  
BILL SCHMIDT DISTRIBUTING  
ANACORTES AUTO PARTS  
WESTSIDE TIRE  
ATKINS TIRE & BRAKE SERVICE  
PAT RIMMER TIRE CENTER INC  
LA CONNER AUTO & MARINE PARTS  
PERFORMANCE R/C PRODUCTS  
CASCADE TIRES  
SEDRO WOOLLEY AUTO PARTS INC  
STOUGARD MARVIN L & CHARLOTTE E  
MOTORSPORTS NORTHWEST INC  
PISTON SERVICE OF ANACORTES INC  
PISTON SERVICE CO

541 Gasoline Service Stations

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MOONEN CUSTOM CLEANERS  
CONWAY TEXACO  
GARYS GATEWAY CHEVRON  
MITCHELLES WELDING  
TRUCK CITY TRUCK STOP  
PHILIPS CORNER  
PIKES AUTOMOTIVE REPAIR-ELECTRICAL SVC  
MENDUM SHELL  
ISLAND TEXACO  
JARRETTS GULL OIL  
BIG ROCK SERVICE & GROCERY  
ANACORTES DIESEL & MARINE  
BONNARS TRADING POST  
BAKER LAKE SHELL & GROCERY  
PETERSONS TEXACO  
PAULS MOBIL  
HAMBURGS COLLEGE WAY UNION  
REFINERY TEXACO  
FIDALGO CHEVRON  
ISLAND CHEVRON SERVICE  
CONWAY MOTOR & MACHINE CO  
MERVS SERVICE  
ALS TEXACO SERVICE  
LOGGERS LANDING  
ZIMMERMANS

Industry Group Name  
IC Code SIC Code Name  
Business Name

=====

PETERS WESTSIDE SHELL SERVICE  
ALS STANDARD SERVICE  
HERBS MUFFLER & TUNE UP CENTER INC  
EVERGREEN CHEVRON SERVICE  
JOES WESTSIDE TEXACO

551 Boat Dealers

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ODYSSEY CRUISE & YACHT SALES INC  
THE STURGEON CO  
SKAGIT MARINE INC  
ANACORTES YACHT SALES  
THE SAIL LOCKER  
DOG ISLAND BOAT WORKS  
STAR INVESTMENT  
SUPERIOR MARINE CANVAS SERVICE  
BICKERSTAFF & CALDICOTT LTD  
PRICED LESS  
ANACORTES MARINE ELECTRONICS INC  
FRED FEITEN MARINE AGENCY  
ARGONAUT MOTOR YACHTS LTD  
HINMANS BOAT BUILDER SUPPLY  
BAY-WEST  
JACK LOGAN SAILING YACHTS  
PENMAR MARINE COMPANY  
FIDALGO MARINE SUPPLY  
ANACORTES YACHT CHARTERS INC  
CHECKS & BALANCES  
MARINE CHANDLERS  
MASTER MARINE SERVICES INC  
LA CONNER YACHT SALES  
DINGHY CO  
TED BREWER YACHT DESIGNS LTD  
PRIME TIME YACHT SALES

561 Recreational Vehicle Dealers

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PACIFIC RIGGING  
INLAND SALES  
RICS WESTSIDE RV INC  
SECURITY TRAILER SALES  
QUALITY HORSE TRAILERS ETC

571 Motorcycle Dealers

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METRIC CYCLE  
MARYOTTS INC  
LOCKREMS CYCLE BARN  
HARLEY DAVIDSON OF SKAGIT COUNTY

513 Truck Rental & Leasing, Without Drivers

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OLMSTED TRANSPORTATION



Industry Group Name  
C Code SIC Code Name  
Business Name  
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14 Passenger Car Rental

XTRACAR/RYAMYR  
PUGET SOUND RENT A RIDE INC  
XTRACAR/RYAMYR  
PUGET SOUND RENT A RIDE INC

15 Passenger Car Leasing

KAR LEASING  
KAR LEASING

19 Utility Trailers & Recreational Vehicle Rentals

ALPINE CAMPGROUND  
FIVE B INVESTMENT CO/PARK VILLAGE  
MURPHY WILLIAM J & ALICE J  
BLUE HERON  
B & E RENTALS

32 Top and Body Repair and Paint Shops

ROGERS  
CLASSIC AUTO REBUILD  
SOUTHSIDE AUTO BODY  
KATHYS UPHOLSTERY  
DARRYLLS AUTO BODY  
SMITTYS AUTO SHOP  
CUSTOM AUTO BODY REBUILD  
SUNSET AUTO BODY  
NORTHWEST AUTO BODY  
WEAVER AUTOMOTIVE  
LITTLE MOUNTAIN COVERS  
JERRYS AUTO BODY  
TOMS AUTO BODY  
PENDELL UPHOLSTERY  
ARROW AUTO BODY  
SOUND BODY SHOP  
CUSTOM CARMAN REBUILDS  
AUTO BEAUTY BY WAYNE  
LORENS  
G M SERVICES & ANACORTES TOWING  
ROBINSONS AUTO REBUILD  
AVON BODY SHOP  
VANPELT CUSTOM AUTO BODY & PAINT  
ONEILS AUTOBODY  
ELITE AUTO REFINISHING  
J J'S CRUISERS  
RONS AUTO BODY  
H & H RACECRAFT  
VANALLEN LYNN M  
STEWART HOWARD JAMES JR  
HI Q CARS  
GREG DUNTON

Industry Group Name  
IC Code SIC Code Name  
Business Name

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WALKERS UPHOLSTERY  
D P PAINTING & DETAILING  
ANDYS PARTS & SERVICES  
J R AUTOMOTIVE  
TUCKERS AUTO TRIM  
IVERSON AUTO BODY

534 Tire Retreading and Repair Shops

SMALLWOOD EDDIE E

536 Automotive Glass Replacement Shops

JOHNS AUTO TOGGERY & GLASS  
FERGUSON & ASSOCIATES  
MT VERNON AUTO GLASS & MUFFLER SHOP

537 Automotive Transmission Repair Shops

TERMINAL COLD STORAGE  
ISLAND TRANSMISSION  
SKAGIT TRANSMISSION

538 General Automotive Repair Shops

HOWARDS VOLKSWAGEN REPAIR  
SMITTYS  
VANDERPOL AUTOMOTIVE  
SKAARUP HARRY  
SCHAEFER VICTOR L & MARILYN L  
DICKS AUTO REPAIR  
AVEYS AUTO SERVICE  
FREEMAN M E  
BIDWELL VICTOR  
WOLL EDWIN J JR  
SPECIALTY WOOD PRODUCTS  
BURLINGTON AUTO PARTS  
BIDWELL TOWING  
ANNETTS AUTO REPAIR  
HAYES AUTOMOTIVE  
BILLS AUTOMOTIVE  
BOOMERS AUTO & MARINE  
FREDS REPAIR  
DOYLES AUTO REPAIR & WELDING  
ONEILS CUSTOM ENGINE SERVICE  
DITES DIESEL POWER  
GLENN'S DIESEL SERVICE  
T C'S AUTO REPAIR  
HOPKES AUTO CLINIC  
WINTZS NORTHWEST BRANCH DISTRIBUTORS  
JOHNS AUTO REPAIR  
WHITLEYS REPAIR  
GENERAL AUTOMOTIVE REPAIR & WELDING  
COFFLAND MOTOR SERVICE  
D & B AUTO TUNE

Industry Group Name  
 SIC Code SIC Code Name  
 Business Name

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PATS GENERAL STORE  
 BOB PORTER ENTERPRISES  
 THE SHOP  
 LOKES  
 MIKES REPAIR  
 JEFFS AUTO CLINIC  
 CASCADE MECHANICAL SERVICES  
 BARTHS AUTO REPAIR  
 GANSKE BROTHERS  
 NORTHWEST AUTOMOTIVE  
 TONYS GARAGE  
 CHANCES TRANSMISSION & AUTOMOTIVE REPAIR  
 LARSON AUTO REPAIR  
 SICKLER REPAIR  
 ARMEYS AUTO & TRUCK REPAIR  
 ANYWHERE REPAIR  
 CAMPBELL LAKE AUTOMOTIVE  
 SWEETWATER FARM  
 INTEGRITY VW REPAIR  
 DAVES QUALITY DETAIL  
 JIM MOCKS AUTOMOTIVE SERVICES  
 JIM GOODE REPAIR  
 EDS REPAIR  
 BROWN KENNETH W  
 SUTTON RANDY L  
 FORRESTER KEITH R  
 ZIP TUNE  
 FRANKS ROLLING FIX IT SHOP  
 KIRKS AUTO REPAIR  
 SHADY TREE MECHANICS  
 60 MINUTE TUNE  
 R & M AUTOMOTIVE  
 BAVARIAN AUTOHAUS INC  
 NORTHWEST AUTO REPAIR  
 M P H AUTOMOTIVE REPAIR  
 RAYS AUTO REPAIR  
 CARS MEDICS/A B C DETAIL  
 ANDERSON AUTO  
 J & K AUTOMOTIVE  
 D & B REPAIR SERVICE  
 ROGERS CLARENCE H & JULIA D  
 SKAGIT AUTO REPAIR  
 MEHLUMS  
 ALS AUTO CLINIC  
 WADE LESTER H  
 TEIXMEN & WILLIAMS

539 Automotive Repair Shops, NEC

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PLAN B INC  
 DWAYNES EQUIPMENT REPAIR  
 BOYDS RADIATOR SERVICE  
 JOHNS GARAGE AUTO ELECTRIC  
 MOUNT VERNON FRAME & AXLE INC  
 JUST IMPORT SERVICE

Industry Group Name  
IC Code SIC Code Name  
Business Name

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GRAVLEYS REBUILD  
SKAGWAY AUTO SHOP  
RAYS REPAIR & REBUILD  
VIRGS BRAKE & SUSPENSION  
GRAY CHARLES G & BERYL V  
COULTER ORIN & BARBARA L  
MOUNT VERNON RADIATOR SERVICE

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Equipment Repair

313 Telephone Communications, exc. Radio

LA CONNER TELEPHONE COMPANY

322 Telegraph & Other Communications

DUCAP ELECTRONICS INC

332 Radio Broadcasting Stations

KAGT  
KAPS RADIO  
KBRC

399 Communications Services, NEC

ODELL COLLEEN M  
COUNTRY CABLE INC

362 Automatic Merchandising Machine Operators

BOB JOHNSON SNACK BAR SERVICE  
EMPLOYEE COUNCIL OF ISLAND HOSPITAL  
MCCONNELLS TRAVEL GUIDES  
H & M VENDING

522 Radio and Television Repair

FINELINE  
CARLS ELECTRONIC SERVICE

523 Refrigerator Service and Repair

BRIDGMAN MICHAEL D & PEGGY SUE  
MCARTHUR REFRIGERATION SERVICE  
BRIDGMAN MICHAEL D & PEGGY SUE  
BILLS SERVICE  
BOCKS REPAIR  
SKAGIT ISLAND REFRIGERATION  
ATLAS APPLIANCE & REFRIGERATION SERVICE  
MURPHYS REFRIGERATION  
BOCKS REPAIR  
MCARTHUR REFRIGERATION SERVICE  
ATLAS APPLIANCE & REFRIGERATION SERVICE

Industry Group Name  
IC Code SIC Code Name  
Business Name

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BILLS SERVICE  
SKAGIT ISLAND REFRIGERATION  
MURPHYS REFRIGERATION

529 Electrical Repair Shops, NEC

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JIMS ELECTRONICS  
DALES ELECTRONICS  
NORTH SOUND OFFICE SYSTEMS INC  
VALLEY APPLIANCE REPAIR  
G & L ELECTRONICS  
NORTHWEST ENERGY MIZERS  
PRECISION ELECTRONICS  
COMMERCIAL REPAIR SERVICE  
G & L ELECTRONICS  
B & C APPLIANCE PARTS & SERVICE  
JIMS ELECTRONICS  
ENERGY SPECIALIST  
K-TRONICS  
B & C APPLIANCE PARTS & SERVICE  
FROSTY MACS REFRIGERATION & APPLS REPAIR  
MR FIXIT  
M J'S APPLIANCE REPAIR  
MACS APPLIANCE REPAIR  
G E PAINTING  
AUSTINS APPLIANCE SERVICE  
HALES APPLIANCE REPAIR  
SOUND OFFICE MACHINES  
G E PAINTING  
AUSTINS APPLIANCE SERVICE  
HALES APPLIANCE REPAIR  
PHILLIPS APPLIANCE SERVICE  
FROSTY MACS REFRIGERATION & APPLS REPAIR  
MR FIXIT  
M J'S APPLIANCE REPAIR  
MACS APPLIANCE REPAIR  
NORTH SOUND OFFICE SYSTEMS INC  
ENERGY SPECIALIST  
K-TRONICS  
SOUND OFFICE MACHINES  
PRECISION ELECTRONICS  
VALLEY APPLIANCE REPAIR  
DALES ELECTRONICS  
PHILLIPS APPLIANCE SERVICE  
COMMERCIAL REPAIR SERVICE  
NORTHWEST ENERGY MIZERS

7631 Watch, Clock, and Jewelry Repair

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H L PETERSON JEWELER

7692 Welding Repair

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WRIGHT BROTHERS ENTERPRISES INC  
WHITLOCK CLOYD O

Industry Group Name  
C Code SIC Code Name  
Business Name

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NICKS FABRICATION & REPAIR  
WESTSIDE IRON WORKS INC  
ELDER JAMES C  
LLOYD MOSHER MACHINE REPAIR  
SAFETY WELDING  
TRICO CONTRACTING INC  
MARTINEZ WELDING & FABRICATION  
YOUNG ZELL A  
G & L WELDING  
STURDY-WELD  
GENERAL SPECIALTIES INC  
H & J WELDING & REPAIR  
CORBELL PHILLIP C  
FAB-TECH  
PADILLA HEIGHTS FAB & REPAIR  
NORSKY ENTERPRISES  
TAYLORS WELDING  
MARINE WELDING  
SAMISH MARITIME INC  
WALLS HEAVY EQUIPMENT  
BOB ADELMAN DESIGN & FAB  
WILLIAMS WELDING

99 Repair Services, NEC

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MOUNT VERNON MUSIC REPAIR  
DANIEL RUE PIANO SERVICE  
BARNES ROBERT O & MARIE D  
MOENNINGS ORGAN SERVICE  
MT VERNON LOCKSMITHS  
LEFF BRADLEY B  
XACT SAW SERVICE  
PACIFIC MARINE SERVICE INC  
KEITHS ORGAN SERVICE  
CASCADE CAMERA REPAIR  
ANACORTES CYCLERY  
BROWN HOWARD T  
NORTHWEST CARBIDE SHARPENING  
WILLIAM C LOWE MARINE SURVEYOR BLDG & CNSLTNT  
PILLOWS SHARPENING  
BRANDS SADDLE SHOP  
BLADE WORKS PRODUCTS INC  
QUICK SILVER MARINE  
VAN GO CUSTOM FRAMING  
SECURITY LOCKS & ACCESSORIES  
JAMES K FRANCIS FARRIER  
SAW-SHARP SPECIALTIES  
ABLEHANDS ANACORTES SERVICE CO  
COLFACK ARTHUR  
KENDRICK HEAVY EQUIPMENT REPAIR  
TOMS EQUIPMENT MAINTENANCE REPAIR  
BLUEPRINT MACHINE SERVICE  
GATEWAY SEPTIC SERVICE  
DUTTONS SHARPENING SERVICE  
SAVAGE ARTS

Industry Group Name  
SIC Code SIC Code Name  
Business Name

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DIXON RACQUET STRINGING  
C & S SERVICES  
A-1 METALCRAFT  
BUDS LAWNMOWER SERVICE  
TERRYS SEPTIC TANK SERVICE  
BOBS BURNER SERVICE  
RUDE ROLF W  
WIGNER WILBUR F  
PM NORTHWEST INC  
JOHNNYS LOCK SAFE AND KEY MOBILE SERVICE  
MIKES REPAIR  
JIMS MOBILE REPAIR  
FRANDOR KNIFE SHOP  
CARLSON ROBERT S  
J R MAINTENANCE  
SKAGIT RIVER ROD & REEL REPAIR  
BLINDING FLASH DEVELOPMENT CO  
BILLS RV & TRAILER MANUFACTURING  
NORTH CASCADE SAW SHOP  
MIKES SMALL ENGINE REPAIR  
THE SILVER MINE  
GILKEY DALE W  
THE SHARP SHOP  
BILLS REPAIR  
T & K MOWING SERVICE  
LAKESIDE CUTTING & SAWSHOP  
LUMARK SERVICES  
JOHNSON DAIRY  
LOOKS REPAIR  
ANACORTES PROPELLER REPAIR  
CHAZ-GLAZ  
AQUAJET ENTERPRISES  
CASCADE LOCK & KEY  
CLEAR LAKE REPAIR  
WALDEN GRINDING  
CASCADE ENTERPRISES  
J & R SMALL ENGINE REPAIR  
THE OUTBOARD DOC  
WARDEN STEPHEN F  
ROTO ROOTER SEWER SERVICE  
K & K ENTERPRISES  
DAY BEN A JR  
TINGLEY POOL CO  
NORTH SOUND BUSINESS SYSTEMS  
MEYER SIGN & ADVERTISING  
BOTTOMS G A  
SCHOLS JAMES E  
BOBS LOCK & KEY SHOP  
BAY MARINE  
MOES LOCK & KEY  
ENGLISH CHIMNEY SWEEP  
TUBBYS REEL REPAIR  
RICKS MARINE  
ADEK BOAT & RIFLE SHOP  
THADDIUS P MARTINWINKLE

Industry Group Name  
IC Code SIC Code Name  
Business Name

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PIANO TUNNING SALES & SERVICE  
LYNES MACHINE & REPAIR SERVICES  
D K KAALAND MILLING  
SHARP 2 CUT

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Metal Manufacturing

355	Aluminum Rolling & Drawing, NEC	MARITIME ALUMINUM CONSTRUCTION CO
444	Sheet Metal Work	SKAGIT VALLEY SHEET METAL WORKS
446	Architectural Metal Work	MCKIBBEN ORNAMENTAL IRON
471	Plating and Polishing	SPECIALTY PLATING INC
496	Misc. Fabricated Wire Products	WIRE FAB.
531	Construction Machinery	C C HOUSTON ENTERPRISES
553	Woodworking Machinery	DIOBSUD FORGE
575	Computer Terminals	ROTHENBUHLER ENGINEERING COMPANY
599	Industrial Machinery, NEC	CALBUILT PRODUCTS INC R & R MACHINE SCHUIRMAN METAL WORKS ANCHOR MACHINE & MFG N W HYDRAULICS & REPAIR M & M & M MACHINE ELIASSEN CUSTOM MACHINE CALBUILT PRODUCTS INC ANCHOR MACHINE & MFG RICKS MACHINE LACONNER MACHINE INC MATTERAND MACHINE & DESIGN RICKS MACHINE



Industry Group Name  
C Code SIC Code Name  
Business Name

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SCHUIRMAN METAL WORKS  
UNIPAR WEST INC  
ANACORTES MACHINE SHOP  
M & M & M MACHINE  
ELIASSEN CUSTOM MACHINE  
ANACORTES MACHINE SHOP  
EDCO INC  
MATTERAND MACHINE & DESIGN  
LACONNER MACHINE INC  
EDCO INC  
N W HYDRAULICS & REPAIR  
UNIPAR WEST INC  
R & R MACHINE

13 Switchgear and Switchboard Apparatus

CUSTOM ELECTRIC DESIGN & CONTROL

79 Electronic Components, NEC.

MICRO-ELECTRONICS INC

93 Signs and Advertising Displays

SKAGIT NEON SIGNS

Construction

21 Single-Family Housing Construction

K M W CONST  
JOE KELLY GENERAL CONTRACTOR  
J & C CONSTRUCTION  
CASCADE BUILDERS  
M J & D CONSTRUCTION  
KELLY CO  
FIELDS ENTERPRISES  
DAUT JAMES A  
SKELTON CONSTRUCTION  
DAVID SOLIE CONSTRUCTION  
EMPIRE CONSTRUCTION CO  
K K CONSTRUCTION/GENERAL CONTRACTOR  
LEWIS RIVER CONSTRUCTION  
PARENT CONSTRUCTION CO  
HELGESON & HELGESON  
WELK CONSTRUCTION CO  
R & H CONSTRUCTION  
ZIMMERMANN CONSTRUCTION  
SHANNON BROS CONSTRUCTION  
ANDERSON CONSTRUCTION CO  
MOODY CONSTRUCTION  
A CONSTRUCTION COMPANY  
KEN LYON BUILDER  
SWETT CONSTRUCTION

Industry Group Name  
IC Code        SIC Code Name  
Business Name

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SUNTROL HOMES  
DUANE JOHNSON & SONS CONSTRUCTION INC  
DENNIS CONSTRUCTION CO  
MARTINDALE HOMES  
FELLMAN CONSTRUCTION  
WOODMANSEE CONSTRUCTION  
SOTO MCNETT CO  
KISER CONSTRUCTION  
BENSON CONSTRUCTION & REPAIR  
CASTLE CONSTRUCTION CO  
M & M BUILDERS & DESIGN INC  
SCHMID CONSTRUCTION  
HANSON CONSTRUCTION  
GRANAHAN JERALD H  
AVERY BUILDERS  
JACK JONES CONSTRUCTION  
CLEARWATER REMODELING  
NORTHWEST BUILDERS  
ADAMS HOME IMPROVEMENT CO  
LAKE ERIE CONSTRUCTION  
PACIFIC PUZZLE COMPANY  
MICHAEL SCHULMEYER & ASSOC  
H & M CONSTRUCTION INC  
MASTERS TOUCH SERVICES  
ANNEMA CONSTRUCTION  
TURTLE CONSTRUCTION COMPANY  
QUANTUM CONSTRUCTION INC  
STORMONT CONSTRUCTION  
J L K CONSTRUCTION  
OTTERSTEDT CUSTOM HOMES  
D R D CONSTRUCTION COMPANY  
DOUGLAS DESIGN & CONSTRUCTION  
MESSER & SON SMALL TIME CONST  
R & R REMODELING  
VALLEY CONSTRUCTION  
DALES CONSTRUCTION  
AXTHELM & SWETT CONSTRUCTION  
BELDIN CONSTRUCTION  
SILVER CREEK CO  
WESOLEK ENTERPRISES  
ALPHA-OMEGA CONSTRUCTORS INC  
ANDERSON CONSTRUCTION  
SCHWETZ CONSTRUCTION  
FERGUSON ENTERPRISES  
WASHINGTON HOMES  
CAVANAUGH CONSTRUCTION  
ROQUE ENGINEERING & CONSTRUCTION CORP  
METAMORPHOSIS  
PEARL CONSTRUCTION CO  
ARC CONSTRUCTION  
HAYTON CONSTRUCTION  
QUALITY BUILDING  
SHANER MELVIN L  
LAKE WASHINGTON BUILDERS  
DUFFIELD CLYDE E

Industry Group Name  
IC Code SIC Code Name  
Business Name

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ELLESTAD KENDAHL H  
SOUZA JOSEPH P  
WHITNEY CONSTRUCTION  
K L H ENTERPRISES  
SKAGIT BUILDERS INC  
DAVIE ROBERT D JR  
FAGERLAND LARS  
ABLE DESIGN & CONSTRUCTION  
ROCKY MOUNTAIN CONSTRUCTION CO  
JANDA CONSTRUCTION ENTERPRISES  
J & J CONSTRUCTION  
L R H CONSTRUCTION INC  
SCHNEIDER CONSTRUCTION  
CHAMBERS BROS CONSTRUCTION  
PACIFIC NORTHWEST BUILDERS  
ALL PHASE CONSTRUCTION & REMODELING  
T & H ENTERPRISES  
3 F CONSTRUCTION  
RON SPRAGG CONSTRUCTION  
FINN HOMES INC  
THE ROBBINS CO  
SUNSET CONSTRUCTION  
MCCOLLOUGH CONSTRUCTION  
L L MOORE CONSTRUCTION CO  
OLYMPIC CONSTRUCTION  
BROPHY CONSTRUCTION CO  
HOME REPAIR REMODELING & MAINTENANCE  
BYER CONSTRUCTION  
D L ENTERPRISES  
G M CONSTRUCTION  
R & J ENTERPRISES  
LARRY COOK CONSTRUCTION  
SMOOTS CONSTRUCTION  
JORGENSEN NEIL R  
GUNERIUS CONSTRUCTION  
HABITAT CONSTRUCTION CO  
DAVID RADCLIFFE CONSTRUCTION CO  
BAKER CONSTRUCTION  
JOHNSON CONSTRUCTION  
CONSTRUCTION SPECIALISTS  
PETERSON CONSTRUCTION CO  
RACANELLO CONSTRUCTION INC  
HARTLEY CONSTRUCTION  
MARLEY CONSTRUCTION  
HUDDLE & SON  
W W CONSTRUCTION  
HOME ELECTRIC & REMODELING  
CASS CONSTRUCTION  
T & M BUILDERS  
WOODCRAFT CONSTRUCTION  
NORTH SOUND CONSTRUCTION INC  
LLOYD CONSTRUCTION  
J KAJFAS CONSTRUCTION  
L & R GENERAL CONTRACTORS INC  
TOMCO

Industry Group Name  
 SIC Code SIC Code Name  
 Business Name

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DICKEY TALTON A  
 GENTRY CONSTRUCTION  
 M D & D F MITCHELL GENERAL CONTRACTORS  
 BAIRD REMODELING CONSTRUCTION  
 BUSTAD INC  
 ED HJORT BUILDER  
 CAN-AMERICA PROPERTIES INC  
 G P YOUNG CONSTRUCTION  
 LITTLE MOUNTAIN CONSTRUCTION  
 N W MOBILE HOME REPAIR  
 CHANDLER CONSTRUCTION INC  
 LYMAN CONSTRUCTION  
 INTERSTATE CONSTRUCTION SYSTEMS INC  
 JOHNSON CUSTOM HOMES  
 ESTILL CONTRACTING  
 SKAGIT BUILDERS  
 HOBACK CONSTRUCTION  
 COUNTRYSIDE REALTY  
 BONNER HOMES  
 SHIELDS JACK WILBUR  
 CARNEY CONSTRUCTION  
 BRUCE S WEECH-BUILDER  
 DAY CREEK CONSTRUCTION  
 SKAGIT COLUMBIAN CLUB  
 HASSLER BUILDERS  
 AL HOWARD CONSTRUCTION CO  
 SEDRO-WOOLLEY DEVELOPMENT INC  
 B & P CONSTRUCTION & TILE  
 B G ENTERPRISES  
 ISLAND CONSTRUCTION  
 R A ANDERSON CONSTRUCTION  
 EXELBY CONSTRUCTION CO  
 FISHER & SON INC  
 LOUGHLIN QUALITY CONSTRUCTION  
 FALCONER JAMES G & NANCY  
 JEVONS CONSTRUCTION  
 SENATORE ENTERPRISES  
 GOLDENEYE CONSTRUCTION  
 HAWAIIAN-NORTHWEST CONSTRUCTION CO  
 SIMPSON GUY K  
 DON-EL CONSTRUCTION

522 Residential Construction, NEC

S O S SERVICES  
 ATLAS CONSTRUCTION  
 SEA SIDE BUILDERS

531 Operative Builders

FREY CONSTRUCTION  
 EVEN DOWN ASSOCIATES LTD  
 LOWRIE RUDELL-BUILDER  
 NORTHWEST CUSTOM LOG HOMES  
 SUTTON & SON BUILDING CONTRACTOR

Industry Group Name  
IC Code SIC Code Name  
Business Name

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DENNIS JOHN DEVELOPMENT  
PIAZZA CONSTRUCTION INC  
MORSS CONSTRUCTION & DESIGN  
JOE TOUSSINT CONST  
ALLEN BIRD CONSTRUCTION  
WHITE TIMOTHY W & FAY C  
MID VALLEY CONSTRUCTION  
THEODORATUS GEORGE J  
JAMES CHESTER  
JAMES A FINNEGAN GENERAL CONTRACTOR  
POPPE BUILDING CO  
REINECKE CONST CO  
ALLEN CONSTRUCTION  
GREGG ENTERPRIZES  
MASON BROTHERS CONSTRUCTION  
BRAGG BARNEL R & REBECCA L  
HENDRICKSON CONSTRUCTION CO  
KNORR EDWARD G  
FISHER CONSTRUCTION CO

541 Industrial Buildings and Warehouses

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KORTUS CONSTRUCTION  
COMPLETE PLANT MAINTENANCE INC  
GENERAL CONTRACTING

542 Nonresidential Construction, NEC

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SHMO BUILDINGS  
MAXWELL HOUSE CONSTRUCTION INC  
WILCO HAWAII INC  
HANSON & ASSOCIATES INC  
FLESHMAN CONSTRUCTION  
NELSON LUMBER CONSTRUCTION CO  
P & L GENERAL CONTRACTORS INC  
COPE-N-NOTCH LOG HOMES INC  
SNYDER BUILDING CORP  
HANSON BROTHERS CONSTRUCTION INC  
TALBERT CONSTRUCTION  
KIELS INC  
SPANNE BUILDINGS INC

711 Plumbing, Heating (Except Electrical), and Air Conditioning

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FOSS & CO  
SULLIVAN-SKAGIT PLUMBING  
SCHILLIOS HAROLD M  
BUTTERFIELD PLUMBING  
CHARLES KEN CRANDALL REFRIGERATION  
BUILDERS CUSTOM PLUMBING COMPANY  
BRETHOUR SHEET METAL WORKS  
CROSSLEY REFRIGERATION ENGNRING & REPAIR  
PLOEG & TJEERDSMA  
LOU ANKNEY SEPTIC SERVICES  
ALL REFRIGERATION

Industry Group Name  
IC Code SIC Code Name  
Business Name

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RAINBOW SEPTIC SERVICE  
R D PLUMBING & DESIGN INC  
SKYLINE PLUMBING & HEATING INC  
F & S QUALITY PLUMBING  
TAMMAN JOHN  
FOX DONALD M  
PROTECH PLUMBING  
JOHNSON PLUMBING  
DONS PLUMBING  
RALPH LOY REFRIGERATION  
J H C ENTERPRISES  
R & R PLUMBING  
D & J SERVICES  
EARL WHITE PLUMBING  
HICKMAN PLUMBING  
WESTERN PLUMBING  
ANACORTES REFRIGERATION  
PAUL HICKMAN & SON  
C E M HEATING INC  
LAVINES HEATING & SHEET METAL  
LARSON HEATING INC  
C G ENTERPRIZE  
COMMERCIAL PLUMBING INC  
REFRIGERATION & HEATING INC  
LARRYS HEATING SERVICE  
MEYER RICHARD

721 Painting, Paper Hanging, and Decorating

---

KELLEY CONSTRUCTION & PAINTING  
STEGMAN PAINTING & WALLCOVERING  
GEAR CAROLE J  
TIM COOLEY PAINTING  
GERRIT HUIZINGA PAINTING  
HAUGEN INGVAR  
MELVILLE PAINTING  
ARTISAN PAINTING & DECORATING CO  
ALLBRITE CUSTOM PAINTING INC  
TOWN & COUNTRY PAINTING  
HANGERS ON WALLPAPERING  
E & Z PAINTING  
MARC PIROLO PAINT & DRYWALL  
STARBIRD PAINTING  
SPECTRUM DESIGN  
BEESON PAINT CONTRACTING  
LOWE & BRADY BUILDERS  
PARAGON PAINTING INC  
MARSHALL LOUIS J JR  
DAVID J MCCOY PAINTING CONTRACTOR  
FINAL TOUCH PAINTING  
CHROMATIC PAINTING COMPANY  
DAVE RINDAL PAINTING  
DON HERZBERGG PAINTER  
BIRKLES PAINTING  
TULLER CUSTOM PAINTING

Industry Group Name  
C Code SIC Code Name  
Business Name

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BLUE HERON PAINTING CO  
THE FINISHING TOUCH  
MILLENAAR PAINTING  
VICKYS PAINTING SERVICE  
EMMERSON CONSTRUCTION

31 Electrical Work

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GROVES CITY ELECTRIC SERVICE INC  
FOUNTAIN ELECTRIC  
MOUNT VERNON ELECTRIC  
E-Z ELECTRIC  
SKAGIT ELECTRIC  
FRANK AND GRETAS REPAIRS  
O & L ELECTRIC & PLUMBING  
BORMAN RITCH M  
WHITE INSTALLATION & CONSULTING SVCS  
TORGGYS CUSTOM INSTALLATION  
WOODS ELECTRIC INC  
VALLEY ELECTRIC CO OF MT VERNON INC  
GOLDSBERRY ELECTRIC  
TROUBLE SHOOTER-ELECTRICAL MAINT WIRING  
WESTON ELECTRIC  
HAMPELS ELECTRIC  
STERLING ELECTRIC  
TIBBLES ELECTRONICS  
DAHLS VALLEY ELECTRIC INC  
THORNTON ELECTRIC  
GRIFFITH ELECTRIC  
ELECTRICAL TROUBLE SHOOTERS INK INC  
PACIFIC RIM SATELLITE SERVICES  
SEVEN SISTERS INC  
OLSEN WAYNE E  
NORTHERN ELECTRIC OF ANACORTES INC  
CHARLTON ELECTRIC  
J P C ELECTRIC  
SKAGIT ISLAND ELECTRIC COMPANY  
R & R CUSTOM WIRING  
CASCADE ELECTRIC  
G & J ELECTRIC  
ISLAND ELECTRIC  
MORNINGSTAR ELECTRIC COMPANY  
B & R PROTECTION SYSTEMS

741 Masonry and Other Stonework

---

A-1 CHIMNEY REPAIR  
DEJONG MASONRY & CONST  
MARTIN BARNES MASONRY  
TOWNSEND DEAN P  
HILL JAMES A  
ERIC MOE MASONRY  
VANDERWAL MASONRY  
JOHNSON DAVID C  
JOHNSON MASONARY

Industry Group Name  
IC Code SIC Code Name  
Business Name

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DEL NAGRO MASONRY  
BAUER JASON A  
SCHEUERMAN MASONRY CONST CO

742      Plastering, Drywall, and Insulation

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ROTZ R REX & ALICE E  
STEWARTS DRYWALL  
THE ROCK DOCTORS  
FINE WALL COVERINGS  
SCHWEITZER ROBERT CHARLES  
SPRINGERS PLASTERING INC  
GREG WILSON DRYWALL  
ACCURATE DRYWALL-TAPE & SPRAY  
KHRISTOS DRYWALL & PAINTING  
DRALLES DRY WALL  
GRIMBLY GORDON J  
HOUSING AUTHORITY OF SKAGIT COUNTY  
SKAGIT DRYWALL INC  
JOEL DURGIN DRYWALL  
DECHENNE CONTRACTING  
JORDAN PAUL B  
WALLS & FLOORS  
DRYWALL BLUES  
DENNEYS CONTRACTING

743      Terrazzo, Tile, Marble and Mossaic Work

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J & J TILE  
THE TILE MAN  
TEXTURES & TILE  
MARTIN MASONRY & TILE  
SAGER ROBERT L  
BARNETT TILE  
ALGERMAN ENT

751      Carpentry Work

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SILVER SMITH WOODWORKING/REPAIRS  
DAVE MOE CONST  
LA CONNER DRYWALL COMPANY  
CHELLSON CO  
CHERYLS CONSTRUCTION  
DAVELAAR DAVE  
SKAGIT WOODCRAFT  
MATTHEWS VAL M  
BJORGAN MILTON O T  
CARPENTER SERVICES LTD  
DUTCH TOUCH CARPENTRY  
HOG MANS CONSTRUCTION  
SQUIRES DOUGLAS L  
M T CONSTRUCTION  
LAVERN CARPENTRY  
ARM & HAMMER BUILDING CONTRACTOR  
STRICTLY VICTORIAN



Industry Group Name  
IC Code SIC Code Name  
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D E JONES CONST CO  
CARPENTER REPAIR SERVICE  
IVANOCOVICH NICK J  
NORTHERN IMPROVEMENT  
MITCHELLS DESIGN & CUSTOM CABINETS  
CONSOLIDATED BUILDERS  
C & M ENTERPRISES  
HUBERT PHILIP J  
SIMMONS GLENN P  
SKAGIT WOODWORKS  
DANIELSON CONSTRUCTION  
HUPY HAL H

752 Floor Laying & Other Floorwork, NEC

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RINDALS FLOOR COVERING SERVICE  
PATS FLOORCOVERING  
EVERGREEN INTERIORS  
HESSELTINE FLOOR COVERING  
ROGER KINSLAND  
CARPET SERVICES  
G & R CARPET INSTALLATION  
REID DARRELL L  
VALLEY CARPET SERVICES  
VANCE & PATS FLOOR COVERING  
FOSTERS HARDWOOD FLOORS  
POWERS FLOOR COVERING  
MOUNTAIN VIEW SERVICES  
VINTAGE FIND  
BURLINGTON FLOOR DESIGN  
CASCADE FLOORS  
CARDONA-ARCE JUAN

761 Roofing and Sheet Metal Work

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JEMCO  
BIG ROCK ROOFING  
MOUNT VERNON GUTTER SERVICE  
MILLER KENNETH D  
ENGLISH TILE ROOFING  
RAINS ROOFING  
JOHNSON ROOFING  
LANGLEY STUART E  
NAZE JILL C  
SKYLITES UNLIMITED  
TRUSS ENGINEERING INC  
AVON ROOFING  
RONK BROS INC  
NORTHWEST GUTTER SERVICE  
PIPPIN ROOFING  
OWENS ROOFING & SUPPLY  
WEST COAST ROOFING-GEN CONTRACTING INC  
SAVAGE ROOFING CO  
ESARY ROOFING & SIDING CO INC  
DOUG SMITHS CUSTOM GUTTERS

Industry Group Name  
SIC Code SIC Code Name  
Business Name  
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793 Glass and Glazing Work

S & S GLASS  
MCBEATH GLASS INC  
SEDRO WOOLLEY GLASS  
BURLINGTON GLASS INC

452 Prefabricated Wood Buildings and Components

COUNTRYSIDE LOG HOMES INC

013 Switching and Terminal Services

MOUNT VERNON TERMINAL RAILWAY INC

-----  
Furniture/Wood Manufacturing & Refinishing

434 Wood Kitchen Cabinets

NORTHWEST WOOD ARTISTRY  
GARY STORY CUSTOM CABINETRY  
EKLUND & SON  
BERGER WOODWORKING  
THORNWOOD CRAFTS  
T & E WOODWORKING  
A & W WOODWORKING  
WOOD HOUSE CUSTOM CABINETS  
ALLENS CUSTOM WOODWORKS  
SKAGIT ARCHITECTURAL MILLWORK INC  
COMPASS WOODWORKS  
BAY WOOD INTERIORS  
WOODMASTER  
KITCHENS & DESIGN  
S & H FINE WOOD PRODUCTS

2511 Wood Household Furniture, Except Upholstered

PAUL SWANSON FINE FURNITURE  
JANUS CO  
HARDTREE  
CHUCKANUT MOUNTAIN WOODCRAFTS  
ENCORE DESIGN  
FUTURE ANTIQUES WOODWORKING  
KEEP/SAKE INC

2519 Household Furniture, NEC

CUSTOM SOUND

5719 Misc. Homefurnishing Stores

GLASSICAL STAINED GLASS  
ROY'S PHONES N THINGS

Industry Group Name  
C Code        SIC Code Name  
Business Name

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CASCADE HOME FURNISHINGS  
SUMMERS INTERIORS  
BILL & BARBARA MERRIFIELD  
POMEROY MANUFACTURING  
TRACY W POWELL WOODCARVER  
CHERYL HARRISON POTTERY  
CARONE DESIGNS  
BOB WILLIAMS COFFEE MUGS  
TALMAN POTTERY  
TRACYS FURNITURE INC  
MARGUERITE GOFF POTTERY  
EARTHENWORKS  
NORTHWEST HOT SPRING SPAS  
H E DESIGN  
TRIBUTARY STUDIOS  
WING MANUFACTURING INC  
REBECCAS CARPET CLEANING  
HENDRICKSONS INC  
THE PALACE MARKET  
CRAFT STOVE OF WESTERN WASHINGTON INC  
ANTIQUE CEILING DESIGN  
PLEASANT RIDGE POTTERY  
INTERIOR ACCESSORIES PERIOD  
WOODMISER STOVE COMPANY

41        Reupholstery and Furniture Repair

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CUSTOM SERVICES  
SUPERIOR CUSTOM UPHOLSTERY  
LEWIS FURNITURE & UPHOLSTERY  
L & D SEWING CENTER  
JOHNSTONS UPHOLSTERY  
B D'S WOODSHOP & REPAIR  
BILL COBB UPHOLSTERY  
THE WOODWORKS  
RENYS FURNITURE UPHOLSTERY  
BOBS UPHOLSTERY  
ANACORTES UPHOLSTERY & CANVAS  
PEE WEES UPHOLSTERY  
ODLES FURNITURE REPAIR & REFINISHING  
SUNNYSIDE AUTOMOTIVE SERVICES  
GWENS UPHOLSTERY & KUSTOM FINISHING  
STEELES UPHOLSTERY BY JEAN  
MCKNIGHT EDITH M & DORRELL D  
CLASSIC UPHOLSTERY  
COLE ENTERPRISES  
J F K ENTERPRISES  
HOUTZ AND SON UPHOLSTERY  
THREE PILLARS  
RONS FURNITURE REPAIR  
DAWSON ENTERPRISES  
HUNTERS UPHOLSTERY  
BROOKS UPHOLSTERY  
VALLEY CUSTOM UPHOLSTERY  
LINDAS UPHOLSTERY

Industry Group Name  
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CEDARDALE UPHOLSTERY  
CLASSIC TOUCH UPHOLSTERY  
KODERA UPHOLSTERING  
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Printing/Ceramics

711      Newspapers

SKAGIT VALLEY HERALD  
THE CONCRETE HERALD  
BURLINGTON PRESS & PRINTING  
THE SKAGIT ARGUS

721      Periodicals

SEVEN SISTERS EDUCATIONAL INSTITUTE THE  
ANDERSON PUBLISHING CO INC  
MERIT PUBLISHING  
OWNER SALES NETWORK  
TARGET COMMUNICATIONS INC  
STABLEMATE

732      Book Printing

ISLAND PUBLISHERS

741      Miscellaneous Publishing

LAUCKHART PUBLICATIONS

752      Commercial Printing, lithographic

GRAPHICS ETC

759      Commercial Printing, NEC

NORTHWEST GRAPHICS  
INSTY PRINTS OF SKAGIT COUNTY  
ABLE PRINTING COMPANY  
CHANNEL TOWN PRESS  
POSTAL INSTANT PRESS  
RAM PUBLICATIONS  
JIMS HOBBY PRESS  
NORTHCOAST PRINTERS  
ACCOUNT ABILITY  
SAN JUAN GRAPHICS  
MOUNTAIN MIMEOGRAPHICS  
A & B COMPANY

2791      Typesetting

THE MACHINE WORKS  
A 2 Z GRAPHICS  
SHARONS TYPE

Industry Group Name  
IC Code SIC Code Name  
Business Name  
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34 Photocopying and Duplicating Services

NORTHERN DESIGN

Diagnostic & Clinical Laboratories

011 Offices and Clinics of Medical Doctors

MOUNT VERNON WOMENS CLINIC INC PS  
NORTH CASCADE FAMILY PHYSICIANS  
STEWART RICHARD H MD  
REZVANI EZATOLAH MD  
DIVITA JOSEPH F MD  
SKAGIT FAMILY PRACTICE CLINIC  
SKAGIT VALLEY MEDICAL CENTER INC PS  
FRANK M HANSEN MD NUCLEAR MEDICINE SVC  
NASH RICHARD W DDS & ANN L BODLE-NASH  
NORTH CASCADE EAR NOSE THROAT/FCL PL STI SRGY  
J. W. VOEGTLIN MD INC PS  
GROSS-LUTHER CLINIC  
FIDALGO MEDICAL ASSOCIATES  
SKAGIT PEDIATRICS  
COOK J ALAN MD  
MILLER STEPHEN J DPM  
NORTHWEST X RAY CO  
VALLEY ORTHOPEDICS  
DIETRICH & SMITH CLINIC INC PS  
SKAGIT EMERGENCY PHYSICIANS INC PS  
T W MARTIN JR MD  
ANSEL Q HYLAND MD  
ROBERT O SLIND MD  
PACIFIC NORTHWEST CARDIOLOGY INC PS  
STUTZ FREDERICK HELMUT & LILLIAN E  
KIRKWOOD C RICHARD MD  
ISLAND RADIOLOGY/NUCLEAR MEDICINE PS LTD  
MICKELWAIT JOHN SEMMES MD  
ISLAND SURGEONS PS INC  
CARNEY ROBERT EMMETT  
SHEPLER OSTEOPATHIC CLINIC  
BECKER LAWRENCE D MD  
ANACORTES FAMILY MEDICINE CLINIC  
SKAGIT SURGEONS A PROFESSIONAL CORP  
LONG WILLIAM V M D  
OSTLUND JAMES A MD  
FAIRHAVEN FAMILY MEDICINE  
RICHARD X MAGUIRE MD PS  
NORTHWEST FOOT CLINIC INC PS  
RUTHS MATERNITY/GYN CLINIC  
SKAGIT NUCLEAR MEDICINE PHYSICIANS  
NORTHWEST ORTHOPAEDIC SURGEONS INC PS  
APTER ROBERT L MD  
CORNELIUS DARRELL R MD  
GEORGE C BAUMROCKER MD FACS PS

Industry Group Name  
IC Code SIC Code Name  
Business Name

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TIMM A ZIMMERMAN MD INC PS  
HAM JAY MD  
TAVES DONALD R  
SKAGIT RADIOLOGY INC PS  
JOEL W BAKER JR MD PS  
ORTHOPAEDIC SURGERY  
EAST VALLEY MEDICAL DIAGNOSTIC CENTER  
NORTH CASCADE WOMENS CLINIC  
NORTH SKAGIT FAMILY PRACTICE PS  
ARMBRUST EARL N MD  
NORTHWEST UROLOGY CLINIC INC PS  
ANESTHESIA SERVICE INC PS  
NORTH CASCADE RADIOLOGY INC PS  
MILLER MARVIN F MD  
E-Z SLEEP  
HOUGHTON HENRY S  
RODNEY BRANDT DDS/NANNETTE CROWELL MD  
CAMMOCK EARL E MD  
WOMENS HEALTH SPECIALISTS  
LARSSON CHARLES E MD  
DARVILL FRED T JR MD  
MIKO THEODORE S DO  
POWERS ROBERT W MD & RUTH D  
HUNTER JOE E MD  
BURLINGTON FAMILY PRACTICE  
LOGEN PETER D MD

021      Offices and Clinics of Dentists

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R DAVID NOURSE DDS PS  
HOWARD M MIZUTA DDS PS  
BERG NORMAN E DDS  
BRUMMITT W J DDS  
PIHL ERIK B DDS  
SCOTT B NASH DDS MSD PS  
FLEURY GLYN A DDS  
AMANO BRIAN T DDS  
EUBANKS MICHAEL C  
DAVIS ALTON C DMD  
BILL N BETHARDS DDS PS  
PERIODONTIST  
KUEHN VON W  
HIGGINS JOSEPH P DDS  
CASCADE DENTAL  
MADDEN PHILIP W DDS  
QUESNELL LARRY J  
HOBBS THOMAS R DDS  
SARGENT GENE DMD  
PAUL R BERGMAN DDS  
PATRICK LOUGHLIN DDS PS  
RAISLER RICHARD E & KAREN A  
JOHNSON HOWARD E DDS  
OTTERHOLT DANA E DDS  
EASTHAM RICHARD M DDS  
SKAGIT PREVENTIVE DENTAL CLINIC INC PS

Industry Group Name  
IC Code SIC Code Name  
Business Name

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LAWRENCE W PIRKLE DMD PS  
RICHARD I JOHNSON DDS INC PS  
PHILIP P MIHELICH DDS PS  
HOLDEN CLARENCE E DDS  
RICHARD A BERTELSEN DMD PS  
WAYNE R WILSKIE DDS PS  
LITTLE TERRY D  
JOHN K FISCHER DDS  
EDMONDS DENNIS A DDS  
ROBERT R MURRAY DDS PS  
BORNEMAN RUSSELL F DDS  
DENNIS G COOLEY DDS PS  
MCKEE & MORRIS INC PS

062 General Medical & Surgical Hospitals

PUBLIC HOSPITAL DIST #1 SKAGIT COUNTY  
THE ISLAND HOSPITAL  
DIST #3 & #4 SKAGIT COUNTY

071 Medical Laboratories

SKAGIT PATHOLOGY INC PS  
HEART CHEK

072 Dental Laboratories

PANTOGRAPH INC  
H & M DENTAL LAB  
WHITACRE DENTAL LAB  
SKAGIT DENTAL LABORATORY  
KERN DENTAL ARTS  
JOHNSON CROWN & BRIDGE LAB  
CROMARTY DENTAL LABORATORY

221 Colleges and Universities

SKAGIT VALLEY COLLEGE

-----  
Educational & Vocational Shops

331 Job Training & Vocational Rehabilitation Services

PORTAL INDUSTRIES-NSMSC  
VOCATIONAL SERVICES NORTHWEST INC  
CHINOOK ENTERPRISES  
WORK RESOURCE CENTER

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Wholesale & Retail Sales

169 Chemicals and Allied Products, NEC

E-Z WAY INDUSTRIAL CHEMICAL CO INC

Industry Group Name  
IC Code        SIC Code Name  
Business Name

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NORTHWEST EXPLOSIVES

191       Farm Supplies

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MULDER HAY COMPANY  
ALF CHRISTIANSON SEED CO INC  
FARM SUPPLY  
GOLDEN HARVEST  
WESTERN LIME CO  
SUNSHINE RURAL SUPPLY  
SKAGIT FARMERS SUPPLY  
HANSEN & PETERSON INC  
ANACORTES FEED & PET SUPPLY COMPANY  
NORTHWEST HAY SALES  
NORTHERN LIME CO  
THE MAIN YARD  
CONWAY FEED INC  
MUNKS LIVESTOCK SLING MFG INC

131       Paint, Glass & Wallpaper Stores

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EMPIRE INDUSTRIES  
SKAGIT VALLEY GLASS & PAINT INC  
KARLS PAINTS

111       Department Stores

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THE ISLANDER  
CONCRETE DEPARTMENT STORE INC

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Graphic Arts

136       Commercial Art and Graphic Design

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G A DAVISON DRAFTING & DESIGN SERVICE  
STARK MICHAEL A  
MARTIN SPEEDY/AMERICAN ARNST  
P T L SIGN & DESIGN  
ANACORTES DRAFTING SERVICE  
ALEXANDER PRODUCTIONS  
KASPRISIN DESIGN GROUP  
BODE DESIGN ASSOCIATES  
BOVAGRAPH  
DESIGN GRAPHICS  
HOOD GRAPHICS  
DESIGNS UNLIMITED  
GABRIEL MEDIA DESIGN & CONSULTING  
KATHY PETH PHOTOGRAPHY  
HOPLEY GAIL D  
MORTENSEN ARTS  
JULIA HURD SILKSCREENING & DESIGN  
P DORAN GRAPHICS  
DESIGN SERVICES  
PEREGRINE DESIGN



Industry Group Name  
IC Code SIC Code Name  
Business Name

Boat Repair and Maintenance

32 Boat Building and Repairing

NOR-WEST MARINE  
WILLET MARINE  
GUEMES ISLAND FURNITURE & FABRICATION  
CHINOOK MARINE CORPORATION  
NORTH WEST MARINE REPAIR  
POWELL MARINE  
ROYAL MARINE FIBREGLASS  
ROZEMA BOATWORKS INC  
GREY HAVEN BOATWORKS  
QUIET COVE ENTERPRISES  
MADRONA WOODCRAFT  
MCCUSKEY DESIGNS/SKAGIT SATELLITE ENG  
ANACORTES YACHT SERVICE INC  
CARL MEINZINGER SHIPWRIGHT  
M & S INDUSTRIES  
EAGLE MARINE  
R & D ENTERPRISES BOAT REPAIR & PAINT  
BAYSIDE MARINE SERVICES  
ALON BOAT REPAIR  
BRANKO BOATS INC  
LEMOLO WOODWORKS  
FLETCHERS MARINE SERVICE  
S E CUSTOM  
TRIAD MARINE INC  
NORTH ISLAND BOAT CO  
UNDERWATER SERVICES  
THE CANVASMAN  
LESLIE MARINE SERVICE  
BEACH MASTER INC  
PERSINGER BOAT BUILDING  
ACE BOATWORKS  
THE WOODSHOP  
W A NELSON CO  
LA CONNER BOAT WORKS  
BROKEN BOAT CO  
ISLAND DIVE CO  
CHAMBERS CRAFT YACHTS INC  
ORCAS INDUSTRIES  
BUFFUM ENGINEERING & EQUIPMENT CO  
LOVRICS SEA-CRAFT  
SMITHS BOAT SHOP  
SWISHER MARINE  
FLOUNDER BAY BOAT LUMBER  
ACTION MARINE SERVICE  
LANE BOAT REPAIR  
CLEE RICHARDSON MARINE  
COE ENTERPRISES  
J MARIE ENTERPRISE  
ROBERTS CO INC

Industry Group Name  
IC Code SIC Code Name  
Business Name

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SOUTH FORK MARINA  
WILD ROSE BOAT REPAIR  
WEGLEY BOAT ENTERPRISES

93 Marinas.

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AFFORDABLE MARINE SERVICES  
FIDALGO BOAT YARD  
WASHINGTON YACHT SERVICE  
CAP SANTE MARINE LTD  
LA CONNER LANDING INC  
NORTH SOUND MARINE INC  
ANACORTES MARINE  
A B C YACHT CHARTERS INC  
DEER HARBOR MARINA  
SKYLINE MARINA INC

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Beauty Salons

31 Beauty Shops

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HAIR & CO  
BLAIR VELDA S  
PEGGYS SKYLINE STYLING  
PIERCY JANICE L  
MARILEE FOHN INC  
MAYERESON DYANNE R  
SALON CAURDAU  
SHEAR DELIGHT  
ODYSSEY HAIR DESIGN  
STUDEBAKER JANELL A  
JENKINS LYNETTE Y  
REFLECTIONS  
HAIR COUNTRY  
PEMMANT LISA R  
MIDWAY HAIR DESIGN  
MS HAIR DESIGN  
RAWLINS KIM A  
SCHUSTER BELINDA M  
FERCHEN PAT  
HAWKINGS MARY JO  
KYLE CYNTHIA A  
PIERSON TAMI R  
HUERTA LOU CINDA  
CRUSE DEBRA D  
BAKER GIDGET P  
THE HAIR SHOPPE  
JOYCES BEAUTY  
RODRIQUEZ DIANE L  
GRAHAM JAN M  
GUYS & GALS STYLING SALON  
HAASE DELORES J  
MAST DEBRA A  
TAYLOR GINGER L

Industry Group Name  
IC Code SIC Code Name  
Business Name

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SAUNDERS LAURA LEA  
ZYON INTERNATIONAL HAIR ARTISTS  
SAVANNAHS HAIR QUARTERS  
SPURGEON EMBER L  
BRUSH & COMB  
HARKNESS CHRISTIE J  
TRENDS  
PROFESSIONAL IMAGES  
FIRST IMPRESSIONS HAIR CARE ETC  
ITS HAPPENIN HAIR  
HAIRMASTERS  
ROFFLERS INTERNATIONAL WEST  
HAIR RAISERS  
SHEAR DELIGHT  
SWETT JEAN L  
CAROLS HAIR AFFAIR  
JACOBSON NANCY L  
BARBARAS TOUCH OF MAGIC  
KIM WEST SALON  
THE HAIR HUT  
FAMILY-HAIR-LOOM  
HAIRTRENDS  
HAIRQUARTERS  
ODYSSEY HAIR DESIGN  
FIDALGO HAIR CARE  
M S HAIR DESIGN  
STUDIO 331  
HAIR QUARTERS  
ODYSSEY HAIR DESIGN & TANNING  
THE MANE EVENT  
HAIR FITNESS  
HEAD LINES  
HAIR BERDASHERY  
HAIR BERDASHERY  
DODDS CINDY L  
VILLAGE BEAUTY SALON  
C J'S HAIR CARE  
YONALLY LOREE A  
HEAD LINES  
HAIR HUT  
MILLER LINDA C  
GADABOUT HAIRDRESSERS  
THE HAIR SHOPPE  
TANGLES  
STUDIO 331 STYLING SALON  
BELIEL SANDRA E  
MOUNTAIN GLEN BEAUTY SALON  
BOND TAMERA K  
HEADLILNES  
PATSY LEVAGUE-COSMETOLOGY SERVICES  
SALON CARDEAU  
THE HAIRITAGE SALON  
HAIR HUT  
THE ULTIMATE  
MAUPIN MARY

Industry Group Name  
IC Code SIC Code Name  
Business Name

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COUNTRY CLASS  
HERTZ JEANIE M  
ESTABROOK MARGARET A  
LYLE ALICE R  
HAIR MASSTERS  
COOKS COUNTRY CURL  
VICS HAIR SALOON  
HAIR FITNESS  
PAIGES BEAUTY SHOP  
ENSLEY TAMMY  
NASH AUDREY R  
STUDIO 331 STYLING SALON  
VICS HAIR SALOON  
DEAN SUE  
KUIPERS MARY  
FAMILY HAIR LOOM  
A CUT ABOVE  
SEVENTH STREET SALON  
MOORS ALETA M  
LINDAS STYLE  
ENGEN-STEWART TERRI M  
ARNOLD LANA  
KAHNS GINA R  
POUDRE PUFF BEAUTY SALON  
THE HAIR SQUARE  
FLANARY CRISTI R  
THE HAIR SHOPPE  
HAIR CONNECTION  
REICHLIN JANICE K  
MRS G'S HAIR STYLING  
MONROES SALON  
DODD NONA L  
SELECT STYLING  
BOYD DEBBIE G  
FABER PAMELA R  
HAIR FACTORY  
ANDERSON MELISSA L  
ELLIES HAIR FAIR ULTEMENT IN HAIR CARE  
PURPLE PLUM  
PURPLE PLUM  
PURPLE PLUM  
PURPLE PLUM  
PURPLE PLUM  
MILLIES BEAUTY SALON  
TRENDS  
CHADWICK HAIR  
GRACES BEAUTY SALON  
BEAUTY MARTE  
BUNNYS BEAUTY SHOP  
GUYS & GALS STYLING SALON  
CALLAHAN JUDITH A  
BETTYS BEAUTY SALON  
GADABOUT HAIRDRESSERS  
IMAGE HAIR DESIGN  
HAIR COUNTRY

Industry Group Name  
IC Code SIC Code Name  
Business Name

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PAULS BARBER SHOP  
HELENS BEAUTY SALON  
SONDRAS  
HAIR-BERDASHERY  
GILBERT LINDA L  
HAIRBENDERS  
MARLENES BEAUTY VIEW  
PHYLS BEAUTY SHOP  
TOWN & COUNTRY BEAUTY SALON  
HAIR & CO  
HAIR & CO  
JUDYS BEAUTY SALON  
VIVIAN'S BEAUTY SHOP  
HAIR AND CO  
HAIRBENDERS  
LINDAS BEAUTY SHOP  
HOME BUILDERS  
THE PURPLE PLUM BEAUTY SALON  
COUNTRY COIFFURES  
LEATHAS STYLING SALON  
STUDIO 331 STYLING SALON  
BLADES CAMANO BEAUTY SALON  
SKINNER SANDRA L  
BODY SECRETS  
NORTHWEST HAIR COMPANY

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APPENDIX C

CHARACTERIZATION OF HAZARDOUS MATERIALS  
BY INDUSTRY TYPE

## APPENDIX C

### CHARACTERIZATION OF HAZARDOUS MATERIALS BY INDUSTRY TYPE

ADAPTED FROM BROCHURES DISTRIBUTED BY THE  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### STRONG ACID/ALKALINE WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Acetic Acid	Acetic Acid, C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>	Metal Manufacturers
Ammonium Hydroxide	Ammonium hydroxide, NH <sub>4</sub> OH, Spirit of Hart- shorn, Aqua ammonia	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Formulators, Chemical Manufacturers, Paper Industry, Leather Products Manufacturers, Cleaning Agents and Cosme- tics Manufacturing, Metal Manufacturing
Chromic Acid	Chromic Acid	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Cleaning Agents and Cosmetic Manufacturers, Metal Manufactures
Corrosive Liquids	Corrosive Liquids	Paper Industry, Leather Products Manufacturers
Corrosive Solids	Corrosive Solids	Paper Industry, Leather Products Manufacturers

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Hydrobromic Acid	Hydrobromic Acid, HBr	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Formulators, Printing and Allied Indus- tries, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetics Manufacturing, Metal Manufacturing
Hydrochloric Acid	Hydrochloric Acid, HCl, Muriatic Acid	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetic Manufacturing, Metal Manufacturing
Hydrofluoric Acid	Hydrofluoric Acid, HF, Fluorohydric Acid	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Formulators, Chemical Manufacturers, Paper Industry, Leather Products Manufacturers, Cleaning Agents and Cosme- tics Manufacturing, Metal Manufacturing
Nitrates	Nitrates	Metal Manufacturers
Nitric Acid	Nitric Acid, HNO <sub>3</sub> Aquafortis	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetic Manufacturing, Metal Manufacturing



<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Perchloric Acid	Perchloric Acid, $\text{HClO}_4$	Metal Manufacturers
Phosphoric Acid	Phosphoric Acid, $\text{H}_3\text{PO}_4$ , Orthophosphoric Acid	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetic Manufacturing, Metal Manufacturing
Potassium Hydroxide	Potassium Hydroxide, KOH, Potassium Hydrate, Caustic Potash, Potassa	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Formulators, Chemical Manufacturers, Paper Industry, Leather Products Manufacturers, Cleaning Agents and Cosme- tics Manufacturing, Metal Manufacturing
Sodium Hydroxide	Sodium Hydroxide, NaOH, Caustic Soda, Soda Lye, Sodium Hydrate	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetic Manufacturing, Metal Manufacturing
Sulfuric Acid	Sulfuric Acid, $\text{H}_2\text{SO}_4$ , Oil of Vitriol	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Paper Industry, Lea- ther Products Manufac- turers, Cleaning Agents and Cosmetic Manufacturing, Metal Manufacturing

## IGNITABLE WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Ignitable Wastes, Aromatic Hydrocarbons, Petroleum Distillates	Carburetor Cleaners, ignitable wastes, Petroleum Distillates, Solvents, Alcohol	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Printing and Allied Industries, Formula- tors, Chemical Manufac- turers, Cleaning Agents and Cosmetic Manufacturers, Metal Manufactures, Furni- ture/Wood Manufacturing and Refinishing

## IGNITABLE PAINT WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Benzene	Benzene	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing
Chlorobenzene	Chlorobenzene, Mono- chlorobenzene, Phenyl- chloride	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing, Paper Industry, Leather Products Manufac- turers
Combustible Liquids	Combustible Liquids	Paper Industry, Leather Products Manufacturers
Ethyl Benzene	Ethyl Benzene	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Ethylene Dichloride	Ethylene Dichloride, 1,2-Dichloroethane	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing, Paper Industry, Leather Products Manufac- turers
Flammable Liquids	Flammable Liquids	Paper Industry, Leather Products Manufacturers
Methyl Ethyl Ketone	Methyl Ethyl Ketone, MEK, Methyl Acetone, Meetco, Butanone, Ethyl Methyl Ketone	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing, Paper Industry, Leather Products Manufac- turers
Toluene	Toluene	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Furniture/ Wood Manufacturing and Refinishing

#### SPENT SOLVENTS AND STILL BOTTOMS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Acetone	Acetone	Formulators, Chemical Manufacturers, Furniture/ Wood Manufacturing and Refinishing, Metal Manu- facturers
Benzene	Benzene	Chemical Manufacturers, Formulators, Furniture/ Wood Manufacturing and Refinishing, Cleaning Agents and Cosmetic Manu- facturers, Metal Manufac- turers
n-Butyl Acetate	Butyl Acetate	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Butyl Alcohol	n-Butyl Alcohol, sec-Butyl Alcohol, tert-Butyl Alcohol	Metal Manufacturers
Carbon Tetrachloride	Carbon Tetrachloride, Perchloromethane, Necatorina, Benzino- form, CCl <sub>4</sub> , Tetraform, Carbona, Halon 104	Printing and Allied Indus- tries, Metal Manufacturers
Chlorobenzene	Chlorobenzene, Mono- chlorobenzene, Phenyl- chloride	Cleaning Agents and Cos- metic Manufacturers
Chloroform	Chloroform	Metal Manufacturers
Dichlorobenzene	o-Dichlorobenzene	Metal Manufacturers
Ethanol	Ethanol, Ethyl Alcohol	Printing and Allied Indus- tries, Formulators, Chemical Manufacturers, Furniture/ Wood Manufacturing and Refinishing, Cleaning Agents and Cosmetic Manu- facturers
Ethyl Acetate	Ethyl Acetate	Formulators
Ethyl Benzene	Ethyl Benzene	Printing and Allied Indus- tries, Chemical Manufac- turers, Cleaning Agents and Cosmetic Manufacturers
Ethylene Dichloride	Ethylene Dichloride, 1,2-Dichloroethane	Cleaning Agents and Cos- metic Manufacturers
Glycol Ethers	May include numerous compounds including Diethylene Glycol and Hexlene Glycol	Formulators
Heptane	Heptane	Formulators
Hexane	Hexane	Formulators
Isopropyl Acetate	Isopropyl Acetate	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Isopropyl Alcohol	Isopropyl Alcohol, Isopropanol	Formulators, Cleaning Agents and Cosmetic Manufacturers, Chemical Manufacturers
Kerosene	Kerosene, Fuel Oil #1	Chemical Manufacturers, Furniture/Wood Manufacturing and Refinishing, Metal Manufacturing
Methyl Alcohol	Methyl Alcohol, Methanol	Formulators, Cleaning Agents and Cosmetic Manufacturers
Methylene Chloride	Methylene Chloride, Dichloromethane, Methane Dichloride, Methylene Bichloride, Methylene Dichloride, Solaesthin, Aerothane NM, Narkotil, Solmethine	Printing and Allied Industries, Formulators, Chemical Manufacturers, Furniture/Wood Manufacturing and Refinishing, Metal Manufacturers, Textile Manufacturing
Methyl Ethyl Ketone	Methyl Ethyl Ketone, MEK	Chemical Manufacturers, Cleaning Agents and Cosmetic Manufacturers, Metal Manufacturers
Methyl Isobutyl Ketone	MIBK	Formulators
1,1,1-Trichloroethane	Aeothane TT, Chlorlen, Chloroethene, Methylchloroform, Alpha T, Chlorotene	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Chemical Manufacturers, Furniture/Wood Manufacturing and Refinishing, Cleaning Agents and Cosmetic Manufacturers, Metal Manufacturers, Textile Manufacturing
Perchloroethylene	Tetrachloroethylene, Perc, Trielin, Vestrol, Tetralox, Perawin, Terlen, Didakene, TetraCap, Antisal 1, Fedad-UN, Neme, Gemalgene, Perm-A-Clor, TCE, Benzinol, Dow-Tri	Metal Manufacturers, Dry Cleaning and Laundry Plants

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Petroleum Distillates	Petroleum Distillates	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Paper Indus- try, Leather Products Manu- facturers, Cleaning Agent and Cosmetic Manufacturers
Petroleum Solvents	Petroleum Solvents, Naphtha	Dry Cleaning and Laundry Plants
Propyl Alcohol	Propyl Alcohol, Propanol	Formulators
Tetrahydrofuran	Tetrahydrofuran, THF	Chemical Manufacturers
Toluene	Toluene, Methacide, Methylbenzene, Methyl- benzol, Phenylmethane, Toluol, Antisal 1A	Formulators, Chemical Manufacturers, Furniture/ Wood Manufacturing and Refinishing, Cleaning Agents and Cosmetic Manu- facturers, Metal Manufac- turers, Textile Manufac- turing
Toluene Diisocyanate	Toluene Diisocyanate	Chemical Manufacturers
Trichloroethylene	Trichloroethylene, TCE, Perm-A-Chlor, Trielin, Triline, Triol, Vestrol, Chlorylene, Dow-Tri, Vitran, Nialk, Philex	Formulators, Chemical Manufacturers, Metal Manufacturers, Textile Manufacturing
Trichlorotrifluoro- ethane	Fluorocarbon 113, Freon 113, Ucon 113, Freon TF, Frigen 113, 113TR-T, Arcton 63	Metal Manufacturers
Trichlorotrifluoro- methane	Eskimon 11, Uncon 11, Isotron 11, Freon 11, Freon MF, Fluorochloro- form, Arcton 9	Metal Manufacturers
Valclene	Valclene	Dry Cleaning and Laundry Plants

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
White Spirits	White Spirits, Varsol, Mineral Spirits, Naphtha	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Chemical Manufacturers, Furniture/ Wood Manufacturing and Refinishing, Cleaning Agents and Cosmetic Manu- facturers, Metal Manufac- turers
Xylene	Xylene, Xylol	Formulators, Cleaning Agents and Cosmetic Manu- facturers, Metal Manufac- turers, Chemical Manufac- tures

#### LEAD ACID BATTERIES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Lead Acid Batteries	Lead Acid Batteries	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation

#### PAINT WASTES WITH HEAVY METALS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Paint Wastes with Heavy Metal, Lead, Nickel, Chromium	Heavy Metal Paint	Vehicle Maintenance, Equipment Repair, Motor Freight Terminals/Railroad Transportation, Paper Indus- try, Leather Product Manu- facturers, Ship Repair Faci- lities

### HEAVY METAL DUSTS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Heavy Metal Soaps	Heavy Metal Soaps Containing; Silver, Calcium, Chromate, Selenium, Barium, Cadmium, Mercury, Lead, Chromium, Nickel	Cleaning Agents and Cosmetic Manufacturers

### INK WITH SOLVENTS OR HEAVY METALS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Waste Ink	Various Constituent Solvents: Carbon Tetrachloride, Chloroform, Methylene Chloride, 1,1,1-Trichloroethane, 1,2-Dichloroethane, Benzene, Toluene, Ethyl Benzene, Tetrachloroethylene, Trichloroethylene. Various Constituents from Pigments: Chromium, Copper, Lead, Zinc, Cyanide, Aluminum, Cadmium, Nickel, Cobalt	Printing and Allied Industries

### WOOD PRESERVING

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Ammoniacal Copper Arsenate	Ammoniacal Copper Arsenate	Wood Preserving
Chromated Copper Arsenate	Chromated Copper Arsenate	Wood Preserving
Creosote	Creosote	Wood Preserving
Pentachlorophenol	Pentachlorophenol, Penta	Wood Preserving



### OTHER REACTIVE WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Acetyl Chloride	Acetyl Chloride	Metal Manufacturers
Hypochlorites	Sodium Hypochlorite, NaOCl, Hypochlorous Acid, Clorox, Dazzle, Antiformin	Formulators, Chemical Manufacturers, Metal Manufacturers
Organic Peroxides	Organic Peroxides	Formulators, Chemical Manufacturers, Metal Manufacturers
Perchlorates	Irenat, Periodin, Per- chlorocap	Formulators, Chemical Manufacturers, Metal Manufacturers
Permanganates	Permanganic Acid, Potassium Salt, Chameleon Mineral	Formulators, Chemical Manufacturers, Metal Manufacturers
Sulfides	Potassium Monosulfide, K <sub>2</sub> S, Sodium Sulfuret, Na <sub>2</sub> S	Formulators, Chemical Manufacturers, Metal Manufacturers

### USED OILS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Used Oil	Dodge Combo MP8, Texaco Cleartex-D, Mobil Omicron, Shell Tellus, Welbube A-307, Eppert 204, Sunvis 931, Solene, Mobilmet Omicron	Metal Manufacturers

### EMISSION CONTROL DUSTS AND SLUDGES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Flue Dusts From Degassing Agents Used In Glass Production	Heavy Metal Dust Con- taining Arsenic, Barium, Cadmium, Chromium, Mercury, Lead, Silver, and/or Zinc	Chemical Manufacturers

### SPENT CATALYSTS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Waste Heavy Metal Catalysts From Plastic Materials, synthetic spinning and polymerization	Heavy Metal Sludges With Organics Containing Antimony, Cadmium, Cobalt, Manganese, and/or Zinc	Chemical Manufacturers

### SPENT PLATING WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Spent Plating Waste	Spent Acid, Alkaline and Cyanide Plating Solutions and Sludges	Metal Manufacturers

### HEAVY METAL WASTEWATER SLUDGES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Heavy Metal Wastewater Sludges	Sludges From Wastewater Treatment, Grinding, Tank Clean Outs, Dust Collectors, and Lead Pots	Metal Manufacturers

### CYANIDE WASTES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Cyanide Waste	Spent Cyanide, Hardening and Cleaning Solutions, Sludges From Quench and Wash Tanks	Metal Manufacturers

### PESTICIDES CONTAINING ARSENIC

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Arsenic Pentoxide	Arsenic Acid Anhydride, Arsenic (V) Oxide	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Arsenic Trioxide	Arsenic Sesquioxide, Arsenic (III) Oxide, Arsenous Acid (anhydride), White Arsenic	Formulators
Cacodylic Acid	Hydroxydimethylarsine Oxide, Dimethylarsenic Acid, Phytar	Formulators
Disodium Monomethanearsenate	DSMA, Ansar 8100, Ar- rhenal, Arsinyll, Dinat, Di-Tac, DMA, Methar 30, Sodar, Versar, DSMA-LQ, Weed-E-Rad 360	Formulators
Monosodium Methanearsenate	MSMA, Ansar 170 H.C. & 529 H.C., Arsanote Liquid, Bueno 6, Daconate 6, Dal-E-Rad, Herb-All, Merge 823, Mesamate, Monate, Trans- Vert, Weed-E-Rad, Weed-Hoe	Formulators

#### PESTICIDES CONTAINING CARBAMATES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Temik	Aldicarb, OMS 771, UC 21149	Formulators

#### PESTICIDES CONTAINING MERCURY

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
2-Methoxyethylmercuric Chloride	MEMC, Agallol, Cekusil, Universal-C, Ceresan- Universal-Nassbeize, Emisan 6	Formulators
Phenylmercuric acetate	PMA, PMAS, Agrosan, Cekusil, Celmer, Gallotox, Hong Nien, Liquiphene, Mersolite, Pamisan, Phix, Seedtox, Shimmer-ex, Tag HL 331	Formulators

### PESTICIDES CONTAINING NICOTINE

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Nicotine	Black Leaf 40	Formulators

### PESTICIDES CONTAINING SUBSTITUTED NITROPHENOLS

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Dinitrocresol	DNC, DNOC, Chemsect, Detal, Elgetol 30, Nitrador, Selinon, Sinox, Trifocide, Trifrina	Formulators
Dinoseb	DNBP, Basanite, Caldon, Chemox General, Chemox PE, Dinitro, Dinitro General, Dynamite, Elgetol 318, Gebutox, Hel-Fire, Nitropone C, Premerge 3, Sinox General, Subtex, Vertac General Weed Killer, Vertac Selective Weed Killer	Formulators

### ORGANOPHOSPHATE PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Dimethoate	AC-12880, Bi 58 EC, Cekuthoae, Cygon, Daphene, De-Fend, Demos-L40, Devigon, Dimet, Dimethogen, Perfekthion, Rebelate, Rogodial, Rogor, Roxion, Trimetion	Formulators
Disulfoton	BAY 19639 and S276, Dithiodemeton, Dithio- systox, Di-Syston, Ethylthiodemeton, Frumin AL, M-74, Solvirex, Thiodemeton	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Famphur	Bash, Bo-Ana, Dovip, Famfos, Warbex	Formulators
Methyl Parathion	Cekumethion, E-601, Devithion, Folidol M, Fosferno M50, Gearphos, Metacide, Metaphos, Nitrox 80, Parataf M, Pennacap-M, Wofatox	Formulators
Parathion	AC-3422, Alkron, Alleron Aphamite, Bladan, Corothion, E-605, ENT 15108, Ethyl Parathion, Etilon, Folidol E-605, Fosferno 50, Niran, Orthophos, Panthion, Paramar, Paraphos, Parathene, Parawet, Phoskil, Rhodiattox, Soprathion, Stathion, Thiophos	Formulators

#### STRYCHNINE PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Strychnine	Strychnine Salts	Formulators

#### THALLIUM SULFATE PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Thallium Sulfate	Thallous Sulfate, Ratox, Zelio	Formulators

### TRIAZINE PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Amitrol	Amerol, Amino Triazol Weedkiller 90, Amizol, AT-90, AT Liquid, Azolan, Azole, Cytrol, Diurol, Farmco herbizole, Simazol, Weedazol, Weedazol TL	Formulators

### PHENOXY PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
2,4,-D	Amoxome, Brush Killer, Brush-Rhap, Chloroxone, Crop Rider, D50, DMA 4, Dacamine, Ded-Weed, Des- ormone, Dinoxol, Emuls- amine BK and E3, Envert DT and 171, Hedonal, Mira- cle, Pennamine D, Rhodia, Salvo, Super-D-Weedone, Verton, Visko-Rhap, Weed Tox, Weed-B-Gone, Weed Rhap, Weedar, Weedone, Weedtrol	Formulators
2,4,5-T	Brush-Rhap, Dacamine, Ded-Weedone, Esteron, Farmco Fence Rider, For- ron, Inverton 245, Line Rider, Super D Weedone, Tormona, Transamine, U46, Veon 245, Weedar, Weedone	Formulators
Silvex	2,4,5-TP, Fenoprop, Aqua- Vex, Double Strength, Fruitone T, Kuron, Kurosal, Silvi-Rhap, Weed-B-Gone	Formulators

### ORGANOCHLORINE PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Aldrin	HHDN, Aldrex 30, Aldrite, Aldrosol, Alttox, Drinox, Octalene, Seedrin Liquid	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Chlordane	Belt, Chlordan, ChlorKil, Chlortox, Gold Crest C-100, Kypchlor, Vesicol 1086, Topiclor 20, Niran, Octachlor, Octa-Klor, Ortho-Klor, Synklor, Termi-Ded	Formulators
DDT	Dedelo, Didimic, Digmar, Genitox, Gyron, Hildit, Kopsol, Neocid, Pentachlorin, Rukseam, Zerdane	Formulators
Dichloropropene	1,3-Dichloropropene, Telone II, Soil Fumigant	Formulators
Dieldrin	Dieldrex, Dieldrite, Octalox, Panoram D-31	Formulators
Endrin	Endrex, Hexadrin	Formulators
Endosulfan	Beosit, Chlothiepin, Crisulfan, Cycloclan, Endocel, En-Sure, FMC 5462, Hildan, Hoe 2671, Malix, Thifor, Thimul, Thiodan, Thiofor, Thionex, Tiovel	Formulators
Heptachlor	Gold Crest H-60, Drinox H-34, Heptamul, Heptox	Formulators
Kepone	Chlordecone, GC 1189	Formulators
Lindane	Exgama, Forlin, Gallogama, Gamaphex, Gammex, Inexit, Isotox, Lindafor, Lindagram, Lindagrain, Lindagranox, Lindalo, Lindamul, Linda- poudre, Lindaterra, Novigam, Silvanol	Formulators
Methoxychlor	Flo Pro McSeed Protectant, Marlata	Formulators

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
Propylene Dichloride	1,2-Dichloropropane	Formulators
Toxaphene	Attac 4-2, 4-4,6, 6-3, 8, Camphochlor, Motox, Phenatox, Strobane T-90, Toxakil, Toxon 63	Formulators

#### OTHER PESTICIDES

<u>Waste Type</u>	<u>Designations/ Trade name</u>	<u>Industry Types Producing Waste</u>
1,2-Dibromo- 3-Chloropropane	DBCP, Nemaforme, Nema- nox, Nemaset, Nematocide	Formulators
Hexachlorobenzene	Perchlorobenzene, Anti- carie, Ceku C.B., HCB, No Bunt	Formulators
Pentachlorophenol	PCP, Penta, Pentachlor, Pentacon, Penwar, Sinituho, Santophen	Formulators
Pentachloronitrobenzene	PCNB, Avicol, Botrilex, Brassicol, Earthcide, Folosan, Kobu, Pentagen, Saniclor 30, Terraclor, Tilcarex, Tritisan	Formulators
Thiram	TMTD, AAtack, Arasan, Aules, Evershield T Seed Protectant, Fermide 850, Fernasan, Flo Pro T Seed Protectant, Hexathir, Mercuram, Nomersan, Pomarsolfrote, Polyram-Ultra, Spottrete-F, Tetrapom, Thimer, Thioknock, Thiotex, Thiramad, Thirasan, Thiu- ramin, Tirampa, Trametam, Tripomol, Thylate, Tuads, Vancide TM	Formulators
Warfarin	Co-Rax, Cov-R-Tox, Kypfarin, Liqua-Tox, RAX, Rodex, Rodex Blox, Tox-Hid	Formulators



APPENDIX D  
LOCAL HAZARDOUS WASTE PROGRAM ELEMENTS

SUMMARY LIST  
LOCAL HAZARDOUS WASTE PROGRAM ALTERNATIVES

Local Hazardous Waste Characterization Programs

1. Standardized Sorting Procedures
2. Collect Sort Data
3. Wastewater Treatment Plant Sampling
4. Survey Local Businesses
5. Incinerator Emission Monitoring
6. Rural Groundwater Monitoring

Public Information and Education Programs

7. General Public Information
8. School Programs
9. Point of Sale Information
10. Product Labeling Program
11. Information Phone Lines
12. Garbage Can Labeling
13. Citizens Waste Treatment
14. Education at Disposal Sites
15. Product Substitution
16. Storm Drain Awareness Program
17. SQG Education
18. County Staff Work Session
19. Existing Materials Collection
20. Health Department Mailings
21. Public Appearances

Regulatory and Enforcement Programs

22. Load-Checking
23. Asbestos Abatement Program
24. Asbestos Enforcement
25. Local Hazardous Waste Ordinances
26. Local Sewer Pretreatment Ordinance
27. Septic Tank Ordinance
28. Product Bans
29. Trouble Call System

Local Hazardous Waste Disposal Options

30. HHW Collection Sites
31. HHW Collection Days
32. Pick-up Service
33. Private TSD Facilities for HHW
34. Used Motor Oil Recycling
35. Battery Collection Program
36. Point of Sale Recycling
37. Citizens Waste Exchanges
38. Freon Recovery and Recycling

Small Quantity Generator Programs

39. SQG Technical Assistance
40. Existing Waste Exchange Programs
41. Permanent TSD Collection Facilities for SQGs
42. SQG Clearinghouse Programs
43. Milk Run Program
44. SQG Identification and Reporting System
45. Hazardous Waste Management Incentives
46. Surveillance Programs
47. Uniform Regulations
48. On-Site Consultation
49. Intern Program
50. Research Grants

Employee Safety and Training

51. Safety Programs
52. Periodic Testing at Waste Facilities
53. Evacuation Plan
54. Asbestos Handling Procedures
55. Hazardous Waste Recognition Classes
56. Spill Response Procedures

## LOCAL HAZARDOUS WASTE PROGRAM ELEMENTS

### LOCAL HAZARDOUS WASTE CHARACTERIZATION PROGRAMS

#### 1. Standardized Sorting Procedures

This program involves standardizing procedures and protocols for all local solid waste sorts to target potential hazardous waste streams. Solid waste sorts would be specifically aimed at characterizing quantity, composition, source, and disposal methods for local hazardous waste in the solid waste stream.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible

#### 2. Collect Sort Data

This program involves collecting and evaluating new solid waste sort data as it becomes available nationwide.

Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.25 FTE/year)	\$10,000
Supplies	\$ 1,000

#### 3. Wastewater Treatment Plant Sampling

Sample and analyze influent to and effluent from the wastewater treatment plants for hazardous waste constituents that may adversely affect receiving waters. Use existing treatment plant staff to collect samples. Costs are primarily costs for lab work.

This program element was ELIMINATED from this plan because wastewater treatment plants are already monitored and regulated by Ecology and the EPA. Sampling and testing schedules and procedures are dictated by the N.P.D.E.S. permits. Additional sampling and testing for this plan could amount to overkill and be a burden on treatment plant staff. However, if a specific problem were to occur with hazardous wastes in the wastewater system, additional monitoring could be implemented to identify and alleviate that problem.

#### 4. Survey Local Businesses

Conduct an on-site survey of every SQG in the County (including farms) every five years over the next 20 years to determine changes in both types and quantities of hazardous waste generated and in hazardous waste management practices to evaluate the effectiveness of implemented programs. Surveyed SQGs would be given specific information and technical assistance to improve waste management practices. The survey would follow a standardized procedure. The SQG would be given a period of time in which to institute changes. Proper management of SQG wastes by more businesses would result in increased worker safety, as well as public health and environmental benefits.

Responsible agency: Skagit County Health Dept.

Costs: Additional personnel

1 to 5 FTEs	\$30,000/year each
Admin./Supplies	\$10,000/year

5. Incinerator Emission Monitoring

Continue monitoring of the incinerator emissions from the stack and hazardous constituents (metals) in the ash. Use information to target specific waste streams (such as batteries) that may be contributing to unacceptable concentrations in the air and ash.

Responsible agency: Skagit County Public Works and Health Depts.

Costs: No new incremental costs

6. Rural Groundwater Monitoring Program

Establish a rural groundwater monitoring program to identify hazardous constituents that are migrating into rural water supplies. Performing quarterly groundwater monitoring adjacent to the County's closed sanitary landfills will help to assure that the groundwater utilized by the public meets drinking water standards. The information from this monitoring program can be used to focus control efforts on waste streams that could be contributing to problems in rural water supplies.

Responsible agency: Skagit Co. Health Dept.

Costs: Sample 10 to 30 wells per year x \$1,000/sample + labor

Total costs = \$15,000 to \$45,000 per year

PUBLIC INFORMATION AND EDUCATION PROGRAMS

7. General Public Information

The Skagit County Public Works and Health Departments would provide information about proper disposal of HHW, recycling, waste reduction, and other issues. The goal of this program would be to bring about a long-term change in consumer behavior by educating the public to recycle, to dispose of wastes properly, and to buy and use products that do not contain hazardous constituents. Program strategies and activities may include:

- development and dissemination of printed materials, such as posters, fact sheets, flyers, brochures, booklets, utility bill inserts, and bus placards;
- development of durable traveling displays, slide shows, and videos for presentations and workshops;

- communication with reporters and producers, writing a newspaper column or series of feature articles, staging media events, production and distribution of PSAs or paid advertisements, regular appearances on radio or TV talk shows; and
- special events.

Many education programs such as dissemination of written materials, telephone hot line, video cassettes, and portable exhibits are already being implemented by the Washington Department of Ecology. Increased publicity would facilitate greater utilization of these services at the local level.

Responsible agency: Skagit County Public Works and Health Depts.

Costs: A complete education program which includes all of the items listed above could involve one FTE, estimated at \$40,000 per year. Additional materials and production costs might be estimated at \$15,000 to \$20,000 for the first year (and less for subsequent years). Total costs may be roughly estimated at \$60,000 for the first year. It should be noted, however, that which items are implemented could greatly influence the overall cost estimate.

## 8. School Programs

Promote education at the grade, middle, and high school levels identifying hazardous household products and safe disposal practices. Encourage use of curriculum prepared by the State. This program would require:

- Potential modifications to the state curriculum to make it applicable with the Skagit School systems.
- Potential incorporation of the textbook produced by The Toxic Substances Education Group (affiliated with Huxley College of Environmental Studies in Bellingham, Washington) for junior high school students.
- Teacher training and workshops to prepare teachers to use curricula.
- In-school programs, including traveling presentations on HHW alone or in conjunction with other environmental topics such as water quality, recycling, etc.

Skagit County has six school districts that would need to be approached separately.

Responsible agency: Skagit County Public Works Dept. or the SCOG or local school districts

Costs: Staff 1 FTE	\$40,000
Admin./Supplies	\$10,000
Workshop presentations	\$20,000
Curricula modifications	\$10,000
Travel expenses	\$ 5,000
Teacher training	\$10,000

#### 9. Point of Sale Information

Lobby state to require information at the point of sale that identifies products containing potentially hazardous substances and instructions for their proper use and disposal.

Responsible agency: The SCOG

Costs: Staff (0.25 FTE/year)                      \$10,000/year for 5 years maximum

#### 10. Product Labeling Program

Lobby State for a product labeling program that educates and informs the public about the use and disposal of hazardous products. Labels can be used to identify less-hazardous products to enable consumers to make informed purchase decisions and to inform about proper disposal.

Labeling products would require state or federal legislation, as local ordinances are ineffective for products made out-of-state. Such requirements might be construed to conflict with the Commerce Clause of the U.S. Constitution which prohibits the enactment of laws that interfere with the free flow of goods in interstate commerce. Manufacturers may view marking their product libelous; therefore, liability may be an issue. Labeling on shelves can be mandated at the local level but would be more effective if mandated at the state level.

Responsible agency: Skagit County Health Dept. or the SCOG

Costs: Staff (0.25 FTE/year)                      \$10,000/year for 5 years maximum

#### 11. Information Phone Lines

Hazardous waste telephone information lines could provide the public with access to information about hazardous wastes, identification of products that are hazardous, product alternatives, and proper disposal methods. This program could include a local phone line operated by Skagit County Public Works, the County Health Department or a volunteer organization. Alternatively, just by increased advertising, the County could piggy-back on the state-wide 800 number hazardous waste and recycling hot lines.

Responsible agency: Skagit County Public Works or Health Depts.

Costs: No costs, if a volunteer organization operated the line or if the County piggy-backed on the state-wide 800 number. Costs for the County would be dependent on the number of trained staff answering the phone line. Costs for a 1 FTE program are:

Staff (per FTE)	\$40,000
Admin./Supplies	\$ 5,000
Telephone	\$ 1,000

#### 12. Garbage Can Labeling

A sticker would be affixed to all garbage cans and residential dumpsters stating that hazardous household chemicals should not be dumped in the trash. The sticker could refer readers to an information phone line number for more information on appropriate disposal options. These stickers could be mailed out to the homeowners with the garbage bill or applied by the collection companies.

Responsible agency: Skagit County Public Works Dept.

Cost: Approx. 25,000 stickers @ \$.25/ea      \$6,250 every 2 to 3 years

#### 13. Citizens Waste Treatment

Using the education and information programs listed above, encourage citizens to treat specific wastes at home. For example, solvents such as paint thinner may be reused until they are gone by allowing particles to settle out and transferring the solvent to another container. The thinner may be used again and the remaining dried out particulate matter may be disposed in the trash.

Responsible agency: Skagit County Health Dept.

Costs: Incremental costs would be negligible, and could be included in Program Element 7, General Public Education

#### 14. Education at Disposal Sites

This program involves education and information at solid waste disposal sites that may be receiving hazardous substances. Sites might include the transfer station, collection boxes, the landfill, the incinerator, and recycling centers. Signs and literature on proper waste disposal and waste minimization would be available to the public. Solid waste facility staff would be trained to inform self-haulers of appropriate disposal methods for HHW.

Responsible agency: Skagit County Public Works Dept.

Costs: 1 self-serve kiosk	\$2,000
Staff training (per site)	\$7,000
Annual retraining	\$3,300

15. Product Substitution

Increase public education and information programs that focus on safe product substitution and less toxic alternatives. Develop and fund an ongoing outreach program that promotes changes in consumer product use.

Responsible agency: Skagit County Health Dept.

Costs: No incremental costs. Include in Program Element 7, General Public Education

16. Storm Drain Awareness Program

Implement local storm drain stencil projects (painting "no dump" messages next to storm grates). Encourage volunteer programs in concert with local jurisdictions. Develop and fund a public awareness program aimed at "storm drain awareness" to reduce out-of-sight-out-of-mind dumping.

Responsible agency: Skagit County Health Dept. or local sewer utilities

Costs: No labor cost for stencil project - uses volunteers. Costs for materials would be approximately \$1,000 per year. Public awareness program can be included in Program Element 7, General Public Education

17. SQG Education (Duplicate of 39 - SQG Technical Assistance)

This would be an on-going education program designed to provide information to businesses about waste reduction, recycling, and proper disposal methods for hazardous wastes. The program would involve producing and distributing fact sheets, a self-audit form, and a disposal and recycling directory; promoting use of hazardous waste collection facilities; and conducting an awards program for businesses with excellent hazardous waste management practices.

The self-audit form would provide a guide to businesses looking for ways of reducing or better managing their hazardous wastes. The form helps business owners examine the materials they use, the wastes they generate, and their industrial processes, so that they can identify areas for improvement with regard to waste management.

An awards program would be designed to recognize and publicize the hazardous waste reduction and management achievements of small businesses in the county. The goal of the program would be to provide an incentive for businesses to institute innovative waste reduction and management steps.

This SQG Education Program could also utilize interns from local colleges and universities to assist in implementation. The implementation of this education task could also be accomplished with help from local professional groups and community groups such as Chamber of Commerce, Rotary, and Elks.



Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.5 FTE)	\$20,000
Fact sheets and brochures	\$ 5,000
Self-audit forms	\$ 1,000
Disposal directory publication/mailing	\$ 1,000
Business awards program	\$ 5,000

#### 18. County Staff Work Session

Develop and present the hazardous waste plan to a joint meeting of County staff. Work with staff to arrive at a definition of roles and responsibilities and opportunities for education of the public during the normal course of their jobs. Focus on piggybacking on existing programs, such as oil and battery collection. Each staff person should know that there is a Hazardous Waste Plan, and what the County goals are for moderate risk hazardous waste management. A variation of this work session could be presented to representatives of the other jurisdictions within the County.

Responsible agency: Skagit County Public Works Dept. or the SCOG

Costs: Approximately \$2,000 per work session x 4 sessions/year during the first year and 2 sessions/year for the next four years.

Total Costs = \$8,000 for first year  
\$4,000 per year for the next four years

#### 19. Existing Materials Collection

Gather multiple copies of existing documents, flyers, news articles, pamphlets, videos, and curriculum guides created by other jurisdictions outside of Skagit County including King County, Seattle/King County METRO, the Department of Ecology, EPA and others. Advertise the existence of this repository and maintain access to County officials, the public, businesses, and representatives of other jurisdictions within the County. This repository could be maintained at a public library, or in the County offices.

Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.25 FTE)	\$10,000
Supplies	\$ 1,000

#### 20. Health Department Mailings

Commitment and motivation occur when people perceive that the issues raised are important and of high priority. In order for people to take action, the water quality issue must affect them personally. Strengthening the connection between health and proper disposal of hazardous waste could be made with Health Department mailings as a utility bill insert. These mailings could promote product substitution

and advertise disposal facilities, as well as educate the general public regarding toxic substances in day to day use.

Responsible agency: Skagit County Health Dept.

Costs: Staff (0.25 FTE)	\$10,000
Fact sheets/brochures/mailings	\$10,000

## 21. Public Appearances

This program involves speaking engagements and presentations of the plan and successes and failures to community and business group meetings by county and city officials/staff. These forums serve to create overall support for proper hazardous waste disposal, and also reward and publicize efforts of local businesses and government.

Responsible agency: Skagit County Public Works Dept.

Costs: No additional incremental costs

## REGULATORY AND ENFORCEMENT PROGRAMS

### 22. Load-checking

Implement a load-checking program in the self-haul areas of the transfer station, collection box sites, and landfill. Transfer station and collection box site workers would inform the self-haulers of appropriate disposal methods for their hazardous waste.

Responsible agency: Skagit County Public Works Dept.

Costs: Costs associated with implementing a load-checking program would be labor costs. Staff currently at the Inman Landfill and Sauk Transfer Station could feasibly take on the additional task of monitoring self-haul waste entering the facilities. In this case, costs to implement this program would be negligible.

However, only the Clear Lake collection box site is staffed full-time during operating hours. Each of the other four sites is staffed only one to two days per week to accept recyclables. In order to implement load-checking at these sites, additional staff would be needed. Approximately 3 FTEs would be needed to staff the four compactor box sites full-time during operating hours. This would result in an expenditure of approximately \$120,000 per year.

### 23. Asbestos Abatement Program

Construction debris would be inspected for potential asbestos containing material prior to disposal. Transfer stations and disposal sites would also be monitored for unacceptable levels of asbestos fibers in the breathing zone. Dust control programs will be emphasized

at waste handling facilities to reduce the potential for asbestos fibers being released to the air.

Responsible agency: Skagit County Public Works and Health Depts.

Costs: Staff (0.25 FTE/year)	\$10,000
Monitoring (per year)	\$10,000

#### 24. Asbestos Enforcement

Support of a County ordinance or State law requiring asbestos inspections and abatement prior to demolition or remodeling could be implemented to encourage proper asbestos management. This would be enforced through the building or demolition permit application. Coordinate disposal of asbestos containing material with the Northwest Air Pollution Authority.

Responsible agency: Skagit County Building Dept./Permits and Licenses

Costs: Staff (0.5 FTE/year)	\$20,000
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#### 25. Local Hazardous Waste Ordinances

Pass City and County ordinances making it illegal to dispose of any hazardous materials improperly. All ordinances and resolutions should be consistent. Enforcement could be at the transfer station, incinerator, staffed compactor box sites, and through citizen reporting.

Responsible agency: Skagit County Public Works and Health Depts., as well as the local sewer utilities

Costs: Agency staff time (0.1 FTE x ~10 agencies)	\$40,000
Admin/supplies/legal consultation	\$10,000

#### 26. Local Sewer Pretreatment Ordinance

Pass local ordinances that set source-control (e.g., pretreatment) standards to include all industrial and commercial facilities. The level of enforcement would depend on funding for inspections.

Responsible agency: Local sewer utilities or Skagit County Health Dept.

Costs: Staff (4 FTEs/year)	\$160,000
Testing/supplies (per year)	\$ 50,000

#### 27. Septic Tank Ordinance

Ban the sale and use in Skagit County of septic tank cleaning products containing targeted organic compounds and require regular inspection and maintenance of all septic systems.

This program element was ELIMINATED from this plan because banning of these products requires that more environmentally sound replacement products are available. Enforcement of this ban may be difficult and very expensive. Bans must be adequately publicized to be effective. Violators would have to be caught in the act. Regular inspection and maintenance of all septic systems would be labor intensive and expensive.

#### 28. Product Bans

Consider bans on the sale of specific products in Skagit County if sufficient information justifies such a step.

This program element was ELIMINATED from this plan because banning of specific products requires that more environmentally sound replacement products are available. Enforcement of this ban may be difficult and very expensive. Violators would have to be caught in the act, since tracing the source of hazardous waste in waste streams is virtually impossible. Bans must be adequately publicized to be effective.

#### 29. Trouble Call System

Support use of trouble call systems such as 911 or other emergency number as a means of reporting illegal dumping.

Responsible agency: Skagit County Public Works and Health Depts. or Fire or Police Depts.

Costs: Negligible

### LOCAL HAZARDOUS WASTE DISPOSAL OPTIONS

#### 30. HHW Collection Sites

Permanent sites where residents could deposit their HHW could be established at the Clear Lake compactor box site, the Sauk Transfer Station, and the MSW incinerator. The sites would be open on a regular basis so that residents would have an on-going option for disposal of HHW. Adequate room must be available for storage of hazardous waste, a buffer zone around the storage facility for fire prevention purposes, and room for queuing the cars.

A mobile household hazardous waste collection facility could be set up at various locations around the County on a rotating basis to provide service to the more remote areas of the County.

Responsible agency: Skagit County Public Works Dept.

Costs: Costs for permanent collection facilities are dependent upon program design and will vary considerably. Initially, there will be capital costs incurred because of the construction of the storage shed. These costs are part of the facility's first year budget, and after the first year, total costs (operating

only) will decrease and level off. The Thurston County facility construction cost was about \$10,000, and the annual operating cost is budgeted at \$10,000 per year, with one staff person working at the site one day per week. Seattle has about \$40,000 of capital, site preparation, and planning to be incurred during the first year, and the operational costs are expected to be \$128,000 per year. Clark County's estimated costs totaled approximately \$30,000 the first year for capital costs and site preparation and planning, \$10,000 per year for education and publicity, \$18,500 per year for additional labor and training, and \$30,000 per year for disposal.

Assuming approximately 25,000 households in Skagit County, with 50 percent of them using a collection facility at least once over a five year period, permanent collection sites would receive approximately 50 visits per week. This would be spread out between the three potential collection sites. With some training, current staff at the Clear Lake compactor box site, the Sauk Transfer Station, and the MSW incinerator should be able to handle the hazardous waste, given the relatively few persons projected to use the facilities. Assuming each visit would result in an additional 0.1 drum of waste, approximately 250 drums annually would need to be disposed of at \$200 per drum. This totals \$50,000 per year required for disposal.

Costs for each proposed site in Skagit County include:

Site design and preparation	\$25,000
Hazardous Waste Shed	\$32,000
Equipment and permits	\$ 5,000
Staff	\$15,000

Costs for a mobile HHW collection facility would include:

Staff (per FTE)	\$40,000
Truck rental/lease	\$ 5,000
Collection shed	\$25,000
Berms, fencing	\$ 4,000
Set up	\$ 5,000
Permits and equipment	\$ 4,000
Disposal	\$50,000

### 31. HHW Collection Days

Annual one-day household hazardous waste collection events could be conducted to collect household hazardous waste for recycling or proper disposal. Collection days also serve to increase public awareness about hazardous materials in the home. Collection days could be held at the MSW incinerator in Burlington.

Responsible agency: Skagit County Public Works Dept.

Costs: Equipment and supplies	\$10,000
Site staff	\$30,000
Disposal	\$30,000
Consultant management services	\$10,000

### 32. Pick-up Service

This program would provide a mobile household hazardous waste collection unit to pick up waste from residents in a specific neighborhood or on an "on call" basis and transport the wastes to TSD facilities.

This program element was ELIMINATED from this plan for the following reasons:

- It can serve far fewer households than other collection events during the same period of time.
- It requires more staff time, and thus higher costs per household.
- Residents might have to stay in their homes for an entire day to meet the waste collectors.
- Safety concerns are unresolved; for example, wastes left unattended in the sun may explode; improperly packed wastes may spill or mix; and people and animals may be inadvertently exposed.

The costs per household for door-to-door collection would obviously be higher than a collection day event where residents bring their waste to a central location. In addition, included in the contract with a hazardous waste firm would be the cost of using a vehicle as well as staff time. A collection day event could utilize public agency employees, such as fire department workers, to handle and sort wastes at the collection site, and thus, save money by contracting out only the transportation and disposal of the wastes.

### 33. Private TSD Facilities for HHW

This program would involve encouraging private TSD (Treatment, Storage, and Disposal) facilities to offer disposal options for household hazardous waste in the County. Incentive programs or subsidies could be used. Private TSD operators could also be contracted to operate the collection facilities.

McClary-Columbia Corporation, a Burlington Environmental Company, located in Washougal, Washington, opens their doors to citizens wishing to dispose of their household hazardous waste once a week. Since 1988, McClary-Columbia has offered this free service from 10:30 a.m. to 3:00 p.m. every Thursday to households in southwestern Washington and the Portland, Oregon area.

Burlington Environmental, located in Seattle, allows the public to bring in household hazardous wastes from 10:00 a.m. to 3:00 p.m. every Thursday, free of charge. However, the use of the facility by citizens has doubled recently and some sort of contractual funding arrangement will likely develop in the near future. On the average, this facility receives waste from 40 to 60 persons per week, with no advertising done by the firm.

Responsible agency: Skagit County Public Works Dept.

Costs: The total costs incurred by the public depend on how much of the firm's services would be contributed without charge. McClary-Columbia, in Clark County, and Burlington Environmental, in King County, provide all of their services free of charge. The first year, approximately 0.25 FTE would be required for planning and coordination, at an approximate cost of \$10,000. Some costs may be incurred by the County for advertising, incentive programs, or subsidies.

#### 34. Used Motor Oil Recycling

Expand existing used motor oil recycling programs and promote more convenient recycling locations. Consider adding curbside used oil pick-up as part of normal recycling or garbage collection programs. Residents could leave oil out for collection in any unbreakable, leak-proof, closed container. Special containers could be provided on request or made available at stores where oil is sold. Oil could be picked up and transported in a separate contained compartment of the collection truck. Another option for collection of used motor oil would be to site used oil collection tanks at County operated waste disposal/recycling facilities. The oil collected here could be transported by County staff to the permanent collection facility for bulking and eventual shipment to a recycler or an appropriate disposal site.

Responsible agency: Skagit County Public Works Dept.

Costs: Costs to expand existing used motor oil recycling programs and promote more convenient recycling locations would be minimal. However, if curbside pick-up of used oil is implemented, costs could substantially increase. Municipalities that supply their own collection services would incur costs of renovating existing collection vehicles to provide a separate contained compartment for the used oil. The parts of the County that contract out their collection services to either of the private haulers would have to negotiate additional services with them.

Costs to site used oil collection tanks at County operated facilities include:

Staff (0.01 FTE/year)	\$ 1,000
Site preparation, etc.	\$ 3,500
Equipment and supplies	\$ 7,500

### 35. Battery Collection Program

This program involves continuation of the battery collection program already in place in Skagit County. The heavy metal content of vehicle and household batteries can cause contamination of ash from the incinerator. Reducing the number of batteries in the waste stream will reduce potential environmental contamination from heavy metals. Under this program, vehicle and household batteries are collected and recycled. Collection takes place at the incinerator, the Inman Landfill, the Sauk Transfer Station, all five compactor box sites, and C & D Recycling. A nominal payment for each battery recycled also encourages local organizations and groups to mount battery collection campaigns as fund raising events.

Responsible agency: Skagit County Public Works Dept.

Costs: There would be no additional incremental costs for this program.

### 36. Point of Sale Recycling

This type of program involves retailers or manufacturers taking back used products and empty containers that they sell to the public or businesses. Potential candidates for these point of sale trade-ins and rebates could include batteries and used motor oil.

This program could be more successfully implemented at the state level if the program involves a requirement which affects the way businesses conduct their day-to-day operations. However, county or city agencies could implement a program which educates residents or businesses about the existence of take-back programs or encourage businesses to begin such programs.

A public agency would be responsible for implementing and enforcing any ordinance requiring businesses to take back used products. However, if no ordinances were developed, private parties would have to enter into take-back arrangements on their own, and the public agency would concentrate on developing education and awareness programs for residents and businesses.

Responsible agency: Skagit County Public Works Dept.

Costs: The total costs from an ordinance requiring manufacturers or retailers to take back used products would primarily be enforcement costs. If no ordinance is passed and the Public Works Department's role is to encourage the use of existing take-back arrangements, there would be no need to utilize full-time staff to administer the program. The Public Works Department would need to spend about \$5,000 per year to advertise, place articles in newsletters and distribute brochures, and to conduct educational seminars.



### 37. Citizens Waste Exchanges

Coordinate a citizens waste exchange for frequently used household products that often have leftovers such as paint or pesticides. Exchanges may be active or passive. A passive exchange would involve coordination of an information system to connect participants with reusable products to potential users. "Over the fence" exchanges between neighbors could be encouraged via a telephone information line or other methods. Active exchanges would be a public, private, or cooperative venture that would involve actual collection, storage, and redistribution of items. The County could incorporate paint swap activities at Household Hazardous Waste Collection Day events, as well as provide an on-going program to dispose/recycle waste paints brought to a permanent collection site.

Responsible agency: Skagit County Public Works Dept..

Costs: Staff (0.1 FTE/year & 2 PTE/year)	\$ 20,000
Publicity/education/disposal (latex)	\$ 4,000
Disposal of oil based paint	\$ 30,000
Equipment and supplies	\$ 7,500

### 38. Freon Recovery and Recycling

This program involves recovery of Freon prior to landfill disposal of appliances. Freon, the cooling gas used in refrigerators and air conditioners, contains chlorofluorocarbons (CFCs), which harm the Earth's ozone layer. Washington State has recently passed a law (RCW 70.94.970 - 990) that will go into effect July 1, 1992 regarding disposal of appliances containing Freon. This law requires that the County must recover all Freon from appliances before disposing of them. This program is a Freon recapture program to safely remove and recycle Freon from discarded refrigerators and freezers.

Responsible agency: Skagit County Public Works Dept.

Costs: The program has not yet been clearly defined, and therefore the costs have not been determined.

### SMALL QUANTITY GENERATOR PROGRAMS

#### 39. SQG Technical Assistance (Duplicate of 17 - SQG Education)

This would be an on-going education program designed to provide information to businesses about waste reduction, recycling, and proper disposal methods for hazardous wastes. The program would involve producing and distributing fact sheets, a self-audit form, and a disposal and recycling directory; promoting use of hazardous waste collection facilities; and conducting an awards program for businesses with excellent hazardous waste management practices.

The self-audit form would provide a guide to businesses looking for ways of reducing or better managing their hazardous wastes. The form helps business owners examine the materials they use, the wastes they generate, and their industrial processes, so that they can identify areas for improvement with regard to waste management.

An awards program would be designed to recognize and publicize the hazardous waste reduction and management achievements of small businesses in the county. The goal of the program would be to provide an incentive for businesses to institute innovative waste reduction and management steps.

This SQG Education Program could also utilize interns from local colleges and universities to assist in implementation. The County could also coordinate with the Cooperative Extension office to help educate SQGs in the agricultural industry. The implementation of this education task could also be accomplished by local professional groups and community groups such as Chamber of Commerce, Rotary, and Elks.

Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.5 FTE)	\$20,000
Fact sheets and brochures	\$ 5,000
Self-audit forms	\$ 1,000
Disposal directory publication/mailing	\$ 1,000
Business awards program	\$ 5,000

#### 40. Existing Waste Exchange Programs

Encourage participation in existing waste exchange programs such as IMEX in Seattle or Pacific Materials Exchange in Spokane, where the generators' waste becomes the feedstock of another company's process.

Responsible agency: Skagit County Public Works and Health Depts.

Costs: Negligible. Include in Program Element 17, SQG Education, or 39, SQG Technical Assistance

#### 41. Permanent TSD Collection Facilities for SQGs

Encourage private TSD operators to establish permanent collection facilities that will accept wastes from SQGs in Skagit County.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible. Include in Program Element 17, SQG Education, or 39, SQG Technical Assistance

#### 42. SQG Clearinghouse Programs

Assist SQGs with proper recycling/disposal of the moderate risk wastes by developing and implementing a clearinghouse program. The County could help coordinate the collection of moderate risk wastes from SQGs with the intent of reducing the SQGs cost of properly disposing or

recycling their wastes. The wastes could be collected by several licensed hazardous waste handlers from the Seattle/Tacoma area. Each SQG would then pay its share of the costs for wastes to be properly disposed or recycled.

Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.1 FTE/year)	\$ 10,000
Printing costs	\$ 2,500

#### 43. Milk Run Program

Develop a "milk run" program to pick up wastes from SQGs, allowing similar types of wastes to be concentrated, lowering the net costs for transportation and disposal.

This program element was ELIMINATED from this plan because it would be prohibitively expensive; door-to-door collection costs can be up to ten times higher than permanent or fixed facilities.

#### 44. SQG Identification and Reporting System

A local business identification system would be established in the first year of the plan. The system would provide data on business hazardous waste generators in the County and the types and amounts of waste they generate. In addition to receiving a number or permit for identification purposes, businesses would be required (as with the regulated generators) to fill out an annual report related to waste generation practices. To initiate the program, businesses would be sent a permit form containing questions about the amounts and types of hazardous wastes they generate. In addition, research is recommended on a business permitting or identification system which would act as a mechanism of accountability or enforcement.

This program element was ELIMINATED from this plan because it would require a substantial amount of time and resources to implement, especially considering that it does not directly take hazardous wastes out of other waste streams or prevent improper disposal. It also could face significant political opposition from businesses which fear another layer of regulation.

#### 45. Hazardous Waste Management Incentives

Provide incentives to companies that implement the state's hazardous waste management priorities. Encourage on-site recovery, recycling, and product substitution. Subsidize recycling of white goods. Hold amnesty days to allow the disposal of a half drum per business of waste free, with discounted rates on additional waste.

Responsible agency: Skagit County Public Works Dept.

Costs: Overall program costs will depend on the type of incentives and subsidies and the degree of participation in amnesty days.  
This program could be phased out after the first few years as

generators become better educated and have other alternatives available for waste minimization, reuse, and disposal. For budgetary purposes, program element costs are estimated at \$10,000 to \$50,000 per year.

#### 46. Surveillance Programs

Development of surveillance programs to monitor the success of education and other waste reduction alternatives..

This program element was ELIMINATED from this plan because it would be very labor intensive, duplicates other technical assistance and education programs, and is expected to be viewed negatively if used as an enforcement tool. This program element would not contribute to the actual reduction of hazardous waste generation or improve disposal or treatment.

#### 47. Uniform Regulations

Development of uniform federal, state, and local regulations governing the management of hazardous wastes.

This program element was ELIMINATED from this plan because it would require federal and state legislation and administration; it could not be done completely at the local level. In addition, at the local level, decision-making bodies may be reluctant to change existing laws or to provide necessary funding to implement changes. It would also reduce flexibility and possibly promote illegal practices. Enforcement would be extremely costly.

#### 48. On-Site Consultation

County staff could be available to provide on-site consultation to small quantity generators on waste reduction, treatment, and compliance. Experts would walk through the business, provide information on environmental compliance, and help establish best waste management practices specific to that business. This would be a consultation program only, and would not be linked to any inspection/enforcement program. If the on-site visit exposes an illegal amount of stored waste, but the business otherwise qualifies as a SQG, the business would be given a grace period to dispose of their wastes without enforcement penalties. The grace period would be given one time only, after which proper waste management is required.

Responsible agency: Skagit County Public Works Dept.

Costs: Staff (0.1 FTE/year)	\$ 10,000
Printing Costs	\$ 2,500

#### 49. Intern Program

Sponsor an engineering intern program dedicated to waste reduction technologies.

This program element was ELIMINATED from this plan because it would not contribute directly to meeting State goals for moderate risk waste in Skagit County.

#### 50. Research Grants

Provide research grants to develop and improve waste reduction technologies.

This program element was ELIMINATED from this plan because it would not contribute directly to meeting State goals for moderate risk waste in Skagit County.

### EMPLOYEE SAFETY AND TRAINING

#### 51. Safety Programs

Develop safety programs, including identification of hazardous waste and provision of adequate safety gear and training to handle any situation involving hazardous waste appropriately through emergency response plans at solid waste facilities and wastewater treatment plants. Personnel responsible for management of the household hazardous waste collection facilities should receive a 40-hour health and safety training course followed by annual 8-hour refresher courses. The training will be in accordance with OSHA and WDLI requirements for workers at hazardous waste facilities.

Responsible agency: Skagit County Public Works Dept. and the local sewer utilities

Costs: One time development costs of between \$10,000 and \$30,000 would be incurred, in addition to training costs of approximately \$5,000 per year.

#### 52. Periodic Testing at Waste Facilities

Implement a periodic screening and testing program at waste facilities for hazardous constituents to determine if hazardous materials are present in the workplace. Activities could include testing the air at transfer stations, inspecting facilities for compliance with the permit operating requirements, and review of monitoring results to assure the protection of public and environmental health.

Responsible agency: Skagit County Public Health Dept.

Costs: Staff (0.3 FTE/year)	\$ 20,000
Equipment and supplies	\$ 5,000

#### 53. Evacuation Plan

Develop Emergency Evacuation Plan for incinerator, landfill, and transfer station. Include training and practice drills.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible. Include in Program Element 50, Safety Programs.

54. Asbestos Handling Procedures

Develop written procedures for asbestos handling and training for asbestos handling team.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible. Include in Program Element 50, Safety Programs.

55. Hazardous Waste Recognition Classes

Conduct hazardous waste recognition classes for operators and workers at the incinerator, landfill, and transfer station.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible. Include in Program Element 50, Safety Programs.

56. Spill Response Procedures

Document response procedures for handling solid waste facilities' hazardous waste spills or releases in the site attendant's manual.

Responsible agency: Skagit County Public Works Dept.

Costs: Negligible. Include in Program Element 50, Safety Programs.

APPENDIX E  
SEPA REVIEW DOCUMENTS

## PART ELEVEN — FORMS

### RCW 197-11-960 Environmental checklist.

#### ENVIRONMENTAL CHECKLIST

##### *Purpose of Checklist:*

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

##### *Instructions for Applicants:*

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

##### *Use of checklist for nonproject proposals:*

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

#### A. BACKGROUND

##### 1. Name of proposed project, if applicable:

Skagit County Moderate Risk Hazardous Waste Management Plan

##### 2. Name of applicant: Skagit Council of Governments

##### 3. Address and phone number of applicant and contact person:

Mr. Robert Ruby  
Executive Director  
(206) 428-1299

Skagit Council of Governments  
204 W. Montgomery  
Mount Vernon, WA 98273

##### 4. Date checklist prepared: June 13, 1991

##### 5. Agency requesting checklist: Washington State Department of Ecology

##### 6. Proposed timing or schedule (including phasing, if applicable): This is a five year hazardous waste management plan that recommends HHW collection days for three years in Skagit County. A permanent hazardous waste collection facility is recommended to be constructed at the incinerator in the third year. Education, information, and agency coordination will occur in all five years.

##### 7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

In four years, work will begin on updating the plan with a twenty-year scope.



8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. Environmental information will be prepared prior to construction of the permanent hazardous waste collection facility. This new information will be used to determine the probable significant adverse environmental impacts of the facility.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Do not know.

10. List any government approvals or permits that will be needed for your proposal, if known.

Each participating jurisdiction will need to approve the management plan. These jurisdictions include Skagit County, and the Cities and Towns of Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon, and Sedro Woolley. The Department of Ecology must also approve the plan.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

See Attachment 1.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

See Attachment 2.

The recommended permanent hazardous waste collection facility is proposed at the County MSW incinerator, located at 1200 Ovenell Road in Mount Vernon, just north of Highway 20.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

#### B. ENVIRONMENTAL ELEMENTS

##### 1. Earth

a. General description of the site (circle one): (Flat) rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_. The proposed site of the hazardous waste collection facility is at the County incinerator, located in the lowlands of the Puget Sound Trough.

b. What is the steepest slope on the site (approximate percent slope)?

Do not know.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Gravelly loam soil.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No filling or grading is proposed for the recommended site of the permanent hazardous waste collection facility.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Do not know.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Do not know.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The facility will be constructed, operated, and maintained as specified in WAC 173-303-430(3)(g).

## 2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. Some emissions would occur during the construction phase of the hazardous waste collection facility. This would consist of dust, dirt, and automotive exhaust from the construction equipment. Little additional air emissions is expected to occur when the project is complete. The hazardous waste brought to the site will be liquids and solids, so in the (see Attachment 3, 2.a)

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Locating the hazardous waste collection facility at the incinerator will allow residents to make only one trip to dispose of hazardous waste, solid waste, and recyclables. This facility will be constructed pursuant to WAC 173-303-430(3)(b).

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY**3. Water****a. Surface:**

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

The recommended site for the permanent hazardous waste collection facility would not need to be filled in order to be used.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Do not know.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

**b. Ground:**

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

## c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known): Where will this water flow? Will this water flow into other waters? If so, describe. The hazardous waste collection facility will be designed to that rainwater runoff will not mix with any hazardous materials in the event of a spill. Specific information about the method of collection of rainwater runoff at the site will not be available until more specific site planning occurs.

2) Could waste materials enter ground or surface waters? If so, generally describe.

The facility design is not yet completed, but it would be designed to prevent spills to surface or groundwaters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any: The facility will be designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden release of dangerous waste to surface or groundwaters. Preparations and preventative measures will be provided as specified in WAC 173-303-340 and WAC 173-303-430(3)(a) and (c).

## 4. Plants

a. Check or circle types of vegetation found on the site:

☐ deciduous tree: alder, maple, aspen, other

☐ evergreen tree: fir, cedar, pine, other

☐ shrubs

☐ grass

☐ pasture

☐ crop or grain

☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

☐ water plants: water lily, eelgrass, milfoil, other

☐ other types of vegetation

Do not know.

b. What kind and amount of vegetation will be removed or altered?

Do not know.

c. List threatened or endangered species known to be on or near the site.

Do not know.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Do not know.

## 5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: .....

mammals: deer, bear, elk, beaver, other: .....

fish: bass, salmon, trout, herring, shellfish, other: .....

Do not know.

b. List any threatened or endangered species known to be on or near the site.

Do not know.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

c. Is the site part of a migration route? If so, explain.

Do not know.

d. Proposed measures to preserve or enhance wildlife, if any:

The facility will be designed, constructed, maintained, and operated as specified in WAC 173-303-430(3)(d).

## 6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

It is anticipated that there will be electricity used to provide lighting for the hazardous waste collection facility.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Do not know.

## 7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Hazardous materials will be accumulated in one location and stored temporarily in segregated areas, prior to shipment to a TSD facility. The facility will be designed to minimize the potential for fire, explosion, and spills.

1) Describe special emergency services that might be required.

Fire, ambulatory, and hazardous waste management services might be needed.

2) Proposed measures to reduce or control environmental health hazards, if any: Construction of the facility will incorporate berming and drainage to minimize environmental and human exposure to hazardous materials. Hazardous materials will be regularly removed from the facility to prevent more dangerous accumulations of waste. Staff will be trained in the handling of hazardous materials. The facility will be designed to meet the requirements of WAC 173-303-340 and WAC 173-303-430(3)(i).

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. The hazardous waste collection facility will draw less than a dozen cars a day, with associated noise. This traffic-associated noise would occur during daytime hours seven days a week. During construction of the facility, noise would be created by the construction equipment. This noise would occur during daytime hours, Monday through Friday.

(1983 Laws)

(Ch. 197-11 RCW—p 45)

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

3) Proposed measures to reduce or control noise impacts, if any: This collection facility is proposed to be sited at the incinerator. Household trips to the facility can be coordinated with trips to the solid waste incinerator. The facility will be designed, constructed, maintained, and operated as specified in WAC 173-303-430(3)(e).

**8. Land and Shoreline Use****a. What is the current use of the site and adjacent properties?**

The site is currently occupied by the MSW incinerator. The surrounding properties include vacant land and farmlands.

**b. Has the site been used for agriculture? If so, describe.**

Do not know.

**c. Describe any structures on the site.**

The site consists of the MSW incinerator scales and scale house, an enclosed tipping floor, the incineration building, stacks, and offices.

**d. Will any structures be demolished? If so, what?**

No.

**e. What is the current zoning classification of the site?**

The site is zones Industrial Zone - M.

**f. What is the current comprehensive plan designation of the site?**

Do not know.

**g. If applicable, what is the current shoreline master program designation of the site?**

Do not know.

**h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Do not know.

**i. Approximately how many people would reside or work in the completed project?** No persons would reside in the facility. One to two people would work there.**j. Approximately how many people would the completed project displace?**

None.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

Not applicable.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

This facility is proposed at the incinerator, a compatible use. Chapter 14.04 of the Skagit County Code (Hazardous Waste) also designates this area as a hazardous waste treatment and storage zone. The facility will be designed, constructed, operated, and maintained as specified in WAC 173-303-430(3)(f).

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY**9. Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

**10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Do not know. The facility has not yet been designed.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The hazardous waste collection facility will undergo site review process and independent SEPA review as specified in WAC 173-303-430(3)(f).

**11. Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Do not know.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Do not know.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

The hazardous waste collection facility will undergo site review process and independent SEPA review as specified in WAC 173-303-430(3)(f).

**12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Do not know.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

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EVALUATION FOR  
AGENCY USE ONLY

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The hazardous waste collection facility will undergo site review process and independent SEPA review as specified in WAC 173-303-430(3)(f).

### 13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Do not know.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No known cultural artifacts exist within the site area.

- c. Proposed measures to reduce or control impacts, if any:

The hazardous waste collection facility will undergo site review process and independent SEPA review as specified in WAC 173-303-430(3)(f).

### 14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Primary access to the site is via SR-237, SR-20, and Ovenell Road. Access to the street system will likely be the same as for the incinerator. No site plans have been prepared yet.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Do not know.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

Do not know.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. Less than a dozen vehicular trips per day are expected to be generated by the facility. The peak times would most likely be weekend days.



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EVALUATION FOR  
AGENCY USE ONLY

## g. Proposed measures to reduce or control transportation impacts, if any:

The hazardous waste collection facility will undergo site review process and independent SEPA review as specified in WAC 173-303-430(3)(f).

## 15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. The proposal may increase the need for emergency services to respond to a hazardous waste spill, but the proposal may decrease the need for remedial cleanup actions at illegal hazardous waste dump sites and residences where hazardous wastes might accumulate without the availability of a collection facility.
- b. Proposed measures to reduce or control direct impacts on public services, if any.
- The hazardous waste collection facility will be designed to minimize the risk of fire or spills. In addition, site information will be shared with the emergency service providers, and facility staff will be trained in hazardous waste management as specified in WAC 173-303-340

## 16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Do not know.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Do not know.

## C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: .....

Date Submitted: June 13, 1990 .....

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

## D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise? The proposal would likely decrease the release of hazardous substances to water. The actions recommended in the Plan are intended to eliminate or reduce the discharge of hazardous substances to the environment. The Plan encourages reduction rather than increased production of hazardous waste.

Proposed measures to avoid or reduce such increases are: At the hazardous waste collection facility there will be monitoring of on-site hazardous waste and frequent transportation of hazardous waste to treatment or disposal locations. Staff will be trained in hazardous waste management. Facility will be designed, constructed, maintained, and operated to minimize discharge to water or soil and emissions to air (see Attachment 3, 1.a)

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The hazardous waste collection facility could result in spills affecting plants, animals, or fish under some circumstances.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

The hazardous waste collection facility will be designed to minimize spills and exposure to plants, animals, and fish. Closed drainage systems and berming will be used to help prevent such exposure as specified in WAC 173-303-430(3)(d).

3. How would the proposal be likely to deplete energy or natural resources?

The proposal would not be likely to deplete energy or natural resources.

Proposed measures to protect or conserve energy and natural resources are:

The hazardous waste collection facility will be designed to be energy efficient. It will not use a large amount of energy to operate. By being located at the incinerator, people can drop off hazardous waste at the same time they drop off solid waste or recyclables. Waste reduction measures, encouraged by the plan, (see Attachment 3, 3.a)

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The proposal may reduce the contamination of environmentally sensitive areas by decreasing illegal dumping of hazardous waste.

Proposed measures to protect such resources or to avoid or reduce impacts are:

The proposal will allow for proper disposal of hazardous waste and will encourage waste reduction. This is less likely to contaminate environmentally sensitive areas. The hazardous waste collection facility will be designed, constructed, maintained, and operated to minimize discharge to water or soil and emissions (see Attachment 3, 4.a)

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The hazardous waste collection facility is proposed to be located at the incinerator, which is not sited in a shoreline area, and would be compatible with that land use and with the solid waste plans. (1983 Laws)

TO BE COMPLETED BY APPLICANT

EVALUATION FOR  
AGENCY USE ONLY

Proposed measures to avoid or reduce shoreline and land use impacts are: The siting of this facility will be made in accordance with the local hazardous waste zoning regulations. It will be sited at the incinerator, a compatible use. The facility will be designed, constructed, maintained, and operated to minimize discharge to water or soil, and emissions to air, as required in WAC 173-303-340 and WAC 173-303-430(3).

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The proposal may increase the need for fire and emergency services because quantities of hazardous waste will be stored at the collection facility. The long-term effects of the proposal may be to decrease demands on emergency services because of better hazardous waste management practices through centralized safe storage.

Proposed measures to reduce or respond to such demand(s) are:

The hazardous waste collection facility will be designed to minimize the risk of spills. Site information will be shared with the emergency service providers, and hazardous waste collection facility staff will be trained in hazardous waste management, as specified in WAC 173-303-340.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The proposal is not known to conflict with local, state, or federal laws or requirements for the protection of the environment. This proposal meets the requirement of Washington laws: (RCW 105.70.220) and WAC 173-303-170 through 230.

## ATTACHMENT 1

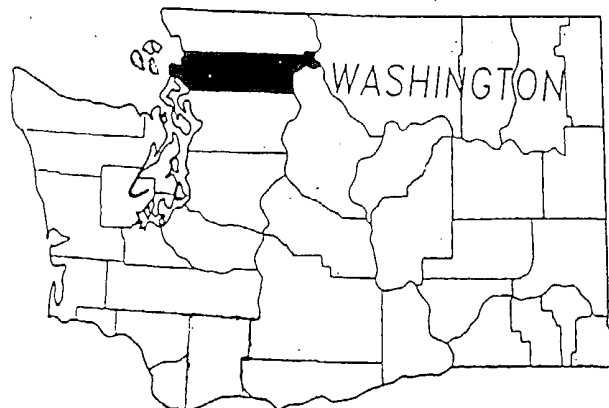
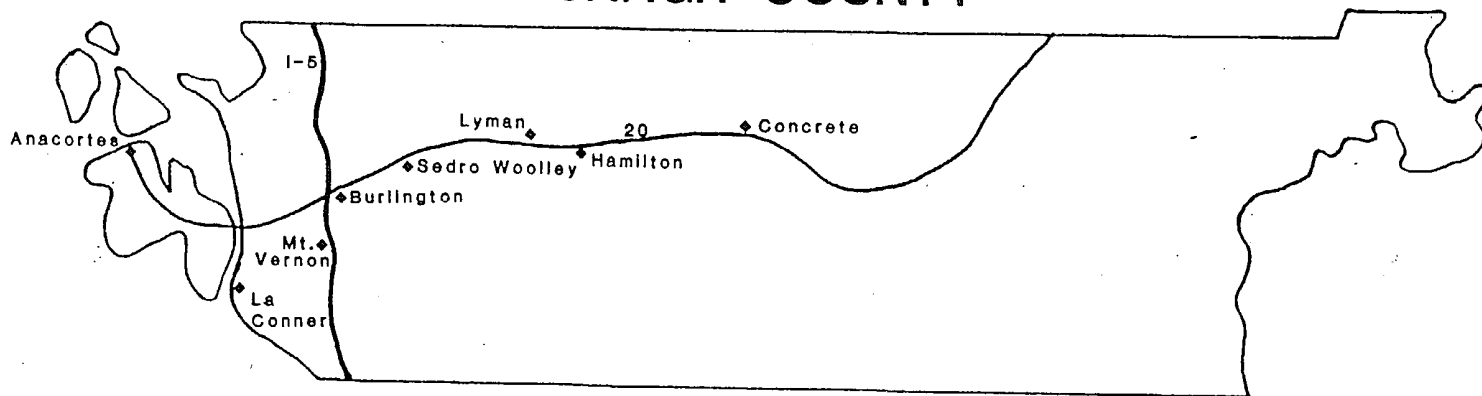
This proposal is a five-year moderate risk hazardous waste management plan for the unincorporated and incorporated areas of Skagit County, Washington, including the cities and towns of Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon, and Sedro Woolley. The Plan was developed in response to state legislation requiring all local governments to submit plans by June 30, 1990 and to implement them by December 31, 1991 (RCW 70.105.220).

This County-wide hazardous waste planning process is mandated to provide direction and to control the otherwise unregulated household hazardous wastes and small quantity generator wastes. The Plan focuses on wastes considered to be of moderate risk due to their household origin or small quantity. The Plan elements address generation and management of non-regulated quantities of hazardous wastes from businesses and households, as well as regulated quantities of business wastes that are nevertheless showing up in the solid and liquid municipal waste streams.

The Plan emphasizes public education, waste reduction, recycling, waste treatment, storage, disposal programs, and facilities. The goal of the Plan is to implement programs which will reduce the amount of toxic or otherwise hazardous materials entering the solid and liquid waste streams, for the protection of public health and the environment in Skagit County.

This five-year recommended program includes program elements for education, collection/disposal/treatment, and enforcement/monitoring. Emphasis is on education to encourage waste reduction, recycling, and reuse. Collection, treatment, and disposal programs will be implemented to allow for proper management of the local hazardous waste that is produced. Surveillance and enforcement programs will be implemented to encourage proper management of wastes once the other programs are in place.

# SKAGIT COUNTY



### ATTACHMENT 3

#### SEPA Environmental Checklist

2.a event of a spill, air emissions will be minimal.

#### SEPA Supplemental Sheet for Nonproject Actions

1.a as required in WAC 173-303-340 and WAC 173-303-430(3).

3.a are likely to also conserve energy and raw materials.

4.a to air, as required in WAC 173-303-340 and WAC 173-303-430(3)

## DETERMINATION OF NONSIGNIFICANCE

**DESCRIPTION OF PROPOSAL:** This is a five-year Moderate Hazardous Waste Management Plan for the unincorporated and incorporated areas of Skagit County, Washington, including the cities and towns of Anacortes, Burlington, Concrete, Hamilton, LaConner, Lyman, Mount Vernon, and Sedro Woolley. The plan was developed in response to state legislation requiring all local governments to submit plans by June 30, 1990 and to implement them December 31, 1991. (RCW 70.105.220)

The plan provides control mechanisms for the otherwise unregulated household hazardous wastes and small quantity generator wastes.

**PROPONENT:** Skagit County Council of Governments, 204 W. Montgomery, Mount Vernon, Washington, 98273, Mr. Robert Ruby, Executive Director.

**LOCATION OF PROPOSAL:** Skagit County.

**Co-lead agencies:** Skagit County Department of Planning and Community Development, Mount Vernon, Burlington, Sedro Woolley and LaConner Planning Departments.

The lead agency for this proposal has determined that it does not have a probable adverse impact on the environment.

An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed Environmental Checklist and other information on file with the Skagit County Planning and Community Development Department. This information is available to the public on request.

This DNS is issued under 197-11-340(2)(a)WAC. There is no comment period.

**RESPONSIBLE OFFICIALS:** Margaret Fleek, Burlington  
Betsy Stevenson, Mount Vernon  
Kendra Smith, LaConner  
Nancy Noe, Sedro Woolley  
Scott Kirkpatrick, Skagit County

Determination of Nonsignificance  
Page Two

CONTACT PERSON: Kraig Olason

ADDRESS: Room 204, County Administration Building  
Mount Vernon, WA 98273

PHONE: (206) 336-9410

Date: 10 / 4 / 91 Signature: Margaret Fleek  
Margaret Fleek  
Burlington Planning Director

Date: 10 / 11 / 91 Signature: Betsy Stevenson  
Betsy Stevenson Consultant  
Mount Vernon Planning Director

Date: 10 / 11 / 91 Signature: Kendra Smith  
Kendra Smith  
LaConner Planning Director

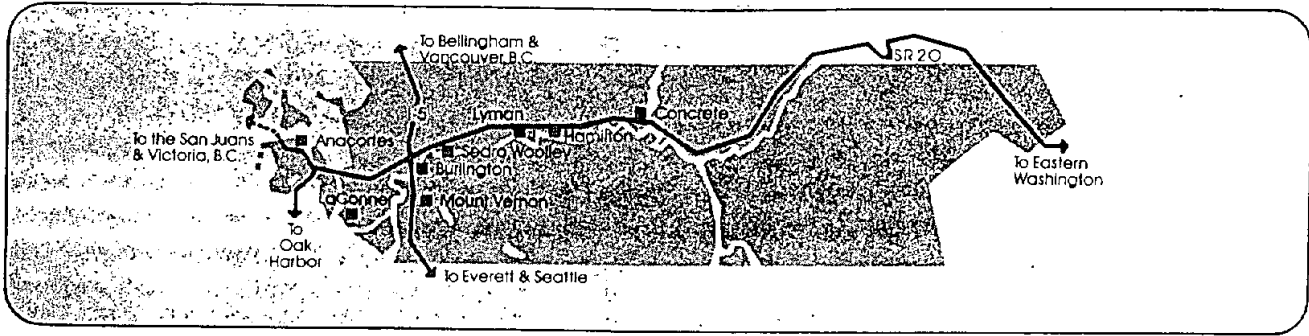
Date: 10 / 11 / 91 Signature: Nancy Noe  
Nancy Noe  
Sedro Woolley Planning Director

Date: 10 / 11 / 91 Signature: Scott Kirkpatrick  
Scott Kirkpatrick, Director  
Skagit County Department of  
Planning and Community  
Development

cc: Burlington, Mount Vernon, LaConner, Sedro Woolley Planning  
Departments



APPENDIX F  
PUBLIC PARTICIPATION DOCUMENTS



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-4299

RECEIVED

JUN 12 1990

S.C.S. ENGINEERS

June 11, 1990

David E. Roberson, CHMM  
SCS Engineers  
2950 Northup Way  
Bellevue, WA 98004

Dear Dave:

Enclosed are the mailing lists of people, agencies, and companies SCOG used to route information on the hazardous waste plan. Chapter 5 was the most widely disseminated piece, although TAB and SCOG board members also received copies of the summary of the garbage sort by R.W. Beck.

This information may be used in the public input section of the plan. We look forward to hearing from you later this week.

Sincerely,  
SKAGIT COUNCIL OF GOVERNMENTS

Debra Lancaster

cc: Sarah Barton

Ken Willis  
Public Health  
County Admin. Bldg  
Mount Vernon, WA 98273

Carlene Sygitowicz  
City of Sedro Woolley,  
720 Murdock  
SEdro Woolley, WA 98284

Jim Pemberton  
City of Anacortes  
Box 547  
Anacortes, WA 98221

*Public works*

John Wiseman  
City of Mount Vernon  
320 Broadway  
Mount Vernon, WA 98273

*Public works*

Stan Kersey, Manager  
City of Burlington  
Box 288  
Burlington, WA 98233

Randy Young  
City of LaConner  
204 Douglas  
LaConner, WA 98257

*Public works*

Jim Kirkpatrick  
County Planning  
2nd & Kincaid  
Mount Vernon, WA 98273

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320 Broadway  
Mount Vernon, WA 98273

336 - 6211

yes

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Skagit County Health Dept.  
County Admin. Bldg  
Mount Vernon, WA 98273

336 -  
9380

Jim Pemberton  
Public Works Dept.  
6 & Q St  
Anacortes, WA 98221

293 -  
1919

yes

Terry Knutson  
Rural Skagit Sanitation  
998 Chuckanut Drive  
Burlington, WA 98233

757 - 4048

Rebecca Voerman  
Skagit County Recycling  
2nd & Kincaid  
Mount Vernon, WA 98273

336 - 9400

Bob Ruby  
Skagit Council of Governments  
204 W. Montgomery  
Mount Vernon, WA 98273

Bill Green  
Solid & Hazardous Waste Program, DOE  
Mail Stop PV-11  
Olympia, WA 98504

~~33~~

SCAN 321-1357

SCOG BOARD MEMBERS

MAYOR RAY REEP  
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320 BROADWAY  
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MAYOR DONALD WALLEY  
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*Dale Woodruff, Mayor*  
~~CHARLES DILLON~~  
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816 SIMS ROAD  
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SKAGIT CO. COMMISSIONER  
SKAGIT COUNTY COURTHOUSE  
MOUNT VERNON, WA 98273

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MOUNT VERNON, WA 98273

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~~Tim Crosby~~  
~~City of Sedro-Woolley~~  
~~City Hall~~  
~~Sedro-Woolley, WA 98284~~

~~Tim Crosby~~  
~~City of Sedro-Woolley~~  
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Cty. Admin. Bldg., Rm. 301  
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Mt. Vernon, WA 98273-3864

Charles Urbick  
Skagit River Steel & Recycling  
POB 376  
Burlington, WA 98233

Jacque Bechtel  
*clo Ken Bechtel*  
*Skagit Co. Public Works*  
*Dept.*  
*700 S. 2nd St, Mt. Vernon 98273*

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C & D Salvage  
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Mt. Vernon, WA 98273

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Jet Recycling  
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Bill Frederick  
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Mt. Vernon, WA 98273

~~Joseph Von Moos~~  
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~~Burlington, WA 98233~~

~~Mark Backlund~~  
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Burlington, WA 98233

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~~Barbara Edwards~~  
~~1319 11th~~  
~~Mt. Vernon, WA 98273~~

SKAGIT COUNTY  
AG ORGANIZATIONS AND BUSINESSES

Apple Growers of West. Washington  
Alan Merritt  
896 Bayview Edison  
Mount Vernon, Wa 98273

Asgrow Seed Company  
Ed Strong  
P. O. Box 211  
Mount Vernon, Wa 98273

Bellingham Frozen Foods  
Larry Leander  
P. O. Box 1016  
Bellingham, WA 98225

Christianson Seed Company  
Rick Williams  
P.O. Box 98  
Mount Vernon, Wa 98273

Stott Howard  
Wood Scientist  
WSU Mount Research & Ext. Center  
1468 Memorial Highway  
Mount Vernon, Wa 98273

Hulbert Farms  
Bob Hulbert  
1727 Hulbert Road  
Mount Vernon, WA 98273

Knutzen Farms  
Roger Knutzen  
1469 Peterson Road  
Burlington, Wa 98233

National Frozen Foods Corp.  
Lloyd Franklin  
P. O. Box 417  
Burlington, WA 98233



Ag Arg

Washington Bulb Company  
John Roosen  
1599 Beaver Marsh Road  
Mount Vernon, Wa 98273

Washington Red Raspberry Commission  
Anne Metzger  
1333 Lincoln Street #202  
Bellingham, WA 98226

Washington Red Raspberry Growers Assn.  
Marvin Tarmia  
1750 S. Burlington Boulevard  
Burlington, WA 98233

Western Washington Farm Crops Assn.  
Pete Sward  
1750 South Burlington Boulevard  
Burlington, Wa 98233

Wilbur Ellis  
John Hartman  
8542 South 212th Street  
Kent, WA 98031

1/90

National Frozen Foods Corp.  
Randy Tastad  
P. O. Box 447  
Burlington, Wa 98233

Norm Nelson, Inc.  
Jerry Nelson  
P. O. Box 441  
Burlington, Wa 98233

Northrup King Company  
P. O. Box 485  
LaCenner, WA 98257

Northwest Bulb Growers Assn.  
Tom DeGoede  
1502 Bradshaw Road  
Mount Vernon, Wa 98273

Northwest Food Processors Assn.  
Craig Smith  
2300 S. W. First Avenue  
Portland, OR 97201-3017

Pea Industry Advisory Committee  
Ron Hawkins  
c/o Agrichem  
1295 Avon Allen Road  
Burlington, Wa 98233

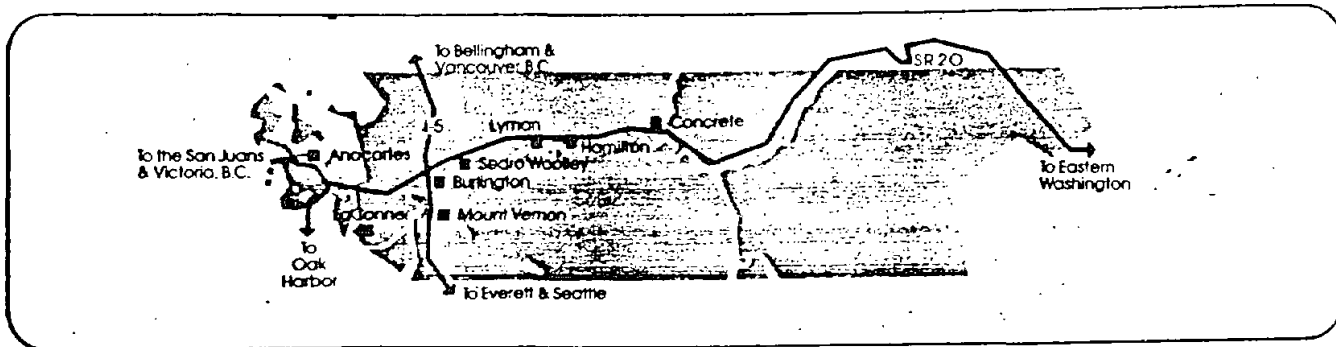
Puget Sound Seed Growers Assn.  
Mark Christianson  
22010 Marine Drive, N. W.  
Stanwood, WA 98292

Skagit County Strawberry Growers Assn.  
Bryan Sakuma  
969 Chuckanut Drive  
Burlington, Wa 98233

J. R. Simplot Company  
Steve Bates  
P. O. Box 278  
Ferndale, WA 98248

Twin City Foods  
Lou Hiett  
P. O. Box 699  
Stanwood, WA 98292

Washington Vegetable Commission  
Dorothy Anderson  
1360 Bow Hill Road



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

April 26, 1990

The Skagit Argus  
413 Gates  
Mount Vernon, WA 98273

Gentlemen:

Please publish the enclosed Notice of Public Hearing in your May 16 and 23, 1990 issues.

Please furnish us with two Affidavits of Publication immediately following the last publication.

Thank you.

Very truly yours,  
SKAGIT COUNCIL OF GOVERNMENTS

Robert H. Ruby  
Executive Director

## NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Skagit Council of Governments will hold a Public Hearing at 7 p.m. on Thursday, May 24, 1990, in the Skagit County Commissioners' Hearing Room A, Skagit County Courthouse Administration Building, Mount Vernon, Washington, to consider a plan for managing wastes not currently regulated by the Washington Department of Ecology. This plan will include an assessment of alternatives for addressing needs and problems for all aspects of moderate risk waste management, including public education, waste reduction, recycling, waste treatment, storage, disposal programs and facilities. The goal of the Plan is to reduce the amount of toxic materials entering the waste stream, for the protection of public health and the environment in Skagit County.

NOTICE GIVEN BY ORDER OF THE BOARD OF SKAGIT COUNCIL OF GOVERNMENTS  
this \_\_\_\_\_ day of April, 1990..

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Robert H. Ruby  
Executive Director  
Skagit Council of Governments

# AFFIDAVIT OF PUBLICATION

## NOTICE OF PUBLIC HEARING NOTICE IS HEREBY GIVEN

that the Skagit Council of Governments will hold a Public Hearing at 7 p.m. on Thursday, May 24, 1990, in the Skagit County Commissioners' Hearing Room A, Skagit County Courthouse Administration Building, Mount Vernon, Washington, to consider a plan for managing wastes not currently regulated by the Washington Department of Ecology. This plan will include an assessment of alternatives for addressing needs and problems for all aspects of moderate risk waste management, including public education, waste reduction, recycling, waste treatment, storage, disposal programs and facilities. The goal of the Plan is to reduce the amount of toxic materials entering the waste stream, for the protection of public health and the environment in Skagit County.

Copies of the complete draft plan are available for review at the public libraries in Mount Vernon, Sedro-Woolley, and Anacortes.

NOTICE GIVEN BY ORDER OF  
THE BOARD OF SKAGIT COUNCIL OF GOVERNMENTS this 27th day of April, 1990.

ROBERT H. RUBY  
Executive Director

Skagit Council of Governments  
Published May 8, 15, 1990.

STATE OF WASHINGTON }  
COUNTY OF SKAGIT } SS.

DANIEL D. BERENTSON

, being first duly sworn on oath deposes that he is an authorized representative of the publisher of The Skagit Argus, a weekly newspaper. That said newspaper is a legal newspaper and it is now and has been, for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a weekly newspaper in Mount Vernon, Skagit County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the annexed is a true copy of a

NOTICE OF PUBLIC HEARING

SKAGIT COUNCIL OF GOVERNMENTS

as it was published in regular issues (and not in supplement form) of said newspaper once each week for a period of 2 weeks, commencing on the 8TH day of MAY, 1990, and ending on the 15TH day of MAY, 1990 both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 36.55, which amount has been paid in full, at the rate of \$ 4.30 per column inch for the first insertion and \$ 4.30 per column inch for each subsequent insertion.

*Daniel D. Berentson*

Subscribed and sworn to before me this 15TH  
day of MAY, 1990.

*Jonathan Pitman*

Notary Public

# THE BARTON GROUP

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REGULATORY AND PUBLIC AFFAIRS  
BOX 10063 BAINBRIDGE ISLAND, WA 98110  
TELEPHONE (106) 842-1246

March 28, 1990

Bob Ruby  
Executive Director  
Skagit Council of Governments  
204 W. Montgomery  
Mount Vernon, WA 98273

Dear Bob:

Enclosed is a draft announcement which you might want to circulate to SCOG members, to separate jurisdictions, to environmental groups, to the SWAC (via Rebecca) and to the news media, as we recently discussed. Rebecca was interested in contacting a number of people and groups as well, so you might forward a copy to her.

As you know, our contract only includes directing the public process, rather than actually implementing it, so I will not be able to perform the "dog and pony show" at the local jurisdictions. However, I think your idea to pursue this course and make an opening for future discussion of the plan would be very worthwhile. Getting some press coverage of the availability of the draft and the public meeting in May would also help to get more citizen participation.

I have also included an insert to be distributed to the SCOG for their help in eliciting more public comment from specific jurisdictions, as we discussed. I will do followup phone calls with each of them as well.


I look forward to meeting with you on April 12. If you need further help, please do not hesitate to call.

Sincerely,

  
Sarah Barton

MEMORANDUM

TO: BOB RUBY  
FROM: SARAH BARTON  
DATE: MARCH 28, 1990  
SUBJECT: SKAGIT HAZ WASTE PLAN ANNOUNCEMENT



Skagit County is now working to create a Local Hazardous Waste Management Plan. The State Hazardous Waste Management Act requires a plan for managing wastes not currently regulated by the Washington Department of Ecology. According to this Act, each local government must prepare a plan and submit it to Ecology for approval.

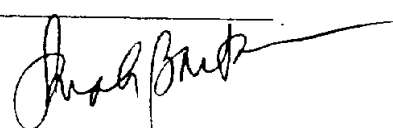
The Skagit Public Works Solid Waste Division and the Skagit Council of Governments are working cooperatively with SCS Engineers as consultant to draft this plan for all the incorporated and unincorporated Skagit County. Participation of businesses, community groups and individual citizens is invited. A Technical Advisory Committee has also been formed to periodically provide technical input and review.

The Plan will focus on wastes considered a moderate risk to their household origin or small quantity. It will include an assessment of alternatives for addressing needs and problems for all aspects of moderate risk waste management including public education, waste reduction, recycling, waste treatment, storage, disposal programs and facilities. The goal of the Plan is to reduce the amount of toxic materials entering the waste stream, for the protection of public health and the environment in Skagit County.

The public input process used in developing the plan has been designed to ensure that the Plan is dealing with the real facts and issues involved in the county; and, to ensure that citizens and agencies affected by the plan have an opportunity to contribute to its development. A draft Plan will be available in early May, and a public meeting for its review will be held in late May. If you have questions or comments before that, please contact \_\_\_\_\_.

MEMORANDUM

TO: SCOG MEMBERS  
FROM: SARAH BARTON, SCS ENGINEERS  
DATE: MARCH 28, 1990  
SUBJECT: SKAGIT COUNTY HAZARDOUS WASTE PLAN



About two months ago, a team from SCS Engineers made a brief presentation regarding the Skagit County Hazardous Waste Plan at the SCOG meeting. Since then, we have been working to draft the plan including an assessment of the current situation, as well as proposed alternatives to address the needs and problems of moderate risk waste management.

The next step is the most critical in determining whether the Plan will be useful and useable to the county and its residents. It is time for public input to be incorporated into the document. This information will ensure that the Plan addresses the issues identified by the residents and businesses in the county. By early May, a draft document will be available for review and comment. In late May, there will be a public meeting.

We need your help to be sure that people are aware of the process and the importance of their input. As you are the best source of information about how to contact and who to contact, we are relying on your input and efforts. As we will have the draft Plan available in early May, you may want to schedule with your constituents to present the plan and take comments. If you need any help, please contact Bob Ruby. We look forward to hearing from you by the end of May. Thank you for your assistance.



**SCS ENGINEERS**

April 30, 1990  
File No. 48913

Mr. Bob Ruby  
Executive Director  
Skagit Council of Governments  
204 W. Montgomery  
Mount Vernon, WA 98273

Dear Mr. Ruby:

Enclosed are three copies of the Preliminary Draft Hazardous Waste Plan and recommended sign-out sheets for anyone requesting to review the plans to be located in the libraries of Mount Vernon, Anacortes, and Sedro Woolley. They have each been marked with "Preliminary Draft" and the copy number. These should be collected at the end of the review period.

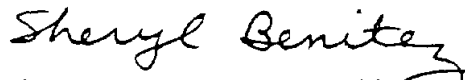
Also enclosed is an unbound original of the Section 5 and list of program elements to be used to produce copies to send out to appropriate individuals, and an example of a memo which can be used to notify the public that plans are available for review and the time and location of the public meeting.

If you have any questions, please feel free to call.

Respectfully Yours,



David E. Roberson, CHMM  
Project Manager  
SCS ENGINEERS



Sheryl C. Benitez, CHMM  
Sr. Project Scientist  
SCS ENGINEERS

SKAGIT COUNTY  
PRELIMINARY DRAFT  
HAZARDOUS WASTE MANAGEMENT PLAN

[illegible]

## MEMORANDUM

TO: ALL RESIDENTS OF SKAGIT COUNTY  
FROM: SKAGIT COUNCIL OF GOVERNMENTS & SKAGIT DEPARTMENT  
OF PUBLIC WORKS

SUBJECT: **WE NEED YOUR HELP!**

Skagit County is in the process of developing a Hazardous Waste Management Plan in response to requirements of the Department of Ecology. The goal is to protect public health and the environment from the problems of improper handling and disposal of hazardous waste.

This document is a list of the problems and alternative solutions. The solutions are also further described in the last few pages. We need your help to create a plan that meets the needs of Skagit residents and businesses. Please mark each alternative with (+) if you think it should be part of the plan. If you feel that an alternative should not be part of the plan, mark (-). If you are neutral about an element, mark (0).

Copies of a PRELIMINARY Draft Hazardous Waste Management Plan are available at the public libraries in Mount Vernon, Anacortes, and Sedro Woolley. A public meeting regarding the draft plan will be held on Thursday, May 24 in Courthouse Hearing Room "B" in Mount Vernon at 7:00 p.m.

Please take the time to mark down your opinions and return this material to the public meeting, or to Skagit Department of Public Works, or mail to: Rebecca Voerman, Skagit County Department of Public Works, County Admin. Building, Room 203, 700 South Second Street, Mount Vernon, WA 98273-3864. If you have questions or need more forms, call Rebecca Voerman at 336-9400.

Also, please let us know the area where you live and what you do for a living. It is optional whether you include your name.

Area of residence: \_\_\_\_\_

Occupation: \_\_\_\_\_

Name (optional): \_\_\_\_\_

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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The overall goal of this Local Hazardous Waste Management Plan is to protect public health and the environment from the adverse effects of the improper handling and disposal of hazardous wastes by households and SQGs. In addition, this plan will take into consideration state hazardous waste management guidelines. These guidelines prioritize management options in the following order: waste reduction, recycling, treatment, incineration, solidification/stabilization, and landfill.

To achieve these goals, problem areas have been identified, objectives have been defined to address these problems, and alternatives have been developed which will manage previously unregulated hazardous wastes.

The following problem/needs areas have been identified in Skagit County. Following each problem/need, an objective is given to correct that specific problem or need, and alternative program elements are listed that meet that objective. Program elements are described in the following section.

**PROBLEM:** Hazardous waste is currently being disposed of in the solid waste stream by small quantity generators and households. The cumulative contribution of hazardous chemicals to the solid waste stream poses a potential safety threat to compactor box site workers, incinerator workers, landfill workers, and solid waste haulers. There is also a potential to impact the incinerator operating system, as well as the quality of ambient air and residual ash. In addition, leachate from the landfills can have a potential impact on quality of groundwater in the area.

**OBJECTIVE:** Reduce the input of hazardous substances to the municipal solid waste stream by a significant, measurable amount. Identify the types of hazardous waste that could be deleterious to the operation of the incinerator. Create incentives for SQGs and homeowners to dispose of their hazardous waste properly. Establish facilities to specifically handle HHW and SQG wastes. Minimize effects on the environment and accidents resulting in worker and public exposure to hazardous waste by decreasing the amounts of targeted chemicals that enter the solid waste stream and by providing formal employee training and safety programs.

**ALTERNATIVES:**

- \_\_\_ Standardized Sorting Procedures
- \_\_\_ Survey Local Businesses
- \_\_\_ Incinerator Emission Monitoring
- \_\_\_ General Public Information
- \_\_\_ Product Labeling Program
- \_\_\_ Garbage Can Labeling
- \_\_\_ Education at Disposal Sites
- \_\_\_ Product Substitution
- \_\_\_ Existing Materials Collection
- \_\_\_ Load-Checking
- \_\_\_ Asbestos Abatement Program

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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- \_\_\_ Asbestos Enforcement
- \_\_\_ Local Hazardous Waste Ordinances
- \_\_\_ HHW Collection Sites
- \_\_\_ HHW Collection Days
- \_\_\_ Private TSD Facilities for HHW
- \_\_\_ Battery Collection Program
- \_\_\_ Point of Sale Recycling
- \_\_\_ WSDA Waste Pesticide Identification and Disposal Program
- \_\_\_ SQG Technical Assistance
- \_\_\_ Existing Waste Exchange Programs
- \_\_\_ Permanent TSD Collection Facilities for SQGs
- \_\_\_ Hazardous Waste Management Incentives
- \_\_\_ Safety Programs
- \_\_\_ Periodic Testing
- \_\_\_ Evacuation Plan
- \_\_\_ Asbestos Handling Procedures
- \_\_\_ Hazardous Waste Recognition Classes
- \_\_\_ Spill Procedures

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**PROBLEM:** Hazardous waste is currently being disposed of in the wastewater stream by small quantity generators and households. The cumulative contribution of hazardous chemicals to the wastewater has a potential to impact municipal wastewater treatment operating systems, treatment plant worker safety, and the health of the receiving waters.

**OBJECTIVE:** Reduce the input of hazardous substances to wastewater stream by a significant, measurable amount. Create incentives for SQGs and homeowners to dispose of their hazardous waste properly. Establish facilities to specifically handle HHW and SQG wastes. Decrease the amount of hazardous chemicals to the sewerage system and to the environment via effluent and sludge by decreasing the amounts of targeted chemicals that enter the waste stream and by providing formal employee training and safety programs.

**ALTERNATIVES:** \_\_\_ Wastewater Treatment Plant Sampling  
\_\_\_ Survey Local Businesses  
\_\_\_ General Public Information  
\_\_\_ Product Labeling Program  
\_\_\_ Product Substitution  
\_\_\_ Storm Drain Awareness Program  
\_\_\_ Existing Materials Collection  
\_\_\_ Local Hazardous Waste Ordinances  
\_\_\_ Local Sewer Pretreatment Ordinance  
\_\_\_ HHW Collection Sites  
\_\_\_ HHW Collection Days  
\_\_\_ Private TSD Facilities for HHW

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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- \_\_\_ Used Motor Oil Recycling
- \_\_\_ Point of Sale Recycling
- \_\_\_ WSDA Waste Pesticide Identification and Disposal Program
- \_\_\_ SQG Technical Assistance
- \_\_\_ Existing Waste Exchange Programs
- \_\_\_ Permanent TSD Collection Facilities for SQGs
- \_\_\_ Hazardous Waste Management Incentives
- \_\_\_ Safety Programs

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PROBLEM: Possible groundwater pollution may occur by the disposal of hazardous substances into septic systems.

OBJECTIVE: Reduce the use of household products containing solvents and other chemicals of concern and eliminate disposal of these chemicals into septic systems.

ALTERNATIVES: \_\_\_ Rural Groundwater Monitoring  
\_\_\_ General Public Information  
\_\_\_ School Programs  
\_\_\_ Point of Sale Information  
\_\_\_ Product Labeling Program  
\_\_\_ Information Phone Lines  
\_\_\_ Citizens Waste Treatment  
\_\_\_ Product Substitution  
\_\_\_ Existing Materials Collection  
\_\_\_ Health Department Mailings  
\_\_\_ Local Hazardous Waste Ordinances  
\_\_\_ HHW Collection Sites  
\_\_\_ HHW Collection Days  
\_\_\_ Private TSD Facilities for HHW  
\_\_\_ Point of Sale Recycling

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PROBLEM: Direct dumping of unwanted household wastes down storm drains can adversely impact local water environments.

OBJECTIVE: Eliminate all direct dumping of any household hazardous wastes into storm drains.

ALTERNATIVES: \_\_\_ General Public Information  
\_\_\_ School Programs  
\_\_\_ Product Labeling Program  
\_\_\_ Information Phone Lines  
\_\_\_ Citizens Waste Treatment  
\_\_\_ Product Substitution  
\_\_\_ Storm Drain Awareness Program

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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- \_\_\_ Existing Materials Collection
- \_\_\_ Health Department Mailings
- \_\_\_ Local Hazardous Waste Ordinances
- \_\_\_ Trouble Call System
- \_\_\_ HHW Collection Sites
- \_\_\_ HHW Collection Days
- \_\_\_ Private TSD Facilities for HHW
- \_\_\_ Used Motor Oil Recycling
- \_\_\_
- \_\_\_
- \_\_\_

PROBLEM: There is currently no secure funding base for managing local hazardous waste in the future.

OBJECTIVE: Identify and establish a stable source of funding for future local hazardous waste planning and implementation programs.

ALTERNATIVES: 

- \_\_\_ General Public Information
- \_\_\_ Bonds
- \_\_\_ Hazardous Waste Collection Fees
- \_\_\_ General Fund
- \_\_\_ Solid Waste Account
- \_\_\_ Hazardous Substances Tax
- \_\_\_ Special Solid Waste District
- \_\_\_ State Solid Waste Tax
- \_\_\_
- \_\_\_
- \_\_\_

PROBLEM: Enforcement of local hazardous waste regulations may be difficult due to insufficient funds and staff to conduct adequate inspections. The lack of an enforcement presence may result in noncompliance by small quantity generators.

OBJECTIVE: Explore alternative funding sources so that visible enforcement presence can be established to make the public aware of regulations and to create an incentive to comply. In addition, emphasize education over enforcement as a means of attaining compliance. Provide for the education of small quantity, household, and agricultural generators regarding their responsibilities for source reduction and proper and safe hazardous waste management.

ALTERNATIVES: 

- \_\_\_ General Public Information
- \_\_\_ School Programs
- \_\_\_ Point of Sale Information
- \_\_\_ Product Labeling Program
- \_\_\_ Information Phone Lines
- \_\_\_ Garbage Can Labeling
- \_\_\_ Citizens Waste Treatment
- \_\_\_ Education at Disposal Sites

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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- \_\_\_ Product Substitution
- \_\_\_ Storm Drain Awareness Program
- \_\_\_ SQG Education
- \_\_\_ County Staff Work Session
- \_\_\_ Existing Materials Collection
- \_\_\_ Health Department Mailings
- \_\_\_ Public Appearances
- \_\_\_ Hazardous Waste Management Incentives
- \_\_\_ Bonds
- \_\_\_ Hazardous Waste Collection Fees
- \_\_\_ General Fund
- \_\_\_ Solid Waste Account
- \_\_\_ Hazardous Substances Tax
- \_\_\_ Special Solid Waste District
- \_\_\_ State Solid Waste Tax

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**PROBLEM:** The public is often unaware of what options they have for managing their hazardous waste. Information and education programs for proper management of small quantity generator waste and household hazardous waste are needed. Conclusions drawn from national surveys indicate that improper waste management practices are the result of ignorance, lack of convenience, and lack of suitable options.

**OBJECTIVE:** Provide the public, industry, agriculture, and local government with the information needed to take rational steps to minimize, recycle, treat, dispose, and otherwise manage hazardous wastes in Skagit County. Foster an ethic of personal responsibility for waste management decisions among the public, businesses, and government.

**ALTERNATIVES:**

- \_\_\_ General Public Information
- \_\_\_ School Programs
- \_\_\_ Point of Sale Information
- \_\_\_ Product Labeling Program
- \_\_\_ Information Phone Lines
- \_\_\_ Garbage Can Labeling
- \_\_\_ Citizens Waste Treatment
- \_\_\_ Education at Disposal Sites
- \_\_\_ Product Substitution
- \_\_\_ Storm Drain Awareness Program
- \_\_\_ SQG Education
- \_\_\_ County Staff Work Session
- \_\_\_ Existing Materials Collection
- \_\_\_ Health Department Mailings
- \_\_\_ Public Appearances

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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**PROBLEM:** The regulatory mechanism is unclear and confusing. There are currently no local regulations for regarding handling/disposal of household hazardous waste or wastes from SQGs. In addition, the public is not aware of the hazardous waste requirements that do exist.

**OBJECTIVE:** Develop clear, consistent regulations for the management of small quantity generator waste and household hazardous waste. Increase public awareness of all hazardous waste requirements.

**ALTERNATIVES:** ☐ General Public Information  
☐ School Programs  
☐ Point of Sale Information  
☐ Information Phone Lines  
☐ County Staff Work Session  
☐ Existing Materials Collection  
☐ Health Department Mailings  
☐ Load-Checking  
☐ Asbestos Abatement Program  
☐ Asbestos Enforcement  
☐ Local Hazardous Waste Ordinances  
☐ Local Sewer Pretreatment Ordinance  
  
☐ \_\_\_\_\_  
☐ \_\_\_\_\_  
☐ \_\_\_\_\_

**PROBLEM:** Current information on the quantities, composition, sources, and disposal practices for small quantity generator waste and household hazardous waste in Skagit County need further definition.

**OBJECTIVE:** Develop and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous wastes generated in Skagit County to aid in management planning and emergency response.

**ALTERNATIVES:** ☐ Standardized Sorting Procedures  
☐ Wastewater Treatment Plant Sampling  
☐ Survey Local Businesses  
  
☐ \_\_\_\_\_  
☐ \_\_\_\_\_  
☐ \_\_\_\_\_

**PROBLEM:** Implementation of a county-wide hazardous waste management plan could be difficult because of the number of different agencies and governments involved.

**OBJECTIVE:** Involve all key parties, public and community organizations, state and local public agencies, small businesses, and hazardous waste management companies in development and implementation of the plan. Identify practical resources and

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## HAZARDOUS WASTE PLAN PROBLEMS AND PROPOSED SOLUTIONS

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support to ensure implementation while recognizing the unique capabilities and limitations of different governments.

ALTERNATIVES:   \_\_\_ General Public Information  
                  \_\_\_ County Staff Work Session  
                  \_\_\_ Existing Materials Collection  
                  \_\_\_ Public Appearances

\_\_\_  
\_\_\_  
\_\_\_

Selection of the final recommended program for the Skagit County Hazardous Waste Plan will be based on an evaluation of individual program elements. Factors considered in this evaluation included:

- ability of the program element to achieve one or more of the objectives for solving a particular local hazardous waste problem;
- degree to which the program element complies with the State waste management priorities;
- acceptance of the program element by the county, SCOG, local jurisdictions, and the public;
- and cost effectiveness.

The program elements as described in the following section were matched to the particular problems and objectives identified for Skagit County. Some of the program elements will be eliminated from further consideration due to feasibility concerns or lack of applicability to Skagit County's problems and objectives.

SUMMARY LIST  
LOCAL HAZARDOUS WASTE PROGRAM ELEMENTS

Local Hazardous Waste Characterization Programs

1. Standardized Sorting Procedures
2. Collect Sort Data
3. Wastewater Treatment Plant Sampling
4. Survey Local Businesses
5. Incinerator Emission Monitoring
6. Rural Groundwater Monitoring

Public Information and Education Programs

7. General Public Information
8. School Programs
9. Point of Sale Information
10. Product Labeling Program
11. Information Phone Lines
12. Garbage Can Labeling
13. Citizens Waste Treatment
14. Education at Disposal Sites
15. Product Substitution
16. Storm Drain Awareness Program
17. SQG Education
18. County Staff Work Session
19. Existing Materials Collection
20. Health Department Mailings
21. Public Appearances

Regulatory and Enforcement Programs

22. Load-Checking
23. Asbestos Abatement Program
24. Asbestos Enforcement
25. Local Hazardous Waste Ordinances
26. Local Sewer Pretreatment Ordinance
27. Trouble Call System

Local Hazardous Waste Disposal Options

28. HHW Collection Sites
29. HHW Collection Days
30. Private TSD Facilities for HHW
31. Used Motor Oil Recycling
32. Battery Collection Program
33. Point of Sale Recycling
34. WSDA Waste Pesticide Identification and Disposal Program

Small Quantity Generator Programs

35. SQG Technical Assistance
36. Existing Waste Exchange Programs

37. Permanent TSD Collection Facilities for SQGs
38. Hazardous Waste Management Incentives

Financing Programs

39. Bonds
40. Hazardous Waste Collection Fees
41. General Fund
42. Solid Waste Account
43. Hazardous Substances Tax
44. Special Solid Waste District
45. State Solid Waste Tax

Employee Safety and Training

46. Safety Programs
47. Periodic Testing
48. Evacuation Plan
49. Asbestos Handling Procedures
50. Hazardous Waste Recognition Classes
51. Spill Procedures

## LOCAL HAZARDOUS WASTE PROGRAM ELEMENTS

### Local Hazardous Waste Characterization Programs

- \_\_\_ 1. Standardized Sorting Procedures - Standardize procedures and protocols for all local solid waste sorts to target potential hazardous waste streams. Conduct solid waste sorts specifically aimed at characterizing quantity, composition, source, and disposal methods for local hazardous waste in the solid waste stream.
- \_\_\_ 2. Collect Sort Data - Collect and evaluate new solid waste sort data as it becomes available nationwide.
- \_\_\_ 3. Wastewater Treatment Plant Sampling - Sample and analyze influent to and effluent from the wastewater treatment plants for hazardous waste constituents that may adversely affect receiving waters.
- \_\_\_ 4. Survey Local Businesses - Survey local industry, businesses and farms every five years over the next 20 years to determine changes in both types and quantities of hazardous waste generated and in hazardous waste management practices to evaluate the effectiveness of implemented programs.
- \_\_\_ 5. Incinerator Emission Monitoring - Continue monitoring of the incinerator emissions from the stack and hazardous constituents (metals) in the ash. Use information to target specific waste streams (such as batteries) that may be contributing to unacceptable concentrations in the air and ash.
- \_\_\_ 6. Rural Groundwater Monitoring - Establish a rural groundwater monitoring program to identify hazardous constituents that are migrating into rural water supplies. Use this information to focus control efforts on waste streams that could be contributing to problems in rural water supplies.

### Public Information and Education Programs

- \_\_\_ 7. General Public Information - Prepare/distribute presentations, seminars, public service announcements, printed material and other visible techniques for getting information to the public about proper disposal practices for HHW.
- \_\_\_ 8. School Programs - Promote education at the grade, middle, and high school levels identifying hazardous household products and safe disposal practices. Encourage use of curriculum prepared by the State.
- \_\_\_ 9. Point of Sale Information - Lobby state to require information at the point of sale that identifies products containing potentially hazardous substances and instructions for their proper use and disposal.

10. Product Labeling Program - Lobby state to implement a product labeling program that educates and informs the public about the use and disposal of hazardous products. Labels can be used to identify less-hazardous products to enable consumers to make informed purchase decisions and to inform about proper disposal.
11. Information Phone Lines - phone lines to provide the public with access to information about hazardous wastes, identification of products that are hazardous, product alternatives, and proper disposal methods. This program could include a local phone line operated by Skagit County Public Works, the County Health Department or a volunteer organization. Alternatively, the County could piggy-back on the state wide 800 number hazardous waste and recycling hot lines.
12. Garbage Can Labeling - attachment of adhesive labels or brochures to garbage cans that direct the public not to dispose of HHW in the trash. Labels might include an information phone line number for more information on appropriate disposal options.
13. Citizens Waste Treatment - using the education and information programs listed above, encourage citizens to treat specific wastes at home. For example, solvents such as paint thinner may be reused until they are gone by allowing particles to settle out and transferring the solvent to another container. The thinner may be used again and the remaining particulate matter may be disposed in the trash.
14. Education at Disposal Sites - education and information at solid waste disposal sites that may be receiving hazardous substances. Sites might include the transfer station, collection boxes, the landfill, the incinerator, and recycling centers. Signs and literature on proper waste disposal and waste minimization would be available to the public. Solid waste facility staff would be trained to inform self-haulers of appropriate disposal methods for HHW.
15. Product Substitution - Increase public education and information programs that focus on safe product substitution and less toxic alternatives. Develop and fund an ongoing outreach program that promotes changes in consumer product use.
16. Storm Drain Awareness Program - Implement local storm drain stencil projects (painting "no dump" messages next to storm grates). Encourage volunteer programs in concert with local jurisdictions. Develop and fund a public awareness program aimed at "storm drain awareness" to reduce out-of-sight-out-of-mind dumping.

17. SQG Education - This would be an on-going assistance program designed to provide information to businesses about waste reduction, recycling, and proper disposal methods for hazardous wastes. The program will involve producing and distributing fact sheets, a self-audit form, and a disposal and recycling directory; promoting use of hazardous waste collection facilities; and conducting an awards program for businesses with excellent hazardous waste management practices. It could also utilize interns from local colleges and universities to assist in implementation. The implementation of this education task could be accomplished by local professional groups and community groups such as Chamber of Commerce, Rotary, and Elks.
18. County Staff Work Session - Develop and present the hazardous waste plan to a joint meeting of County staff. Work with staff to arrive at a definition of roles and responsibilities and opportunities for education of the public during the normal course of their jobs. Focus on piggybacking on existing programs, such as oil and battery collection. Each staff person should know that there is a Hazardous Waste Plan, and what the County goals are for moderate risk hazardous waste management. A variation of this work session could be presented to representatives of the other jurisdictions within the County.
19. Existing Materials Collection - Gather multiple copies of existing documents, flyers, news articles, pamphlets, videos, and curriculum guides created by other jurisdictions outside of Skagit County including King County, Seattle/King County METRO, the Department of Ecology, EPA and others. Advertise the existence of this repository and maintain access to County officials, the public, businesses, and representatives of other jurisdictions within the County. This repository could be maintained at a public library, or in the County offices.
20. Health Department Mailings - Commitment and motivation occur when people perceive that the issues raised are important and of high priority. In order for people to take action, the water quality issue must affect them personally. Strengthening the connection between health and proper disposal of hazardous waste could be made with Health Department mailings as a utility bill insert. These mailings could promote product substitution and advertise disposal facilities, as well as educate the general public regarding toxic substances in day to day use.
21. Public Appearances - Speaking engagements and presentations of the plan and successes and failures to community and business group meetings by county and city officials/staff. These forums serve to create overall support for proper hazardous waste disposal, and also reward and publicize efforts of local businesses and government.

## Regulatory and Enforcement Programs

- \_\_\_ 22. Load-Checking - implement a load checking program in the self-haul areas of the transfer station, collection box sites, and landfill. Transfer station and collection box site workers would inform the self-haulers of appropriate disposal methods for their hazardous waste.
- \_\_\_ 23. Asbestos Abatement Program - Construction debris would be inspected for potential asbestos containing material prior to disposal. Transfer stations and disposal sites would also be monitored for unacceptable levels of asbestos fibers in the breathing zone. Dust control programs will be emphasized at waste handling facilities to reduce the potential for asbestos fibers being released to the air.
- \_\_\_ 24. Asbestos Enforcement - Support a County ordinance or State law requiring asbestos inspections and abatement prior to demolition or remodelling could be implemented to encourage proper asbestos management. This would be enforced through the building or demolition permit application. Coordinate disposal of asbestos containing material with the Northwest Air Pollution Authority.
- \_\_\_ 25. Local Hazardous Waste Ordinances - Pass City and County ordinances making it illegal to dispose of any hazardous materials improperly. All ordinances and resolutions should be consistent. Enforcement could be at the transfer station, incinerator, staffed drop boxes, and through citizen reporting.
- \_\_\_ 26. Local Sewer Pretreatment Ordinance - Pass or expand local ordinances that set source-control (e.g., pretreatment) standards to include all industrial and commercial facilities. The level of enforcement would depend on funding for inspections.
- \_\_\_ 27. Trouble Call System - Support use of trouble call systems such as 911 or other emergency number as a means of reporting illegal dumping.

## Local Hazardous Waste Disposal Options

- \_\_\_ 28. HHW Collection Sites - Permanent sites could be established at the Clear Lake compactor box site, Sauk Transfer Station site, and the incinerator where residents could deposit their HHW. The sites would be open on a regular basis so that residents would have an on-going option for disposal of HHW. A mobile household hazardous waste collection facility could be set up at various locations around the County on a rotating basis to provide service to the more remote areas.

- \_\_\_ 29. HHW Collection Days - Annual one-day household hazardous waste collection events could be conducted to collect household hazardous waste for recycling or proper disposal. Collection days also serve to increase public awareness about hazardous materials in the home. Collection days are to be held at the MSW incinerator in Burlington.
- \_\_\_ 30. Private TSD Facilities for HHW - Encourage private TSD (Treatment, Storage, and Disposal) facilities to offer disposal options for household hazardous waste in the County. Incentive programs or subsidies could be used. Private TSD operators could also be contracted to operate the collection facilities.
- \_\_\_ 31. Used Motor Oil Recycling - Expand existing used motor oil recycling programs and promote more convenient recycling locations. Consider adding curbside used oil pick-up as part of normal recycling or garbage collection programs.
- \_\_\_ 32. Battery Collection Program - continuation of the battery collection program already in place in Skagit County. The heavy metal content of household batteries can cause contamination of ash from the incinerator. Reducing the number of batteries in the waste stream will reduce potential environmental contamination from heavy metals. Under this program, household batteries are collected and recycled. Collection takes place at the incinerator, the Inman Landfill, the Sauk Transfer Station, all five compactor box sites, and C & D Recycling. A nominal payment for each battery recycled also encourages local organizations and groups to mount battery collection campaigns as fund raising events.
- \_\_\_ 33. Point of Sale Recycling - point of sale trade-ins and rebates on specific products such as batteries and used motor oil.
- \_\_\_ 34. WSDA Waste Pesticide Identification and Disposal Program - Skagit County is registered for participation in the state farm pesticide management program. The targeted wastes from this program include old and out of date pesticide currently being stored on farms. This program also has an education component to help farmers understand proper management practices for use and handling of pesticides.

#### Small Quantity Generator Programs

- \_\_\_ 35. SQG Technical Assistance - This would be an on-going assistance program designed to provide information to businesses about waste reduction, recycling, and proper disposal methods for hazardous wastes. The program will involve producing and distributing fact sheets, a self-audit form, and a disposal and recycling directory; promoting use of hazardous waste collection facilities; and conducting an awards program for businesses with excellent hazardous waste management practices.



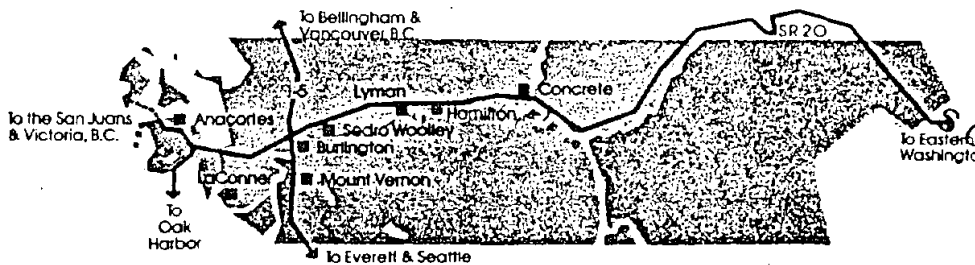
- \_\_\_ 36. Existing Waste Exchange Programs - Encourage participation in existing waste exchange programs such as IMEX in Seattle or Pacific Materials Exchange in Spokane, where the generators' waste becomes the feedstock of another company's process.
- \_\_\_ 37. Permanent TSD Collection Facilities for SQGs - Encourage private TSD operators to establish permanent collection facilities that will accept wastes from SQGs in Skagit County.
- \_\_\_ 38. Hazardous Waste Management Incentives - Provide incentives to companies that implement the state's hazardous waste management priorities. Encourage on-site recovery and recycling. Subsidize recycling of white goods. Hold amnesty days to allow the disposal of one drum per business of waste free, with discounted rates on additional waste.

#### Financing Programs

- \_\_\_ 39. Bonds - Issue bonds to finance major capital improvement projects.
- \_\_\_ 40. Hazardous Waste Collection Fees - charge a collection fee for dropping off hazardous waste at collection sites.
- \_\_\_ 41. General Fund - increase sales or property tax rates to provide supplemental funding through the general fund.
- \_\_\_ 42. Solid Waste Account - Increase tipping fees at the incinerator to help fund local hazardous waste programs.
- \_\_\_ 43. Hazardous Substances Tax - The State Hazardous Substances Tax implemented by the State may offer a potential source of revenue to Skagit County. It would require new State legislation for a local government to place an additional tax onto the existing one and for the State to administer the local part of the tax as they do the sales tax.
- \_\_\_ 44. Special Solid Waste District - Establish a special solid waste district throughout the County to create a new tax for purposes of funding both local solid and hazardous waste programs. Because of potential public opposition to another tax, County Commissioners may be pressured to not establish a new taxing district.
- \_\_\_ 45. State Solid Waste Tax - Lobby for an increase in the State Solid Waste Tax and distribute the additional revenues to local governments for hazardous waste programs.

## Employee Safety and Training

- \_\_\_ 46. Safety Programs - Develop safety programs, including identification of hazardous waste and provision of adequate safety gear and training to handle any situation involving hazardous waste appropriately through emergency response plans at solid waste facilities and wastewater treatment plants.
- \_\_\_ 47. Periodic Testing - Implement a periodic screening and testing program at waste facilities (for example, test air at transfer stations) for hazardous constituents to determine if hazardous materials are present in the workplace.
- \_\_\_ 48. Evacuation Plan - Develop Emergency Evacuation Plan for incinerator, landfill, and transfer station. Include training and practice drills.
- \_\_\_ 49. Asbestos Handling Procedures - Develop written procedures for asbestos handling and training for asbestos handling team.
- \_\_\_ 50. Hazardous Waste Recognition Classes - Conduct hazardous waste recognition classes for operators and workers at the incinerator, landfill, and transfer station.
- \_\_\_ 51. Spill Procedures - Document procedures for handling a hazardous waste spills or releases in the site attendant's manual.



RECEIVED  
AUG 25 1989  
SCS ENGINEERS

# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

August 24, 1989

Skagit County Hazardous Waste Advisory Group  
204 W. Montgomery  
Mount Vernon, WA 98273

Re: Hazardous Waste Planning Grant Objectives

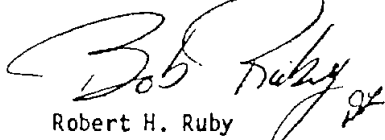
Dear Technical Advisory Group Members:

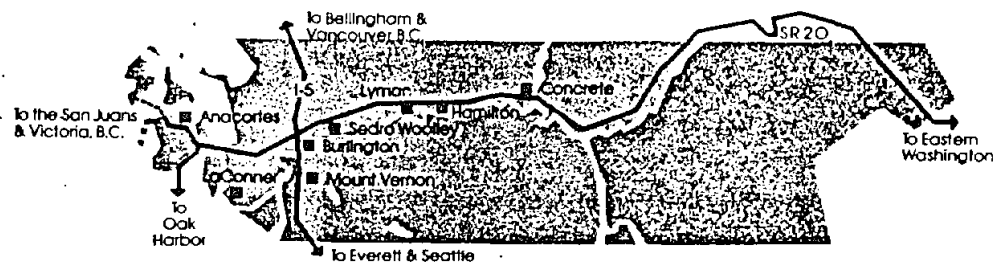
We would like to thank you for participating as a technical advisory group member to the 1989-1990 Skagit County Hazardous Waste Planning Program. The purpose of the program is to develop a permanent Skagit County hazard waste plan.

The first meeting of this technical advisory group is scheduled for Wednesday, September 13, 1989 at 11 a.m. in Hearing Room A in the Skagit County Administration Building. The agenda includes reviewing Skagit County's problems with moderate hazard waste identification and disposal and determining objectives to solve these problems. For your review prior to our meeting, we have attached a copy of the problems and objectives as researched by SCS Engineers, our contractors.

We are still in the early stages of program development and feel it is important to clearly define our objectives and organize the work in order to provide an effective approach to the study of moderate hazardous waste in Skagit County. We look forward to your comments and appreciate your help. If you have any questions, please call me at 428-1299.

Very truly yours,  
SKAGIT COUNCIL OF GOVERNMENTS

  
Robert H. Ruby  
Executive Director



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

## NOTICE OF SPECIAL MEETING

### SKAGIT COUNTY HAZARDOUS WASTE TECHNICAL ADVISORY GROUP

11 a.m. Wednesday, September 13, 1989

Skagit County Administration Building  
Hearing Room B

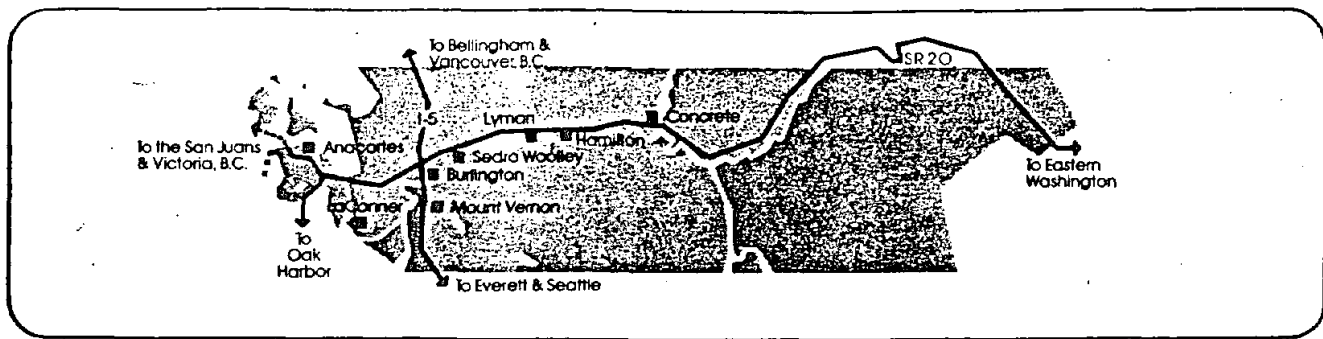
### AGENDA

Review of objectives for Skagit County's  
Hazardous Waste Planning Project

### ATTACHMENTS

1. List of objectives from Skagit County Public Works
2. List of problems and objectives from SCS Engineers
3. List of Technical Advisory Group members

We look forward to your comments and appreciate your help. If you have any questions, please call Bob Ruby at 428-1299 or Bill Ness at 336-9400.



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 426-4299

## HAZARDOUS WASTE PLANNING STUDY TECHNICAL ADVISORY GROUP SPECIAL MEETING MINUTES

September 13, 1989 -- 11 a.m.  
County Courthouse, Hearing Room B - Mount Vernon

### Members present:

Ray Reep, Chairman  
Bill Ness  
Bob Ruby

### Others present:

Sara Barton  
Dave Roberson  
Sheryl Benetiz  
Bill Green

Meeting was called to order by the Chairman at 11:03 a.m. and introductions of all present were made.

Bob Ruby introduced the grant program goals and objectives and discussion ensued on this topic. The general agreement was that both SCS Engineers' and the County's outlines were reasonable and sufficient. Bill Green from the Department of Ecology mentioned that the purpose of the goals and objectives were to prevent the adverse effect of small-quantity hazardous waste generation on the county and that the goals which were outlined certainly were realistic. Chairman Reep stated that Skagit County needs a plan for small generators of hazardous waste materials.

The Chairman asked if the goals and objectives as presented were adequate as stated and asked for a consensus among the members present. The group agreed to adopt, as stated, the goals and objectives.

On the topic of public participation through the process of the grant program, Bob Ruby explained the Skagit Council of Governments is comprised of elected representatives from all jurisdictions within the county. Because the SCOG has regular meetings which are held in a forum open to the public, Ruby suggested using the SCOG meetings as an environment for public participation in the grant process. Chairman Reep called for consensus of SCOG public meetings as part of the program process. All those present agreed with this method of public participation.

Ruby went on to mention that there must be a public hearing held on the grant before the final draft of this project is approved. Ruby suggested establishing a tentative date for a public hearing in the early part of April, 1990. Chairman called for a consensus, and this tentative date was unanimously approved by all those present.

Ruby's suggestion that a second technical advisory board meeting be scheduled sometime in mid-November, 1989 met with the approval of all those present at the meeting.

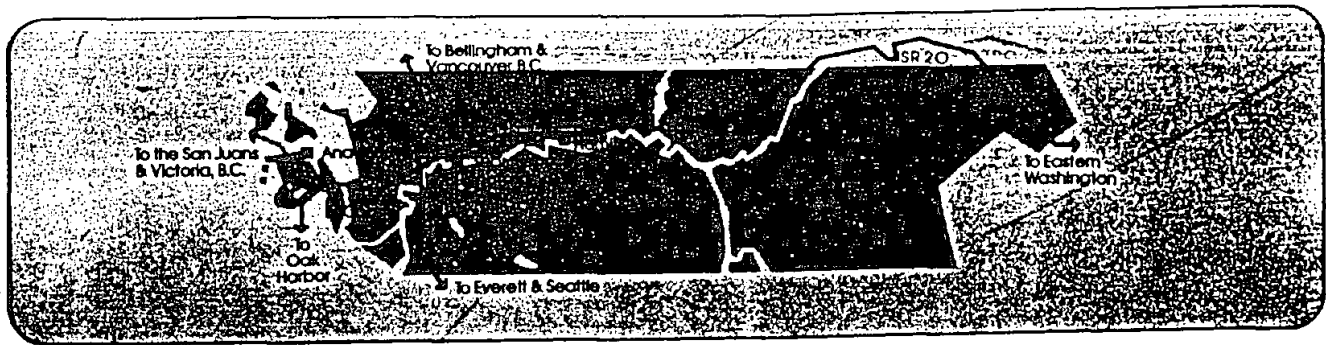
Meeting adjourned at 11:44 a.m.

Respectfully Submitted:

Robert Ruby, SCOG Executive Director

APPROVED:

Mayor Ray Reep, Chairman



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

## NOTICE OF REGULAR MEETING SKAGIT COUNCIL OF GOVERNMENTS

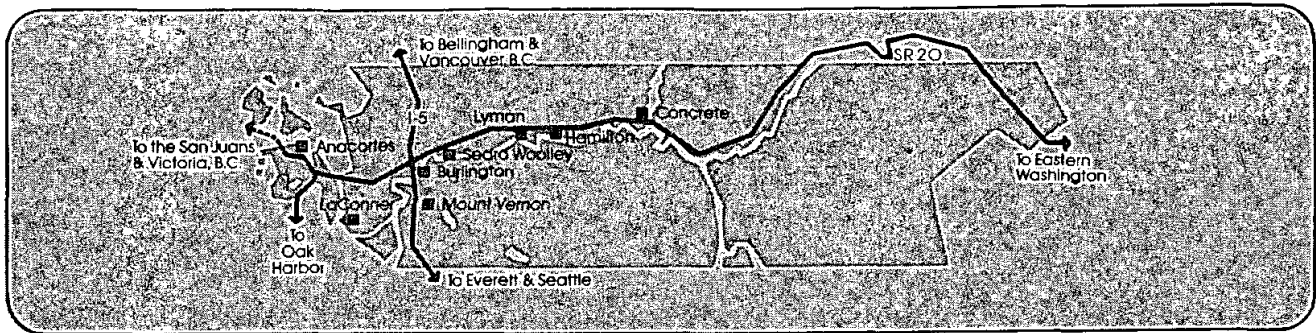
RECEIVED  
JAN 18 1990  
S.C.S. ENGINEERS

7:30 p.m. Wednesday, January 24, 1990

Burlington Council Chambers

### AGENDA

1. Roll Call
2. Minutes of December 20 meeting
3. Hazardous Waste Plan update
4. Hazardous Waste Plan amendment
5. EDASC Governmental Affairs Committee  
program/update
6. 1990 Budget
7. Vouchers:
  - a. SCOG 89-142 through 89-158
  - b. RLF 89-207
8. Other Business



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

## HAZARDOUS WASTE PLANNING STUDY TECHNICAL ADVISORY GROUP SPECIAL MEETING MINUTES

March 13, 1990 -- 10 a.m.  
County Courthouse, Hearing Room C - Mount Vernon

Members present:  
Terry Knutson  
Ken Willis  
Bob Ruby  
Jim Pemberton  
Rebecca Voerman

Others present:  
Diane Pottinger

Meeting was called to order at 10:08 a.m. and introductions of all present were made.

Approval of the minutes of the last meeting dated November 8, 1989 was passed on a motion by Ruby, seconded by Voerman.

In program report and status, Ruby mentioned that SCS had recently sent a copy of their draft results to this point. Although the draft was basically general in nature and included mostly background, a copy of that draft will be made available to members of the TAB for review and comment. A routing will begin with Ken Willis and then will be passed along to remaining committee members. Also under program status, Voerman mentioned that alternatives as well as programs needed to be developed to delineate which activities would be made as recommendations to the planning process. It was decided that SCOG staff would develop a preliminary program alternative listing for our Skagit County plan; this listing will be circulated to TAB members for review and comment.

Concerning the survey of waste stream composition, Diane Pottinger from R.W. Beck outlined Beck's mechanics for the study as well as the objectives. She mentioned surveying 90 dumps in the sample; 30 each of residential, commercial, and transfer stations. This would provide data in draft copy form by April 15.

Regarding public input process, Ruby related that in a recent telephone conversation, SCS stated its intention to immediately send information to each of the SCOG member with a solicitation for public input in addition to the formal public hearing process. It was the consensus of the TAB committee to follow up on that communication by SCS by requesting each local jurisdiction slot Hazardous Waste Planning on their agendas. This will allow TAB members to explain the purposes and objectives of the hazardous waste plan with those attending the city council meetings, and port and county commissioners meetings. SCOG will solicit press coverage for those meetings dates and agenda to alert the public. It will be mentioned that any information or questions from the public could also be submitted to staff by mail or telephone.

The next meeting for the Technical Advisory Board was set for 10 a.m., Thursday, April 12. Results from the waste composition sort will be reviewed during this meeting.

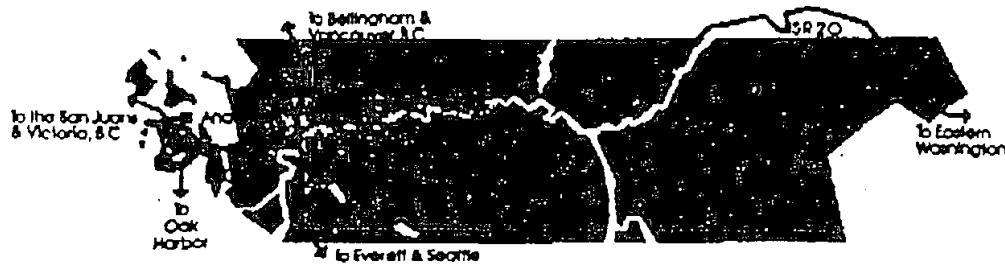
Meeting adjourned at 11:12 a.m.

Respectfully Submitted:

Robert Ruby, SCOG Executive Director

APPROVED:

Mayor Ray Reep, Chairman



# Skagit Council of Governments

2004 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

## NOTICE OF SPECIAL MEETING

### SKAGIT COUNTY HAZARDOUS WASTE TECHNICAL ADVISORY GROUP

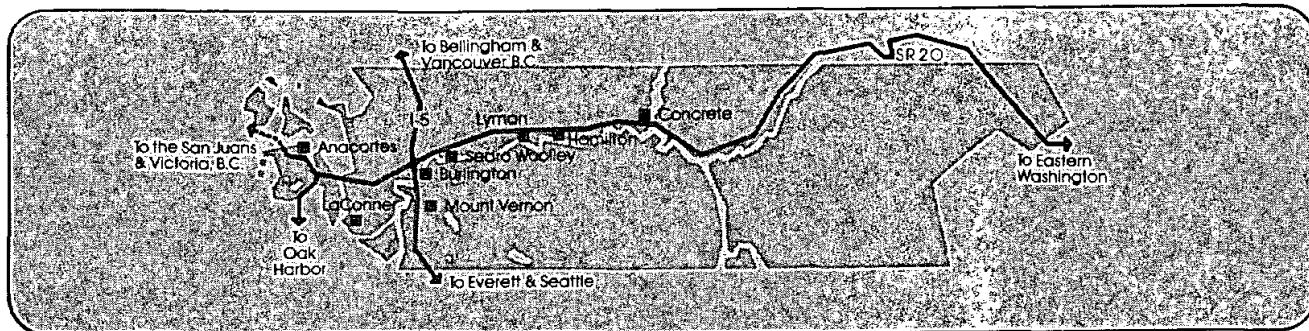
10 a.m. Thursday, April 12, 1990

Skagit County Administration Building  
Hearing Room B

### AGENDA

1. Introductions, roll call
2. Approval of March 13, 1990 minutes
3. Public meeting status
4. SCS preliminary draft
5. Beck preliminary composition study results
6. Plan recommendations





# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

## HAZARDOUS WASTE PLANNING STUDY TECHNICAL ADVISORY GROUP SPECIAL MEETING MINUTES

April 12, 1990 -- 10 a.m.  
County Courthouse, Hearing Room B - Mount Vernon

### Members present:

Ray Reep, Chairman  
Rebecca Voerman  
Ron Palmer  
John Hadman  
Terry Knutson  
Jim Pemberton  
Bob Ruby

### Others present:

Diane Pottinger  
Sarah Barton  
Dave Roberson  
Mark Spahr  
Jeff Monson

Meeting was called to order by the Chairman at 10:04 a.m. and introductions of all present were made. Approval of the minutes of the last meeting dated March 13, 1990 was passed on a motion by Ruby, second by Pemberton.

Regarding public meeting status, Ruby mentioned that letters had been sent from SCOG to all jurisdictions within the county indicating a willingness and desire to discuss the purpose and objectives of the hazardous waste plan during local public meetings.

The SCS preliminary draft of Chapter 5 on Recommendations was distributed and discussed. Ruby outlined a preliminary schedule for technical input and recommendations on this draft. In order to meet the compressed time schedule to submission date, it was decided that the next TAB meeting will be Wednesday, May 17, at 10 a.m. At this meeting, input from TAB members relating to recommendations will be submitted. This meeting was arranged to be before the formal public hearing, which will be held near the last of May, 1990.

Diane Pottinger submitted R.W. Beck's preliminary study results from the garbage sort just completed and described what kind of information was identified. TAB members will have the opportunity to study this local Skagit County information before making their recommendation to the general study.

Meeting adjourned at 11:16 a.m.

Respectfully Submitted:

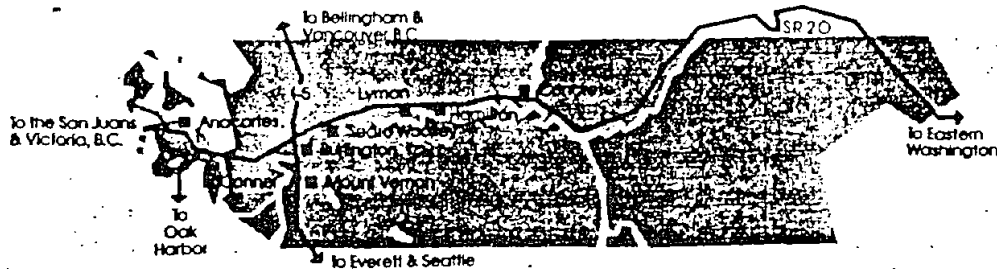
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Robert Ruby, SCOG Executive Director

APPROVED:

---

Mayor Ray Reep, Chairman



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

RECEIVED

MAY 9 1990

## NOTICE OF SPECIAL MEETING

S.C.S. INVOLVEMENTS

### SKAGIT COUNTY HAZARDOUS WASTE TECHNICAL ADVISORY GROUP

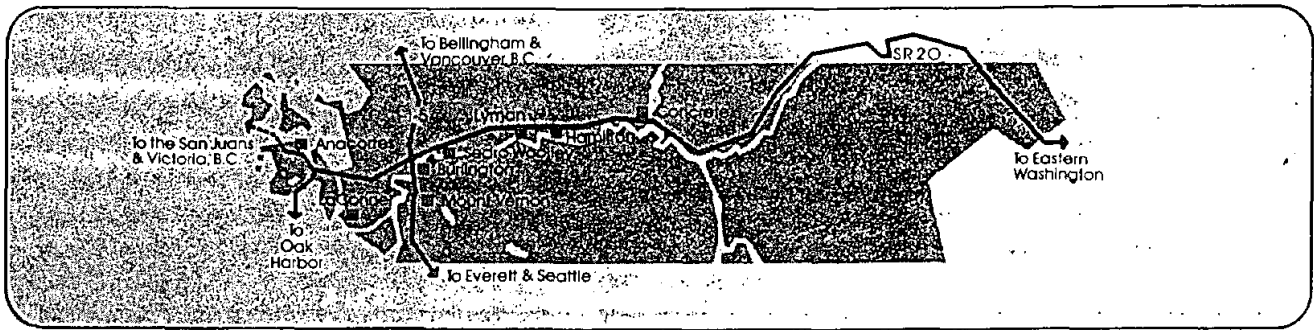
1 p.m. Wednesday, May 16, 1990

Skagit County Administration Building  
Hearing Room A

#### AGENDA

1. Introductions, roll call
2. Approval of April 12, 1990 minutes
3. Review of SCS and Beck drafts

Complete copies of the entire draft plan are available for review at the libraries in Anacortes, Mount Vernon and Sedro Woolley, as well as in the SCOG office.



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-4299

May 3, 1990

EX-100-1143  
MAY 4 1990  
S.C.G. EX-100-1143

David E. Roberson, CHMM  
SCS Engineers  
2950 Northup Way  
Bellevue, WA 98004

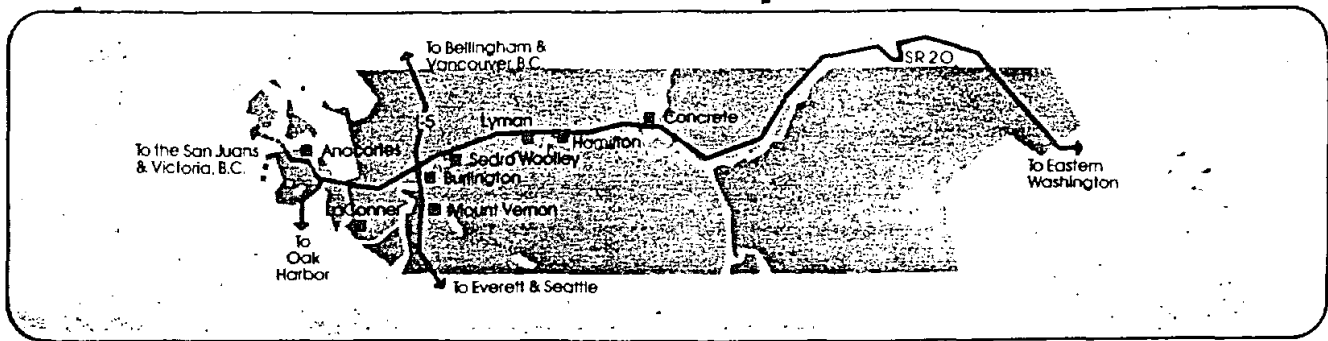
Dear Dave:

Enclosed please find copies of TAB meeting minutes regarding public input process for the hazardous waste study, along with letters to SCOG members (who represent all of the county jurisdictions) informing them of our willingness to speak before their public meetings and explain the objectives of the plan, and copies of news articles and agendas. You may wish to use this information in the compilation of the plan.

Please do not hesitate to contact me with any questions or comments regarding the hazardous waste plan.

Very truly yours,  
SKAGIT COUNCIL OF GOVERNMENTS

Robert H. Ruby  
Executive Director



# Skagit Council of Governments

204 Montgomery • Mount Vernon, WA 98273 • (206) 428-1299

March 27, 1990

Skagit Council of Governments  
204 W. Montgomery  
Mount Vernon, WA 98273

Re: Hazard Waste Planning Public Input

Dear SCOG Board Member:

As discussed and approved during last week's SCOG meeting, Technical Advisory Board members are available to explain the purposes and objectives of the hazardous waste plan with the public who attend city council meetings, and port and county commissioners meetings. In addition, SCOG will solicit press coverage for those meetings dates and agenda to alert the public..

TAB members will be available during the last two weeks of April and the first two weeks in May. We will be happy to include in our publicity the date, time and place of your meeting as a public forum on this issue.

If you would be interested in including this topic on the agenda of your next council meeting, or any other public forum or meeting, please call the SCOG office at your earliest convenience.

Very truly yours,

  
Bob Ruby  
Executive Director

## News Notes

### SCOG eyes comment on hazardous waste

The Skagit Council of Governments wants county residents to air their concerns about hazardous wastes and how to manage them.

Executive director Robert Ruby said the Hazardous Waste Plan will address those materials not now covered by state Department of Ecology regulations, such as smaller amounts of hazardous wastes or those less toxic.

Those interested in contributing information should contact Ruby at the SCOG office, 204 Montgomery, Mount Vernon.

### Comments sought on waste issue

SEDRO-WOOLLEY — Just one day after Earth Day, the City Council heard all about hazardous waste.

The Skagit Council of Governments is asking county residents for their comments on how to better dispose of hazardous waste.

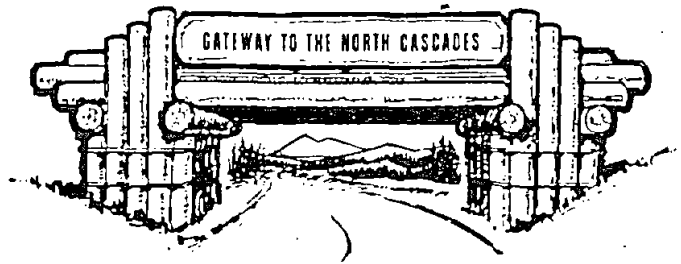
Skagit County must submit a draft plan to the state Department of Ecology by the end of June, Bob Ruby of SCOG told the council Monday.

The state gave Skagit County \$90,000 last year to study what wastes were being discarded and to draft a disposal plan, Ruby said.

Ruby described hazardous wastes as cleaning solutions, paint thinners, used latex paint, film developing chemicals and drain cleaning solutions.

Ruby said suggestions to the county plan may be made to him at the SCOG office at 204 W. Montgomery St., in Mount Vernon.

*Skagit Valley Herald  
Wed. 4/25/90*



## CITY OF SEDRO-WOOLLEY, WASHINGTON

98284

ADMINISTRATION  
720 MURDOCK STREET  
(206) 855-1661

POLICE  
720 MURDOCK STREET  
(206) 855-0111  
EMERGENCY 911

FIRE  
720 MURDOCK STREET  
(206) 855-2252  
EMERGENCY 911

MUNICIPAL COURT  
720 MURDOCK STREET  
(206) 855-0366

BUILDING DEPARTMENT  
720 MURDOCK STREET  
(206) 855-0771

CITY PLANNER  
720 MURDOCK STREET  
(206) 855-0919

SEWER/SANITATION  
720 MURDOCK STREET  
(206) 855-0929

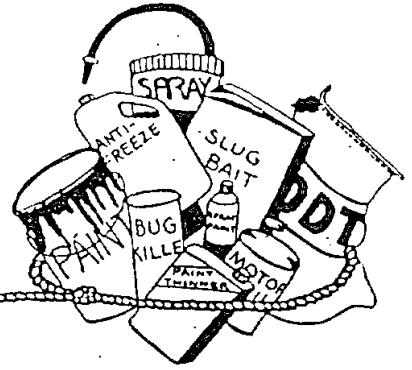
PUBLIC LIBRARY  
802 BALL AVENUE  
(206) 855-1166

### CITY COUNCIL AGENDA

APRIL 23, 1990

1. MINUTES
2. VOUCHER APPROVAL
3. SWEAR-IN: Denise Nicholson
4. AWC CONVENTION - Wenatchee
5. HAZARDOUS WASTE PLANNING

# FREE HOUSEHOLD HAZARDOUS WASTE ROUND-UP



**SATURDAY, OCTOBER 21, 9 A.M. - 4 P.M.**

Keep your home and environment safe. Bring old and unwanted household hazardous waste products to a collection site near you. If you can't use up or recycle hazardous products, then...

## BRING

- ✓ Pesticides
- ✓ Oil-based paints
- ✓ Thinners
- ✓ Solvents
- ✓ Cleaning products
- ✓ Antifreeze
- ✓ Swimming pool and hobby chemicals
- ✓ Dry & wet cell batteries
- ✓ Latex paint (please try and use it up, give it away or dry it outside instead)

## DON'T BRING

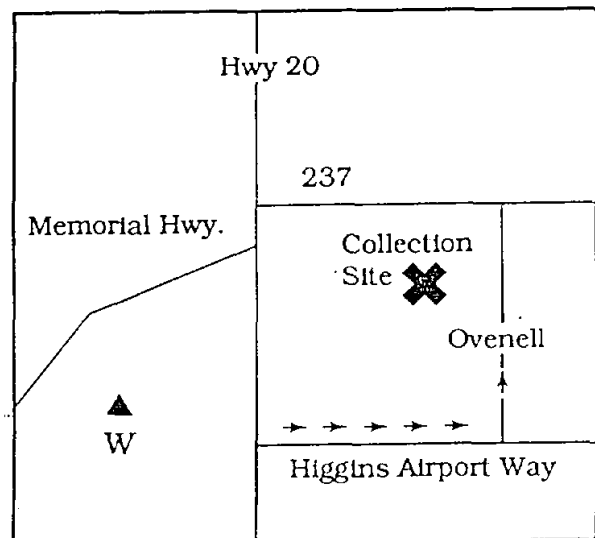
Explosives (Department of Emergency Management 336-9403)  
Unlabeled products, Leaking containers,  
Containers larger than 5 gallons.

**No business generated waste will be accepted!**

Keep products in original containers.  
Store them so they don't tip over during transportation.  
Keep away from children, pets, passenger compartment of vehicle.  
Separate paint from other materials.

## COLLECTION SITE:

**SKAGIT COUNTY INCINERATOR  
PARKING LOT**



Sponsored by  
**SHELL OIL COMPANY**  
ANACORTES REFINERY

**FOR MORE INFORMATION CALL  
1-800-826-1962**

A Community Service of the Skagit .  
County Solid Waste Management Division,  
Department of Public Works

Printed on Recycled Paper



# Directory of Skagit County Recycling Centers

● West County

▲ Central County

■ East County

Name and Address	Telephone	Hours Open	Automotive	Household	Materials Accepted
▲ Ais Auto Clinic 115 Cedar, Burlington	757-6336	8am-5pm Mon-Fri	X		Used Motor Oil
▲ Alger Compactor Cain Lake Road	424-6568	9am-4pm Fridays	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
▲ Anacortes Middle School 22nd S. M. Ave., Anacortes	293-7473	24 hrs 7 days/wk		X	Newspaper, Aluminum Cans
● Anacortes Senior Center "O" between 5th & 6th, Anacortes	293-7473	24 hrs 7 days/wk		X	Newspaper, Aluminum Cans
■ Birdsview Compactor Baker Lake Road	424-6568	9am-4pm Saturdays	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
▲ Burlington High School 301 Garl, Burlington	757-4074	24 hrs 7 days/wk		X	Newspaper
■ Clear Lake Compactor Hewey Rd.	424-6568	8am-6pm M,W,F,S,S	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
● Conway Compactor Fir Island Rd	424-6568	9am-4pm Sun, Mon	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
▲ Chevron Chevron 157 S. Burlington Blvd., Burlington	755-0070	8am-10pm Mon-Fri	X		Used Motor Oil
■ Fidelity Chevron 1120 Commercial Ave., Anacortes	293-7632	8am-9pm 7 days/wk	X		Used Motor Oil
▲ Hartberg Unocal 212 E. College Way, Mt. Vernon	424-7600	24 hrs 7 days/wk	X		Used Motor Oil (5 gallon maximum)
▲ Hewey's Corner Market 1502 Allen West Rd., Burlington	757-6443	24 hrs 7 days/wk		X	Newspaper
■ Immaculate Heart Church 719 Ferry, Sedro-Woolley	855-0077	24 hrs 7 days/wk		X	Aluminum Cans
▲ Inman Landfill 520 Inman Pt. Rd., Burlington	424-6568	Daylight Savings: 8:30 am-6pm M-F 8:30am-5:30pm Sat, Sun Standard Time: 8:30am-4:30pm 7 days/wk	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
■ Island Chevron 1251 Highway 20, Anacortes	293-5578	8:30am-10pm Mon-Sat 8am-10pm Sun	X		Used Motor Oil
■ Island Transmission 301 Commercial Ave., Anacortes	293-6030	10am-5pm Mon-Fri	X		Used Motor Oil
▲ J & D Appliance Recycling 1854 Lafayette, Burlington	757-1251	9am-5pm Mon-Fri		X	Appliances (reparable only)
▲ Jet Recycling 115 Lind St., Mt. Vernon	336-3252	9am-4pm Mon-Sat	X	X	Paper, Metal, Glass Auto Batteries
■ LaConner Recycling Chilberg Rd., LaConner	466-3352	10am-2pm Mon-Sat		X	Paper, Metal, Glass
▲ Larry's Auto/Truck Repair 1460 S. Burlington Blvd., Burlington	757-7444	8am-4:45pm Tues-Sat	X	X	Ferrous and Nonferrous Metals
▲ Martin Oil 1489 Avon Cut-Off, Mt. Vernon	424-4228	8am-5pm Mon-Fri	X		Used Motor Oil
▲ Mt. Vernon Elks 2111 Riverside Dr., Mt. Vernon	336-5757	24 hrs 7 days/wk		X	Newspaper
▲ Mt. Vernon Senior Center 1401 Cleveland St., Mt. Vernon	336-5757	24 hrs 7 days/wk		X	Newspaper Aluminum
▲ Mt. Vernon Seniors S. 18th and Broadway, Mt. Vernon	336-5757	24 hrs 7 days/wk		X	Newspaper
■ Sauk Transfer Station 1050 Sauk Landfill Rd.	424-6568	Easter to Labor Day: X 9am-5pm Mon, Thurs, Sun Labor Day to Easter: 9am-5pm; Thurs, Sun	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
● Sedro-Woolley Sanitation Shop 3rd and Sterling, Sedro-Woolley	855-0929	6am-1:30pm Mon-Fri		X	Paper, Metal, Glass Pop/Milk Plastic Grass Clippings
● Sedro-Woolley Senior Center Memorial Park, Sedro-Woolley	855-1531	24 hrs 7 days/wk		X	Newspaper
● Similk Compactor Christiansen Rd.	424-6568	9am-4pm Sat	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries
● Shelker Bay Recycling Kulshan Way, LaConner	455-3350	9am-3pm Sat	X	X	Paper, Metal, Glass Batteries
■ Skagit County Incinerator 1200 Ovensh Rd., Burlington	424-6568	8:30am-4:30pm 7 days/wk	X	X	Paper, Metal, Glass Pop/Milk Plastic, Batteries Automotive
▲ Skagit River Recycling 1265 S. Anacortes St., Burlington	757-6066	8am-4:30pm Mon-Fri 9am-12 Sat	X	X	Paper, Metal, Glass Pop/Milk Plastic Auto Batteries
● Vintage Oil 744 S. March Pt. Rd., Anacortes	293-2044	8am-4pm Mon-Fri	X		Used Motor Oil

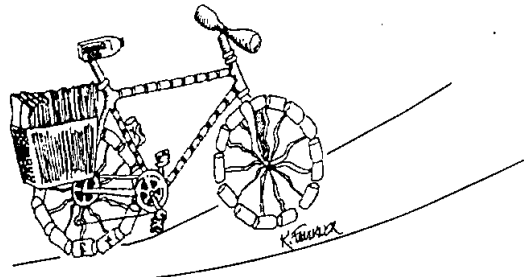
For more information, call:  
**Skagit County's Recycling Coordinator at 336-9400.**

Special thanks to Kathleen Faudner for the bicycle graphic and to Ranger Mari-Louise Communications for layout and design.

PRINTED ON RECYCLED PAPER FOR THAT GREAT LOOK!



## Cycling into the Future...



...A Guide to Precycling and Recycling in Skagit County.

**PRECYCLING: THE BEST SOLID WASTE STRATEGY.** Includes making wise consumer choices that avoid creating the waste, repairing and reusing items, and composting.

**RECYCLING: THE SECOND BEST SOLID WASTE STRATEGY.** Materials are separated from garbage to be put back into the manufacturing process and made into new items.

### PRECYCLING

#### Be A Wise Consumer

- Choose durable products
  - ✓ cloth diapers
  - ✓ cloth towels
  - ✓ durable dinnerware
- Buy recycled paper and other recycled products
- Buy only what you need
- Buy in bulk when possible

#### Repair/Reuse

- Use reusable shopping bags
- Reuse packaging for
  - ✓ children's art projects
  - ✓ workshop storage
- Check yellow pages for
  - ✓ used items
  - ✓ companies that repair

#### Compost

- Turn fallen leaves, grass clippings, weeds, garden plants into a valuable soil amendment
- Turn non-fatty food scraps into a high quality "vermicompost" using a worm bin

### RECYCLING

#### Why You Should Recycle

- Conserves resources/preserves habitat
- Reduces pollution
- Holds down volume at incinerator
- Earns money on some materials
- Employs people
- Reduces litter
- Reduces amount of garbage so may reduce garbage bill
- Conserves energy
- You'll be helping to solve a serious community problem

#### How To Recycle At Home

- Find a convenient spot about 3' x 3' to store your recyclable materials
- Locate a recycling center near your home (see directory on other side)
- Call the recycling center to verify what is accepted and how to prepare
- Keep each material separate in boxes, bags, or buckets
- Take in recyclables when you have a carload; tie delivery in with errands
- *Stick with it!*

### WHAT YOU CAN RECYCLE

#### Aluminum Cans

- empty

#### Tin Cans

- remove both ends
- rinse
- remove labels
- flatten

#### Glass Bottles & Jars

- rinse
- remove lids
- separate by color (green, brown, clear)

#### Newspapers

- keep clean and dry
- store in brown paper bags

#### Cardboard (NO waxed or plastic coated)

- empty contents and remove liners
- flatten

#### Household Batteries

- store in a closed jar out of reach of children

#### Scrap Metal

- remove plastic or other non-metal materials

#### Magazines

- keep clean and dry
- store in brown paper sacks

#### Plastic Milk Jugs (HDPE)

- rinse
- flatten

#### Plastic Pop Bottles (PET)

- flatten

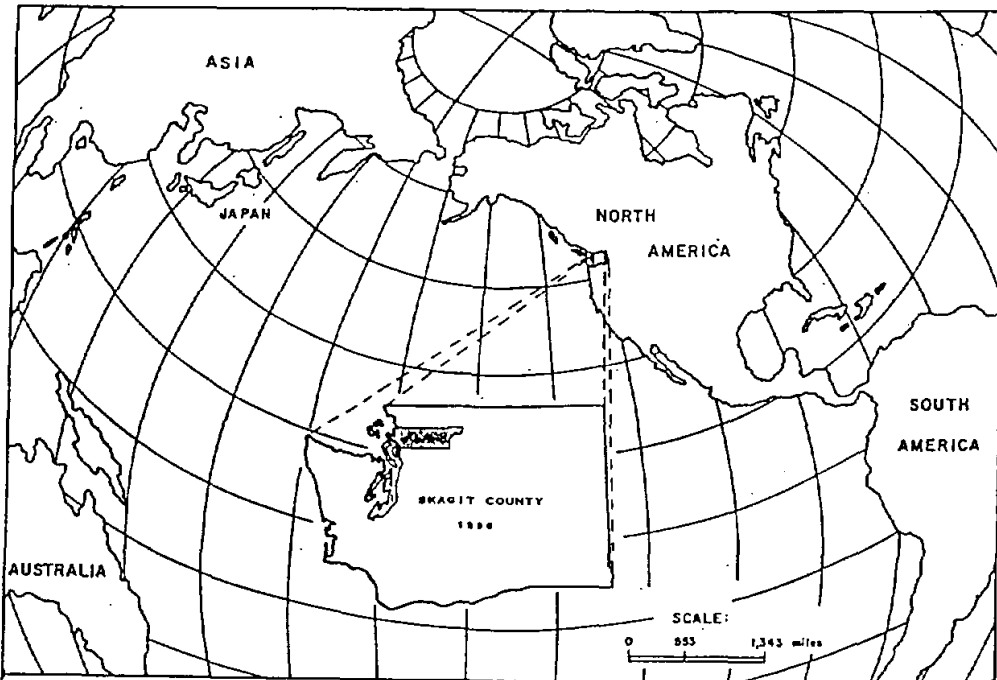
#### Used Motor Oil

- uncontaminated; (NO antifreeze, solvents or other chemicals)
- transport in non-breakable, sealed containers

#### Used Antifreeze

- uncontaminated; transport in non-breakable, sealed container

90009



### SKAGIT COUNTY AGRICULTURAL NEEDS SURVEY

Please answer all questions. If you want to answer any questions in more detail than space allows, please write in the margins or on the back page. Your extra comments will be read and taken into account.

Thank you for your help!

Please return the completed questionnaire in the enclosed self-addressed stamped envelope.

COOPERATIVE EXTENSION



Washington State University

SKAGIT COUNTY

**1989 & 1990**  
**PESTICIDE**  
**RECERTIFICATION**  
**TRAINING**  
**PROGRAMS**

*Sponsored by:*  
**Washington State**  
**University**  
**Cooperative Extension**

*Coordinated By:*  
Gary Thomasson - Extension Pesticide Education Specialist  
&  
Carol Ramsay - Extension Project Associate

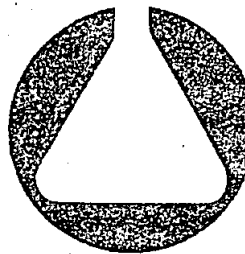
Please Pass This Information Packet to Those  
Seeking Training For Pesticide Licensing

No Recertification Credits Will Be Given For These Programs

**1990**  
**PRE-LICENSE**  
**PESTICIDE TRAINING**  
**SHORT COURSES**

*Sponsored by:*  
**Washington State**  
**University**  
**Cooperative Extension**

*Coordinated By:*  
Gary Thomasson - Extension Pesticide Education Specialist  
&  
Carol Ramsay - Extension Project Associate



## Chemical Safety in the Home

Today's average home contains a wide variety of chemicals designed to make life easier, cleaner, healthier, and more pest-free. These chemicals are usually stored in such places as medicine chests, under the kitchen sink, in closets, in the laundry, in the home workshop, or in the garage. When used according to label directions, stored safely, and disposed of properly, these chemicals represent little or no threat to man, his pets, or his property. However, each year the number of home chemical accidents increases, particularly poisoning cases involving small children.

The following precautions can prevent most of the potential problems associated with chemicals commonly used in or around the home:

1. **Read the Label and Follow the Directions.** Almost all chemical containers have labels that provide specific instructions covering use, storage, and disposal.
2. **Always Keep a Chemical in Its Original Container.** If you find a chemical that has lost its label, don't guess—dispose of it.
3. **Keep All Household Chemicals Out of Reach of Small Children.** Chemicals stored in the lower shelves of kitchen or bathroom cabinets are readily accessible to infants who cannot distinguish between a can of oven or drain cleaner and a soft drink can. A lockable storage cabinet is preferable where small children are a consideration.
4. **Store and Use Flammable Chemicals with Proper Care.** Never store or use flammable chemicals near the home furnace or any other appliance producing an open flame or spark. These chemicals are best stored in a lockable cabinet in the garage and used in well-ventilated areas, preferably out-of-doors.
5. **Make Every Effort To Use Up the Chemical Before Disposing of the Container.** Never dispose of excess pesticides, paint thinners, and solvents through the sewer system. If you cannot use the chemicals, give them to some responsible person who will use them according to label instructions. If you are concerned about disposing of "old" pesticides or chemicals lacking container labels, contact your county health department for disposal instructions.
6. **Properly Dispose of All Chemical Containers.** Before disposing of any chemical container be sure that the container is empty. Use aerosol canisters until nothing more will spray from them, then include with items to be taken to a sanitary landfill. Aerosol containers will explode if subjected to high temperatures. Thoroughly rinse (three times) metal, glass, or plastic containers carrying liquid pesticides. Include the resulting rinse water in the pesticide spray tank and apply according to label instructions. After rinsing, these containers may be disposed of in a sanitary landfill. Never burn paper pesticide containers in a home fireplace or wood stove. Dispose of such containers either via a sanitary landfill or, if the label directions so indicate, they may be incinerated along with other combustibles outside of the home.

*Revised by Gary Thomasson, Extension Pesticide Education Specialist.*

Extension programs are available to all persons without discrimination. Published June 1981.

## SAFE DISPOSAL OF HOME USE PESTICIDES

Gary L. Thomasson, *Pesticide Education Specialist and Extension Entomologist*

**NOTE:** The disposal guidelines presented in this publication are restricted to "General Use" pesticides commonly applied in and around residential dwellings by unlicensed pesticide users.

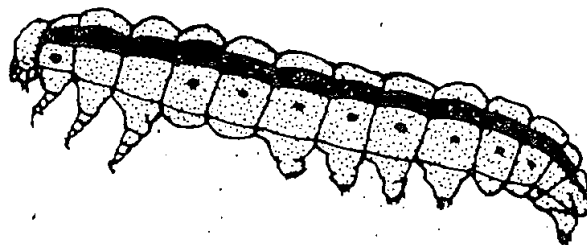
Home and apartment dwellers who practice do-it-yourself pest control are inevitably faced with the problem of how to dispose of empty pesticide containers or containers partially filled with pesticides of questionable usefulness because of their age. To put this problem in proper perspective, it might help to remember where these pesticides were purchased. Most of the pesticides used by nonprofessionals are purchased in supermarkets, pharmacies, hardware stores, and yard and garden stores. Although these chemicals are poisons designed to kill pest organisms, they are sold to the public in formulations which are minimally hazardous to the user. As such, they are usually no more hazardous than many of the other chemicals found on store shelves; consequently, pesticides purchased in the retail outlets indicated may be disposed of safely and legally by adhering to the following procedures:

- The best way to dispose of an unused pesticide is to apply it to the target site per label instructions, even though the pesticide may have lost its potency because of age. All pesticides will be destroyed by sunlight, soil micro-organisms or other factors in the environment. Thus, using a pesticide for its intended purpose significantly reduces the chances of environmental contamination problems.

- Never dispose of an unused pesticide by flushing it down the toilet or in any other way introducing it into the sewer system. Contamination of any waterway (including a sewage system) is illegal, and potentially damaging to the environment.
- Before disposing of any pesticide container, remove as much of the chemical as possible. Remove liquid pesticide concentrates by rinsing the container with water three times. Dispose of the rinsate by adding it to the sprayer and applying per label instructions.
- Never reuse empty paper, plastic, or glass pesticide containers for any purpose. Dispose of by placing them in the garbage for shipment to a sanitary landfill. Do not place containers in kitchen garbage compactors nor attempt to burn containers in a home fireplace, woodstove, or "burn barrel."
- Place empty aerosol containers in the garbage. Never attempt to incinerate or puncture aerosol containers, because these pressurized containers will explode.
- If you have doubts about the advisability of disposing of a particular pesticide via the sanitary landfill, contact the nearest Department of Ecology office for additional information.

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# USING PESTICIDES SAFELY in the HOME and YARD



MODERATE RISK HAZARDOUS WASTE PLAN - BACKGROUND - Public Input

<u>DATE</u>	<u>ACTION</u>
August, 1989	Formation of Technical Advisory Committee (TAC) (see attached)
September, 1989	TAC meeting
January, 1990	Planning update presented at regular SCOG meeting
March, 1990	TAC meeting
April, 1990	TAC meeting
May, 1990	TAC meeting
May, 1990	Draft Chapter 5 widely disseminated for public review (see attached)
May, 1990	Public Hearing on Draft Plan
February, 1991	TAC meeting
February, 1992	Discussion/Agreement at regular SCOG meeting regarding completion of the Plan
March, 1992	Meetings with Mayors to discuss contents of the Final Plan



APPENDIX G  
RESPONSE TO PUBLIC COMMENTS

## APPENDIX G

### RESPONSE TO PUBLIC COMMENTS

Throughout the planning process, numerous public involvement notices were mailed out to the general public, copies of the Draft Plan were made available in three different areas of the County, and a public meeting was held in Mount Vernon. However, other than comments made by the Technical Advisory Committee during regularly-scheduled meetings, no comments were received from the general public, the Skagit Council of Governments, the Solid Waste Advisory Committee, or the jurisdictions. This low level of participation was anticipated as the Plan was not a controversial topic.