

COMPREHENSIVE PLANS
FOR THE
SOUTHWEST & SOUTH CENTRAL
PLANNING DISTRICTS OF
SKAGIT COUNTY
WASHINGTON

JUNE 1979

SKAGIT COUNTY PLANNING DEPARTMENT
218 COUNTY ADMINISTRATION BUILDING
MOUNT VERNON, WASHINGTON 98273

JULY 1979

COMPREHENSIVE PLAN FOR THE
SOUTHWEST DISTRICT
AND
SOUTH CENTRAL DISTRICT
OF
SKAGIT COUNTY, WASHINGTON

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0.3 PREFACE

Chapter 172, 1st Extraordinary Session, Laws of 1973 amended RCW 36.70.320 (known as the planning Enabling Act) to allow Comprehensive Planning on a District or less than entire county basis.

The Skagit County Planning Department has adopted the District approach to Comprehensive Planning to facilitate the preparation and adoption current, viable plans specifically tailored to the needs and objectives of each of the several separate and distinct geographical areas of the county.

The six Planning Districts selected for Skagit County are generally identified as follows:

- North Central District - including the area surrounding Sedro Woolley.
- Northwest District - including the area surrounding Burlington.
- Island District - including the area surrounding Anacortes.
- Southwest District - including the area surrounding La Conner.
- South Central District - including the area surrounding Mount Vernon.
- Upriver District - including the area surrounding Concrete.

The Southwest and South Central Planning Districts are fourth and fifth in a series of six areas that are under revision for a new Comprehensive Plan for Skagit County. The Comprehensive Plan for the County, combining the six different districts, is scheduled for completion in 1979.

It should also be noted that Chapter 172, 1st Extraordinary Session, Laws of 1973, which amended the Planning Enabling Act as mentioned above, does not invalidate previous Comprehensive Plans or those portions of previous Comprehensive Plans covering areas other than the Planning District. Since there are a number of areas which can best be considered on the basis of a county-wide plan, the District Plan should be considered to be a supplement to the County-wide Comprehensive Plan adopted in 1968. In areas wherein there is an apparent conflict, the District Plan takes precedence. When all six districts plans are completed, the new Comprehensive Plan will be considered complete and the 1968 Plan will then be superseded in its entirety.

0.5 SUMMARY - SOUTHWEST & SOUTH CENTRAL AREA COMPREHENSIVE PLANS

The Southwest and South Central Comprehensive Plans described and evaluated in this document are important milestones in Skagit County's planning program. These plans represent a culmination of several year's effort to update and revise the Comprehensive Plan for Skagit County. The plans for the Southwest and South Central areas are fourth and fifth in a series of revisions of Skagit County's Comprehensive Plan.

However, these plans for the Southwest and South Central areas do not represent a completion of the planning process for these areas. These plans will and should be amended and revised as community standards change. No comprehensive plan should be considered as the final answer to all land use problems and decisions. It can be a valuable and usable guideline through which decisions related to land use can be made. As with any guideline, these plans should be used regularly by decision makers in order to reap the best benefits a comprehensive plan can provide.

The recommendations contained in this plan can best be described by the following generalization:

1. The existing and future agricultural use of the floodplain should be provided with at least 20 year flood frequency protection.
2. The variety of lifestyles available in the Southwest and South Central area, both rural and urban, should be maintained or expanded in those areas where the physical environment and existing developments are compatible.
3. Development of the unprotected floodplain area should be stopped.
4. New development should be directed to floodsafe uplands of the Southwest and South Central areas.
5. Commercial goods and services should be provided by the traditional urban centers. Highway services only should be provided at key arterial intersections.
6. Industrial uses should be located near urban centers or in areas where the physical environment and existing or proposed land uses are conducive and compatible with the proposed industrial development.

0.6 SUMMARY SHEET - SOUTHWEST AND SOUTH CENTRAL E.I.S.

Nature of this report: Draft Environmental Impact Statement

Sponsor: Skagit County Planning Department
Room 218, County Administration Building
Mount Vernon, Washington 98273

Type of Proposed Action: Legislation

Official Title of Proposed Action and Summary of the Proposed Action:

Southwest and South Central Districts - Skagit County Comprehensive Plan Amendment.

The proposed legislative action will amend and revise portions of the current and official Skagit County Comprehensive Plan. The portions for which the comprehensive plan are being amended are generally described as:

Southwest District: Boundaries:

North - from the Swinomish Bridge easterly along Highway 20 to the intersection with north - south center line of Section 11, Township 34N, Range 3 East;

East - south on the center line of Section 11, Township 34 N, Range 3 East, then south to the center of Section 23, Township 34, Range 3, then east to Penn Road, then South to the center of Section 25, Township 34, Range 3, then east to the center of the Skagit River, then south following the South Fork of the Skagit (via Tom Moore Slough) to the confluence with Skagit Bay;

South - Skagit County Line;

West - from the Swinomish Channel bridge, south along the center of the Swinomish Channel to the Skagit County line (east of Ika Island);

This area contains approximately 41.5 square land miles, all within Skagit County (excluding the Town of La Conner).

environment either beneficially or detrimentally. However, each specific development, or each consumption of land, at the project level, is the point in time or source at which environmental assessments and impact statements should be developed, issued, reviewed, and commented upon.

Comprehensive Plans are not rigid, fixed documents, but developed with references to the various standards of a neighborhood, community, or region to guide the development of the areas, so as to provide an identifiable lifestyle of the areas, against which various forms of land development or use may be analyzed and evaluated. A Comprehensive Plan can and should change as community standards and goals change.

A list of environmental impacts of a Comprehensive Plan would include all of the aspects of that plan both in terms of all of the myriad types of activities it would condone for finite areas and all of the larger group of activities that would be precluded in finite areas.

The Comprehensive Plan will:

1. Allow substantial development of large land area for the following use activities:
 - a. residential
 - b. commercial
 - c. industrial
 - d. public
 - e. agricultural
 - f. forestry
2. Prevent many types of development and land use activities.
3. Provide minimum standards for development and land use activities.
4. Allow habitat change for numerous indigenous species of flora and fauna.

Summary of Alternatives

A. No Comprehensive Plan

Comprehensive Plans are required by the Revised Code of

- 5.9 Commercial Land-Use Policies
- 5.10 Industrial Land-Use Policies
- 5.11 Transportation
- 5.12 Community Facilities
- 5.13 Open Space and Recreation
- 5.14 District Designations/Southwest
- 5.15 South Central Residential Land-Use Policies
- 5.16 Commercial Land-Use Policies
- 5.17 Industrial Land Use Policies
- 5.18 Transportation
- 5.19 Community Facilities
- 5.20 Open Space and Recreation
- 5.21 District Designations/South Central

0.4 FOREWARD

The Southwest and South Central District Plans contained in this volume and illustrated in principle on the accompanying maps are the fourth and fifth in a series of six District Comprehensive Plans stemming from the Comprehensive Land Use Planning Alternatives Program completed in 1973.

This series of six District Plans, when completed, will form an entirely new Comprehensive Plan for Skagit County.

These Comprehensive Plans will produce a pattern of development for the Southwest and South Central areas of Skagit County that will:

1) preserve the resource productive areas; 2) provide a variety of living environments; and 3) maintain control over the costs associated with community growth and improvement.

South Central District: Boundaries:

North - SR 20 at Avon-Allen Road east along the northern section line of Section 12, Township 34, Range 3, to Pulver Road south on Pulver Road to the center of the Skagit River, then east via the center of the Skagit River to the western section line of Section 22, Township 35, Range 6;

East - south along the western section line of Section 22 Township 35, Range 6, to the southwest corner of Section 36, Township 34, Range 6, then south along the section line between Ranges 6 and 7 to the Skagit County line;

South - Skagit County line;

West - Center of Section 11, Township 34, Range 3 and the intersection of SR 20, south along the center section line to the center of Section 23, Township 34, Range 3, then east to the center of Section 24, Township 34, Range 3, then south to the center of Section 25, Township 34, Range 3, then east to the center of the Skagit River, then south following the South Fork of the Skagit (via Tom Moore Slough) to Skagit Bay.

This area contains approximately 190.5 square land miles all within Skagit County (excluding the City of Mount Vernon).

Summary of Environmental Impacts:

A Comprehensive Plan, by its nature, is a permissive document in terms of potentially allowing a wide variety of land uses to occur. It is also restrictive in that adherence to the provisions, policies, and goals of a Comprehensive Plan will preclude a variety of land uses from occurring. Thus, there is a balance of the liabilities and benefits of a Comprehensive Plan.

No Comprehensive Plan will have a direct environmental impact. A Comprehensive Plan does not develop projects, or prohibit or promote, degradation of the environment directly. The various provisions and policies of a Comprehensive Plan will, upon implementation, affect the

Washington, thus this alternative would require a change in state law which is beyond the range of control of the Board of County Commissioners.

B. More Proscriptive Comprehensive Plans

More proscriptive Comprehensive Plans could at an extreme preclude all forms of development and land use activities and could propose that as existing development and land use activities are amortized that the area they occupy be returned, or allowed to return to its natural status.

C. More Liberal Comprehensive Plans

More liberal Comprehensive Plans could allow any form of development to occur in any area, adjacent to any other development or undeveloped area, in which any form of degradation or alteration of existing systems would be allowed.

D. For discussion of the alternatives for the Southwest and South Central Districts refer to Chapter 4 in the plan.

3. Recommended Plans

A. For a discussion of the recommended plan for the Southwest District refer to Chapter 6. For a discussion of the South Central District plan refer to Chapter 7.

B. For a graphic representation of the Southwest and South Central Area Comprehensive Plans see attached maps.

Review Period: 35 days (Comment Period deadline is

Recipients of the E.I.S. Document:

- 1) Skagit County Board of Commissioners
- 2) Skagit County Planning Commissioners
- 3) Skagit Regional Planning Council
- 4) City of Mount Vernon
- 5) Town of La Conner
- 6) Regular E.I.S. Distribution List

0.7 LIST OF DOCUMENTS

1. Comprehensive Plan - Skagit County, January 1968.
2. Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands, Skagit Regional Planning Council, April, 1973.
3. Skagit County Water, Sewerage, and Drainage Facilities Plan, Skagit Regional Planning Council, June 1970.
4. Skagit County - A Strategy for Environmental Protection and Economic Development, The Urban Land Institute, November, 1972.
5. Skagit County Agriculture: An Economic Mainstay, Department of Agriculture, Washington State University, 1972.
6. A Tourist and Recreation Strategy for Skagit County, Northwest American, 1972.
7. The North Cascades Highway, Its Impact on Local Community Economics, Community Development Services, 1972.
8. Puget Sound and Adjacent Waters Study, Pacific Northwest River Basins Commission, 1970.
9. Soil Survey - Skagit County Washington, U.S. Department of Agriculture, Soil Conservation Service, January 1960.
10. Solid Waste Management Plan, Skagit County Planning Department, 1971.
11. North Puget Sound Region for 1971, A New Plan for Law and Justice, Northwest Regional Council.
12. Overall Economic Development Plan (Skagit County Washington). Skagit County Development Association, 1972.
13. Skagit County Emergency Services Operations Plan, Skagit County Department of Emergency Services, October 1972.
14. Skagit County Comprehensive Park and Recreation Plan, Jongejan, Gerrard, Associates, 1973.
15. Skagit County Industrial Site Survey, Latourell Associates, 1972.
16. Skagit County Water Quality Management Program, CH2M/HILL, 1974.
17. Swinomish Comprehensive Plan, Stevens, Thompson, Runyan, 1972.

0.8 PREAMBLE FOR THE SKAGIT COUNTY COMPREHENSIVE PLAN

On September 10, 1968, the Skagit County Board of County Commissioners adopted a revision of its Comprehensive Plan which stated as follows:

"This text together with the Comprehensive Plan-Map, the 'Analysis of Population in Skagit County,' the 'Skagit County Economic Base,' October, 1964, 'Parks and Recreation,' a Plan for Skagit County, comprises the Comprehensive Plan for Skagit County."

Chapter II, entitled "Purposes and Intent" of the Comprehensive Plan on Page 9 explained the intent of Skagit County as follows:

"This Plan should be periodically reviewed by the Planning Commission and said Board. In addition to adding more detailed plans, it may be necessary from time to time to change basic features of the Plan, as economic, social or technological changes indicate a better basic pattern of land use or a need for re-evaluation of planning principles and objectives."

The Washington State Planning Enabling Act, RCW 26.70.340 provides that:

"When the Comprehensive Plan containing the mandatory subjects as set forth in RCW 36.70.330 shall have been approved by motion by the Board and certified, it may thereafter be progressively amplified and augmented in scope by expanding and increasing the general provisions and proposals for all or any one of the required elements set forth in RCW 36.70.330 and by adding provisions and proposals for the optional elements as set forth in RCW 36.70.350. The Comprehensive Plan may also be amplified and augmented in scope by progressively including more completely planned areas consisting of natural homogeneous communities, distinctive geographic areas, or other types of districts having unified interests within the total area of the county . . . "

Skagit County recognizes that its Comprehensive Plan must be studied continually and revised whenever new technology, techniques and other data indicate that the best interest of the County, or any portion thereof, will be served thereby.

Skagit County recognizes, as it moves forward from its long range generalized plan adopted in 1965 and amended in 1968, to more precise plans for development, that because of the vast amounts of land within the boundaries of Skagit County (1,735 square miles), and because of the great diversity of the kinds of land and needs of its citizenry, and in order to make the Comprehensive Plan more meaningful as a guide and a tool for the regulation of land, it is in the best interest of the people of Skagit County to supplement the plan by dividing the county into natural homogeneous communities and geographic areas in order that more precise development policies can be developed and adopted for the more natural homogeneous communities and geographic areas.

Therefore, Skagit County, for planning purposes, is divided into the following districts:

- 1) North Central
- 2) Upriver
- 3) South Central
- 4) Southwest
- 5) Northwest
- 6) Island

and, in conjunction with the revision and updating of the general provisions that apply to the county as a whole, more precise plans and guidelines that will apply more particularly to the specific areas will be developed for these areas or districts.

The following describes the approximate boundaries of the six planning areas of Skagit County:

- 1) North Central

North - Skagit County Line

South - Skagit River

West - A line running north from the Skagit River along the District Line Road to the Cook Road, then west along the Cook Road to Highway I-5, then north along I-5 to the County Line.

East - A line running north from the Skagit River beginning at a point lying between Sections 21 and 22, Range 6, Township 35, and continuing north to the County line (generally between Lyman and Hamilton)

2) Upriver:

North - Skagit County Line

South - Skagit County Line

West - A line running between county lines, parallel to a north/south line between Section 21 and 22, Range 6, Township 35 (generally between Lyman and Hamilton).

East - Skagit County Line

3) South Central:

North - Skagit River

South - Skagit County Line

West - South along the Skagit River from its intersection with I-5.

East - A line running south from the Skagit River beginning at a point lying between Section 21 and 22, Range 6, Township 35, (generally between Lyman and Hamilton).

4) Southwest:

North - A line running west beginning at a point between Section 12 and 13, Range 3, Township 34, generally south of Avon.

South - Skagit County Line

West - The center of the Swinomish Channel

East - South along the Skagit River from its intersection with I-5.

5) Northwest:

North - Skagit County Line

South - Skagit River, to a line running North along the Polver Road to a line running west beginning at a point between Sections 12 and 13, Range 3, Township 34, (generally south of Avon).

West - The center of the Swinomish Channel.

East - A line running north from the Skagit River along the District Line Road to the Cook Road, then west along the Cook Road to Highway I-5, then north along I-5 to the County Line.

6) Island:

All of the islands of Skagit County lying west of the center of the Swinomish Channel.

NOTE: The Island Planning District does not include the city of Anacortes.

(See "Scope," Page 8, 1968 Skagit County Plan)

The text portion of the Comprehensive Plan, including the illustrative materials, tables, and charts, is designated as the "plan policies." It sets forth in narrative form the public objectives, policies and standards to be applied when guiding the future growth of Skagit County.

In addition to the plan policies there is also a map portion of the Comprehensive Plan which is designed and intended to illustrate the application of the plan policies in a general way.

The Comprehensive Plan is an expression of the public policy outlining the general guidelines for the future development of the county and is not designed or intended to establish precise land use boundaries in either the policies or the map portion of the plan.

1. PHYSICAL ENVIRONMENT

The physical environment is a complex of many interrelated elements. Often times action upon one seemingly isolated element has subsequent impacts upon other elements. It is important therefore, to know the elements and their relationships with other elements, including man. The physical characteristics section is composed of the following sections:

- 1.1) Geology
- 1.2) Slope
- 1.3) Soils
- 1.4) Septic Suitability
- 1.5) Floodplain
- 1.6) Coastal Shoreline Characteristics and Processes
- 1.7) Hydrology

The diverse physical environment can be mapped and discussed for specific areas, such as the Southwest and Southcentral Planning areas. The value of an analysis of the Physical Environment is that those responsible for planning decisions can more clearly understand the relationship between the characteristics of the land and the effects that development will have upon the other elements of the environment.

1.1 GEOLOGY

The study area consists of two general geologic regions. The western part is in the Puget Sound Trough of the Pacific Border Province, which consists mainly of the extensive delta and floodplain of the Skagit River, alluvial flats, glacial outwash plains, and a few lateral or frontal moraines. The elevation of these lowlands ranges from sea level to approximately 400 feet, with the exception of a few areas which are higher.

Most of Skagit County lies in the Northern Cascades region of the Sierra-Cascade Province. The Cascade Mountains consist of ancient sediments, strongly folded, generally metamorphosed, and intruded by granite batholiths. The summit elevation of this mountainous region ranges from 6,000 to 8,000 feet, with some peaks rising even higher. Glaciation has left its mark, characterized by the extreme ruggedness of much of this area. The forces of glaciation and heavy annual snowfall still have a great influence especially in the high elevation above 5,000 feet.

The Skagit River, which is the second largest river in the state, is the backbone of much of the study area. Its system drains much of the county, with the main tributaries being the Sauk, Cascade, Suiattle, and Baker Rivers.

1.1.1 GEOLOGIC UNITS

The geology of the study area is characterized by four dominant forms, and five other forms of more localized importance. The dominant forms are:

- Alluvium (Qa)

- Paleocene-cretaceous non-marine rocks (Tkc)

- Undivided glacial drift (Qg)

- Undivided pre-tertiary sedimentary and unsedimentary rocks (PT).

The smaller, more local forms are:

- Undivided sedimentary and cretaceous rocks (Jk)

- Glacial till (QgLT)

- Non-marine oligocene rocks (Oc)

- Outwash stratified drift and associated material (Qg10)

- Metamorphic rocks of low-grade zone (Pjph).

1.1.2 GEOLOGY MAP

The geology map locates these geologic units in the planning area on a generalized basis. Refer to Geology Map, Map A, Comprehensive Land Use Planning Alternatives Study.

1.1.3 SUB-AREA ANALYSIS

1.1.3.1 SOUTH SKAGIT FLOODPLAIN

This section of the floodplain is influenced greatly by the Skagit River and the previous scouring effects of the Pleistocene Glaciation. It consists mainly of Alluvium (Qa). This material is mostly unconsolidated silt and gravel valley fill with some clay. It also includes low-level terrace, marsh, peat, artificial fill, and glacial deposits. This alluvium is a product of post-glacial stream erosion and deposition. The Skagit River, starting in the Cascades, emerges onto the lowlands where it discharges its load of silt and sand. As the river drops its sediment, deltas are built seaward, gradually extending the land westward as portions of the troughs are filled with silt and sand. The Skagit River has been building its large delta and floodplain westward for the past 10,000 years.

There is an exception to this generally flat alluvium floodplain in the Pleasant Ridge/LaConner/Fish Town Area. Where the advancing front of the Skagit Delta encountered islands such as this, they were surrounded by sediments and are now seen as hills rising above the flat floodplain.

The Pleasant Ridge area is composed of younger glacial drift (Qglt). This consists of till, a hard blue-gray to gray concrete-like mixture of clay, silt, sand, and gravel which was deposited at the end of a recessional moraine. It is principally Wisconsin in age.

The LaConner area, although very close to Pleasant Ridge, is somewhat different in its geologic composition. The area consists of upper jurassic-lower cretaceous sedimentary and volcanic rocks (JK). More specifically, these are sedimentary and volcanic rocks that are undivided. Some of these include graywacke, argillite, siltstone, slate, volcanic rocks, phyllite, greenschist, and greenstone. It is reasonable to believe that this area underwent some uplifting before the Pleistocene Glaciation, between the Jurassic and Cretaceous periods.

The Fish Town area is composed of Oligocene non-marine rocks (Oc). These consist of andesite conglomerate, tuff beds, and mud-flow material.

1.1.3.2 SOUTH CENTRAL AREA

The western part of this area, including the western part of the City of Mount Vernon, is influenced by the Skagit River. West of Mount Vernon the Skagit opens into its wide expansive floodplain. Obviously, alluvium (Qa) is the prominent under-structure here.

The hills in the eastern section of the city and around Conway consists of younger glacial drift (Qgl). The understructure and their fairly gentle slopes are products of the glaciation. Between these two areas, however, lies a group of much more resistant hills. This area includes Little Mountain and Devils Mountain which consists of pre-tertiary sedimentary and meta-sedimentary rocks (PT), and paleocenecretaceous non-marine rocks (TKC). This same formation runs eastward to include the area around Big Lake, Devils Lake, and Lake McMurray. These lakes are probably all glacial in origin.

The Walker Valley is an example of a glaciated valley, the west side of which contains pre-tertiary sedimentary and metasedimentary rocks (PT), while the east side is mostly younger glacial drift (Qgl).

1.1.3.3 MIDDLE SKAGIT RIVER AREA

The Skagit River meanders through the Middle Skagit Area constantly using its natural forces to change the form of the land. This is done by deposition, erosion, and flooding. This area of the river has a multitude of bends, some of which are near towns. During enlargement of a bend, the river channel shifts toward the outer part of the bend, leaving a strip of relatively flat land, or floodplain, on the inner side of the bend. The floodplain is built of bars composed largely of sand and gravel brought as bed load scoured from the outsides of bends immediately upriver. Inundation of the floodplain from time to time allows finer silt and clay to settle out over the surface, adding to the floodplain height and covering the coarser alluvium beneath. As lateral cutting by the river continues, the floodplain strips grow wider and presently join to form continuous belts along either side of the river. The cutting and filling proceeds to such an extent that the channel migrates here and there across the entire floodplain.

1.1.4 PLANNING IMPLICATIONS

These geological considerations have a great effect not only on the density of development, but also on the configuration of that development to the land itself. Ground configuration and substratum determine how both buildings and services (water, sewer, roads, etc.) are dispersed over the land. Historically, flat areas, such as valley and river basins, have been very susceptible to a grid pattern of development. This makes it easy to administer the land and to provide the necessary services, but all too often the resulting development has been regarded as monotonous, ugly, and depressing. The existence of a variety of landforms and resources in an area provides a natural base with which to plan a development pattern that enhances these attributes instead of ignoring them. The upland areas of Skagit County are well endowed with these attributes. Such things as a variety of hills and gullies, streams, lakes, trees, and spectacular views should be considered as design resources which are nonrenewable if not used in a proper design context. Mineral resources are also an important

consideration within the planning area. Sand, gravel, and rock are of primary interest in planning for future needs and require care in the selection of areas where extraction activities will be compatible with adjacent land uses.

1.1.5 SUPPLEMENTAL INFORMATION

A broader evaluation of the planning implications of geologic consideration is presented in Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands, which is a supplement to this Comprehensive Plan for the Southwest/South Central District of Skagit County.

The geologic topics covered in the above supplement are:

1. Climate and precipitation
2. Flora and fauna
3. Geologic factors affecting landforms
4. Mountain forming
5. Glaciation
6. Geology of specific areas
7. Planning implications
8. Man's relationship to earth processes

Additional data is contained in the tables which deal with the following subject area:

1. Movements of the land surface
2. Allowable bearing capacities of earth materials
3. Explanation of rocks of the study area
4. Divisions of geologic time
5. Pleistocene sequence in the Puget lowland

1.2 SLOPE

1.2.1 ELEMENT OF SLOPE

The two main elements of slope that must be considered when examining the possibility of development are steepness (slope %) and aspect (The orientation of a sloping ground surface with respect to geographic north).

1.2.1.1 SLOPE STEEPNESS

Slope steepness affects the rate at which precipitation is drained from the surface. On steep slopes surface runoff is rapid and water does not long remain available to plants. On gentle slopes, much of the precipitation can penetrate the soil and become available for prolonged plant use. The thickness of the soil may be lessened by the process of erosion. Thus, the characteristics of the soil itself may often be related to slope steepness. The occurrence of certain geologic processes such as overland flow, earth flow, mud flow, landslides, rockfall, and soil creep are also directly related to the steepness of the slope and thus affect the amount to which a certain piece of land can be developed. The eroding capacity of these processes increases directly with the angle of the slope.

1.2.1.2 SLOPE ASPECTS

The second element of slope which may have an effect on its use is slope aspect. As stated earlier, this concept is involved with the direction in which the slope is facing. It has direct influence upon plants by increasing or decreasing their exposure to sunlight and prevailing winds. Upon divides, peaks, and ridge crests the soil tends to be drier because of rapid drainage and because the surfaces are more exposed to sunlight and to drying winds. Generally speaking, slopes facing the sun have a warmer, drier environment than slopes facing away from the sun. Another example might be the location of a ski area. Some slopes have more snow, due in part to their slope aspect.

1.2.2 SLOPE MAP

For discussion purposes, slope has been classified and mapped into five categories. These are:

| | |
|-------|--------|
| 0-3% | 15-30% |
| 3-8% | 30+% |
| 8-15% | |

These categories are derived from Soil Conservation Service maps, and the United States Coast and Geodetic Survey map of the planning area. The slope maps locate these categories of slope on a generalized basis in the Southwest and South Central Planning Districts. Refer to Slope Map, Map E, Comprehensive Land Use Alternatives Study.

1.2.3 SUB-AREA ANALYSIS - SLOPE CHARACTERISTICS

1.2.3.1 SOUTH SKAGIT FLOODPLAIN

The first, and probably most important area to be examined is the floodplain area. For ease in making this analysis more understandable, the Skagit and Samish Floodplains are broken up into three specific areas. The southern portion of the Skagit Floodplain will be the first to be examined. It covers approximately the area of Township 33N - 34N and Range 3E. This section of the floodplain is reasonably flat with a range of 0-3% slope over most of the land. However, there are areas of slope ranging from 3% to 15%, most notably the Pleasant Ridge area and the Fish Town area, near LaConner. When considering slope and its related aspects, some slopes tend to be more suitable to certain uses than others. The floodplain is best suited for agriculture and other compatible uses such as pasture, recreation, open space, and forestry.

This is partially due to the amount of 0-3% slope that is on the floodplain, the fertile alluvium soils left there by the river, and the rather high water-table that exists there. For the same reasons, extensive urban related development would be less satisfactorily located in this area. Drainage is rather poor in this area due to its nearly level slope, soil characteristics, and high water table. All of these, plus the frequent danger of flooding, place a burden on the amount of development that can conceivably take place within the floodplain. The Pleasant

Ridge and Fish Town areas do offer the possibility of some moderate intensity development. They contain some moderate slopes with good view characteristics. The major problems that hinder development in many such areas include the poor septic suitability, the potential for shrink/swell damage inherent in the soils, and the lack of sewers.

1.2.3.2 MOUNT VERNON/WALKER VALLEY AREA

Like the other major cities in the County, much of Mount Vernon lies in the floodplain. The area around East Mount Vernon does have some slopes ranging from 0-15%. However, it appears the characteristics of the predominately Bow soil causes some complications for development. This is primarily centered upon the unsatisfactory shrink/swell characteristics of this soil group. Septic suitability can also be a problem in this soil. The degree of success in overcoming these complications is related to the application of the architectural and engineering elements of each specific development design.

The Big Lake area and the slopes surrounding Walker Valley all have a gentle 3-8% slope. Also, parts of the valley between Big Lake and Lake McMurray have a 0-3% or 3-8% slope.

The ridge running southward from Mount Vernon, including the area east of Conway, has some fairly moderate slopes, although it is intermittently steep in places.

Taking into consideration only the dangers and complications of the floodplain, it would appear that Mount Vernon's potential growth area lies east of the present city. There is plenty of land available here with suitable slope characteristics. The variation in slopes would present a pleasing atmosphere in terms of design potentials.

The corridor running south through Walker Valley, around Big Lake, to Lake McMurray, has areas where the slope suitability and view characteristics are good.

1.2.3.3 MIDDLE SKAGIT RIVER

This is approximately the area in and around the Skagit River Valley from Sedro Woolley to Concrete. East of Sedro Woolley the river valley forms a narrow swath of fairly level land with a slope range of approximately 0-3%. The slope of the hills on the south side of the river tends to be more abrupt than that on the north, generally being 30% or better. The hills on the north side of the river valley, especially near Sedro Woolley, have a fairly substantial amount of area with 3-15% slope.

The flat portion of the river valley is within the flood danger area. This presents the same problems for development as stated earlier. The areas of moderate slope north of the river valley and closer to Sedro Woolley lend themselves to urban related development.

The South Central area is dominated by the Cultus Mountains, which rise to a peak elevation of 3,950 feet, and which are flanked to the west and north by the Skagit River floodplain.

1.2.4 PLANNING IMPLICATION

The numerous mountains, hills, and valleys of Skagit County are a product of many forces over a certain expanse of time. However, the general shapes and slopes that have been created were probably most influenced by the last glaciation, the constant flow of the Skagit River System and the movements of the earth's crust. By analyzing these slopes, one can understand both their potentials and their weaknesses in the proper functioning of our ecosystem.

1.2.5 SUPPLEMENTAL INFORMATION

The Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands has a more extensive discussion of the planning implications of slope and of view characteristics associated with topographic features of this area. The areas discussed are:

1. Slope steepness
2. Slope steepness and accelerated land erosion
3. Slope aspect
4. View characteristics
5. Slope analysis of the study area

1.3 SOILS

1.3.1 SOIL TYPES

Of the two hundred and twenty-six (226) soil types found in Skagit County, one hundred and sixteen (116) are represented in the Southwest and South Central portions of the county. Because many soil types are identical in composition, and are distinguished only by their differing degrees of slope, only the different series names will be listed. A detailed listing of soil types is available in the Skagit County Washington Soil Survey, prepared by the Soil Conservation Service, 1960. The soils found in the Southwest and South Central Planning Districts are:

| | |
|---------------|------------------------|
| Alderwood | Nookachamps |
| Belfast | Norma |
| Bellingham | Osa |
| Bow | Pilchuck |
| Cagey | Puget |
| Carbondale | Puyallup |
| Cathcart | Rifle |
| Coastal beach | Riverwash |
| Cokedale | Rough broken land |
| Everett | Rough mountainous land |
| Giles | Rough rocky land |
| Gilligan | Samish |
| Greenwood | Saxon |
| Heisler | Semiahmoo |
| Indianola | Skiyou |
| Klaus | Snohomish |
| Kline | Thornton |
| Lummi | Thornwood |
| Lynden | Tidal marsh |
| Made land | Tisch |
| Mukilteo | Wickersham |

1.3.2 SUB-AREA ANALYSIS

It should not be inferred from the above list that area soil types are equally distributed or proportional in the amount of land they represent.

The Southwest region is characterized by Puget silt loam (Pg), one of the most extensive and productive soils of the county. However, because of its inherently poor drainage and slow surface run-off, its productivity is dependent on drainage practices (dikes, ditches, tide gates), which keep it from being regularly inundated. While such practices deprive the soil of river-borne organic matter which would be deposited during seasonal overflows, they nevertheless allow cultivation to occur on a regular basis, thus providing a stable economic base in the county.

Other soils which are closely associated with Puget silt loam are: Sumas silt loams; Puyallup fine sandy loam; Cokedale loam; and Sultan silt loam. Although they occur with less frequency than the Puget soil, they comprise a soils group that is characteristic of the river delta. Like the dominant Puget type, these soils also demonstrate the properties of poor drainage, slow surface run-off and a moderate to high natural fertility. Because of their poor drainage these soils have very severe limitations for septic tank sewage disposal systems. In addition, their location in the river floodplain exposes them to flood hazard, which, together with poor septic suitability, makes the greater part of the Southwest planning area unsuitable for urban-type development. An exception to the characteristic alluvial deposits of the floodplain occurs in the Pleasant Ridge area, which rises to a maximum elevation of 130 feet above sea level. Here the predominant soil type is Bow gravelly loam which occurs on plateau-like glacial uplands, and is derived from finely textured glacial till. Like the lowland soils, Bow soil has poor drainage and surface run-off characteristics, as well as severe limitations for septic systems. It is considered one of the county's best upland agricultural soils, and is used for pasturage and raising hay, oats, and grasses. Bow soils have only a moderate natural fertility, and require fertilizer maintenance to maintain productivity.

The South Central district of the planning area has the same soil types and characteristics as the Southwest district, along the northern and eastern boundaries flanking the Skagit River. Otherwise, this area is dominated by rough mountainous land, interspersed at lower elevations by Alderwood soils, and a variety of small, local deposits of other soil types, principally, Osa, Cathcart, and Bow. Taken as a whole, these soil types do not display a single set of characteristics, but vary considerably in drainage and run-off rates, septic suitability, shrink/swell, shear strength and permeability. Detailed information is available in the Soil Survey of Skagit County, prepared in 1960 by the Soil Conservation Service.

1.3.3 PLANNING IMPLICATIONS

Soils in the Southwest planning district are classified in capability classes II and III, which makes them suitable for tillage and pasture if proper management is exercised.

These are some of the most productive soils in the county, and represent the bulk of the area's agricultural lands. The area is also in the river floodplain, so is subject to potentially destructive floodwaters.

The South Central planning district is dominated by soils in capability classes VI - VIII. Class VI soils may be used for pasturage; however, class VII and VIII are not suitable for pasture, and none of the classes is suitable for tillage. The area is well suited to forestry, and provides wildlife habitat as well as recreational opportunities.

1.3.4 SUPPLEMENTAL INFORMATION

The Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands discusses soils in the following areas:

1. Soils study area - general overview
2. Soil forming processes
3. Soil characteristics
4. Properties of major soils groups
5. Soils suitability (planning implications)
6. Soil suitability table
7. Agriculture, pasture, forestry and soil suitability

Also refer to the Soils Map, Map C of the above study.

1.4 SEPTIC SUITABILITY

1.4.1 ELEMENTS OF SEPTIC SUITABILITY

Septic suitability is a term used to define the conditions pertaining to a certain area with respect to individual sewage disposal systems or subsurface drainfields. The suitability of an area is usually thought of in terms of degree (i.e., good, moderate, poor, very poor, etc.). The information presented in this section is an attempt to give a generalized picture of the septic suitability of the study area. Every site proposed for development should be tested thoroughly.

Strict regulations pertaining to the use of septic tanks are necessary because of the potential health hazard involved if a system fails. For this reason, septic tanks are considered to be an interim solution to the problem of sewage disposal.

Land areas are classified in one of four categories: a) possessing only slight limitations with regard to septic suitability; b) possessing moderate limitations; c) being of a variable nature (primarily with regard to soil depth and slope); and d) possessing severe limitations.

1.4.2 SEPTIC SUITABILITY MAP

A Septic Suitability Map is provided for various areas in the Planning Districts. It must be emphasized that this is a generalized map. It does, however, give an initial insight into the septic suitability of a general area. The only way to obtain accurate information as to the suitability of a specific area is to perform a series of tests at that site during the time of greatest precipitation. Refer to the Septic Suitability Map, Map D, Comprehensive Land Use Planning Alternatives Study.

1.4.3 SUB-AREA ANALYSIS

1.4.3.1 SOUTHWEST DISTRICT

Generally, the soils in the Southwest area have characteristics which make them unsuitable for their use as septic drain fields. However, due to the extreme variability of septic suitability, this plan will not

generalize by sub-area. The need for a percolation test prior to development is emphasized for all non-sewered developments.

1.4.3.2 SOUTH CENTRAL DISTRICT

Due to the extreme variability of septic suitability this plan will not generalize by sub-area. The need for percolation test prior to development is emphasized for all non-sewered developments.

1.4.4 SUPPLEMENTAL INFORMATION

The report, Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands, deals in greater depth with the whole question of septic suitability and provides a generalized table which analyzes the septic suitability of the various soils types found in the Southwest and South Central Planning Districts.

1. Planning implications
2. Suitability criteria
3. Septic tank design
4. Suitability map analysis
5. General septic suitability of Skagit County Soils

1.5 THE FLOODPLAIN, FLOODING, AND FLOOD DAMAGE PREVENTION AND PROTECTION

1.5.1 THE FLOODPLAIN

Floodplains are by definition where rivers flood. The floodplain is just as much a part of its natural course as the channels which carry normal and low flows. In Skagit County this includes: the entire floor of the Skagit River Valley, the delta of the Samish and Skagit Rivers, and the reclaimed tidelands adjoining the Skagit, Samish, and Stillaguamish River Basins. This area is approximately 90,000 acres, including 68,000 acres of fertile farmland downstream and west of Sedro Woolley, and 22,000 acres upstream.

Land use throughout the floodplain is characteristically rural and agricultural.

1.5.2 FLOODPLAIN MAP

The floodplain map, map H, Comprehensive Land Use Planning Alternatives Study, displays the 100 year floodplain for most of Skagit County.

1.5.3 FLOODING

Flooding occurs when the floodplain is inundated by stream flows in excess of the capacity of the stream channel.

The Skagit River is subject to two distinct types of floods; winter and summer. Most of the exceptional winter floods have occurred in November or December, the summer floods in May or June.

The large winter floods result from storms moving in from the Pacific Ocean. The precipitation associated with these storms is intensified as the air currents are forced upward over the Cascade Mountains. Temperatures accompanying these storms are often high enough to melt some of the snow-pack. If, in addition, the ground is saturated from previous precipitation, surface runoff is increased. The runoff swells creeks and streams which fill the main river channel to capacity. As the increasing flow proceeds downstream, the flatter grades cause a reduction in river velocity and the river spreads out onto the floodplain.

The crests of summer floods are caused mainly by the hot summer sun melting the glaciers and snowfields in sparsely timbered or open areas. The peak stages of the greatest summer floods are considerably lower than those for the great winter floods. The summer floods, however, are of much longer duration and are greater in volume than the winter floods. The crops are growing at the time of summer floods and, if the dikes fail, the damage done is accentuated by the fact that the long duration and great volume of the floods prevent repairing of the dikes and levees.

Refer to Table 1.5.1.1 Floods Since 1815.

1.5.4 PROTECTIVE AND PREVENTATIVE STRATEGIES TO REDUCE FLOOD DAMAGE

Historically, floodplains have been the site for urban growth and development because of their proximity to transportation routes (rivers) and their level topography, which minimizes construction costs. However, as valley residents know, floodplain development creates serious problems when the Skagit River follows its natural tendency to flow across the floodplain when its normal channel capacity is exceeded. This plan will address the various means of reducing flood damage.

Methods of flood loss reduction may generally be viewed in terms of protective and preventive strategies. Protective measures consist of attempts to "stop the flood water, where it falls" and "keep the flood water away from people." Preventative measures seek to "keep people away from the flood water." Watershed management and engineering works fit into the former category, and human adjustment to flooding into the latter.

1.5.5 "STOPPING THE WATER WHERE IT FALLS"

1.5.5.1 WATERSHED MANAGEMENT

Watershed management, which includes land treatment and soil conservation, can help decrease the volume and velocity of water flowing into upstream channels, thereby reducing river flood hazards. By improving the soil structure, an increase in retention capacity of precipitation and snow-melt is promoted. In addition, vegetative cover tends to increase the rates of water infiltration.

Most of the Skagit River watershed, above 500 feet, is forested. The land comprising this area, with few exceptions, is owned by timber companies, the state, or the federal government.

Timber harvest and management affect the function of a watershed to regulate the runoff and infiltration of precipitation. The State Forest Practices Act regulates timber harvesting on state and private lands. The county has input into the implementation of the Act only in operations involving designated shorelines, removal of land from forestry use, and the development of gravel pits. The federal lands are managed in accordance to their own regulations with no county input into their forest practices. As a result of state and federal control of forest practices, the county is limited in its ability to develop and implement policies related to watershed management in most of the watershed.

1.5.5.2 PRESERVING WETLANDS

Wetlands in a watershed help to maintain the natural water storage capacity of the river basin. Wetlands can perform a function similar to that of a reservoir by modifying high and low flow of the river. They also can reduce flood damage by storing water from precipitation and upland runoff.

The major wetland area that stores floodwaters from the Skagit is the Nookachamps Creek area. This area of about 5,000 acres provided approximately 34,000 acre-feet of storage for the 1951 flood which reduced the peak flow by 6,000 c.f.s.

By preserving wetlands in their natural state, natural detention areas for floodwaters are kept intact.

1.5.6 "KEEPING THE WATER AWAY FROM THE PEOPLE"

1.5.6.1 CURRENT FLOOD WORKS

Present flood control works on the Skagit River include levees, bank protection and stabilization works, and upstream storage. These works are all designed to reduce damage by containing river flow during flood periods.

TABLE 1.5.1 FLOODS SINCE 1815

| <u>FLOOD</u> | <u>NEAR CONCRETE</u> | <u>NEAR SEDRO WOOLLEY</u> | <u>NEAR MOUNT VERNON</u> |
|---------------|----------------------|---------------------------|--------------------------|
| 1815 | 500,000 cfs | 400,000 cfs | N/A |
| 1856 | 350,000 cfs | 300,000 cfs | N/A |
| November 1896 | N/A | 185,000 cfs | N/A |
| November 1897 | 275,000 cfs | 190,000 cfs | N/A |
| November 1906 | N/A | 180,000 cfs | 180,000 cfs |
| November 1908 | N/A | 97,000 cfs | N/A |
| November 1909 | 260,000 cfs | 220,000 cfs | N/A |
| November 1910 | N/A | 114,000 cfs | N/A |
| January 1914 | N/A | 104,000 cfs | N/A |
| December 1917 | 220,000 cfs | 195,000 cfs | N/A |
| December 1921 | 240,000 cfs | 210,000 cfs | N/A |
| February 1932 | 147,000 cfs | N/A | N/A |
| November 1932 | 116,000 cfs | N/A | N/A |
| December 1933 | 101,000 cfs | N/A | N/A |
| January 1935 | 131,000 cfs | N/A | N/A |
| October 1945 | 102,000 cfs | N/A | 94,300 cfs |
| November 1949 | 154,000 cfs | 140,000 cfs | 114,000 cfs |
| February 1951 | 139,000 cfs | 150,000 cfs | 144,000 cfs |
| November 1955 | 106,000 cfs | 113,000 cfs | 107,000 cfs |
| April 1959 | 90,700 cfs | 92,000 cfs | N/A |
| November 1959 | 89,300 cfs | 91,000 cfs | 91,600 cfs |
| November 1962 | 114,000 cfs | N/A | 83,200 cfs |
| December 1975 | 122,000 cfs | 121,000 cfs | 130,000 cfs |

1.5.6.1.1 LEVEES

The existing levee and sea dikes were constructed by 16 diking districts and a few private individuals. The diking districts maintain 55.8 miles of levees and 39 miles of sea dikes to protect 45,000 acres of land. Individual owners maintain 16 miles of levees to protect 1,000 acres. The level of protection afforded by diking district levees is summarized in Table 1.5.2. Overtopping of low areas in the levee system begins at flows of 84,000 cfs. By sandbagging and minor flood fighting, the levees have held against a 91,000 cfs flow (Mount Vernon Gage). The entire city of Burlington relies on levees for flood protection. Conway, West Mount Vernon, the central business districts of Mount Vernon, and residential areas to the south are also protected by levees. LaConner is protected from high tides by the sea dike along the Swinomish Channel. Interior dikes prevent Skagit River overflows from reaching the city.

1.5.6.1.2 BANK PROTECTION

With financial aid from the Agricultural Stabilization and Conservation Service and the State of Washington, property owners and Skagit County constructed extensive bank stabilization works along the river in an effort to reduce land losses caused by erosion. For the most part, these projects consisted of rock revetments. Pile and plank walls and other means were also used with varying results. In recent years, most of the bank protective work has been done by the diking districts with the help of County, State and Federal agencies to prevent erosion and the undermining of levees.

1.5.6.1.3 UPSTREAM STORAGE

Negotiations are currently proceeding to permanently increase flood control storage from 16,000 to 84,000 acre-feet in the reservoir behind the Baker Dam. This additional storage was available during the winter of 1977-78.

Ross Reservoir has 120,000 acre-feet of storage reserved for flood control. This reservoir controls inflow from approximately 1,000 square miles of upstream drainage area, or about one-third of the total Skagit River watershed. Flood storage behind Ross Dam is used only when the

TABLE 1.5.2 PROTECTION BY DIKING DISTRICT LEVEES

| Location | Miles of Levee | To Flow (cfs) | Recurrence Interval (years) |
|---|----------------------|------------------|-----------------------------------|
| ----- | ----- | ----- | ----- |
| Skagit River Right bank-Burlington to the mouth of the North Fork (River Mile 2-21) | 16.1 | 108,000 | 5 |
| Left bank-Burlington to Mt. Vernon (River Mile 21 to 13) | 7.5 | 143,000 | 14 |
| Left bank-Mt. Vernon to mouth of the South Fork (River Mile 13 to 2) | 14.4 | 101,000 | 4 |
| Left bank of the North Fork | 5.5 | 91,000 | 3 |
| Right bank of the South Fork | 6.0 | 91,000 | 3 |
| Samish River Right bank | 4.3 | 123,000 | 8 |
| Left bank | 2.0 | 123,000 | 8 |
| TOTAL | 55.8 miles | | |

discharge at Concrete is forecasted to be 90,000 cfs or greater. The effectiveness of this storage during the winter flood periods depends upon variable storm characteristics. Under average conditions, Ross Dam reduces flood crests by 15,000 to 25,000 cfs at Sedro Woolley.

1.5.6.2 AUTHORIZED FLOOD CONTROL PROJECTS

1.5.6.2.1 DIVERSION CHANNEL

The Avon Bypass project was authorized by the Flood Control Act of 1936 and was reactivated in 1960. This project would divert about 60,000 cfs of Skagit River floodwaters from near Burlington to Padilla Bay and increase flood protection for the 68,000 acre delta downstream from Sedro Woolley and the towns of Burlington, Mount Vernon, Conway and LaConner.

The Avon Bypass would discharge silt and freshwater into Padilla Bay, which would have an undetermined effect on the area's fish, shellfish and waterfowl. Currently there is a project at the state and federal level, with approval by the county, to protect the Bay as an Estuary. This protection if enacted could preclude the construction of the bypass. Another impact that would be associated with this project is the removal of about 500 acres of prime agriculture land from production by the bypass and its right-of-way.

1.5.6.2.2 LEVEE AND CHANNEL IMPROVEMENTS

The Federal Flood Control Act of 1966 authorized strengthening existing levees and minor channel improvements along the lower 17 miles of the Skagit River. This project would increase the present maximum channel capacity from 91,000 cfs to about 120,000 cfs.

The U.S. Army Corps of Engineers is currently reviewing the project authorized by the 1966 Act to determine if the project should be modified because of changed criteria or conditions. The Corps prepared six alternatives, which are summarized briefly below.

ALTERNATIVE 1

DO NOTHING

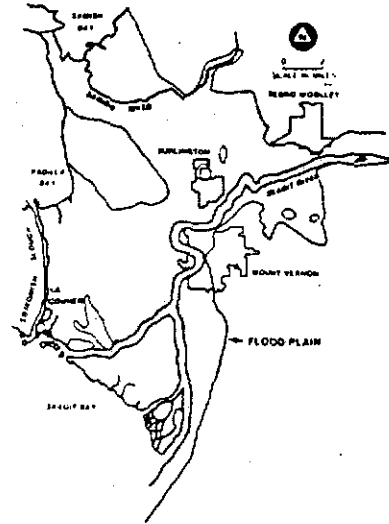
DESCRIPTION: No new action would be taken for flood damage reduction through either structural or non-structural means. Development on the flood plain would be restricted through existing zoning. Flood proofing of future structures would be required as part of a flood insurance program that would indemnify property owners against losses. Undeveloped lands in the flood plain could be preserved for parks and open space.

Implementation costs.

| | |
|------------------|---------------------------------|
| Federal | Flood plain information studies |
| | Flood insurance studies |
| Washington State | - Zoning, land purchase, |
| Skagit County | and park development |
| Cities | |
| Individuals | - Floodproofing |

Annual management costs.

| | |
|-------------|--|
| Federal | insurance premiums subsidy, emergency operations |
| Local | administration and maintenance of parks and zoning, emergency operations |
| Individuals | floodproofing maintenance, insurance premiums |



ALTERNATIVE 2

LOW LEVEES

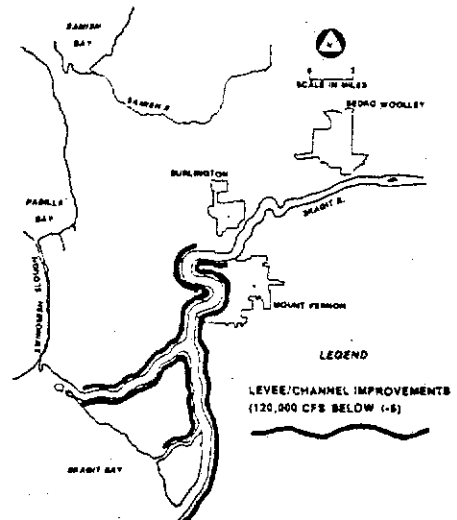
DESCRIPTION: Involves raising and strengthening the existing levee system from the mouths of the Forks upstream to the railroad crossing and improving the hydraulic capacity of the North Fork and Freshwater Slough so that the safe channel capacity downstream from the railroad bridge is 120,000 c.f.s. Development on the flood plain would continue to be restricted through existing zoning. The existing flood warning system would provide flood forecasts and emergency information.

Implementation costs.

| | |
|---------|--------------------------------------|
| Federal | \$15,100,000 (1966 report updated to |
| Local | \$ 560,000 1977 prices) |

Annual management cost.

| | |
|---------|---|
| Federal | None |
| Local | \$15,000 (in addition to present costs) |



ALTERNATIVE 3

RURAL AND URBAN LEVEES

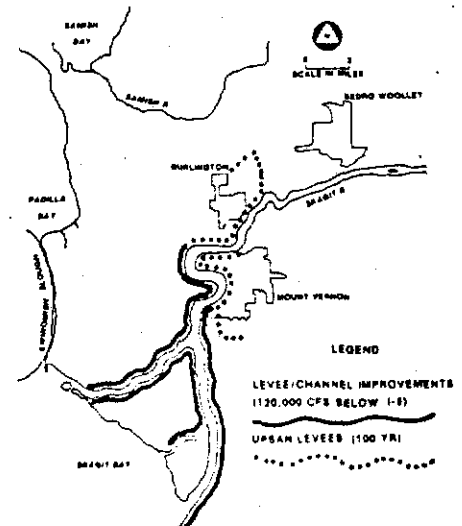
DESCRIPTION: Includes alternative 2 and in addition would provide a high degree (100-year) of flood protection to the urban area of Burlington and Mount Vernon by a high levee system. Flood plain management would continue to be required for those areas lying outside the high levees. This would include zoning, flood proofing of future structures, the flood warning system, etc. Undeveloped lands could be used for parks and open space.

Implementation costs.

| | |
|---------|--|
| Federal | \$27,000,000 - 53,000,000 (preliminary |
| Local | \$ 3,000,000 - 7,000,000 estimate-not based on detailed studies) |

Annual management costs.

| | |
|---------|-------------------|
| Federal | None |
| Local | \$50,000 - 70,000 |



ALTERNATIVE 4

DAM, RURAL AND URBAN LEVEES

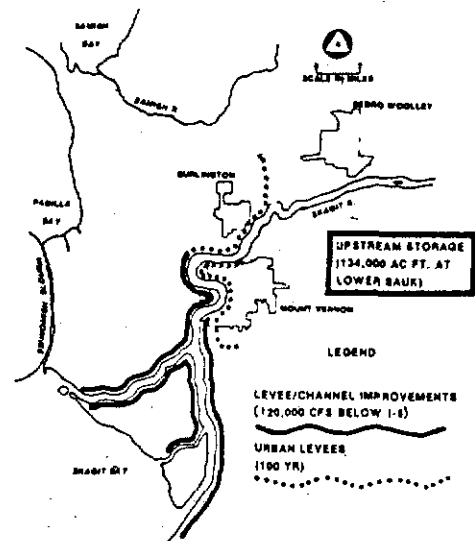
DESCRIPTION: Includes alternative 2 and, in addition, upstream storage of 134,000 acre feet would be provided by a dam on the Sauk River and a high levee system would provide a high degree of flood protection (100-year) to the urban areas of Burlington and Mount Vernon. Flood plain management would continue to be required for those areas lying outside the high levees. This would include zoning, flood proofing of future structures, the flood warning system, etc. Undeveloped lands could be used for parks and open space. Upstream storage on the Sauk River would conflict with "Scenic" designation.

Implementation costs.

| | | |
|---------|-----------------------------|--|
| Federal | \$175,000,000 - 225,000,000 | (preliminary estimate-not based on detailed studies) |
| Local | \$ 3,000,000 - 6,000,000 | |

Annual management costs.

| | |
|---------|--------------------|
| Federal | \$500,000 |
| Local | \$ 50,000 - 70,000 |



ALTERNATIVE 5

BYPASS, RURAL AND URBAN LEVEES

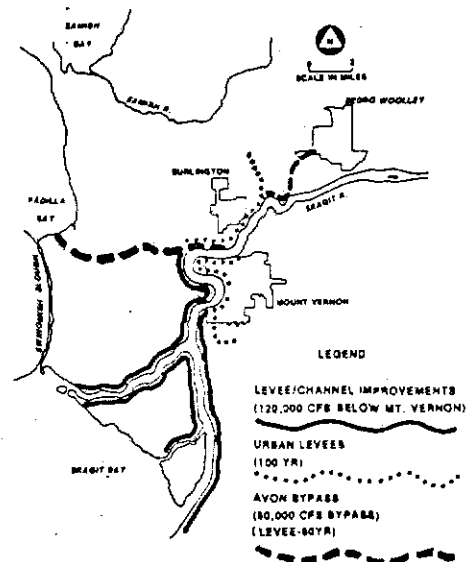
DESCRIPTION: Includes alternative 2 and, in addition, the Avon Bypass and a high levee system to provide a high degree of flood protection (100-year) to the urban areas of Burlington and Mount Vernon. The existing levee system would be extended to Sedro Woolley. Flood plain management would continue to be required for those areas lying outside the high levees. This would include zoning, flood proofing of future structures, the flood warning system, etc. Undeveloped lands could be used for parks and open space.

Implementation costs.

| | | |
|---------|---------------------------|--|
| Federal | \$70,000,000 - 90,000,000 | (preliminary estimate-not based on detailed studies) |
| Local | \$15,000,000 - 20,000,000 | |

Annual management costs.

| | |
|---------|---------------------|
| Federal | None |
| Local | \$150,000 - 200,000 |



ALTERNATIVE 6

DAM, BYPASS, RURAL AND URBAN LEVEES

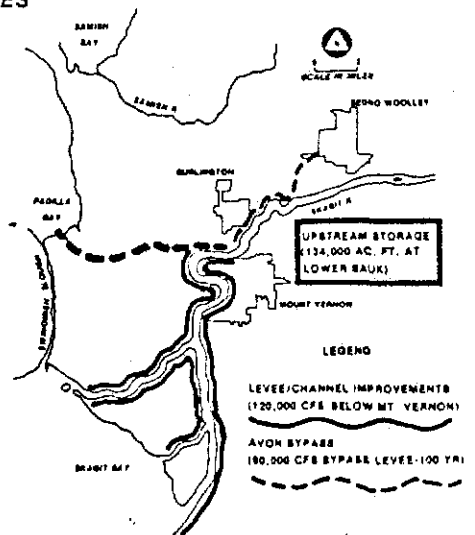
DESCRIPTION: Includes alternative 2 and, in addition, the Avon Bypass and upstream storage of 134,000 acre feet on the Sauk River. The existing levee system would be extended to Sedro Woolley. Since about 100-year flood protection would be provided to the entire flood plain downstream of Sedro Woolley most of the restrictions would no longer be required. Undeveloped lands could be used for parks and open space. Upstream storage on the Sauk River would conflict with "Scenic" designation.

Implementation costs.

| | | |
|---------|-----------------------------|--|
| Federal | \$200,000,000 - 250,000,000 | (preliminary estimate-not based on detailed studies) |
| Local | \$ 14,000,000 - 18,000,000 | |

Annual management costs.

| | |
|---------|---------------------|
| Federal | \$500,000 |
| Local | \$120,000 - 160,000 |



The Corps conducted a public meeting in March, 1978 to determine which study efforts the public thought should be concentrated upon. The public consensus was for alternatives 1, 2, and 3. Alternatives 4 and 6 were not chosen because of the inclusion of portion of the Skagit River system into the National Wild and Scenic River System, which would restrict upstream storage on the Sauk River. Alternative 5 was not chosen because of the impacts the Bypass would cause on Padilla Bay and its Estuary and upon the disruption of agricultural lands.

1.5.6.3 OTHER FLOODWORKS - STREAM CHANNEL IMPROVEMENT AND REALIGNMENT

Stream channel improvement results in end effects much the same as those which would occur from dikes or levees. Here, however, the improvements would involve dredging operations (removal of obstructions and/or straightening the channel course). Channel improvements of this type have a distinct advantage over the levee system in that when flood waters rise, any inundation is relatively slow. The velocity or surge associated with a dike failure does not exist.

Dredging operations would be controlled by the surrounding topography, and attempts to go beyond such limitations will either reap no benefit or will simply move the flood problem to other areas. Attempts to reduce stream roughness must recognize the possibility of vegetative regrowth or sediment deposition, both of which may return the roughness to its original value.

It is reasonable to expect that channel improvements and realignment may require more land area than other alternatives. In many cases, this land area may not be available at acceptable costs. Thus, aesthetics of the improvement must not be ignored. If dredging and realignment are undertaken, stream water ecology will be affected. Forces created by flowing water are often underestimated; it is quite difficult to force a meandering channel to assume an "artificial" path in all instances. Unless suitable protection is designed to offset erosive energy of the stream, the meander of the natural channel will reoccur.

1.5.6.4 LIMITATION AND DISADVANTAGE OF FLOODWORKS

Although floodworks can reduce flood losses and protect existing land uses in a developed area, their major disadvantage is that they can permit existing and new development to occur in a flood hazard area by fostering a false sense of security. If a flood occurs which exceeds the protective capacity of the floodworks, greater damage could result due to the increased development of the land which was thought to be safe from flooding. In addition, there would be increased costs of state, federal, and private disaster relief assistance.

Other limitations include:

1. Construction costs are large.
2. The construction itself tends to reduce the natural storage capacity that was originally available.
3. The drainage of "protected" lands is complicated if flood waters overflow or break a dike or levee.
4. Floodworks may actually contribute to the raising of flood levels by restricting flood channels.

1.5.7 "KEEPING THE PEOPLE AWAY FROM THE WATER"

Effective floodplain management is an alternative to flood control projects. Floodplain management is designed to provide an approach which will permit the use and development of floodplain lands for the optimum benefit of the region's population and its economic activities without having to provide structural measures of protection to prevent flood damages. The primary concern of floodplain management is to minimize the number of structures on the floodplain and/or to require that new structures be built to offer minimum resistance to floodwater in certain crucial areas. Floodplain management seeks to reduce present and future flood damages by controlling and directing the amount and location of development on the floodplain.

Many individual techniques can be used to develop a program of floodplain management. Among these are:

- 1) zoning
- 2) subdivision regulations
- 3) encroachment regulations
- 4) building and housing codes

- 5) realtor regulations to disclose flood information to potential buyers
- 6) sanitary and health codes
- 7) official mapping programs
- 8) flood warning systems
- 9) abating floodway obstructions
- 10) flood-proofing programs
- 11) urban renewal
- 12) abatement of non-conforming uses in the floodplain through attrition
- 13) public purchase and management of floodplain lands and easement purchase
- 14) land treatment and channel modification
- 15) tax incentives and adjustments
- 16) building loan and mortgage requirements
- 17) flood insurance regulations

These techniques need to be examined further to determine their feasibility and effectiveness as alternatives or supplements to floodworks.

1.5.8 RELATIONSHIP OF FLOODPLAIN MANAGEMENT AND THE RETENTION OF AGRICULTURAL LANDS

Floodplain management can have a major impact on the relationship between urban development and the preservation of agricultural and open space lands. An overall flood damage prevention program must not only be a means of reducing flood losses, but it must be consistent with the overall planning objectives of the county. One of the primary objectives of Skagit County is to preserve the prime agricultural lands.

Prohibiting future development in the floodplain besides reducing potential flood losses is an effective means of protecting our county's prime agricultural soils from conversion to other uses. There are several reasons why the prevention of development of the floodplain would be beneficial with respect to agricultural land.

First, since over 90 percent of the prime agricultural land within Skagit County lies within the 100-year floodplain, the restriction of development in the floodplain would be a major step in the preservation of prime agricultural land. This restriction should be balanced by the encouragement of development in areas outside the floodplain.

Second, if development were allowed to continue on the floodplain, increased flood protection would be necessary since existing protection is far below the 50 or 100 year flood level needed to protect urban development. Thus there would be increased public costs from the need for new flood protection structures. If flood control projects provided the lower Skagit Valley with 50 or 100 year flood protection, agricultural land would then be subject to future urban expansion, having reduced the constraint of more frequent flooding.

Any development in the floodplain should be seriously studied to ascertain the ramifications of any such development. As more and more developments encroach onto our floodplain more pressure is put on government to spend more money for flood protection. As the river is made safer from floods more development takes place which puts agriculture under a great deal of pressure.

A result of urban development is that it increases property values, thus neighboring farmland not enrolled in the Open Space Taxation Program may become subject to increased property assessments. This would increase the farmer's cost of production and lower his profit margin. In addition, adjacent agricultural lands become restricted in their use. Crop dusting, manure spreading, harvesting, and plowing often cannot be done on land adjacent to developed areas without interfering with domestic activities.

Though floodplain zoning could play a key role in preserving agricultural land, flooding of agricultural land can still create problems in Skagit County. This is especially true with respect to winter crops. Though agricultural land does not need as great a degree of protection from flooding as urban development does, some flood protection would be desirable. Presently, most of the farmland within the floodplain has a 10-to-14 year protection. According to the Skagit Regional Planning Council, 20-year protection for agricultural land would be desirable.

1.5.9 FLOOD DAMAGE PREVENTION PLAN

The need exists to protect existing urban areas in the floodplain, especially at Burlington, Sedro Woolley and West Mount Vernon. However, this protection should not be of a kind that will spur additional floodplain growth, possibly setting off a chain reaction of growth-increased protection-growth. There are numerous upland areas in the county which can be developed without incurring the cost or potential harm to life and property which is associated with floodplain development.

The protection of agricultural land is important to the county's character and economy; such protection is also consistent with the wisest pattern of urban development.

Floodworks and floodplain management techniques should be viewed as parts of the solution to prevent flood damage. They should be integrated into a total program. Most importantly the flood damage prevention program should be consistent with the overall goals, objectives and policies of this plan.

1.5.10 SUPPLEMENTAL INFORMATION

The Flood Characteristics Section of the Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands contains the following chapters:

1. General flood information
2. History of flooding
3. Economic considerations of flooding
4. Existing flood control projects
5. Proposed flood control projects
6. Federal flood insurance program
7. The federal and state role in floodplain management
8. Floodplain management

A thorough review of the above chapters will provide a basic understanding of the relationship between floodplain management and land use planning, and ably supplements this Comprehensive Plan for the South Central and Southwest planning districts.

1.6 COASTAL SHORELINE CHARACTERISTICS AND PROCESSES

This section will address the coastal shoreline of the Southwest and South Central Districts, the Intertidal Wetlands and the Swinomish Channel.

1.6.1 SUB-AREA ANALYSIS

1.6.1.1 INTERTIDAL WETLANDS

Between the Swinomish Channel and the South county line lie many coastal marshes and sloughs. This area is comprised of the wetlands and waterways between the tideflats of Skagit Bay and the adjacent levees and uplands.

This area is an interface between fresh and saltwater environments. It is a dynamic landscape feature, changing daily with the tides, seasonally with the river flow, and over the decades with the formation of the delta.

The area is a biologically important one, being used as a habitat for the wintering, migration, production and feeding activities of many species of fish and wildlife. Fresh and salt water interface habitats are among the most biologically productive ecosystems.

Besides providing habitat for a wide variety of birds and other animals, more than half the net production of the marsh plants is eventually washed out on receding tides to nourish the biological communities of the mudflats and the sea beyond.

This type of wetland is considerably less in extent than in the past because of filling and diking to form agricultural land and to protect that land from salt water intrusion. However, this diking has concentrated the delta forming process to the areas near the mouths of the major channels and this should increase the amount of marsh habitat in Skagit County.

1.6.1.2 SWINOMISH CHANNEL

The Swinomish Channel defines the Western boundary of the Southwest District. This channel provides a protected inside navigation route between Northern and Southern Puget Sound for over 10,000 vessels annually. The channel originally was only a narrow tidal passage, the Swinomish Slough. In 1892 the United States Congress authorized that a channel be maintained four feet deep by one hundred feet wide. Currently about eleven miles of channel are maintained by the Corps of Engineers to a depth of twelve feet by one hundred feet wide.

About 120,000 cubic yards of bottom material are removed by dredging annually. Some of this dredged material is placed on sites adjacent to or near the channel.

1.6.2 MAP

Refer to Skagit County Final Shoreline Area Designation Map.

1.6.3 PLANNING IMPLICATIONS

1.6.3.1 WETLANDS USE AND PROTECTION

The natural delta forming processes have been altered by diking, but the deltaic land building process is still adding marsh to this district. Because this wetland is physically dynamic and biologically productive, this area is only suitable for passive recreation such as hunting, fishing and nature studies.

The Skagit County Shoreline Management Master Program, while classifying this area as "Rural Shoreline," supports maintaining this type of habitat through the Program's policies. The Program states that "estuaries, natural wetlands, and marshes should not be dredged or used as landfill or spoils disposal sites." Concerning recreation, the Program states that, "unique and fragile shoreline areas, such as marshes, estuaries and wetlands that are susceptible to damage from structural recreation development and to seasonal changes in water levels should be identified, protected, and preserved for less intensive forms of recreation." The

Program also states that "shoreline stabilization and flood protection projects should be located landward of the natural wetlands, marshes, and swamps of associated fresh and marine water bodies."

1.6.3.2. SWINOMISH CHANNEL DREDGING

Maintenance of the Swinomish Channel began in 1892 to fulfill the need for an inland waterway connecting north and south Puget Sound. The channel has kept a uniform width of 100 feet. However, the depth was increased from 4 to 12 feet in 1935 and to 16 feet in current dredging operations. Maintenance of the channel to current specifications requires the removal of 120,000 cubic yards of spoils (clean, coarse, sandy material) annually.

The source of the material entering the channel has not been determined accurately. The Skagit River carries a yearly average of 10 million tons of suspended sediments and probably contributes to the sediment overload at the south end of the channel. In addition, there is a tide differential between Skagit Bay on the south and Padilla Bay on the north which creates a net movement of materials toward Padilla Bay. Sediment sources in mid-channel and at the north end have not been identified, although channel bank erosion and the movement of tidal flat material from Padilla Bay are suspected. The cumulative effect of sediment transport in the channel is the creation of 6 to 8 foot high sand waves that develop on the channel bottom and must be removed annually.

Dredging technology is more than equal to the task of collecting sediment overloads in the channel; it is the disposal of the collected sediments that poses the major problem in the operation. There are five disposal methods which have been used or are being considered: upland disposal, intertidal disposal, settling basins, open-water disposal and re-use of the dredge material. Of these, the first four have been used. However, each of these is subject to criticism and none of them, either singly or together, is likely to provide a long-term solution to dredge disposal.

Upland disposal poses the most problems of the five disposal techniques. There is a scarcity of upland sites and an ongoing conflict with the predominant agricultural use of the channel uplands on the east side and forestry activity on the west side. In either case, upland disposal along the channel interferes with forestry operations and encourages

non-agricultural uses on filled areas. A case in point is Skagit Beach, a subdivision first platted in 1964 and containing in excess of 50 lots, about half of them built on. The homes are located adjacent to the channel on dredge material that displaced the prior agricultural use of the land. It is county policy to discourage the attrition of farmlands, so it is unlikely that further dumping permits will be granted for the east bank. Tribal policy controls upland dumping on the west (Swinomish reservation) shore.

Intertidal dumping in Padilla Bay has created eight islands, totalling 34½ acres. This alternative has proven feasible in the past but probably will not be allowed when the bay becomes a protected National Estuary. Intertidal dumping in Skagit Bay has produced three islands, totalling 17 acres. The effects of intertidal dumping are thought to be less on Skagit than on Padilla Bay because it complements rather than contradicts the Skagit River's natural deposition of sediments.

Open water disposal has been approved in the past for Padilla Bay between Hat Island and Marches Point, in Skagit Bay near the west end of the channel, and in Bellingham Bay, approximately two miles north of Shannon Point. Open water dumping is controlled by the State Department of Natural Resources through a permit process, and the materials themselves are subject to quality standards set by the Environmental Protection Agency and the State Department of Ecology.

DNR actively encourages upland disposal and allows open water dumping only as a last resort when the applicant can demonstrate undue hardship or economic disadvantage in dumping elsewhere. The U.S. Army Corps of Engineers, while exempt from the DNR permit process under the precedent of navigational servitude has recently agreed to dump in DNR approved locations. The Corps is still subject to EPA quality standards.

Settling basins are used to reduce the frequency of dredging but offer no long-term solution for dredge disposal. Using this alternative, depressions are dug in the channel bottom, giving sediments a place in which to settle out. At best, this method will allow material to collect for one or more years before dredging is again required.

The increasing concern at all levels of government over the preservation and enhancement of productive marine environments makes inter-tidal and open water disposal less feasible alternatives than they have been in the past. Upland disposal is generally unacceptable, particularly when it occurs on or adjacent to agricultural and wetlands. Settling basins, as noted, offer no long-term solution.

The last form of dredge disposal, one which has not proved feasible up to this time is re-use of the dredge spoils for land fill and other purposes. This has more promise than the other alternatives, not only because the material is recycled but also because it requires just a single upland site for storage and removal. However, this alternative is economically uncompetitive with the other disposal methods and is not likely to be used until it reaches an economic par with them. This conclusion has been reached by the U.S. Army Corps of Engineers and by TRA, a Seattle based consulting firm hired by the County to inventory suitable disposal sites for dredged material.

However, the requirement for a long-term solution to dredge spoils disposal reveals two alternatives: identify and control the source of sediments and eliminate or greatly reduce the need for a variety of disposal sites by favoring a policy of materials re-use. In each case, a high degree of interagency cooperation will be necessary to assure program success. Program orientation to these goals could allow annual dredging to occur, possibly at reduced amounts, without the complications that accompany the yearly approval of new sites.

1.7 HYDROLOGY

1.7.1 ELEMENTS OF HYDROLOGY

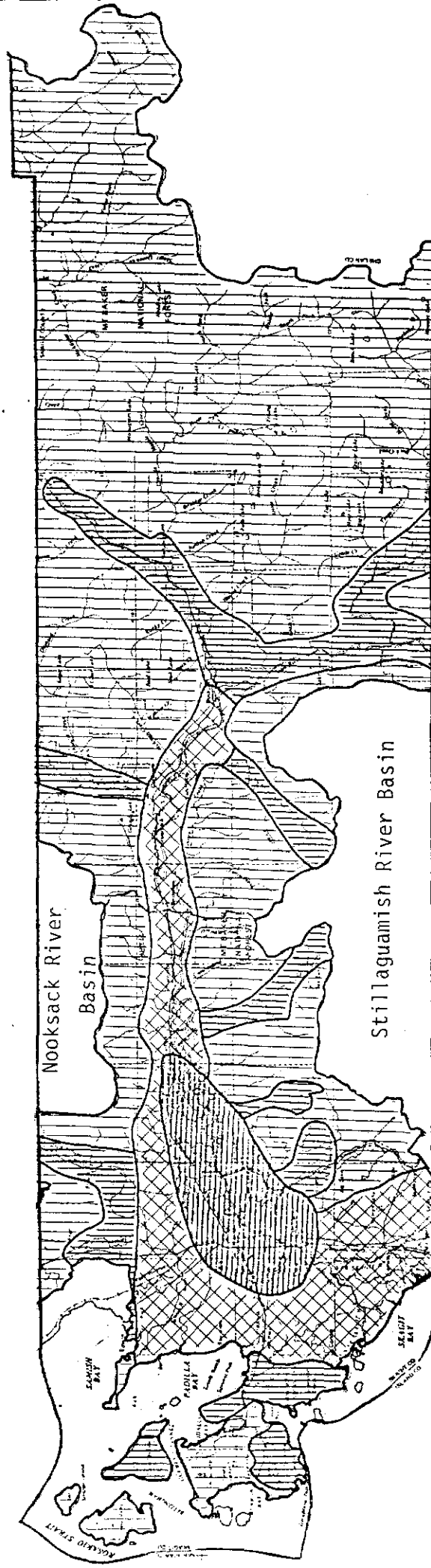
1.7.1.1 SURFACE WATER

Surface water movement in the county is nearly all contained in the Skagit-Samish Basin, which drains 3,044 square miles of land and inland water in Snohomish, Skagit and Whatcom Counties, and British Columbia. Headwaters of the Skagit are in Canada. Four major tributaries (the Sauk, Suiattle, Cascade and Baker Rivers) and hundreds of creeks and feeders flow into the Skagit from the steep mountain valleys of the North Cascades. The combined run-off amounts to the equivalent of 11,800,000 acre-feet per year at Mount Vernon.

The river undergoes periodic fluctuations, rising in the late fall/early winter to accommodate increased precipitation, and again in mid-summer, to accommodate glacier melt. Characteristically, stream flow varies from an average low of 9,000 cfs in late summer to an average high of 25,000 cfs in early summer at the Concrete gauge which measures flow from 88% of the Skagit Basin. Mid-winter flow is subject to sudden, sharp rises due to changing climatic conditions, and can exceed the average high flow of 25,000 cfs. Flooding is potentially more dangerous at this time of year because winter high water occurs, suddenly over a short period of time.

Glaciers within the basin regulate stream discharge by practically eliminating extreme low flows during the dry summer months. In addition, ground water inflow into the Skagit and its tributaries, and discharge from water-shed dams, help maintain water flow during dry periods.

The Nooksack River Basin drains a portion of the North Central part of Skagit County, while the Stillaguamish River Basin drains a portion of the South Central part of the county. Refer to figure 1.7.1.1



LEGEND

(GALLONS PER MINUTE)



0-10



11-50



51-100



OVER 500

Figure 1.7.1.1

AVAILABLE GROUND WATER IN THE SKAGIT RIVER BASIN,
SKAGIT COUNTY

Source: Skagit County Water Quality Management Program

1.7.1.2 GROUND WATER

Important aquifers in the low-land and mountain areas of the county are contained in coarse quaternary deposits (alluvium, till, and recessional outwash) which are rather continuous over a 250 square mile area, and which exceed 500 feet in thickness in localized areas. Generally speaking, alluvium along the marine and river delta shorelines is fine-grained and relatively impervious; while inland, by contrast, sand and gravel strata containing fresh water are thicker and more abundant.

Virtually all recharge to the lowland aquifers is by precipitation. Significant recharge from the Skagit and Samish Rivers is doubtful because of the fineness and relative impermeability of river-bed sediments. By a conservative estimate, lowland aquifers are thought to receive an average of about 50,000 acre-feet of recharge annually.

The natural discharge of ground water is into the Skagit and Samish Rivers and their tributaries. However, a considerable amount is lost through evaporation and transpiration, especially in the delta area where the water table is very near the ground surface. Figure 1.7.1.1 provides a generalized account of ground water availability in the Skagit River Basin. It is not a site specific account however, as localized conditions may cause water to be available in amounts different than those displayed in the map.

Limited information indicates that the more productive lowland aquifers are contained in the coarser alluvial deposits beneath the Skagit and Samish floodplains. Local outwash deposits may also contain high yielding aquifers.

1.7.1.3 LAKES

A comprehensive study of Skagit County lakes was prepared, "Water-Supply Bulletin 43, Vol. 1." This study contains physical, cultural, and water quality data on county lakes and their drainage area. This report provides base data that can be used to assess environmental impacts on development within their drainage area.

There are no lakes located in the Southwest Planning District, however the District does contain many fresh and/or salt water sloughs.

There are nine permanent lakes within the South Central Planning District and one intermittent lake, Barney Lake.

1.7.2 SUB-AREA ANALYSIS

Analysis of particular regions of the county must take place within the context of the overall river basin systems; for this reason, only generalizations can be made about the hydrology of the planning districts. Specific information on the water characteristics of each district can be derived accurately only on a case by case basis.

1.7.2.1 SOUTHWEST DISTRICT

The water table in the Southwest District lies at or very near the ground surface, and much of the land requires artificial drainage to make it suitable for cropping. The quality of the groundwater makes it suitable for irrigation and domestic use, however, well owners in the area have reported high amounts of iron and excessive hardness.

1.7.2.2 SOUTH CENTRAL DISTRICT

The South Central District contains aquifers in quaternary outwash and alluvium deposits which are at least 200 feet thick. Recharge rates are probably rapid due to topography and relatively more rainfall than that which the Southwest District receives. Most wells in the South Central District are used domestically and are less than 50 feet deep. Water quality is generally excellent and is suited for practically all uses, although objectionable amounts of iron have been reported in some wells less than 30 feet deep.

1.7.3 PLANNING IMPLICATIONS

Planning issues related to hydrology are generally the same, regardless of location. In the first place, watersheds and aquifer recharge areas must be managed and protected to ensure adequate, continued supplies of

groundwater. In the mountainous areas this means careful timber management that will assure slope stability and prevent erosion and harmful surface run-off. Residential development should also be planned to minimize its impact on natural drainage and run-off patterns. There have been recent instances where the increased run-off from residential development adjacent to agricultural lands has adversely affected Drainage District Systems. Costs associated with these impacts should be borne by the development.

As previously mentioned, the Southwest District receives nearly all of its recharge from precipitation. The greatest threat to this would occur if the floodplain area were urbanized, and large portions of its natural surface were covered with impervious material (asphalt, cement, etc.). However, floodplain management practices, and the area's present economic importance make this a doubtful possibility.

Other planning issues concern the availability of adequate water supplies, and the quality of those supplies. Both these issues have been addressed in section 2.9 of the Comprehensive Plan, and in the documents referred to in that section.

1.7.4 SUPPLEMENTAL INFORMATION

The United States Geological Survey is currently involved in the Puget Sound Earth Sciences Applications Project, which will inventory geology, hydrology, geography and related earth sciences information in Skagit and other marine counties. When this study is completed in 1979, the pertinent information will be incorporated into the Comprehensive Plan.

2. DEVELOPMENTAL CHARACTERISTICS

This portion of the Comprehensive Plan District is oriented toward the impact man has had on land and land use in the Southwest and South Central areas. The boundaries of man's impact are less readily definable than the boundaries of the physical environment. Man is a mobile influence on his environments; population, land use, land ownership, etc., are not fixed and stable factors. For this reason some of the chapters of the Developmental Characteristics section deal with a larger land area than the Southwest and South Central Planning areas.

An inventory and analysis of the developmental characteristics, when combined with data on the physical environment, provides a set of parameters within which the decision making functions of the planning process can occur. The interrelationship of the natural and man made developmental systems must be clearly reviewed to successfully develop meaningful land use decisions.

The Developmental Characteristics section of the Comprehensive Plan is composed of the following chapters:

- 2.1) History of Development
- 2.2) Population Analysis and Projections*
- 2.3) Land Use Patterns
- 2.4) Housing Analysis and Projections*
- 2.5) Land Ownership
- 2.6) Economic Base Analysis*
- 2.7) Transportation
- 2.8) Open Space - Recreation
- 2.9) Community Facilities

*These chapters are oriented to both the Southwest and South Central areas and to some extent to the entire County, due to the nature of the data.

2.1 HISTORY OF DEVELOPMENT

2.1.1 ORIENTATION

This chapter of the Comprehensive Plan is a brief synthesis of Chechacos All prepared by the Skagit County Historical Society in 1973. While the following summary is concerned with European settlement of the area, this plan recognizes the impact exerted on the area by the earlier Indian culture. A picture of Indian life in Skagit County is given in Chief Martin J. Sampson's book, Indians of Skagit County.

2.1.2 EARLY SETTLEMENT OF THE DELTA AREA

European settlement of the Puget Sound region began in 1846, after a treaty with England fixed the border between Canada and the United States at the 49th parallel. In 1852, "Blanket Bill" Jarman came to the area, eventually settling down at Jarman's Prairie in 1868. He is given the distinction of being the earliest white resident of the county.

The first exploration up the Skagit River occurred in 1858, but it wasn't until 1870 that Joseph Dwelley and Jasper Gates took up claims where Mount Vernon now stands. The town is usually dated from 1877, when Harrison Clothier and E. G. English, who had moved to the area a year earlier, founded the general store around which Mount Vernon grew.

Two enormous log jams, large enough to have forced the river to seek a new channel had they stayed in place, were cut through by 1879 thus allowing stern-wheeler traffic to and past Mount Vernon.

Then in 1884, Mount Vernon won the county seat from La Conner, whose residents considered the new county seat rough and uninviting. The choice was a good one, however, as the flatlands around Mount Vernon were reclaimed for agriculture, and the city became an important supply and distribution point for farming and logging interests. Many other towns that had begun in the latter part of the 19th century were not so successful. Fir, Mann's

Landing, Milltown, and Skagit City to name a few, are delta towns that remain only in memory.

While Mount Vernon became the center of commerce and government in the county, La Conner has the distinction of being the county's oldest town. Alonzo Low opened a trading post at Swinomish in the 1860's, which by 1869, had been purchased by John S. Conner. La Conner's period of greatness coincided with the time when water transportation was supreme. The town was the outlet for produce from the Skagit flats, and the market center where goods from the rest of the county could be obtained. Railroads and improving county roads undercut its dominant position, but left it a charming town rich in tradition. It had the earliest public high school in the county, and the Tillinghast Seed Company is probably the county's oldest continuously operating business.

Diking in the delta area began about 1870, when Michael Sullivan raised a crop of barley on 40 acres that had been diked to prevent salt-water intrusion. At that time the delta was laced with sloughs and channels, and there was no attempt to integrate diking efforts into a comprehensive program of protection. It wasn't until the 1890's and after that portions of the river were diked, and diking and drainage districts were formed to provide a medium for cooperative effort.

Towns in the South Central District were founded, by and large, to provide services for the burgeoning logging industry. Minkler, Ehrlich and Sterling are just a few of the settlements that disappeared as logging moved away from the delta and upriver into the hills. Day Creek, Clear Lake, Big Lake, Montborne, and McMurray are all communities that had their hey day during the logging boom in the early 20th century.

2.1.3 LOGGING

The development of Skagit Valley grew steadily, with farming and logging becoming increasingly popular and successful.

Actually, logging had to be done first, for the whole valley was at one time covered by dense stands of timber. As a business, logging seems to have come into existence on the lower river as early as 1871. By the year 1875, there were hundreds of men engaged in logging at various

places in the Skagit and Samish regions. The lure of these industries, combined with the later development of the coal mines and mineral resources, caused immigrants to move into the county in increasing numbers. There was a lag in this prosperity in 1874 due to the financial crisis in the East. This caused the Northern Pacific Railroad to suspend construction of its line to the valley and slowed immigration into the county. Money became very scarce.

After clearing of the big log jams made the Skagit River navigable above Mount Vernon, the logging industry began to prosper. It was not until Mr. Minkler built a sawmill at Birdsvew in 1882, that Skagit County had an actual mill. Before that, all the logs were sent to large mills at Tacoma, Seattle, and Utsalady.

As this industry grew, so did the county. The various towns and cities upriver owe much of their existence to the logging industry, Sedro Woolley and Burlington being two good examples.

2.1.4 MINING

The mining industry in Skagit County go off to a slow start due to the giant log jams. It had a fairly short prosperous period and then evolved into a relatively unimportant industry. In 1874, Amasa Everett, Orlando Graham, and Lafayette Stevens discovered coal near Hamilton. The coal found here was of good quality, but the quantity was a hindrance in its long-range importance to the county. Skagit County was not without its dose of "gold fever" in the late 1800's. This precious mineral, however, was also found in too scarce a quantity to amount to any substantial sums, but it did cause quite a bit of excitement.

The discovery of large amounts of rock suitable for construction purposes near Concrete was of significant importance for many years. This importance has been reduced significantly in recent years.

2.1.5 FISHING

The fishing industry got a late start in this county due to the limited accessibility to a market. However, an abundant supply of fish was secured

for local needs and it was a well known fact that the region's water swarmed with salmon. The pioneer in the fishing business on the upper Skagit seems to have been James H. Moores. He was located on the west bank of the Skagit, just above Mount Vernon, near the great log jam. His success opened the way for others. The Skagit area has seen great booms in the fishing and canning industries over the years since.

It has been the home of some of the largest salmon canneries in the world. In recent years, however, the competition from other fishing areas and the increasing emphasis on agriculture and logging have tended to lessen the overall impact of the fishing industry on Skagit County.

2.1.6 AGRICULTURE

As the fame of the fertile Skagit Delta lands spread, so did the agricultural base of the county. The main crops of the early days consisted of oats, barley, and various vegetables. However, the prosperity that these farmers enjoyed was seriously hampered on many occasions by floods and high tides, which sometimes destroyed whole crops. As logging activities moved eastward, agriculture became the primary industry in the floodplain. As more land was cleared and reclaimed, the value and economy of the county grew. New and better crops have been introduced through the years, helping to affirm the strong agricultural base of the county.

2.1.7 COUNTY GROWTH

As the county became more accessible and its great wealth of resources became known, it saw much growth. The greatest growth actually came in these earlier years, between 1900 and 1910. During these years the county grew from 14,272 people to 29,241. This was an increase of 105%. The population began leveling off between 1910 and the 30's, but between the 30's and the 60's it rose steadily once more. However, between the 60's and the 70's, the population has again shown signs of leveling off. It is interesting to mention that the County saw more than half its growth in the ten years between 1900 and 1910.

Current population and growth projections are contained in the Population section of this plan.

2.2 POPULATION

2.2.1 ORIENTATION

Analysis of the current population and its projection of an area is basic to the planning process. This analysis can be used to determine the need for various land uses and community facilities within a planning district.

2.2.1.1 LIMITATIONS OF POPULATION ANALYSIS

Analysis of the population of Skagit County and for each of its separate Planning Districts is limited by the frequency and manner in which the population is enumerated. The United States Census is currently only made every ten years. Between each census, major demographic changes on a county wide or smaller scale may occur. State Office of Fiscal Mangement makes interim estimates yearly of the population for the total county and its incorporated places. These enumerations and estimates are usually made for areas whose boundaries do not correspond to the Planning District boundaries. Therefore, it was necessary to interpolate much of the population information used in this study.

2.2.1.2 ELEMENTS OF POPULATION ANALYSIS

The elements of population analysis include: size of population, its composition, its structure, and its distribution.

Current and projected population size can help to insure that adequate area for various land uses will be set aside for current and future needs. Analysis of this element may also be used to determine if growth constraints should be instituted. Control would be needed if the projected demand for a particular land use exceeded the amount of land suitable for that use.

Population structure concerns the age-sex distribution within the population.

Population composition includes in this study, racial/ethnic associations and incorporated/unincorporated distribution. This information is useful

when estimating residential space requirements for various dwelling types consistent with existing and anticipated family sizes, income levels, and needs.

Information about population distribution can be used to determine various land uses and can help to determine whether facilities should be located in an area.

2.2.2. COUNTY POPULATION

The 1970 enumerated population of Skagit County was 52,381 persons. The 1978 estimate was 57,600 persons.

2.2.2.1 SOUTH CENTRAL DISTRICT

The following table is the 1970 population of the South Central Planning District by enumeration districts.

| <u>Census Division</u> | <u>Enumeration District</u> | <u>Population</u> |
|------------------------|-----------------------------|-------------------|
| 3 | 7 a | 190 |
| 11 | 29 | 477 |
| 13 | 43 | 792 |
| 11 | 44 | 545 |
| 14 | 45 b | 170 |
| 11 | 46 | 1,550 |
| 11 | 47 | 530 |
| 15 | 58 | 1,359 |
| 11 | 59 | 670 |
| 16 | 60 c | 631 |
| | | <hr/> |
| | | 6,915 |
| | Mount Vernon | 8,804 |
| | | <hr/> |
| | | 15,719 |

a - 1/5 of ED 7

b - 9/10 of ED 45

c - 3/4 of ED 60

This analysis makes no attempt to estimate the current population of the district. However, it is estimated that the 1978 population of Mount Vernon was 11,600, with some of this increase due to annexation.

2.2.2.2 SOUTHWEST DISTRICT

The following table is the 1970 population of the Southwest Planning District by enumeration district.

| <u>Census Division</u> | <u>Enumeration District</u> | <u>Population</u> |
|------------------------|-----------------------------|-------------------|
| 16 | 60 a | 211 |
| 16 | 61 | 261 |
| 17 | 63 | 1,395 |
| 17 | 64 | 272 |
| 17 | 65 | 932 |
| | | <hr/> |
| | | 3,171 |
| | La Conner | <hr/> |
| | | 639 |
| | | <hr/> |
| | | 3,710 |

a - 1/4 of ED 60

This analysis makes no attempt to estimate the current population of the district. However, it is estimated that the 1978 population of La Conner was 636.

2.2.3 COMPOSITION OF SKAGIT COUNTY POPULATION

2.2.3.1 RACIAL MAKEUP

Of Skagit County's 1970 population, only 1011 or 1.9% were non-white. By 1977 this total was estimated to have increased to 1,265 or 2.1% of the county population. The break-down of non-white by race is:

| | <u>1970</u> | <u>1977</u> |
|-----------------|-------------|-------------|
| American Indian | 650 | 750 |
| Black | 45 | 75 |
| Oriental | 134 | 250 |
| Other | <u>182</u> | <u>190</u> |
| | 1,011 | 1,265 |

People with a Spanish surname totalled 1,295 in 1970 and 1,600 in 1977.

2.2.3.1.1 SOUTHWEST DISTRICT

Of the Southwest District's (including La Conner) 3,710 residents in 1970, 52 (1.4%) were non-white. The breakdown of non-white by race is:

| | <u>1970</u> |
|-----------------|-------------|
| American Indian | 14 |
| Black | 0 |
| Oriental | 7 |
| Other | <u>31</u> |
| | 52 |

2.2.3.1.2 SOUTH CENTRAL DISTRICT

Out of 15,619 residents in the South Central District in 1970, 99 (1.4%) were non-white. The breakdown of non-white by race is:

| | <u>1970</u> |
|-----------------|-------------|
| American Indian | 34 |
| Black | 9 |
| Oriental | 27 |
| Other | <u>29</u> |
| | 99 |

2.2.3.2 INCORPORATED/UNINCORPORATED POPULATION DISTRIBUTION

The following table is a breakdown of persons residing in incorporated and unincorporated places within the county:

| <u>Year</u> | <u>County Total</u> | <u>Incorporated Total</u> | <u>Percentage</u> | <u>Unincorporated Total</u> | <u>Percentage</u> |
|-------------|-------------------------|-------------------------------|-------------------|---------------------------------|-------------------|
| 1978 | 57,600 | 30,893 | 53.6 | 26,707 | 46.4 |
| 1977 | 56,000 | 29,626 | 52.9 | 26,374 | 47.1 |
| 1976 | 54,100 | 28,744 | 53.1 | 25,356 | 46.9 |
| 1975 | 53,400 | 28,343 | 53.1 | 25,057 | 46.9 |
| 1974 | 53,000 | 27,225 | 51.4 | 25,775 | 48.6 |
| 1973 | 53,000 | 26,920 | 50.8 | 26,080 | 49.2 |
| 1972 | 52,900 | 26,715 | 50.5 | 26,185 | 49.5 |
| 1971 | 52,700 | 26,242 | 49.8 | 26,458 | 50.2 |
| 1970 | 52,381 | 25,978 | 49.6 | 26,403 | 50.4 |
| 1960 | 51,350 | 24,751 | 48.2 | 26,599 | 51.8 |
| 1950 | 43,273 | 19,364 | 44.7 | 23,909 | 55.3 |
| 1940 | 37,650 | 13,107 | 35.0 | 24,543 | 65.0 |

The number of persons residing in unincorporated areas of Skagit County decreased between 1960-1975, but has increased since that period. This change is reflected in the following table:

| <u>Period</u> | <u>County Population Increase</u> | <u>Incorporated Population Change</u> | <u>Unincorporated Population Change</u> |
|---------------|---|---|---|
| 1970-1975 | 1,019 | 2,365 | -1,346 |
| 1975-1978 | 4,200 | 2,550 | 1,650 |
| 1970-1978 | 5,219 | 4,915 | 303 |

Some of the change between populations residing in these different areas has been the result of annexation. Between 1970 - 1977, there were 35 parcels of land totaling 2.61 square miles and containing 502 persons that were annexed by incorporated towns in the county.

2.2.3.2.1 SOUTHWEST DISTRICT

In 1970 only 15% of the population within the South West District resided in incorporated areas (La Conner).

2.2.3.2.1 SOUTH CENTRAL DISTRICT

In 1970, 66% of the population within the South Central District resided in incorporated areas (Mount Vernon).

2.2.4. AGE - SEX STRUCTURE - COUNTYWIDE

The median age of the population at the time of the 1970 census was 32.1 years. This median age increased from the last decade. In 1970, 32.8% of the population were under 18 years of age, and 1.2% were 65 years or older, while in 1975 the percentages were estimated to be 29.6 and 13.1 respectively. In 1977, the percentage over 65 years had increased to 14.0%.

The county's population is becoming older because the people that were part of the big population surge of 1900 - 1910 have been reaching the average maximum age.

2.2.4.1. AGE - SEX PERCENTAGES BY PLANNING DISTRICTS - 1970

| MALE | | | | FEMALE | | |
|--------|------|------|---------|--------|------|------|
| COUNTY | SW | SC | | COUNTY | SW | SC |
| 3.7 | 3.9 | 3.3 | under 5 | 3.7 | 3.5 | 3.7 |
| 9.9 | 11.3 | 10.1 | 5-14 | 9.7 | 10.7 | 9.9 |
| 7.7 | 7.2 | 8.3 | 15-24 | 7.7 | 7.4 | 8.5 |
| 5.7 | 5.5 | 6.0 | 25-34 | 5.7 | 5.6 | 5.7 |
| 5.2 | 5.3 | 4.9 | 35-44 | 5.6 | 5.5 | 5.6 |
| 5.8 | 5.5 | 5.6 | 45-54 | 6.3 | 5.9 | 6.1 |
| 5.4 | 5.6 | 4.7 | 55-64 | 5.5 | 5.4 | 5.0 |
| 3.5 | 3.5 | 3.1 | 65-74 | 3.9 | 3.7 | 3.8 |
| 2.2 | 2.3 | 2.0 | 75 over | 2.8 | 2.3 | 3.0 |
| 49.1 | 50.1 | 48.7 | | 50.9 | 49.9 | 51.3 |

2.2.5 COMPONENTS OF POPULATION CHANGE

The major components of population change are: births, deaths, and migration.

Birth rates are affected by the interaction of several factors. These factors include people's changing values and attitudes about: marriage, birth control, adoption, family size, divorce, and abortion. Changing economic conditions and expectations also affect the birth rate.

Deaths tend to be the most stable of the components. Modern medicine has greatly reduced infant mortality and stabilized life expectancy. This has had the tendency to lower the overall death rate.

Migration has become an important component in population analysis because of the increase in mobility within the present American society. This element is difficult to estimate due to the causes of migration. Some causes of migration are:

1. The desire for better economic opportunities
2. The attraction of milder climates.
3. Desire for better living or housing conditions.
4. Movements for reasons of health, education, or retirement.

Of these causes, the first is considered to be responsible for the major percentage of migration in most communities. Also, such basic considerations as prosperity or depression, peace or war, availability of transportation, and so on, can have a very marked influence on the volume of migration.

TABLE 2.2.5.1 SKAGIT COUNTY COMPONENTS OF POPULATION CHANGE

| <u>Year</u> | <u>Births</u> | <u>Deaths</u> | <u>Natural Increase</u> | <u>Net Migration</u> | <u>Total Change</u> | <u>Total Population</u> |
|-------------|---------------|---------------|-----------------------------|--------------------------|-------------------------|-----------------------------|
| 1940 | | | | | | 37,650 |
| | 8,243 | 6,113 | 2,130 | 3,493 | 5,568 | |
| 1950 | | | | | | 43,273 |
| | 10,368 | 4,560 | 5,808 | 2,269 | 8,077 | |
| 1960 | | | | | | 51,350 |
| | 8,460 | 5,153 | 3,302 | -2,271 | 1,031 | |
| 1970 | | | | | | 52,381 |
| | 2,395 | 1,703 | 692 | - 73 | 619 (519)* | |
| 1973 | | | | | | 53,000 (52,900) |
| | 651 | 585 | 66 | - 66 | 0 (600) | |
| 1974 | | | | | | 53,000 (53,500) |
| | 858 | 561 | 297 | 103 | 400 (1,300) | |
| 1975 | | | | | | 53,400 (54,200) |
| | 800 | 582 | 218 | 502 | 720 (1,000) | |
| 1976 | | | | | | 54,120 (55,200) |
| | 842 | 573 | 269 | 1,611 | 1,880 (800) | |
| 1977 | | | | | | 56,000 (56,000) |

* Figures enclosed in parentheses are 1977 OFM re-evaluations of previous estimates.

Note: 1940 - 1970 are ten-year intervals.
 1970 - 1973 is a three-year interval.
 1973 - 1977 are yearly intervals.

2.2.6 PAST POPULATION TRENDS

Skagit County's population has been increasing this century. The rate of increase has varied due to changes in births, deaths, and migration. The greatest increase was between 1900 - 1910, caused mostly by migration.

Since that decade the county's population has increased at a slower rate, but that rate has been increasing each decade with the exception of 1960 - 1970. During the period 1960 - 1974, the population increased by 1,650 persons, with net migration being minus 2,410 persons. The people born during the post-World War II population surge was becoming old enough to enter the labor market. The county's economic base of agriculture and extractive resources could not support such an increase in employment. Those that could not find local employment generally left the county to find work in more urbanized areas. Many people also left the county for educational opportunities not available here.

Since 1974, in-migration has greatly increased. An estimated 2,216 people moved into the county during the period 1974 - 1977. See Table 2.2.6.1.

Table 2.2.6.1. POPULATION GROWTH, 1900 - 1970

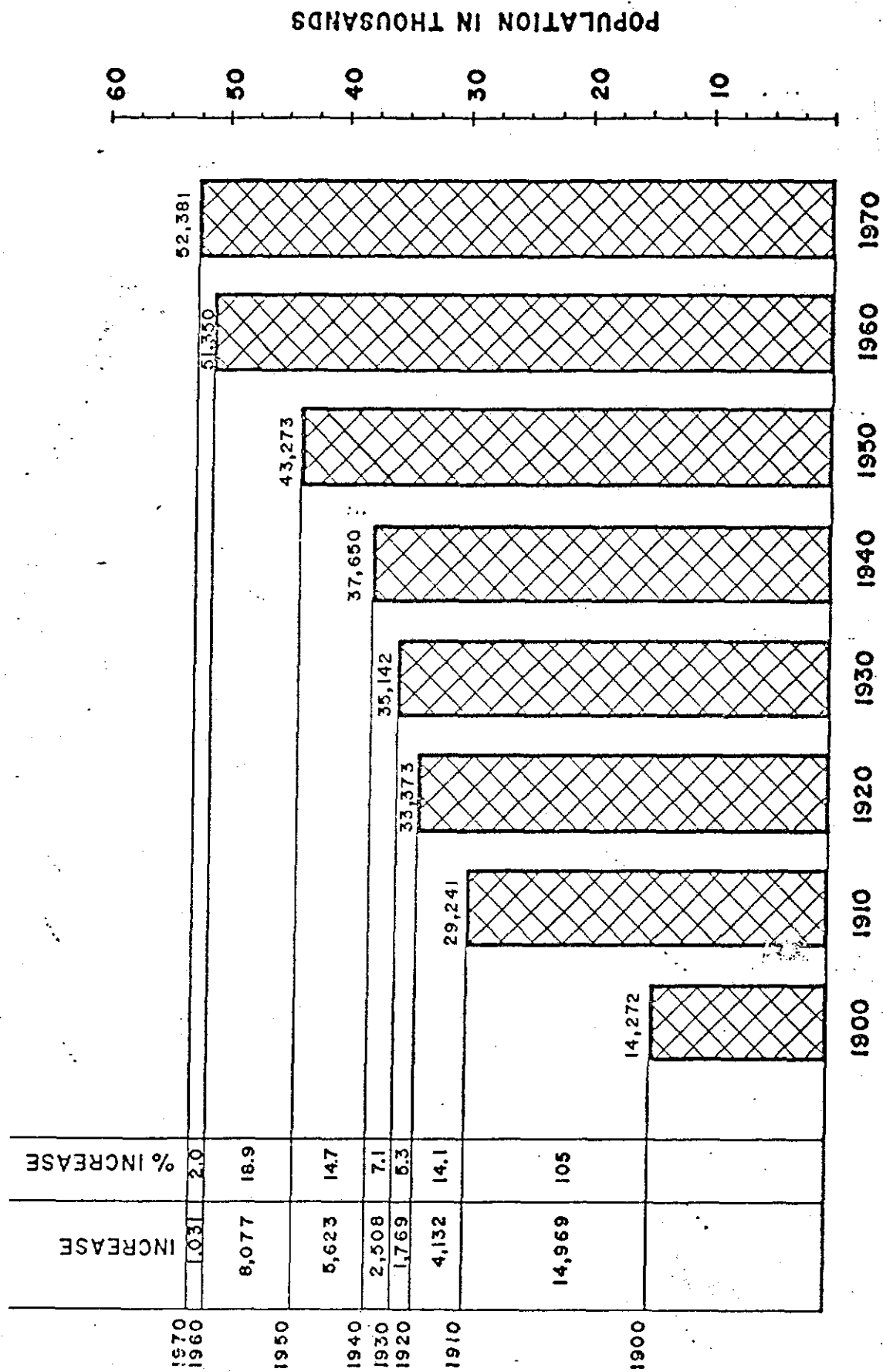
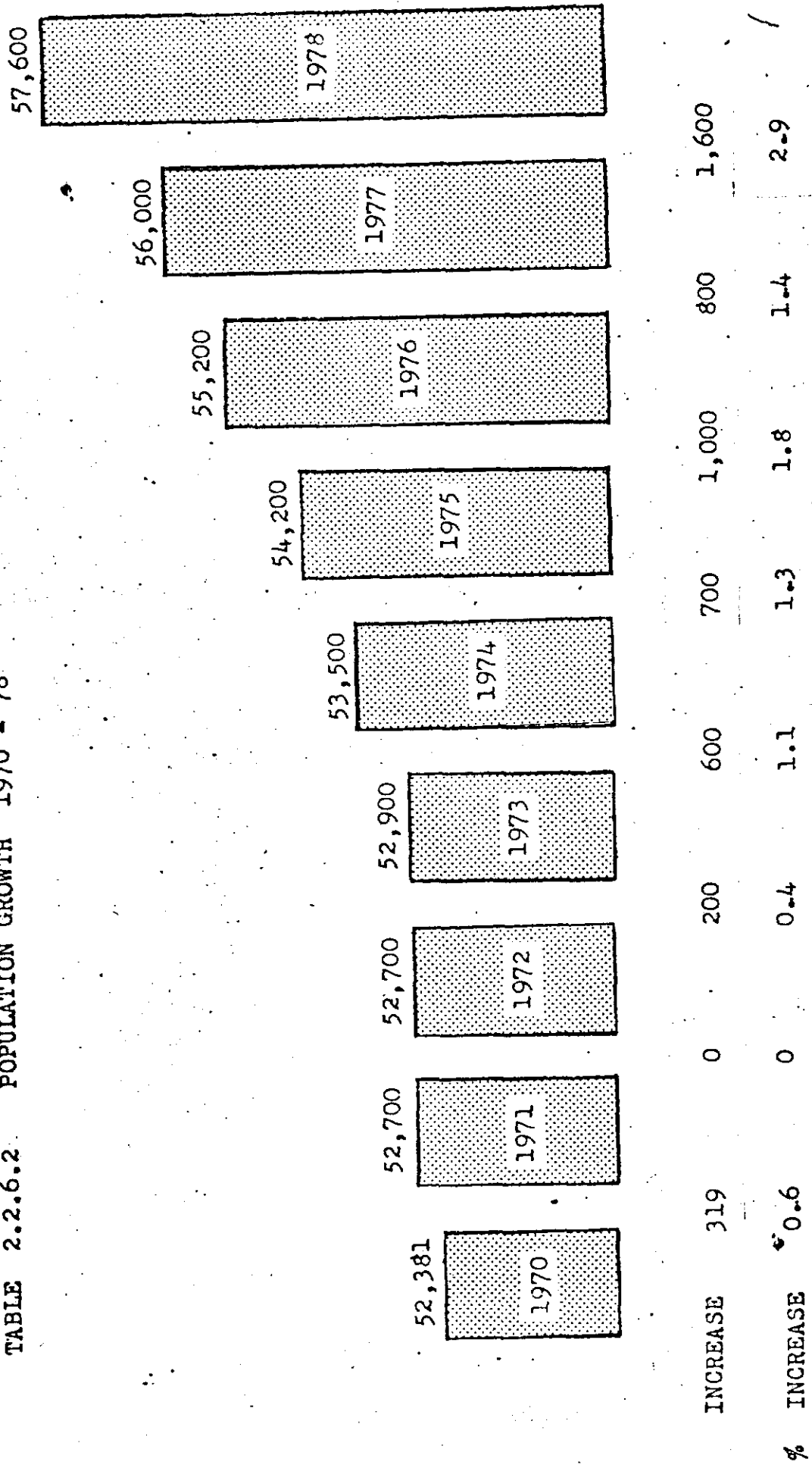


TABLE 2.2.6.2 POPULATION GROWTH 1970 - 78



Based on 1977 OFM re-evaluations of previous estimates.

2.2.7 POPULATION PROJECTION

2.2.7.1 PROJECTION DIFFICULTIES

It is more difficult to project population changes in small or less densely populated areas. Accuracy is also difficult to attain because projections based upon trends and/or judgments about the future can be vastly altered by unforeseen events.

2.2.7.2 PAST PROJECTIONS OF SKAGIT COUNTY POPULATION

During the past ten years many population projections have been made for Skagit County (see Table 2.2.7.3). On Graph 2.2.7.4, past and current projections have been ranged and plotted, along with the population as enumerated by Census or estimated by the State.

The 1968 range was very high and its early inaccuracy was in part unexpected minus net migration along with a drop in natural increases.

The current population estimates lie within the upper end of the 1973 projection range. If the current rate of increase continue, this range will also prove inaccurate.

Generally these projected populations have proven to be inaccurate, sometimes highly so. Projection methods are becoming more complicated but it is to be seen how accurate they are.

2.2.7.3 PAST POPULATION PROJECTIONS

| | <u>1970</u> | <u>1980</u> | <u>1985</u> |
|----------|-------------|-------------|-------------|
| 1965 - a | 59,287 | 69,871 | 75,860 |
| 1968 - b | 58,019 | 63,529 | 64,850 |
| 1968 - c | 78,618 | 99,991 | 112,736 |
| 1968 - d | 63,000 | 78,400 | 87,500 |
| 1972 - e | 52,381* | 52,950 | 53,200 |
| 1973 - f | 52,381* | 53,600 | 54,000 |
| 1973 - g | 52,381* | 57,900 | 60,200 |

* Actual Census Figures

Sources:

- a - State Dept. of Commerce and Economic Development
- b - Comprehensive Plan adopted in 1968, low projection
- c - Comprehensive Plan adopted in 1968, high projection
- d - Puget Sound Governmental Conference
- e - State Office of Physical Planning and Fiscal Management
- f - Skagit Regional Planning Council - low projection
- g - Skagit Regional Planning Council - high projection

2.2.8.1 SOUTHWEST DISTRICT PROJECTION

Little population growth is expected in the Southwest District. The land-use is predominately agricultural with the landowners supporting its continuation. Most of the soils are not suitable for septic drain fields, preventing the residential development of the area. There are several upland areas which are not suitable for agriculture that would be suitable for low intensity residential development. However, these uplands are also unsuitable for septic drain fields. Because of these limitations, future building and population growth is expected to take place within the area served by the La Conner Sewer District in the absence of new sewerred areas.

2.2.8.2 SOUTH CENTRAL DISTRICT PROJECTION

Much of the County's recent growth has taken place within the South Central District. Mount Veron increased by approximately 2,600 persons from 1970 to 1978. However, 540 of that gain was by annexation into the city. The district's soils are generally not suitable for the intensive development of septic drain fields. Therefore, it is expected most of the district's future growth will be in those areas served by sewer.

2.2.9 PLANNING IMPLICATIONS

Future population is difficult to project with accuracy. In allocating suitable land for various uses, it can only be "estimated" how much will be needed and where within a particular time-frame.

2.3 LAND-USE PATTERNS

2.3.1 ORIENTATION

The existing land-use patterns for the Southwest and South Central Planning Districts were surveyed and mapped on a parcel by parcel basis in the summer of 1972, and updated in August, 1975. The information is recorded on section maps at a scale of 1" = 400', with each land-use identified and located both in relation to property lines, and in relation to change in land-use characteristics within individual parcels of property.

2.3.2 MAJOR CHARACTERISTICS

The chart below displays the major classifications of land use by activity and area for Skagit County.*

GENERALIZED LAND USE - 1972 (by activity)

| | | | | |
|--------------------------|--------|--------|---------|--------|
| Residential ¹ | 18,040 | 90.06 | 11,108 | 1.89 |
| Community | 341 | 1.70 | 1,116 | .19 |
| Commercial ² | 1,305 | 6.51 | 1,009 | .17 |
| Industrial | 346 | 1.73 | 2,400 | .41 |
| Transportation | -- | -- | 6,686 | 1.14 |
| Forest | -- | -- | 451,612 | 76.81 |
| Agriculture | -- | -- | 111,735 | 19.00 |
| Parks | -- | -- | 2,301 | .39 |
| TOTAL | 20,032 | 100.00 | 587,967 | 100.00 |

*Skagit River Floodplain and related uplands (these figures do not represent land west of the Swinomish Channel, or federally owned land in the mountainous, eastern portion of the county).

1 Less accessory buildings

2 Less parking lots

2.3.3. LAND USE BY DENSITY

Land use by structures for activities and area within Skagit County are tabulated below. This section examines the county-wide totals of land uses as inventoried in Section 2.3.4 - County Summary.

2.3.4 GENERALIZED LAND USE

The Generalized Land Use Table for Skagit County contains seven land use classifications and compares these classifications by 1) the number of structures in each classification; 2) the percentage of each classification; 3) the acreage in each classification; and 4) the percentage of acres in each classification.

2.3.5 SUB-AREA ANALYSIS

See the following tables entitled: South Central Planning District and Southwest Planning District. The figures given are current through 1975, and will be updated as more recent information becomes available.

2.3.3 LAND USE CLASSIFICATIONS BY DENSITY (COUNTY) 1972

| <u>Land Use Density</u> | <u>Structures/Acre</u> | <u>Acres Allocated Per Structure</u> |
|-------------------------|------------------------|--|
| Single Family | 1.98 | .50 |
| Multi-Family | 1.85 | .54 |
| Mobile Home | 2.64 | .38 |
| Accessory Building | 4.55 | .22 |
| Group Housing | 1.32 | .76 |
| Vacant-Unused | 1.03 | .97 |

| | <u>Services/Acre</u> | <u>Acres/Services</u> |
|-------------------|----------------------|-----------------------|
| Community Service | .29 | 3.39 |
| Quasi-Public | .32 | 3.08 |
| Vacant-Unused | .33 | 3.00 |

| | <u>Commercial/Acre</u> | <u>Acres/Commercial</u> |
|---------------|------------------------|-------------------------|
| Goods | 2.02 | .49 |
| Services | 1.11 | .90 |
| Parking | .72 | 1.39 |
| Warehouse | 1.79 | .56 |
| Vacant-Unused | 1.59 | .63 |

| | <u>Industry/Acre</u> | <u>Acres/Industry</u> |
|---------------|----------------------|-----------------------|
| Heavy | .09 | 10.63 |
| Light | .29 | 3.44 |
| Vacant-Unused | .19 | 5.27 |

| | <u>Barns/Acre</u> | <u>Acres/Barns</u> |
|----------------------|-------------------|--------------------|
| Barns & Outbuildings | 2.00 | .50 |
| Vacant-Unused | .34 | 2.96 |

COUNTY SUMMARY

2.3.4 LAND USE INVENTORY

| Existing Land Use | | Number | Acres | Acres-% of Total | Acres-% Land Use Classification |
|-------------------|--------------------------|---------|-----------|---------------------|------------------------------------|
| 1. | Single Family | 15,094 | 7,594 | 1.29 | 68.36 |
| 2. | Multi-Family | 313 | 169.50 | .03 | 1.53 |
| 3. | Mobile Home | 1,293 | 490 | .08 | 4.41 |
| 4. | Accessory Bldg. | 7,103 | 1,562 | .27 | 14.06 |
| 5. | Group Housing | 47 | 35.50 | .01 | .32 |
| 6. | Vacant | 1,293 | 1,257 | .21 | 11.32 |
| 1. | Community Service | 211 | 716.25 | .12 | 64.18 |
| 2. | Quasi-Public | 121 | 372.75 | .06 | 33.40 |
| 3. | Vacant | 9 | 27 | --- | 2.42 |
| 1. | Goods | 482 | 238.75 | .05 | 23.65 |
| 2. | Services | 594 | 533 | .09 | 52.80 |
| 3. | Parking | 77 | 107 | .02 | 10.60 |
| 4. | Warehouse | 186 | 103.75 | .02 | 10.28 |
| 5. | Vacant | 43 | 27 | --- | 2.67 |
| 1. | Heavy | 167 | 1,774.75 | .31 | 19.98 |
| 2. | Light | 103 | 354 | .06 | 3.98 |
| 3. | Tran./Util./Corridor | 1,226 | 6,686.50 | 1.14 | 75.27 |
| 4. | Vacant | 13 | 68.5 | .01 | .77 |
| 1. | Standing | 430,839 | | 73.36 | 95.40 |
| 2. | Harvested | 20,696 | | 3.52 | 4.59 |
| 3. | Vacant | | 76.5 | .01 | .01 |
| 1. | Crop Active | | 60,412.50 | 10.28 | 54.07 |
| 2. | Crop Inactive | | 725 | .12 | .65 |
| 3. | Pasture Active | | 40,655 | 6.92 | 36.39 |
| 4. | Pasture Inactive | | 3,207.75 | .55 | 2.87 |
| 5. | Woodlot | | 2,751.75 | .64 | 3.36 |
| 6. | Barns & Outbuildings | 4,511 | 2,251.75 | .38 | 2.01 |
| 7. | Vacant | 247 | 731.50 | .12 | .65 |
| 1. | Aquatic - Marine | | | | |
| 2. | Aquatic - Fresh | | | | |
| 3. | Park | 81 | 1,939 | .33 | 100.00 |
| 4. | Forestry Park | | | | |
| 5. | Shoreline, Dikes, Levees | | | | |
| 6. | View Spot - Turnoff | | | | |

2.3.5 LAND USE INVENTORY - 1975

| <u>EXISTING LAND USE</u> | <u>NUMBER</u> | <u>ACRES</u> | <u>ACRES-% OF TOTAL</u> | <u>ACRES-% LAND USE CLASSIFICATION</u> |
|-----------------------------|---------------|--------------|-----------------------------|--|
| <u>Residential</u> | | | | |
| 1. Single Family | 971 | 544.50 | 1.54 | 73.70 |
| 2. Multi-Family | 18 | 17.00 | .048 | 2.30 |
| 3. Mobile Home | 108 | 34.50 | .097 | 4.67 |
| 4. Accessory Building | 724 | 133.50 | .38 | 18.06 |
| 5. Group Housing | 5 | 1.50 | .004 | .20 |
| 6. Vacant | 14 | 8.00 | .022 | 1.08 |
| <u>Community</u> | | | | |
| 1. Community Service | 17 | 69.00 | .19 | 70.05 |
| 2. Quasi-Public | 11 | 29.50 | .083 | 29.95 |
| 3. Vacant | -0- | -0- | -0- | -0- |
| <u>Commercial</u> | | | | |
| 1. Goods | 23 | 16.00 | .045 | 14.35 |
| 2. Services | 48 | 51.50 | .145 | 46.20 |
| 3. Parking | 3 | 5.00 | .014 | 4.48 |
| 4. Warehouse | 56 | 32.00 | .090 | 28.70 |
| 5. Vacant | 8 | 7.00 | .020 | 6.27 |
| <u>Industrial</u> | | | | |
| 1. Heavy Industry | 8 | 25.50 | .072 | 9.77 |
| 2. Light Industry | 7 | 49.00 | .138 | 18.77 |
| 3. Trans./Util./Corridor | 48 | 186.50 | .527 | 71.46 |
| 4. Vacant | -0- | -0- | -0- | -0- |
| <u>Forestry</u> | | | | |
| 1. Standing Timber | | 1,527.5 | 4.32 | 93.28 |
| 2. Harvested | | 81.00 | .228 | 4.95 |
| 3. Vacant | | 29.00 | .082 | 1.77 |
| <u>Agriculture</u> | | | | |
| 1. Crop Active | | 20,990.50 | 59.3 | 84.60 |
| 2. Crop Inactive | | 154.5 | .436 | .622 |
| 3. Pasture Active | | 2,996.5 | 8.47 | 12.08 |
| 4. Pasture Inactive | | 70.00 | 1.98 | .282 |
| 5. Woodlot | | 168.00 | .474 | .677 |
| 6. Barns & Outbuildings | 787 | 430.25 | 1.21 | 1.73 |
| 7. Vacant | 11 | 3.50 | .010 | .014 |
| <u>Other</u> | | | | |
| 1. Aquatic-Marine | | 2,965.00 | 8.38 | 38.37 |
| 2. Aquatic-Fresh | | 2,380.00 | 6.72 | 30.80 |
| 3. Park | 3 | .18 | .050 | .233 |
| 4. Forestry | 1 | -0- | -0- | -0- |
| 5. Shoreline, Dikes, Levees | | 2,365.00 | 6.68 | 30.60 |
| 6. View Spot-Turnoff | | | | |

Total Acres 35,289

SOUTH CENTRAL

2.3.5 LAND USE INVENTORY - 1975

| <u>EXISTING LAND USE</u> | <u>NUMBER</u> | <u>ACRES</u> | <u>ACRES-% OF TOTAL</u> | <u>ACRES-% LAND USE CLASSIFICATION</u> |
|-----------------------------|---------------|--------------|-----------------------------|--|
| <u>Residential</u> | | | | |
| 1. Single Family | 5,542 | 2,287.00 | 1.71 | 70.73 |
| 2. Multi-Family | 131 | 49.75 | .037 | 1.54 |
| 3. Mobile Home | 487 | 135.75 | .10 | 4.20 |
| 4. Accessory Building | 2,102 | 424.75 | .32 | 13.13 |
| 5. Group Housing | 27 | 22.25 | .017 | .69 |
| 6. Vacant | 181 | 314.00 | .24 | 9.71 |
| <u>Community</u> | | | | |
| 1. Community Service | 74 | 239.75 | .18 | 78.22 |
| 2. Quasi-Public | 43 | 51.75 | .039 | 16.88 |
| 3. Vacant | 4 | 15.00 | .011 | 4.90 |
| <u>Commercial</u> | | | | |
| 1. Goods | 272 | 117.00 | .088 | 34.21 |
| 2. Services | 269 | 128.5 | .096 | 37.57 |
| 3. Parking | 42 | 55.75 | .042 | 16.30 |
| 4. Warehouse | 59 | 24.75 | .018 | 7.24 |
| 5. Vacant | 26 | 16.00 | .012 | 4.68 |
| <u>Industrial</u> | | | | |
| 1. Heavy Industry | 28 | 125.50 | .094 | 5.34 |
| 2. Light Industry | 38 | 97.75 | .073 | 4.16 |
| 3. Tran/Util./Corridor | 383 | 2,107.50 | 1.6 | 89.73 |
| 4. Vacant | 4 | 18.00 | .013 | .77 |
| <u>Forestry</u> | | | | |
| 1. Standing | | 95,443.50 | 71.5 | 93.78 |
| 2. Harvested | | 6,307.00 | 4.7 | 6.20 |
| 3. Vacant | | .17 | .013 | .02 |
| <u>Agriculture</u> | | | | |
| 1. Crop Active | | 9,596.50 | 7.50 | 42.12 |
| 2. Crop Inactive | | 189.00 | .14 | .80 |
| 3. Pasture Active | | 11,038.75 | 8.27 | 46.70 |
| 4. Pasture Inactive | | 696.50 | .52 | 2.95 |
| 5. Woodlot | | 1,038.25 | .78 | 4.39 |
| 6. Barns & Outbuildings | 1,162 | 590.25 | .44 | 2.50 |
| 7. Vacant | 22 | 127.00 | .095 | .54 |
| <u>Other</u> | | | | |
| 1. Aquatic-Marine | | -0- | -0- | -0- |
| 2. Aquatic-Fresh | | 1,662.00 | 1.24 | 90.52 |
| 3. Park | 12 | 55.00 | .041 | 2.30 |
| 4. Forestry Park | | -0- | -0- | -0- |
| 5. Shoreline, Dikes, Levees | | 119.00 | .089 | 6.48 |
| 6. View Spot-Turn-off | -0- | -0- | -0- | -0- |

TOTAL ACRES: 133,470.50

SOUTHWEST PLANNING DISTRICT

2.3.6 GENERALIZED LAND USE - 1975

| <u>EXISTING LAND USE</u> | <u>NUMBER</u> | <u>ACRES</u> | <u>% OF TOTAL</u> |
|--------------------------|---------------|-----------------|-------------------|
| RESIDENTIAL | 1,840 | 739.00 | 2.09 |
| COMMUNITY | 28 | 98.50 | .278 |
| COMMERCIAL | 138 | 115.50 | .326 |
| INDUSTRIAL | 63 | 261.00 | .737 |
| FOREST | | 1,637.50 | 4.63 |
| AGRICULTURE | | 24,813.25 | 70.10 |
| OTHER* | | <u>7,728.00</u> | 21.83 |

TOTAL ACRES: 35,392.75

*See Table 2.3.5

SOUTH CENTRAL AND SOUTHWEST DISTRICTS

2.3.7 COMBINED LAND USE - 1975

| <u>EXISTING LAND USE</u> | <u>NUMBER</u> | <u>ACRES</u> | <u>% OF TOTAL</u> |
|--------------------------|---------------|-----------------|-------------------|
| RESIDENTIAL | 10,310 | 3,972.50 | 2.35 |
| COMMUNITY | 152 | 405.00 | .240 |
| COMMERCIAL | 806 | 457.50 | .270 |
| INDUSTRIAL | 516 | 2,609.75 | 1.54 |
| FOREST | | 103,405.00 | 61.24 |
| AGRICULTURE | | 48,449.50 | 28.70 |
| OTHER* | | <u>9,564.00</u> | 5.67 |
| | TOTAL ACRES: | 168,863.25 | |

*See Table 2.3.5

2.3.8 VALIDITY

The data base used to gather information on land-use in the county is contained in the 1975 update of Tabulated Land-Use Data. This is the most recent survey of land-use types and categories, and should be considered accurate for the purposes of this plan. The most rapid growth in the two planning areas has occurred in Mount Vernon, where there has been a net gain of 582 dwelling units (single family and apartment units) between 1976 and 1978. However, this information is not broken down into types of housing or the amount of acreage occupied. When such information becomes available in tabulated form, it will be included in the Comprehensive Plan as part of the ongoing plan revision process.

2.3.9 LAND USE MAP

The land use map of the Southwest and South Central Planning areas is generalized by 40 acre increments. The forty (40) acre generalization was developed by aggregating the land uses in each quarter of a survey section (i.e. 640 acres (1 square mile) = 1 section) within each of the Townships and Ranges in the project area. The illustration on the next page demonstrates the quarter of a section concept.

2.3.10 AVAILABILITY OF LAND USE DATA

The raw and bulk land use data is available at the Skagit County Planning Department Office.

In addition to the section maps containing parcel and land use characteristic information, the land use data is cross-referenced with numerical land use data logs. These land use data logs described each 40 acre parcel of land, in terms of the 1) various land uses within that 40 acre parcel; 2) the number of each of the land uses; and 3) the acreage of each of the land use classifications which occur in that 40 acre parcel of property.

The land use data logs are also available for reference purposes in the Skagit County Planning Department. The information contained in the data logs is prepared by computerization and has been keypunched onto cards for use in a computer. These keypunched cards are also available at the Skagit County Planning Department Office.

2.4 HOUSING

2.4.1 ORIENTATION

Housing, like population, is a regional characteristic that is best evaluated for an entire political subdivision. Because the housing market is fluid and changing, it is difficult to evaluate housing supply and demand characteristics for a concise area.

For this reason, the housing element for the Southwest and South Central areas must rely on an analysis of housing for Skagit County as a whole. The preceding chapter on land-use analysis complements the housing elements, and together with it, provides a sound basis for projecting potential land-use patterns.

The figures used to prepare this section date from the 1970 census. Updated figures have been included as they are available, and the plan will be revised to reflect new information gathered in the 1980 census.

2.4.2. HOUSING TYPES

Housing in the Skagit Regional Planning area is composed primarily of detached single family residential structures occupying separate and legally defined parcels of property with a sparse scattering of varying densities of multi-family residential structures. Housing in the planning area occupies larger lots than does housing in the State of Washington or the United States, as would be expected in a semi-rural area.

At the national and state level, housing is undergoing a substantially more rapid change than is housing in the area. The greatest areas of change appear to be in the rate of economic growth and the rate of change in the number of persons per household. This area is not experiencing the same rate of economic growth as the State of Washington or the United States; our economy is expanding at a slower rate of increase than the state or the nation. The number of persons per household for the state and nation are decreasing more rapidly than average household size for this area. These two factors have a stabilizing effect on the housing

market of the planning area and on the lifestyle of the residents of the area. This stability will allow for a steady and measured improvement in the housing inventory of the study area.

While the population in Skagit County did not expand significantly between 1960 and 1970, the number of occupied housing units expanded from 15,759 to 17,185, a change of 1,426 more occupied housing units. However, the total number of housing units changed by only 215 units, from 19,360 in 1960 to 19,575 in 1970. This indicates: 1) a high rate of occupancy and thus greater utilization of the housing resources; 2) a smaller average household size. It can also be assumed that a substantial number of deteriorated and/or delapidated structures have been demolished in the last decade because approximately 1,100 building permits for new residences were issued in that period and the total housing supply increased only by 215 residential units.

2.4.3. HOUSING CHARACTERISTICS

The following three tables present housing characteristics on a local and county-wide level.

Table 2.4.3.1 shows housing characteristics of the Southwest District and is taken from census divisions.

Table 2.4.3.2. is likewise taken from census divisions, and pertains to the South Central District.

Table 2.4.3.3 is of the entire county.

It must be remembered that the foregoing information, as well as that depicted in the following three tables, is based on the last complete and integrated set of data, the 1970 census. For that reason, it was thought necessary to include the data. The information following Tables 2.4.3.1 - 2.4.3.3 is more current but less comprehensive. It is hoped that an accurate assessment of area housing is given by presenting both current (through 1978 in some cases) and background (1970 census data) information.

2.4.4 HOUSING STATISTICS

The following table summarizes county housing characteristics (with combined Southwest and South Central figures in parentheses). Information pertinent to the planning districts was not available in Numbers 15, 16, 17 and 19.

2.2.4.1 BREAKDOWN OF HOUSING STATISTICS

1. There were 52,381 residents in Skagit County in 1970. (18,780)
2. There were 18,575 dwelling units in Skagit County in 1970. (7,195)
3. 17,185 of the 18,575 dwelling units were occupied. (6,785)
4. The average household size was 3.28 persons per dwelling units. (2.96)
5. The occupancy rate was approximately 88% (88%)
6. Of the occupied units, 2,814 were owner occupied. (71%)
7. There were 892 rental occupied units, or approximately 26%. (26.5%)
8. The average value of the owner occupied units was \$17,775. (\$19,083)
9. The average monthly rental was \$76. (\$77.60)
10. 3,129 dwelling units were occupied by one person. (1,210)
11. 5,651 dwelling units were occupied by two persons. (1,958)
12. 2,761 dwelling units were occupied by three persons. (964)
13. 2,606 dwelling units were occupied by four persons. (885)
14. 4,085 dwelling units were occupied by five or more persons. (1,168)
15. Of the 19,575 dwelling units, 17,124 (or approximately 89%) were classified as sound.
16. 1,634 dwelling units (or approximately 8%) were classified as deteriorating.
17. 618 dwelling units (or approximately 3%) were classified as dilapidated.
18. There are 716 mobile homes used as dwelling units. (278)
19. It was estimated that 2,256 homes were in need of repairs or remodeling.
20. Within the next 20 years, approximately 2,084 (744) new dwelling units will have to be constructed if:
 - a. The average household size remains stable.
 - b. The projected population rate of 1% annually is achieved.
 - c. A significant economic event doesn't occur in the planning area, or in the adjacent counties.

2.4.3.1. HOUSING CHARACTERISTICS OF THE SOUTHWEST AREA
By Census Division

| Census Division No. | 16 | 17 | Total |
|--|--------------|--------------|----------------|
| 1. Total Population | 1,103 | 3,238 | 4,341 |
| 2. Total Housing Units | 372 | 1,109 | 1,481 |
| 3. Total Occupied Units | 328 | 1,032 | 1,360 |
| 4. Occupancy Rate | .881 | .931 | .918 |
| 5. Occupancy Status (Owner)% | 241 73.4% | 814 79.6% | 1,055 77.6% |
| 6. Occupancy Status (Renter)% | 87 26.6% | 218 21.1% | 305 22.4% |
| 7. Seasonal & Migrant (Vacant)% Total H.V. | 20 5.4% | 23 2.1% | 43 2.9% |
| 8. Average Family Size | 2.10 | 3.61 | 2.85 |
| 9. Average Value Unit Owner Occupied | \$18,420 | \$19,630 | \$19,025 |
| 10. Mobile Home Trailer | 5 | 48 | 53 |
| 11. Average Monthly Rent - Renter Occupied | \$75 | \$76 | \$75.50 |
| Occupied Unit By No. Persons/Unit | | | |
| 1 | 41 | 165 | 206 |
| 2 | 104 | 344 | 448 |
| 3 | 51 | 168 | 219 |
| 4 | 47 | 126 | 173 |
| 5 and Up | 85 | 229 | 314 |

2.4.3.2

HOUSING CHARACTERISTICS OF THE SOUTH CENTRAL AREA
By Census Division

| Census Division No. | 13 | 14 | 15 | M.V | Total |
|--|--------------|--------------|--------------|----------------|----------------|
| 1. Total Population | 1,337 | 2,269 | 2,029 | 8,804 | 14,439 |
| 2. Total Housing Units | 445 | 1,288 | 714 | 3,267 | 5,714 |
| 3. Total Occupied Units | 416 | 673 | 653 | 3,083 | 4,825 |
| 4. Occupancy Rate | .934 | .523 | .914 | .944 | .844 |
| 5. Occupancy Status (Owner)% | 313 75.2% | 528 78.4% | 510 78.1% | 2,000 64.8% | 3,351 69.5% |
| 6. Occupancy Status (Renter)% | 103 24.7% | 145 21.5% | 143 21.9% | 1,083 33.6% | 1,474 30.5% |
| 7. Seasonal & Migrant (Vacant)% Total H.V. | 2 -- | 457 35.4% | 2 -- | 16 .48% | 477 8.3% |
| 8. Average Family Size | 3.15 | 2.22 | 3.44 | 3.44 | 3.06 |
| 9. Average Value Unit Owner Occupied | \$16,430 | \$19,120 | \$21,520 | \$19,490 | \$19,140 |
| 10. Mobile Home Trailer | 36 | 19 | 67 | 103 | 225 |
| 11. Average Monthly Rent Renter Occupied | \$71 | \$74 | \$84 | \$90 | \$79.75 |
| Occupied Unit by No. Persons/Unit | | | | | |
| 1 | 68 | 87 | 109 | 740 | 1,004 |
| 2 | 127 | 202 | 207 | 974 | 1,510 |
| 3 | 63 | 78 | 100 | 504 | 745 |
| 4 | 62 | 126 | 102 | 422 | 712 |
| 5 and up | 96 | 180 | 135 | 443 | 854 |

HOUSING CHARACTERISTICS

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | MU | A | SW | B | TOTAL |
|---------------------------|-------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|
| 1. TOTAL POPULATION | 1018 | 1174 | 1475 | 2571 | 503 | 989 | 1939 | 254 | 636 | 1040 | 1725 | 2245 | 1337 | 2269 | 2025 | 1103 | 3238 | 613 | 1474 | 8804 | 7701 | 4592 | 3138 | 52,381 |
| 2. TOTAL HOUSING UNITS | 479 | 465 | 537 | 852 | 20 | 312 | 774 | 266 | 246 | 358 | 564 | 722 | 445 | 1208 | 714 | 372 | 1109 | 301 | 684 | 3267 | 2860 | 1775 | 1159 | 19,575 |
| 3. TOTAL OCCUPIED UNITS | 322 | 377 | 483 | 793 | 14 | 291 | 632 | 111 | 219 | 324 | 550 | 691 | 416 | 673 | 653 | 328 | 1032 | 195 | 528 | 3083 | 2653 | 1670 | 1106 | 17,185 |
| 4. OCCUPANCY RATE | 672 | 810 | 909 | 931 | 700 | 915 | 817 | 417 | 891 | 905 | 975 | 957 | 934 | 523 | 914 | 881 | 931 | 647 | 772 | 944 | 979 | 940 | 955 | 875 |
| (OWNER) | 218 | 233 | 403 | 631 | 0 | 232 | 486 | 72 | 142 | 273 | 433 | 579 | 313 | 528 | 510 | 241 | 814 | 166 | 412 | 2000 | 2022 | 1215 | 759 | 12,793 |
| OCCUPANCY STATUS % | 57.7 | 75.2 | 82.5 | 85.9 | 00.0 | 79.3 | 77.3 | 64.9 | 64.5 | 84.2 | 78.7 | 83.8 | 75.2 | 78.4 | 78.1 | 73.4 | 79.6 | 85.1 | 75.0 | 64.8 | 76.2 | 72.8 | 68.6 | 74.4% O.U. |
| (RENTER) | 104 | 94 | 85 | 112 | 14 | 59 | 144 | 39 | 77 | 51 | 117 | 112 | 103 | 145 | 143 | 87 | 218 | 29 | 116 | 1063 | 631 | 455 | 347 | 4351 |
| OCCUPANCY STATUS % | 32.2 | 24.9 | 17.5 | 14.1 | 100.0 | 20.2 | 22.7 | 35.1 | 35.1 | 15.7 | 21.2 | 14.6 | 24.7 | 21.5 | 21.9 | 26.6 | 21.1 | 14.8 | 21.9 | 33.6 | 23.7 | 27.3 | 31.4 | 25.5% C.U. |
| (PERCENT) % TOTAL H. U. | -0- | -0- | -0- | 1 | -0- | 1 | 10 | 14.4 | -0- | -0- | -0- | 2 | 2 | 457 | 2 | 20 | 23 | -0- | 2 | 16 | 1 | -0- | -0- | 681 |
| SEASONAL & MIGRANT | | | | | | | | 54.1% | | | | | | 35.4% | | | | | | | | | | 3.47% |
| 3. AVERAGE FAMILY SIZE | 3.16 | 3.25 | 3.46 | 3.22 | 702 | 2.93 | 3.51 | 3.26 | 3.27 | 3.12 | 3.32 | 3.25 | 3.15 | 2.22 | 3.44 | 2.10 | 3.61 | 3.11 | 3.58 | 3.44 | 3.44 | 3.61 | 2.83 | 3.23 |
| OWNER OCCUPIED | | | | | | | | | | | | | | | | | | | | | | | | |
| AVERAGE VALUE UNIT | 0.710 | 9.590 | 10.690 | 16.740 | -0- | 15.803 | 17.660 | 26.440 | 16.420 | 24.820 | 18.300 | 20.190 | 16.430 | 19.120 | 21.520 | 18.420 | 19.630 | 21.060 | 26.920 | 19.450 | 17.160 | 14.460 | 15.190 | 17,775 |
| 10. MIDDLE HOME - TRAILER | 7 | 12 | 35 | 62 | -0- | 43 | 36 | -0- | 5 | 21 | 20 | 60 | 36 | 19 | 67 | 5 | 48 | 5 | 49 | 103 | 28 | 35 | 20 | 716 |
| RENTER OCCUPIED | | | | | | | | | | | | | | | | | | | | | | | | |
| AVERAGE MONTHLY RENT | 53 | 50 | 45 | 68 | 65 | 61 | 72 | 60 | 81 | 85 | 91 | 79 | 71 | 74 | 84 | 75 | 76 | 78 | 90 | 90 | 76 | 69 | 89 | 76 |
| 1 | 59 | 47 | 75 | 102 | 2 | 42 | 77 | 50 | 37 | 36 | 80 | 77 | 68 | 87 | 109 | 41 | 165 | 35 | 69 | 740 | 502 | 393 | 256 | 3129 |
| 2 | 93 | 139 | 179 | 247 | 5 | 87 | 85 | 51 | 72 | 112 | 185 | 224 | 127 | 202 | 207 | 104 | 344 | 80 | 238 | 974 | 950 | 551 | 380 | 5651 |
| 3 | 42 | 61 | 75 | 127 | 2 | 44 | 226 | 12 | 40 | 46 | 75 | 113 | 63 | 78 | 100 | 51 | 168 | 19 | 84 | 504 | 421 | 250 | 160 | 2761 |
| 4 | 45 | 52 | 59 | 143 | 3 | 41 | 197 | 10 | 39 | 59 | 97 | 115 | 62 | 126 | 102 | 47 | 126 | 23 | 64 | 422 | 421 | 222 | 131 | 2601 |

2.4.5 HOUSING GROWTH SINCE 1970

The Skagit Regional Planning Council has prepared the following table (2.4.7.1) showing new house construction, by school district, for the period 1970-78. While school district boundaries are not always contiguous with planning area boundaries, the correlation is close enough, so that the figures are reasonably accurate for the planning areas, with the exception of Sedro Woolley. Figures pertaining to the planning districts date back only to 1975.

In that year, a total of 73 building permits were issued for single-family dwellings and mobile homes in the Southwest and South Central Districts. (See Table 2.4.7.2). In 1977, permits were issued for 83 units, and through the first 7 months of 1978, permits have already been issued for 76 units. If projected over a twelve month period, permits issued would total 130, and should in any case reach 100.

Construction in the Southwest District shows no discernible growth trend, due to that area's stable, agricultural land base. The South Central District, however, shows an increase in housing starts that is characteristic of the county-wide trend since the early 1970's, particularly in the urban areas in and around Anacortes, Burlington, Sedro Woolley and Mount Vernon.

A significant trend in new housing is the number of mobile homes and multi-family units that have been constructed in relation to total housing units. Since 1970, mobile homes and multi-family units have made up 43.5% of all units built, with the most significant increases occurring in the incorporated areas of Mount Vernon, Sedro Woolley and Burlington. 35.3% of the 1970-78 multi-family units are in incorporated areas, while 68.5% of the mobile homes erected during the same period are in unincorporated areas. Mobile homes accounted for 3.65% of the area's total housing units in 1970, but by 1978, that figure had increased to 7.18%. It can be reasonably assumed that the growing cost of conventional housing is making mobile homes an attractive alternative. The large number of multi-family units built within incorporated areas indicates a trend toward medium to high density housing in areas which are served by public sewer and water.

TABLE 2.4.5.1

HOUSING CONSTRUCTED IN SCHOOL DISTRICTS 1970-72, 1973-6, 1976-78, 1970-78

| School District | 1970-72 (33 months) | | | 1973-76 (42 months) | | | 1976-78 (21 months) | | | Total (96 months) | | | Total All Dwelling Units |
|--|------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------|--------------|--------------|----------------------|---------------|---------------|-----------------------------------|
| | SF | MF | MH | SF | MF | MH | SF | MF | MH | SF | MF | MH | |
| Concrete (City) | 48 (15) | 0 (0) | 58 (2) | 44 (6) | 0 (0) | 51 (1) | 3 (0) | 0 (0) | 22 (1) | 95 (21) | 0 (0) | 131 (4) | 226 (25) |
| Sedro Woolley (City) | 243 (16) | 100 (100) | 110 (0) | 265 (133) | 44 (44) | 139 (27) | 76 (55) | 140 (76) | 58 (20) | 584 (348) | 284 (220) | 307 (47) | 1175 (615) |
| Anacortes (City) | 234 (160) | 60 (60) | 20 (0) | 257 (176) | 56 (56) | 16 (4) | 225 (149) | 131 (131) | 17 (13) | 716 (485) | 247 (247) | 53 (17) | 1016 (749) |
| La Conner (City and Shelter Bay) | 83 (67) | 8 (8) | 14 (5) | 110 (94) | 10 (10) | 8 (3) | 103 (82) | 8 (8) | 3 (0) | 296 (243) | 26 (26) | 25 (8) | 347 (277) |
| Conway | 35 | 0 | 11 | 43 | 0 | 19 | 9 | 0 | 4 | 87 | 0 | 34 | 121 |
| Burlington (City) | 175 (14) | 42 (6) | 79 (2) | 169 (7) | 52 (2) | 85 (0) | 69 (2) | 54 (32) | 40 (4) | 413 (23) | 148 (40) | 204 (6) | 765 (69) |
| Mount Vernon (City) | 290 (133) | 60 (60) | 111 (105) | 217 (129) | 40 (40) | 115 (80) | 189 (160) | 364 (364) | 77 (66) | 696 (422) | 464 (464) | 303 (251) | 1463 (1137) |
| Total (Cities) | 1108 (549) | 270 (234) | 403 (114) | 1105 (545) | 202 (152) | 433 (115) | 674 (448) | 697 (611) | 221 (104) | 2887 (1542) | 1169 (997) | 1057 (333) | 5113 (2872) |

SF - Single Family MF - Multi Family MH - Mobile Home

The City figures in brackets are included in school district totals.

TABLE 2.4.5.2

ISSUANCE OF BUILDING PERMITS: 1975 to AUGUST 3, 1978 *

| | South Central | | | | Southwest | |
|------|---------------|------|------|------|-----------|------|
| | S.F. | M.F. | M.H. | S.F. | M.F. | M.H. |
| 1975 | 38 | - | 23 | 5 | - | 7 |
| 1976 | 42 | 2 | 21 | 9 | - | 2 |
| 1977 | 35 | 1 | 19 | 16 | 1 | 3 |
| 1978 | 46 | - | 22 | 5 | - | 3 |

*These figures pertain to unincorporated areas only.

2.4.6 HOUSING PROJECTIONS

When the Comprehensive Land Use Planning Alternatives for the Skagit River Flood Plain and Related Uplands was completed in 1973, it was estimated that the county would require 2,084 new housing units over a 20-year period, based on a 1% annual population growth rate. Since 1970, however, 5113 new units have been constructed in the county, exceeding the 20-year projection by 145% and nearly equaling the forecasted housing need for 1990 (25,480-25,500 units) as projected in 1976 by Pacific Northwest Bell and the Bonneville Power Administration.

There has been no significant development in area economics which can account for the surge of new construction, so other factors must be considered.

During the period between 1960 and 1973, 2,410 people left the county, while the population increased from 51,350 to 53,000, a gain of 3.2%. Since 1973, however, the migration pattern has reversed, and 2,216 people have moved into the county to supplement the area's natural increase and push the growth rate up to 5.7% for the five year period to 1978. In addition, children of the post-war baby boom are now in their late 20's and early 30's, and are entering the housing market in proportionately larger numbers than their predecessors in the 60's and early 70's. Another factor, one which will not be known until the 1980 census, is the number of people per dwelling unit. With changing attitudes towards marriage and an increasing divorce rate, it is conceivable that there are now more single people in the housing market than there have been in the past.

The Skagit Regional Planning Council stated in their Housing Assistance Plan for 1977, that between 480 and 580 new housing units will be required annually through 1985 to meet projected population growth. The smaller figure is a low estimate and assumes no new economic developments in the county, while the larger figure takes into account construction of the proposed Skagit Nuclear Plant. The construction of two proposed Seattle City Light projects, High Ross Dam and Copper Creek Dam, would also have an as yet undetermined effect on area housing.

Of the 580 new households anticipated annually between 1975-85, it has been projected that approximately 150 will be located in or around Mount Vernon, 90 in or around Burlington, 160 in or around Sedro Woolley, 50 in or around La Conner, 100 in or around Anacortes, and 30 elsewhere in the county.

2.4.7 CONDITION OF HOUSING

The 1970 Census identified 1,432 housing units that either had incomplete plumbing or were dilapidated, but with complete plumbing. Sixty-five percent of these were occupied and a further 6% were for sale or rent. See Table 2.4.7.1.

A housing survey undertaken by the County planning Department in 1971, examining only the exterior condition of houses, identified approximately 1,600 deteriorating housing units and 600 dilapidated housing units out of the year-round housing stock ⁺19,000. The 600 dilapidated units are spread fairly evenly throughout the county, with about half of them being occupied. Mount Vernon, Anacortes and Sedro Woolley each have about 200 deteriorating housing units. However, the percentage of deteriorating housing does not vary significantly between farm, rural non-farm, and city, or between single and multi-family dwellings, and the percentage in each city is close to the county average of 8%. Of the 50% of deteriorating housing located outside these cities, just over 300 units are upriver of Sedro Woolley on the north side of the Skagit River. These units represent 22% of the total, a rate of almost three times the county average.

The county does not have a neighborhood problem as yet, as far as sub-standard housing is concerned. There is an individual house problem that can be identified from the assessor's records.

2.4.8 HOUSING GOALS AND OBJECTIVES

The following goals and objectives have been developed and adopted by the Skagit Regional Planning Council and represent the policies of the County Planning Department.

1. All residents in the planning area should be housed in safe, sanitary and sound dwelling units.
2. Housing diversity of the broadest possible type should be available to residents of this planning area.

3. Residential land uses should not be mixed with incompatible land uses.
4. All urban services should be provided to the residents of the planning area living in middle and high density residential areas.
5. Services of a rural nature should be provided to the residents of the planning area residing in low density areas.
6. The building code should be revised to stimulate either the repairs or eventual demolition of deteriorating housing.
7. Land use policies should continue to be promulgated by local government.
8. Financing of residential development should continue to be controlled by the state and federal government, especially with regard to the amount of available capital and the interest rate at which capital can be expended.
9. Private enterprise should be encouraged to fulfill the demands of the housing market.
10. Land use regulations should be revised and amended as technology modifies development techniques, so the planning area will benefit from state and federal experiments in residential development.
11. Publicly financed housing should continue to be provided for the elderly and for low income families in such a manner that efficiently allows for diversity in housing.
12. Preservation of the existing housing inventory to the extent it can be economically brought into a decent, safe and sanitary state.
13. Removal of housing that cannot economically be brought into a decent, safe and sanitary state.
14. Rehabilitation of existing substandard housing to the extent feasible.
15. Provision of housing with physical characteristics which meet the requirements of the elderly, probably specialized multi-family residential units.
16. Providing for the financial feasibility of home ownership by low income families, with emphasis on acquisition from existing inventory which has been brought to a satisfactory condition.

17. Furthering the social and economic integration of minority group members who are or will become permanent residents of the County by providing housing for such persons which is generally dispersed but in sufficient proximity to other members of the minority group to permit a continuing identity with the group;
18. Providing housing which meets the special requirements of migrant farm workers and similar transient groups.

2.4.9 HOUSING DEMAND AND NEED

Skagit County has experienced a fairly rapid population growth rate since early to middle 1970's. This is expressed not only in the number of building starts since 1970, but also in the volume and total value of real estate transactions. Table 2.4.9.1 shows the number of transactions per year and their total value from 1974 through July, 1978. These figures are predominantly for single family residences, although there has been an increase in multifamily unit construction. Mobile homes seldom change hands through real estate agencies and are not reflected in the totals.

Average yearly sales for the 36 real estate firms who are affiliated with the local Multiple Listing Bureau totaled 35 units per year per firm between 1974 and 1977. During this time, the average value per unit sold grew from \$22,883.00 to \$35,397.00, an increase of 54.7%. If 1978 sales continue to the present rate, total sales value will exceed \$80,000,000.00 for slightly more than 2,000 units.

TABLE 2.4.7.1 DEFICIENT HOUSING

| <u>Occupancy</u> | <u>Units</u> | <u>Incomplete Plumbing</u> | <u>Dilapidated With All Plumbing</u> |
|-------------------|--------------|--------------------------------|--|
| Owner-Occupied | 12,784 | 197 | 281 |
| Rented | 4,365 | 221 | 238 |
| Vacant Year-Round | 1,786 | 377 | 118 |
| For Sale | (109) | (18) | (0) |
| For Rent | (460) | (20) | (53) |
| <hr/> | | | |
| TOTAL | 18,935 | 795 | 637 |

TABLE 2.4.9.1 SKAGIT COUNTY REAL ESTATE SALES - 1974 to JULY 1978

| <u>YEAR</u> | <u>NO. OF SALES</u> | <u>TOTAL VALUE</u> |
|-------------------|---------------------|--------------------|
| 1974 | 992 | \$22,700,000 |
| 1975 | 1,049 | \$27,700,000 |
| 1976 | 1,295 | \$40,100,000 |
| 1977 | 1,712 | \$60,600,000 |
| 1978 (to July) | 859 | \$33,300,000 |

2.5 LAND OWNERSHIP PATTERNS

2.5.1 ORIENTATION

Like the other chapters of this section on Developmental Characteristics, this chapter on land ownership patterns is to some extent related to the entire Region rather than a specific Planning District. Accordingly, reference must be made to the Regional area, however, the specific analysis of areas overlapping the South Central and South Western County have been included in this chapter.

Study of land ownership patterns results in a more precise picture of past, present, and future trends in land development for a study area. Trends in parcelization and ownership were the primary elements under consideration in this chapter on Land Ownership Patterns.

2.5.2. PARCELIZATION AND SUBDIVISION

The dividing of a piece of land into separate saleable parcels is a common practice in the field of land development. Although it was beyond the means of this study to amass the amount of data for a complete study of all county land parcels, a sample of 56 randomly selected sections (56 areas of 1 square mile each) throughout the county were taken and studied through the years 1941-1972. This statistical sample was more than adequate to establish trends in parcelization in the study area. It was found that between the years 1941 and 1959 there was an average increase of approximately 3.7 parcels per square mile section. Between 1959 and 1972 this increase was 4.3 parcels per square mile. This demonstrates a reasonably steady increase in the amount of parcelization over the past 20 years. These figures (the number of parcels per square mile section) were then placed on a graph (#1) and compared with population trends and number of housing units for the same time span, Graphs 3, 4, and 5. The corresponding results were then placed together on Graph 6 to show similarities and differences among trends.

This series of graphs included in this section attempts to demonstrate further the correlations between population, parcelization, and housing unit trends. As can be seen, Graph 1 plots the number of parcels per square mile section against the population figures for 1940, 1960, and 1970.

2.5.3 OTHER ELEMENTS OF LAND OWNERSHIP

Parcelization and land ownership trends in each geographical/planning areas were also studied. The state and federal lands of the county are also an important element of this section. An inventory of all public lands in the area was conducted by the Planning Department and is on file.

The question of land values and uses for various areas is important with respect to locational analysis. However, due to budgetary and time restraints, it was not feasible to attempt a specific and precise consideration of this.

2.5.4 SUB-AREA ANALYSIS

2.5.4.1 SOUTHWESTERN PLANNING DISTRICTS

1941 - 1959

Between the years 1941 and 1959 the South Skagit Floodplain area remained similar in reference to land ownership patterns. Parcelization or subdivision of property was not widespread; at times land was aggregated under the owner in a few sections.

The land in and around the city of LaConner also remained quite stable. The area near Avon, however, was subject to some activity in terms of change of ownership and subdivision.

Inheritance of land through family ties seemed to be a frequent occurrence in this area and the county as a whole. The general agricultural nature of the area is probably a great contributing factor to this phenomenon.

1959 - 1972

The South Skagit Floodplain continued to subdivide rather slowly through this period. Again the parcelization of land among heirs is noticed. The agricultural lands in this area have a 30 acre minimum zoning which should prevent the parcelization of farmland into parcels too small to be economically farmed.

2.5.4.2 SOUTH CENTRAL PLANNING DISTRICT

1941 - 1959

During this period, Mount Vernon's influence grew quite extensively especially to the east and north. The land in and around the Mount Vernon and Big Lake - Lake McMurray corridor changed ownerships, but did not subdivide to any substantial degree. Here again the county transferred much of its land to either lumber companies or the state. The land immediately around the two lakes did not show any substantial change in terms of parcelization. The area to the east of these lakes underwent the same type of county-state-lumber company changes previously mentioned, with the state and the timber companies controlling almost all of the land throughout this period.

1959 - 1972

During this period, Mount Vernon's influence did not spread to any great extent. The land around the city, especially on the north and east, showed some signs of parcelization, but for the most part land parcel sizes remained the same as in the previous years.

East of Mount Vernon, near Big Lake and Lake McMurray, subdivision of property was also minimal. However, there were some changes in ownership of various large parcels of land. The Walking Circle M Ranch bought all of Skagit Steel's land holdings near the north end of Big Lake. Scott Paper continued to be a large land owner. Also, Puget Sound Pulp and Timber Company sold its land in this area to Georgia Pacific.

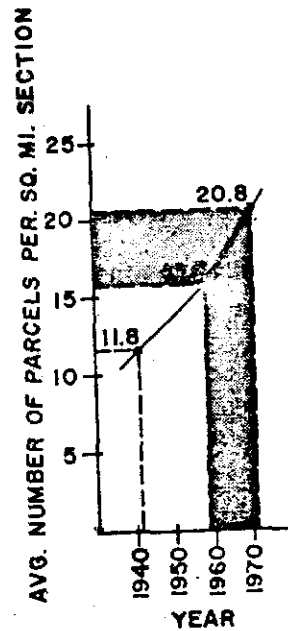
Scott Paper bought large parcels of property east of Conway, while Pacific Denkmann Company retained all of its holdings in this same area.

1972 - 1979

Between 1970 and 1978 2.32 square miles of County land was annexed into Mount Vernon. Most of this area was to the east of Mount Vernon's previous boundary. Parcelization of land to the east of the city is increasing due to expectations that the city will continue to expand in that direction.

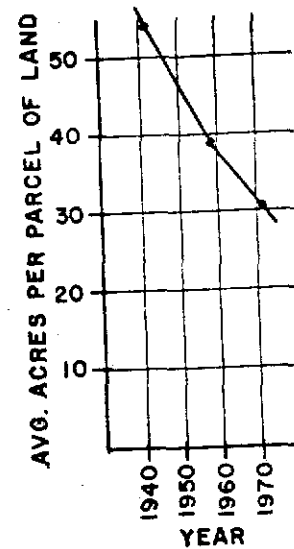
GRAPH 1

THIS GRAPH PLOTS PARCELIZATION OF LAND WITH YEARS. IT SHOWS PARCELIZATION TO BE GREATER IN THE LAST 13 YEAR PERIOD, THAN IT DID IN THE PREVIOUS 18 YEAR PERIOD. THIS WOULD ALSO MEAN THAT AVERAGE PARCEL OR LOT SIZE IS BECOMING SMALLER.



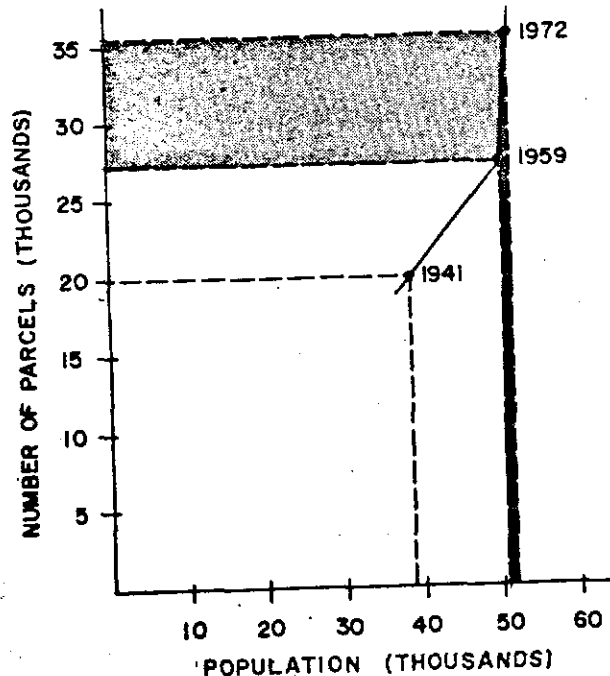
GRAPH 2

THIS GRAPH SHOWS THE DECREASING SIZE OF PARCELS OF LAND THROUGH THE YEARS.



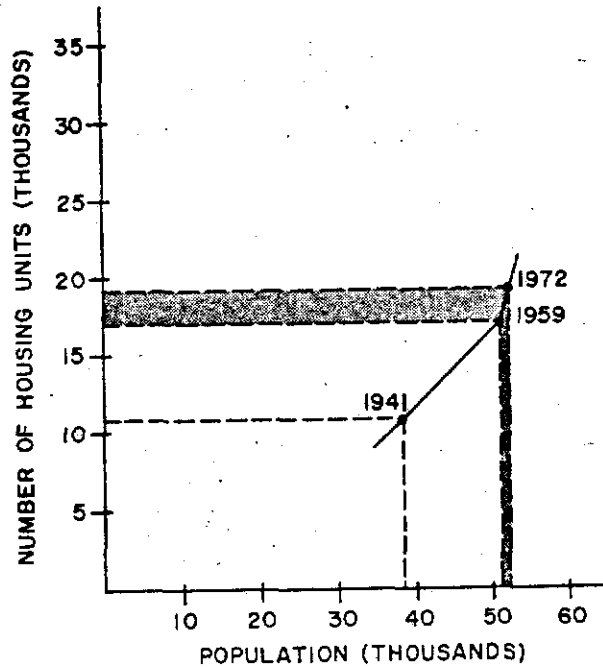
GRAPH 3

THIS GRAPH PLOTS THE PARCELIZATION, OR NUMBER OF PARCELS IN UNINCORPORATED PORTIONS OF THE COUNTY, AGAINST POPULATION. IT SHOWS A SUBSTANTIAL INCREASE IN SUBDIVISION AND PARCELIZATION RELATIVE TO A RATHER SMALL INCREASE IN POPULATION.



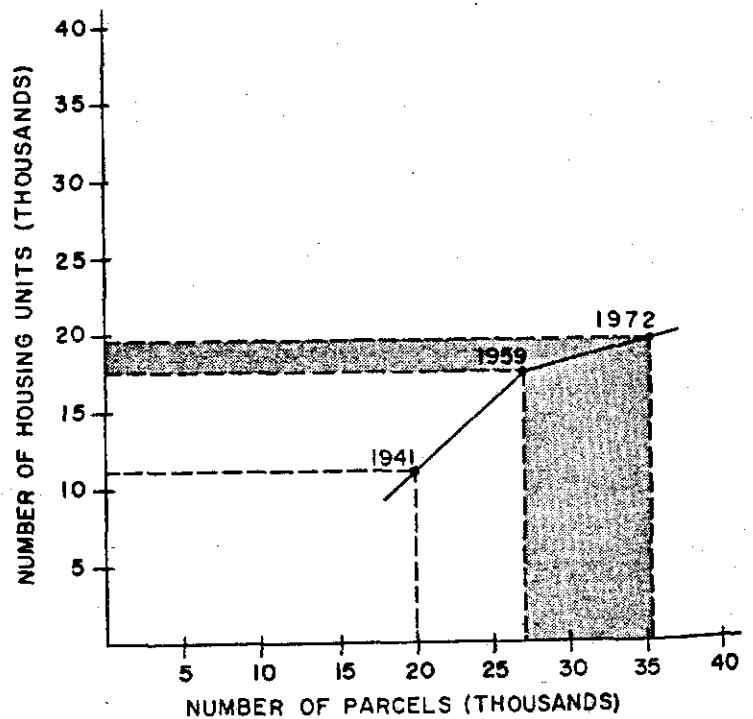
GRAPH 4

THIS GRAPH SHOWS THE NUMBER OF HOUSING UNITS IN THE COUNTY INCREASING AT A GREATER SCALE THAN POPULATION.



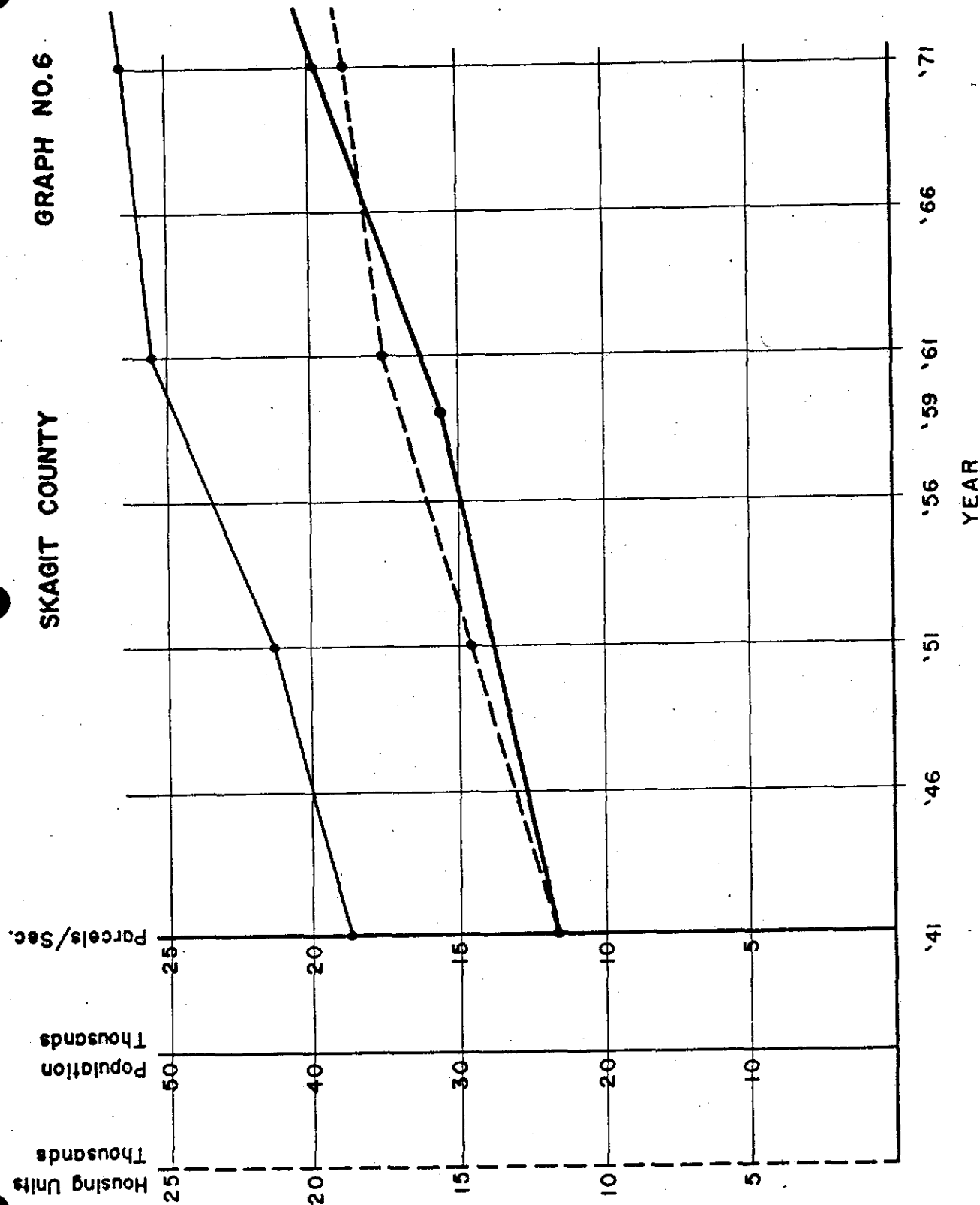
GRAPH 5

THIS GRAPH ILLUSTRATES THE SMALLER INCREASE IN HOUSING RELATIVE TO PARCELIZATION AND SUBDIVISION.



GRAPH NO. 6

SKAGIT COUNTY



* COMPARISON OF HOUSING UNITS, POPULATION, AND NUMBER OF PARCELS OF LAND/SECTION

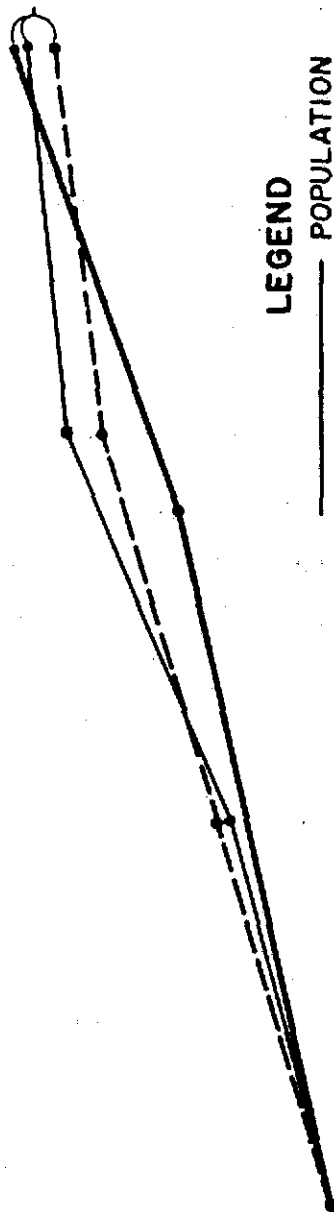
GRAPH NO. 7

POPULATION PARCELIZATION AND NUMBER OF HOUSING UNITS, SKAGIT COUNTY

Increasing Subdivision
& Parcelization Relative
To Population &
Housing Units.

LEGEND

- POPULATION
- - - NO. OF HOUSING UNITS
- PARCELIZATION



2.6 ECONOMIC BASE ANALYSIS

2.6.1 ORIENTATION

To date there ~~has~~ been no economic base analysis by individual county planning districts; however, several studies have been completed for Skagit County.

2.6.2 ECONOMIC INFORMATION SOURCES

A series of reports on Skagit County's economy have been prepared. These have included:

- I. Skagit County Agriculture: An Economic Mainstay, 1972.
- II. Skagit County Industrial Site Survey.
- III. A Tourist and Recreation Strategy for Skagit County with Recommendations for Implementation.
- IV. The Urban Land Institute Report on Skagit County.
- V. The North Cascades Highway: A Study of Its Impact on Local Community Economics.
- VI. Overall Economic Development Plan (Skagit County, Wash.), 1970.
- VII. An Introduction to the Economy of Skagit County in 1977.
- VIII. Economic Statistics on Skagit County, 1977.
- IX. Overall Economic Development Program and Comprehensive Economic Development Strategy, 1978. These studies and other information are available at the Skagit County Planning Department.

2.6.3 COUNTY LABOR FORCE

People are the major factor in the economic growth and development of an area. Although the rivers, forests, soils, minerals, and other natural features form a resource base, people provide the directive force for their utilization.

The following tables classify the county's workforce by occupation and industry.

TABLE 2.6.3.1

WORKFORCE BY OCCUPATION
(Source: 1970 Census)

| <u>Occupation</u> | <u>Numbers Employed</u> | <u>% of Total</u> |
|-----------------------------|-----------------------------|-----------------------|
| Operatives | 2,900 | 16.0 |
| Craftsmen | 2,700 | 14.9 |
| Professional and Technical | 2,600 | 14.4 |
| Service Workers | 2,500 | 13.8 |
| Clerical Workers | 2,300 | 12.7 |
| Managers and Administrators | 1,600 | 8.8 |
| Laborers, except farm | 1,300 | 7.2 |
| Farm Workers | 1,100 | 6.1 |
| Sales Workers | 1,100 | 6.1 |
| ALL OCCUPATIONS | 18,100 | 100.0 |

TABLE 2.6.3.2

PAYROLLS AND EMPLOYMENT IN
SKAGIT COUNTY BY INDUSTRY (1975)

| | <u>Average Monthly Employment</u> | <u>Total Wages Paid (\$ millions)</u> | <u>Jobs Added</u> |
|--|---------------------------------------|---|-------------------|
| Manufacturing | 4,200 | 53.3 | 760 |
| Trade | 4,200 | 27.4 | 950 |
| Construction | 900 | 13.4 | 680 |
| Services | 1,900 | 12.0 | 610 |
| Federal, State & Local Governments | 1,100 | 12.0 | -340 |
| Agriculture and Fishing | 1,200 | 9.4 | * |
| Transportation and Public Utilities | 800 | 9.1 | 150 |
| Finance, Insurance and Real Estate | 500 | 4.3 | 120 |
| Mining | (40) | .5 | * |
| SUBTOTAL | 14,600 | 141.4 | 2,300 |
| Proprietors, self employed, and other | 4,900 | | |
| TOTAL | 19,500 | | |

TABLE 2.6.3.3

MANUFACTURING EMPLOYMENT

(Source: Washington State Employment Security Department)

| Type | 1975 | Jobs Added |
|---------------------|-------|---------------|
| Other Manufacturing | 1,700 | 490 |
| Wood | 1,160 | -110 |
| Food | 1,010 | 310 |
| Printing | 100 | 30 |
| Boats | 70 | 30 |
| Concrete | 80 | |
| Electronics | 50 | 20 |
| Fabricated Metals | 20 | -10 |
| TOTAL | 4,200 | 760 |

Despite the recent increases in total employment monthly unemployment averages have ranged between 11 to 16 percent since 1970. This has been due to new labor force entrants and the effects of seasonal employment. The population and labor force are growing faster than the supply of jobs.

Labor force participation by both men and women is lower than the state average: 74% - 77% for men, 37% - 44% for women. Of the county's workforce, 10% have jobs outside the county, but this is balanced by the 10% of county jobs held by non-residents.

2.6.4 ECONOMIC SECTORS

2.6.4.1 AGRICULTURE AND FOOD PROCESSING

Agriculture is Skagit County's economic mainstay with a 1977 products value of \$ 56.9 million.

The manufacturing industry based on the fish catch and agricultural produce has a total payroll of \$10 million and an average employment of 1,000. Food processing accounts for almost one-fourth of the county's manufacturing jobs, with many additional workers involved in the distribution of the products.

Agriculture, fishing and food processing is the mainstay of the Skagit economy and is likely to remain so for the foreseeable future.

2.6.4.2 FORESTRY

Three quarters of the land area of the county is forest and woodland, of which 567,000 is classified as commercial. This commercial forest land contains an estimated 15,082 million board feet (Scribner Rule) of sawtimber trees. These sawtimber stands are by volume, 20% in forest industry lands, 55% in National Forest, 13% in other public lands and 12% in other private lands.

In 1975 a total of 108 million board feet of timber was harvested, with a total taxable value of \$15.2 million. Much of the timber harvest is processed in Skagit County. The lumber and wood products industry in Skagit County is strong and well established, and with increasing use of new growing techniques, has considerable potential for long-term expansion.

2.6.4.3 MANUFACTURING

Skagit County has 146 manufacturing firms. This sector is dominated by six firms - Skagit Corporation, Shell, Texaco, Anacortes Veneer, Publishers, and Snelson Anvil, which provide 60% of the year-round manufacturing jobs. With the exception of Skagit Corp, all are located in Anacortes. Other types of manufacturing include: food processing, printing, boat building, concrete, electronic, and fabricated metals, among others.

2.6.4.4 TRADE

Sales in the retail sector are increasing and are tabulated by area in Table 2.6.4.4.1 and by type in Table 2.6.4.4.2.

Tourism contributed an estimated \$13 million in sales in the retail and service trade. The impact of tourism has been dramatic in LaConner. Retail sales in that town increased 300% between 1971 and 1975 to \$11.4 million.

Since 1966, 230 new wholesale businesses have been established to a total of 290 in 1975. Wholesale trade in 1975 was \$127 million, a 13% increase over the previous year.

TABLE 2.6.4.4.1

SKAGIT COUNTY RETAIL SALES
(\$ millions)

| | 1974 | % of Total | 1975 | % of Total |
|--------------------|-------|---------------|-------|---------------|
| Anacortes | 32.9 | 14.7 | 37.7 | 16.1 |
| Burlington | 20.1 | 9.0 | 23.2 | 9.9 |
| Concrete | 1.7 | 0.7 | 1.4 | 0.6 |
| Hamilton | .5 | 0.2 | .4 | 0.2 |
| LaConner | 6.6 | 2.9 | 11.8 | 4.9 |
| Lyman | .1 | * | .2 | 0.1 |
| Mount Vernon | 97.9 | 43.6 | 103.8 | 44.5 |
| Sedro Woolley | 28.9 | 12.9 | 29.0 | 12.4 |
| Total Incorporated | 189.4 | 84.2 | 207.1 | 88.7 |
| Unincorporated | 34.9 | 15.8 | 26.4 | 11.3 |
| Total County | 224.3 | 100.0 | 233.4 | 100.0 |

2.6.5 ECONOMIC GOALS AND OBJECTIVES

The Skagit Regional Development Association has prepared or sponsored several reports on the county's economy. The economic goals and objectives that were developed from these reports in 1973 are summarized as follows:

- a. Preserve the existing agricultural and natural resource oriented economic structure of the Skagit area.
- b. Promote compatible diversified industrial development for the Skagit area.
- c. Expand and promote tourism and the recreational attributes of the area.
- d. Provide additional flood protection for existing urban areas.
- e. Develop safe and adequate sewer, water, and drainage systems for the county.
- f. Pursue area-wide planning and economic development.

Additionally, it is the philosophy of the Skagit Regional Development Association that diverse and compatible land uses which do not damage existing economic activities are encouraged to locate in the Skagit area.

In 1978 the Skagit Regional Planning Council issued a report "Overall Economic Development Program and Comprehensive Economic Development Strategy." The four goals of this Overall Economic Development Program are:

- a. Assistance to our target population of disadvantaged and unemployed.
- b. Minimizing the disruption likely to be generated in central and eastern Skagit County by construction of the Skagit Nuclear Project.
- c. Stabilizing the economic base in western Skagit County.
- d. Securing the necessary community/infrastructure improvements to achieve these goals.

The objectives from these goals are:

Agriculture

- The maintenance of agriculture.
- The prevention of encroachment on high quality agricultural land.
- The development of additional specialized food processing operations.
- 15 year flood protection to agricultural lands.

Commercial

- Sewer extension to commercial area south of Burlington.

Industrial

- Consolidate the position within Skagit County of those industrial firms presently located here.
- Reverse the decline of the industrial base in Anacortes.

Tourism

- Increase the tourist industry to the point where it becomes the major growth industry in the county.
- Fidalgo Island should become the boating center for the San Juans.
- Marina developments.
- River related motel and restaurant site.
- Roadside improvements and control of signs.
- Expansion of steelhead and south parks.
- Conference and exhibition centers.
- Permanently fix LaConner's First Street.
- Improvements to Sedro Woolley's downtown.

2.6.5.1

SUMMARY OF ECONOMIC GOALS AND OBJECTIVES

From Skagit County Agriculture:
An Economic Mainstay

| <u>Report Number</u> | <u>Page Number</u> | <u>Paragraph Number</u> | |
|--------------------------|------------------------|-----------------------------|--|
| I | X | 1 | -- retain agricultural land |
| I | X | 2 | -- use agricultural specialists |
| I | X | 3 | -- continue agricultural research |
| I | X | 4 | -- investigate use of irrigation |
| I | X | 5 | -- co-op or lease agricultural equipment |
| I | X | 6 | -- use time left to make land resource decisions |
| I | X | 7 | -- develop agricultural labor force |
| I | Xi | 1 | -- work with and cooperate with environ- mental protection agencies |
| I | Xi | 3 | -- expand hog and broiler chicken indus- tries |
| I | Xi | 4 | -- expand fresh market capabilities |
| I | Xi | 5 | -- increase use of commodity commissions |

2.6.5.2 SUMMARY OF ECONOMIC GOALS AND OBJECTIVES
From Skagit County Industrial Site Survey

| REPORT NUMBER | PAGE NUMBER | PARAGRAPH NUMBER | | COST PER ACRE | # OF ACRES |
|------------------|----------------|---------------------|---|------------------|---------------|
| II | 7 | 1 | -- Anacortes | N/A | 180 |
| II | 10 | 1 | -- E. Anacortes N. SR 536 | \$ 4,330 | 400 |
| II | 16 | 1 | -- S.E. Anacortes S. SR 536 | \$ 2,866 | 1,360 |
| II | 21 | 1 | -- F.E. Anacortes N. SR 536 | \$21,563 | 900 |
| II | 25 | 1 | -- W. Swinomish Channel N. SR 536 | \$18,750 | 40 |

2.6.5.3 SUMMARY OF ECONOMIC GOALS AND OBJECTIVES

From A Tourist and Recreation Strategy For Skagit County With Recommendations for Implementation

| <u>Report Number</u> | <u>Page Number</u> | <u>Paragraph Number</u> | |
|--------------------------|------------------------|-----------------------------|--|
| III | 13 | 2 | -- identify or develop destination attractions |
| III | 13 | 2 | -- improve attractions, making them more convenient |
| III | 13 | 2 | -- provide tourist services |
| III | 13 | 2 | -- promote attractions and services |
| III | 20 | 3 | -- advertising & promotion program |
| III | 25 | 4 | -- steam railway excursion |
| III | 27 | 1 | -- resort development |
| III | 62 | 4 | -- control location of commercial |
| III | 62 | 5 | -- prevent high-density recreational developments |
| III | 62 | 6 | -- support Wild & Scenic Rivers Act |
| III | 62 | 7 | -- establish park and open space systems |
| III | 63 | 2 | -- develop and lease vacation lots to general public |
| III | 68 | 3 | -- expand motel facilities (mid-river) |
| III | 68 | 4 | -- establish campground near I-5 - SR 20 |
| III | 84 | 3 | -- coordinate & develop public & private marinas |

2.6.5.4 SUMMARY OF ECONOMIC GOALS AND OBJECTIVES
From Urban Land Institute Report on Skagit County

| <u>Report Number</u> | <u>Page Number</u> | <u>Paragraph Number</u> | |
|--------------------------|------------------------|-----------------------------|---|
| IV | 16 | 2 | -- classify the river under the Wild & Scenic Rivers Act |
| IV | 24 | 1 | -- hold existing employment levels at their present levels |
| IV | 27 | 1 | -- adopt sound land use policies and programs |
| IV | 29 | 4 | -- prevent the decentralization of towns and cities |
| IV | 34 | 3 | -- protect and retain high-quality farm land for agricultural production |
| IV | 36 | 1 | -- preserve the natural beauty of the county |
| IV | 36 | 1 | -- develop new facilities and services to support a tourist, recreation industry |
| IV | 57 | 1 | -- maintain a high-quality living environment |
| IV | 57 | 2 | -- part of the industrial development effort should be devoted to assisting growth in existing local industry |

2.6.5.5 SUMMARY OF ECONOMIC GOALS AND OBJECTIVES

From the North Cascades Highway:
A Study of Its Impact on
Local Community Economics

| <u>Report Number</u> | <u>Page Number</u> | <u>Paragraph Number</u> | |
|--------------------------|------------------------|-----------------------------|---|
| V | 90 | 4 | -- cluster commercial development |
| V | 91 | 2 | -- State of Washington assume leadership and coordination State Parks & Recreation |
| V | 92 | 5 | -- private developer should look long range |
| V | 92 | 6 | -- regulate signs |
| V | 93 | 1 | -- coordinate promotional activities |
| V | 93 | 2 | -- upgrade substandard sections of highway |
| V | 94 | 2 | -- U.S. Park & Forest & State Highway should protect ecology of wilderness area |
| V | 94 | 3 | -- in-park facilities must integrate and be secondary |

2.6.5.6. SUMMARY OF ECONOMIC GOALS AND OBJECTIVES

From Skagit County Overall Economic Development Plan

| <u>Report Number</u> | <u>Page Number</u> | <u>Paragraph Number</u> | |
|--------------------------|------------------------|-----------------------------|---|
| VI | 72 | 2 | -- construct adequate sewer facilities |
| VI | 73 | 3 | -- develop Anacortes Industrial Park and deep water facilities |
| VI | 73 | 4 | -- develop solid waste management plan |
| VI | 74 | 2 | -- continue construction of and improve arterial network |
| VI | 74 | 4 | -- develop Swinomish Salmon Plan |
| VI | 75 | 2 | -- develop Swinomish Boat Marina and Storage Facilities |
| VI | 75 | 4 | -- expand Manpower Training Program |
| VI | 75 | 6 | -- provide adequate housing in Skagit County |
| VI | 76 | 2 | -- continue with development of new crops |
| VI | 76 | 3 | -- research in extending harvest season |
| VI | 76 | 5 | -- prepare comprehensive park, recreation and facilities plan |
| VI | 77 | 2 | -- identify resource and non-resource oriented industrial development (feasibility study) |
| VI | 77 | 4 | -- expand and alter Skagit County Courthouse facilities |

2.7 TRANSPORTATION - ROADS AND CIRCULATION

2.7.1 ORIENTATION

Ground elevations vary from neary sea level in the Skagit and Samish River agricultural basins to foothills in the far western and central regions of the county, to finally the rugged alpine regions of the Cascade Mountains. In the Islands area and the eastern part of the county, the rolling and mountainous topography has greatly influenced the location and configuration, as well as the construction costs of road development. The flat terrain of the broad agricultural basins has not greatly influenced road location and development since road alignments generally follow along or parallel section lines with no major topographical problems.

Streets and roads provide the main means by which people move about, travel, and ship goods and services. They act to determine where people choose to live, shop, and pursue leisure activities. Certain land uses, whether they are farming or manufacturing, require roads that provide direct and efficient means of transportation. These uses largely influence where and how roads are built. Once established, other land uses such as residential, commercial enterprises and support industries are attracted to and become established along such roadways. Soon more arterials and connectors, as well as road improvements, are needed to meet the needs of the increased traffic. These in turn act as stimuli for further development and thus, demand for increased public expenditures rises.

Roadways and the resultant circulation system must be a critical part of a comprehensive planning effort. In this section, the existing road system will be examined and in other sections land use and development patterns are analyzed. From these analyses future road circulation needs and problems can be identified and means to meet and solve them determined.

2.7.2 CLASSIFICATION OF ARTERIALS

The County Engineer's Office classified roads under two systems. The traditional system divides roads into Primary, Secondary, and Collector Arterials and Access Roads based upon how a road collects and directs traffic. At present the roads in Skagit County are changing their classifications, under this system, so it will not be discussed. Current information is available from the County Engineers.

The county's roads have been classified by funding sources. The categories are: State Highways, Federal Aid System, Route and County Arterial, County Arterials, County Access Roads. These roads are depicted on a map in the County Commissioners' Office.

In 1972 the county road system was surveyed and classified by the engineering consulting firm, VTN Washington Inc. Their study proposed road standards and developed a method of prioritizing needs for a six year construction program. However, their recommendations have not been accepted and the county has developed its own six year construction program for the period 1975-1981.

The degree of intensity of development in certain parts of the county causes the county to focus the funds for roadways in and around these developing areas. Thus, there is a need for a continuing planning process for road systems based on land use patterns.

2.7.3 SUB-AREA ANALYSIS

Lists of roads and planned construction by planning district follow.

SOUTHWEST DISTRICT ROADS

State Highways

SR-20 (Swinomish Channel to District boundary)
SR-536
SR-530

Federal Aid Secondary System

Beaver Marsh Road
Avon Road (SR-20 to SR-536)
Dike Road

Federal Aid Secondary System/County Arterial

LaConner-Whitney Road
Best Road
McLean Road
Fir Island Road

County Arterials

Bradshaw Road
Avon Road (SR-536 to McLean Road)
Calhoun Road
Milltown Road (SR-530 to I-5)
Silvernail Road
Fogan Road (Silvernail Road to I-5)

County Access Roads

All other public roads within the District

SOUTHWEST DISTRICT ROAD IMPROVEMENTS
WITHIN THE SIX YEAR CONSTRUCTION PROGRAM

| <u>Road</u> | <u>Miles of Improvements</u> | <u>Cost</u> |
|-----------------------|----------------------------------|---------------|
| Beaver Marsh Road | 2.76 | 105,000 |
| Best Road | 3.73 | 125,000 |
| Bradshaw Road | 3.81 | 60,000 |
| Calhoun Road | 0.99 | 30,000 |
| Dike Road | 0.15 | 14,000 |
| Donnelly Road | 1.00 | 50,000 |
| LaConner-Whitney Road | 1.10 | 70,000 |
| McLean Road | 1.76 | 55,000 |
| Milltown Road | 1.40 | 55,000 |
| Polson Road | 1.49 | <u>20,000</u> |
| | Road Total | \$584,000 |

| <u>BRIDGE CONSTRUCTION</u> | <u>Cost</u> |
|----------------------------|------------------------|
| Conway Hill Road | 60,000 |
| Frontage Road - Conway | 60,000 |
| Peter-Johnson Road | <u>60,000</u> |
| | Bridge Total \$180,000 |

| | |
|------------|-----------|
| TOTAL COST | \$764,000 |
|------------|-----------|

SOUTH CENTRAL DISTRICT ROADS

State Highways

- SR-538
- SR-9 (Skagit River south to county line)
- SR-534

Federal Aid Secondary System

- South Skagit Highway (SR-9 to District boundary)
- Francis Road (Mount Vernon to SR-9)
- Beaver Lake Road (SR-9 to Gunderson Road)
- Gunderson Road (Beaver Lake Road to SR-9)
- Blackburn Road (I-5 to Little Mountain Road)
- Little Mountain Road

County Arterials

- Lake Cavanaugh Road
- North Shore Drive
- South Shore Drive

County Access Roads

- All other public roads within the District

SOUTH CENTRAL DISTRICT ROAD IMPROVEMENTS WITHIN
THE SIX YEAR CONSTRUCTION PROGRAM

| <u>Road</u> | <u>Miles of Improvement</u> | <u>Cost</u> |
|-----------------------------|---------------------------------|---------------|
| Anderson Road | 0.25 | 20,000 |
| Francis Road | 3.43 | 150,000 |
| Gunderson Road | 0.90 | 30,000 |
| Lake Cavanaugh Road | 6.77 | 120,000 |
| Little Mountain Road | new alignment | 255,000 |
| Mt. Vernon - Clear Lake Rd. | 1.12 | 20,000 |
| River Bend Road | 1.37 | 35,000 |
| South Skagit Highway | 23.91 | 150,000 |
| Stackpole Road | 2.21 | 30,000 |
| Starbird Road | 1.16 | <u>35,000</u> |
| | Road Total | \$845,000 |

2.8 OPEN SPACE - RECREATION

2.8.1 ORIENTATION

Skagit County has an unique rural environment characterized by an abundance of agricultural and forested open space. The high elevations, foothills and valleys of the Cultus Mountains in the South Central district comprise a total of 101,700 timbered acres or 76% of that district's total acreage. The remaining acreage lies between the mountains to the east and the Skagit River to the west. It is rolling land, interspersed with fields and pastures, with several lakes at the base of the mountains.

The Southwest District is predominately agricultural with 24,800 acres, or 70% of the total land area devoted to that use. With the exception of Pleasant Ridge, it is all river floodplain. These areas provide excellent opportunities for recreational activity including upland hiking, swimming, canoeing, hunting and nature study to name a few. It is the county's responsibility to plan ahead, and to save sufficient usable open space for the use and enjoyment of residents and others.

2.8.2 GOALS AND OBJECTIVES OF OPEN SPACE - RECREATION

The Southwest and South Central regions cannot be isolated in any discussion of open space/recreation. The area's open space and recreational resources attract locals, but are used primarily by vacationers and travellers from within and outside the state. The existence of developed recreational facilities, the rural ambience and the attractiveness of the farmland, forests, rivers and surrounding environs make this an attractive area for visitors.

Since recreation has a county-wide impact on the area's resources, this plan adopts the goals and objectives stated in the Comprehensive Land Use Planning Alternatives for the Skagit River Floodplain and Related Uplands that apply to recreation. They are:

1. Locate and define potential recreation areas.
2. Determine and evaluate the recreational needs of resident and non-resident populations.
3. Preserve and maintain the aesthetic qualities and interesting attractions of the Skagit area.
4. Examine potential outdoor recreation areas as to their:
 - a. feasibility for acquisition and ownership
 - b. prior history of recreational and/or other activities
 - c. the need for urgency of acquisition
 - d. relation to transportation corridors for public access
5. Develop a trails plan as a subsection of the overall recreation plan.
6. Indicate the need for suitable indoor recreation areas.
7. Provide both urban and rural open space recreation areas.
8. Explore the functional inter-relationships between local, state, and federal recreational programs, and coordinate programs whenever possible.

2.8.3 DEMAND - SUPPLY AND NEED FOR OPEN SPACE

The following table summarizes the recreation activity needs for the Skagit area to 1990. The data included in the table is a refinement of detailed information developed by the Skagit County Planning Department for the Skagit County Parks and Recreation Commission. Both Park Study volumes, one on demand, the other on standards, needs and costs, are available for review at the County Planning Department.

2.8.4 INVENTORY OF EXISTING RECREATIONAL FACILITIES

There is only one developed park facility in the planning districts, a county owned riverside boat launch and picnic area just south of Conway on the south fork of the Skagit River. There are no state or federal parks.

The State Department of Game controls the largest number of public use sites, with 18 river access locations on the Skagit. Of these 18, however, only eight have been developed. The Game Department has maps available detailing the location of access points, availability of parking and the presence and condition of boat launches.

2.8.4 OPEN SPACE - RECREATION SUPPLY AND DEMAND TABLE

| Activity | Standard | Supply | Demand | | | | Need | | |
|--|----------------------|-------------------|------------|------------|--------------|------------------------|------------------------|------------------------|--|
| | | | 1970 | 1980 | 1990 | 1970 | 1980 | 1990 | |
| Boating Moorage | .01 acres/unit | 10.79 ac. | 8.30 ac. | 9.52 ac. | 10.77 ac. | 2.49 ac. (excess) | 1.27 ac. (excess) | .02 ac. (excess) | |
| Boating Trailered | .04 acres/unit | 29.32 ac. | 33.20 ac. | 38.08 ac. | 43.08 ac. | 3.88 ac. | 8.76 ac. | 13.76 ac. | |
| Boating Canoeing | .02 acres/unit | 203.83 ac. | 7.26 ac. | 8.32 ac. | 9.42 ac. | 196.57 ac. (excess) | 193.99 ac. (excess) | 191.35 ac. (excess) | |
| Camping | .14 acres/unit | 117.46 ac. | 625.80 ac. | 861.00 ac. | 1,101.66 ac. | 508.30 ac. | 734.54 ac. | 984.20 ac. | |
| Field Sports | 1 field/6,000 pop | 32 flds. | 8.6 flds. | 9.0 ac. | 10.6 ac. | 23.4 ac. (excess) | 23.0 ac. (excess) | 21.4 ac. (excess) | |
| General Recreation Playground/Parks | 1.25 acs/1,000 pop | 155 ac. | 130 ac. | 142 ac. | 160 ac. | 25 ac. (excess) | 3 ac. (excess) | 5 ac. | |
| Golf | 144 person/course | 3-18 holes 1-9 | 10.4 ac. | 12.0 ac. | 13.0 ac. | 6 ac. | 8 ac. | 9 ac. | |
| Hiking | .05 miles/unit | 600 mi. | 11.10 mi. | 17.10 mi. | 23.25 mi. | 588 mi. (excess) | 582 mi. (excess) | 576 mi. (excess) | |
| Picnicking | .01 acres/unit | 18.70 ac. | 29.60 ac. | 34.00 ac. | 38.50 ac. | 10.90 ac. | 15.3 ac. | 19.8 ac. | |
| Swimming | .02 acres beach/unit | 15 ac. | 46.20 ac. | 60.00 ac. | 74.84 ac. | 31.20 ac. | 45.00 ac. | 59.84 ac. | |
| Winter Sports | 30 people/acre | none | 27.2 ac. | 31.3 ac. | 35.4 ac. | 27.2 ac. | 31.3 ac. | 35.4 ac. | |

There were four activities that had a high need for creating more facilities; whether to expand existing facilities or to create new ones. These activities were: camping, swimming, golf, and picnicking; with several other activities also having a need to a lesser extent.

For the county, camping, swimming and picnicking areas should be high on a priority. These activities needs could be met with just a minimum of site expansion as these activities are linked to each other. Golfing should not be as great of concern because of the nature of the activity and the people it serves, plus a greater chance of private sector to invest in golf courses.

The Game Department also manages the Skagit Wildlife Recreation Area, a 13,000 acre preserve of which some 10,000 acres are in Skagit County on the lower reaches and inter-tidal portions of the Skagit River. The refuge is on the pacific flyway and is a resident and seasonal home to scores of bird species, notably ducks and geese. See Appendix A for a complete listing of coastal species. It is a popular, well-used area for hunters and for nature lovers, who take advantage of the refuge's 14 miles of trails. In addition, the Game Department maintains boat ramps on six South Central area lakes: Cavanaugh, Beaver, Sixteen, McMurray, and at Clear and Big Lakes.

Area municipalities also maintain a significant amount of public open space in the form of city parks and public school playgrounds. Facilities include baseball fields, basketball and tennis courts and picnic areas. Further information can be obtained from the city governments of Mount Vernon and LaConner. The city of Sedro Woolley maintains a public swimming beach at Clear Lake which is open from the first week of June through Labor Day. A nominal fee (50¢) is charged for daily use.

Public open space is also maintained under the provisions of Washington's 1973 Open Space Tax Law. Under the provisions of this law, the granting authority may impose certain conditions when giving approval to Timber and Open Space applications. The Planning Commission recommends approval of these two classifications with the following condition: the applicant must allow reasonable public access for recreational activities which are consistent with the area, except that the applicant may restrict his land to camping and motorized access.

2.8.5 INVENTORY OF POTENTIAL RECREATION AREAS

The development of parks and/or recreation sites in the Southwest District is unlikely because of that areas value as agricultural land. However, the recently completed Skagit County Shoreline Access Study has identified areas in the Southwest District where dike tops could be used as nature trails and where potential exists for inland canoeing, for example, on Sullivan Slough. Potential also exists at some Game Department access

sites on the Skagit for putting in fixed firepits, refuse collectors, increased parking and other amenities. The principal constraint on recreational development on the river, however, is the fact that facilities would be within the river floodway and would have to be firmly secured to prevent their dispersal during high water periods. Another potential recreation site would be on the dredge spoils which lie upland on the east bank of the Swinomish Channel. This could require the affected property to be rezoned from its present agricultural classification; however, some thought could be given to this alternative as the dredge material will not support crops and is located along an active waterway with an excellent view of boating traffic.

The County Parks Department has no plans for parks in the unincorporated areas of the planning districts. Presently, the Parks Department is working with citizens and other government agencies to develop an indoor/outdoor recreation facility highlighted by a much needed indoor swimming pool.

Another potential recreational opportunity, one which is now only in its planning stages, is the proposed Pacific Northwest National Scenic Trail. The trail will begin at Brown Pass in Glacier National Park and run west to Washington where a 40-50 mile segment is proposed to follow the Skagit River from Ross Lake to LaConner. Final route selection will be made pursuant to interagency planning and public involvement in the route selection process.

The Skagit County Potential Park Inventory, 1971, lists a number of potential recreation areas in the planning districts, for which no capital acquisition and development program yet exists. This document can be reviewed at the Planning Department office.

2.8.6 SUPPLEMENTAL INFORMATION

Skagit County provides a wealth of opportunity for outdoor activities. With this in mind, the County Parks Department is presently preparing a comprehensive parks and recreation plan which is due for completion sometime in the fall, 1978.

The goals and objectives of this plan will supersede the Open-Space/Recreation element of the Comprehensive Plan.

2.9 COMMUNITY FACILITIES

2.9.1 ORIENTATION

Previous portions of this plan have dealt with a variety of characteristics which together form the environment of the community. This portion deals with the capital outlays that have been made to make the overall characteristics of the community better suited to the needs of its residents.

Existing public utilities, services, and facilities are delineated here. An inventory of this type is necessary to determine what should be changed or expanded to serve the projected needs of the community.

The Community Facilities portion of this report is composed of the following:

- 2.9.2) Educational Facilities
- 2.9.3) Personal Services
- 2.9.4) Sewer, Water, Drainage Facilities

2.9.2 EDUCATIONAL FACILITIES

The maintenance of a sound school system is not only a benefit to the children of the area, but it is also an asset to the area as a whole. Besides the primary result of supplying a child with the best possible education, there are secondary and tertiary effects of a good school system. The schools tend to unite the community through P.T.A., sports events, school concerts, joint use of school and public facilities, and other activities. The community is also benefited by the increase in the overall education of its present and future members. In this way, the people can be better prepared to determine their own future.

2.9.2.1 INTERMEDIATE SCHOOL DISTRICT 108

Education in the study area is conducted under the general supervision of Intermediate School District 108 (ISD 108) headquartered in Bellingham. ISD 108 is a four-county organization of school districts, which encompasses the school districts of Whatcom, Skagit, Island, and San Juan Counties.

This District has a records keeping function as mandated by state law, acting primarily in the capacity of a coordination and service agency for the public and private school districts in the four-county North Sound area.

2.9.2.2 SOUTHWEST AND SOUTH CENTRAL EDUCATIONAL FACILITIES

Objective and accurate assessment of existing educational facilities is a difficult undertaking. It is believed that the best evaluation of goals and priorities for area education will be gained by the people of the planning areas working together with the teachers and administrators of their respective districts.

The Southwest and South Central planning areas are served by four School Districts: 320 (Mount Vernon); 311 (LaConner); 317 (Conway); and 101 (Sedro Woolley).

The number of students enrolled at schools in the planning area totaled 4,118 according to June, 1978 figures. This represents a net loss of 177 students from 1972 enrollment figures.

The following list is a breakdown of planning area schools:

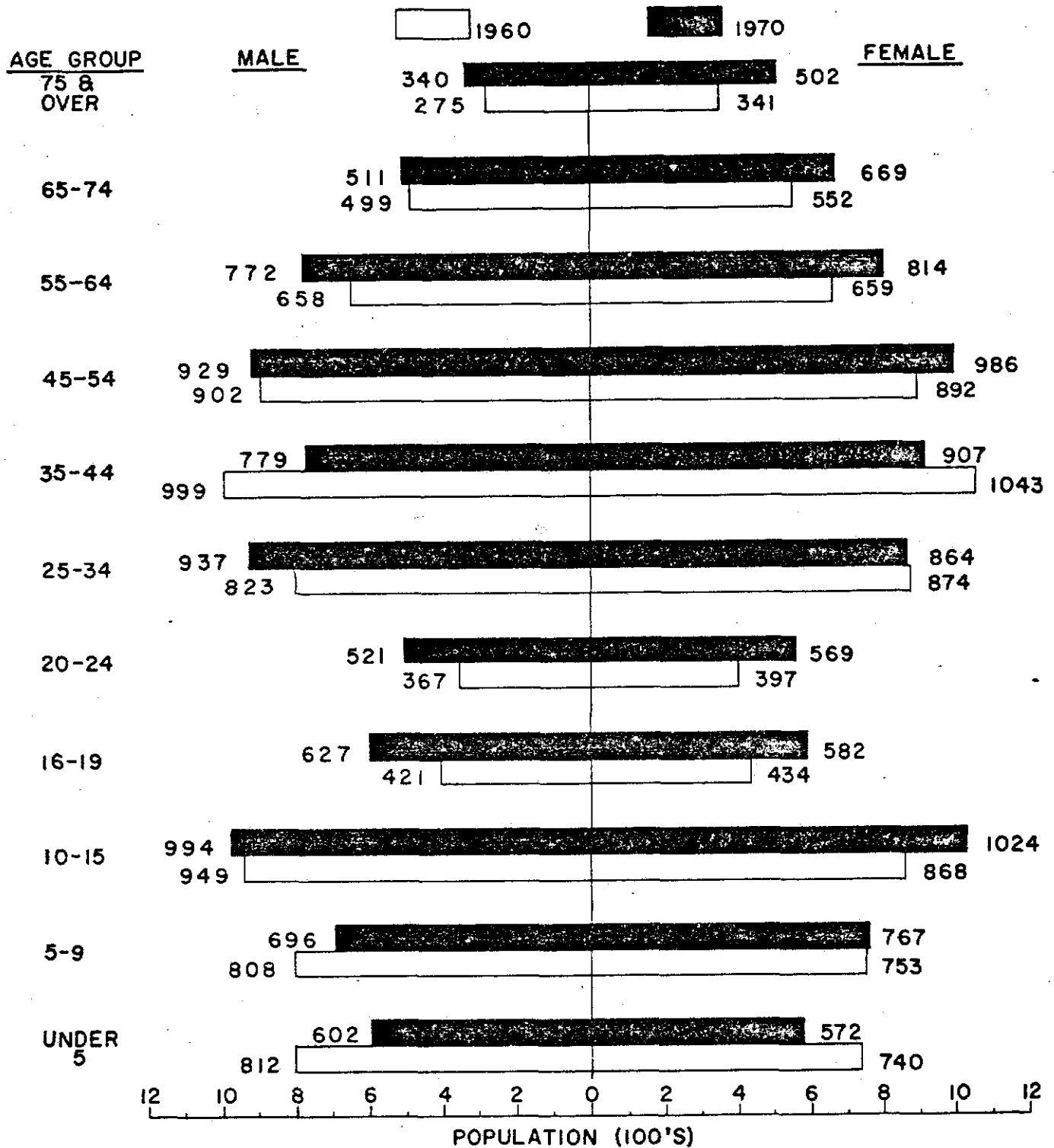
| <u>School (Grade)</u> | <u>1978 Enrollment</u> | <u>Acreage</u> | <u>Year Built Additions</u> |
|----------------------------------|----------------------------|----------------|---------------------------------|
| Conway (District 317) (K - 8) | 222 | N/A | 1938/1952 |
| Mount Vernon (District 320) | | | |
| Senior High School (9 - 12) | 1,116 | 6.32 | 1922/36/51/53/62/71 |
| LaVenture (7 - 8) | 425 | 12.3 | 1971 |
| Jefferson (1 - 6) | 532 | 4.4 | 1956/1970 |
| Lincoln (K - 6) | 461 | 2.4 | 1938 |
| Madison (1 - 6) | 333 | 6.3 | 1954/1961 |
| Washington (K - 6) | 290 | 4.97 | 1950/53/61 |
| Sedro Woolley (District 101) | | | |
| Clear Lake (K - 6) | 238 | 4.3 | 1935 |
| Big Lake (K - 6) | 96 | 9.2 | 1962 |

| <u>(cont.)</u> <u>School (Grade)</u> | <u>1978</u> <u>Enrollment</u> | <u>Acreage</u> | <u>Year Built</u> <u>Additions</u> |
|---|----------------------------------|----------------|---------------------------------------|
| LaConner (District 311) | | | |
| Senior High School | 145 | 10.0 | 1921 |
| LaConner School | 260 | 11.1 | 1936/61/64 |

Schools in the planning areas serve a population of 16,887 (1970 census figure. See chapter on population for projected growth rates). While this figure is probably lower than the present population, it is significant to note that school enrollment has dropped from 4,285 in 1972 to 4,118 in 1978. The Conway and LaConner districts have felt the greatest loss (a total of 200 students in the six year period, 1972 - 1978), while the Mount Vernon and Sedro Woolley districts have changed only slightly; the former gaining 14 students and the latter losing 9 at the Clear Lake and Big Lake schools.

By examining the age/sex pyramids for the relevant school districts, it can be seen that between 1960 and 1970 the number of children under age 5 decreased by 17%, from 2,766 to 2,295. At the same time, the number of people between 5 and 15 showed a 14% increase, from 6,006 to 6,832. This latter group has now moved through grade school, and is being followed by decreased enrollment as fewer students move into the system. This trend is especially evident in the Conway and LaConner districts which have decreased in enrollment by 38% and 14% respectively, between 1972 and 1978. Enrollment in the Mount Vernon School District, and at the Big Lake and Clear Lake grade schools (Sedro Woolley School District) has remained fairly constant, the former showing a .44% increase and the latter a 2.7% decline.

The decrease in the younger age group has a significant effect in terms of the future needs of the districts in enrollment trends, construction and staff.



TOTALS 1. 1960=15,085

2. 1970=15,964

3. NUMBER OF WOMEN OF CHILD-BEARING YEARS (16-45)-1960=2,748,
1970=2,922

4. NUMBER OF BIRTHS (PLUS NET MIGRATION AGES UNDER 10)-1950-'60=
3,113, 1960-'70=2,637

AGE GROUP

75 &
OVER

 1960 1970

65-74

55-64

45-54

35-44

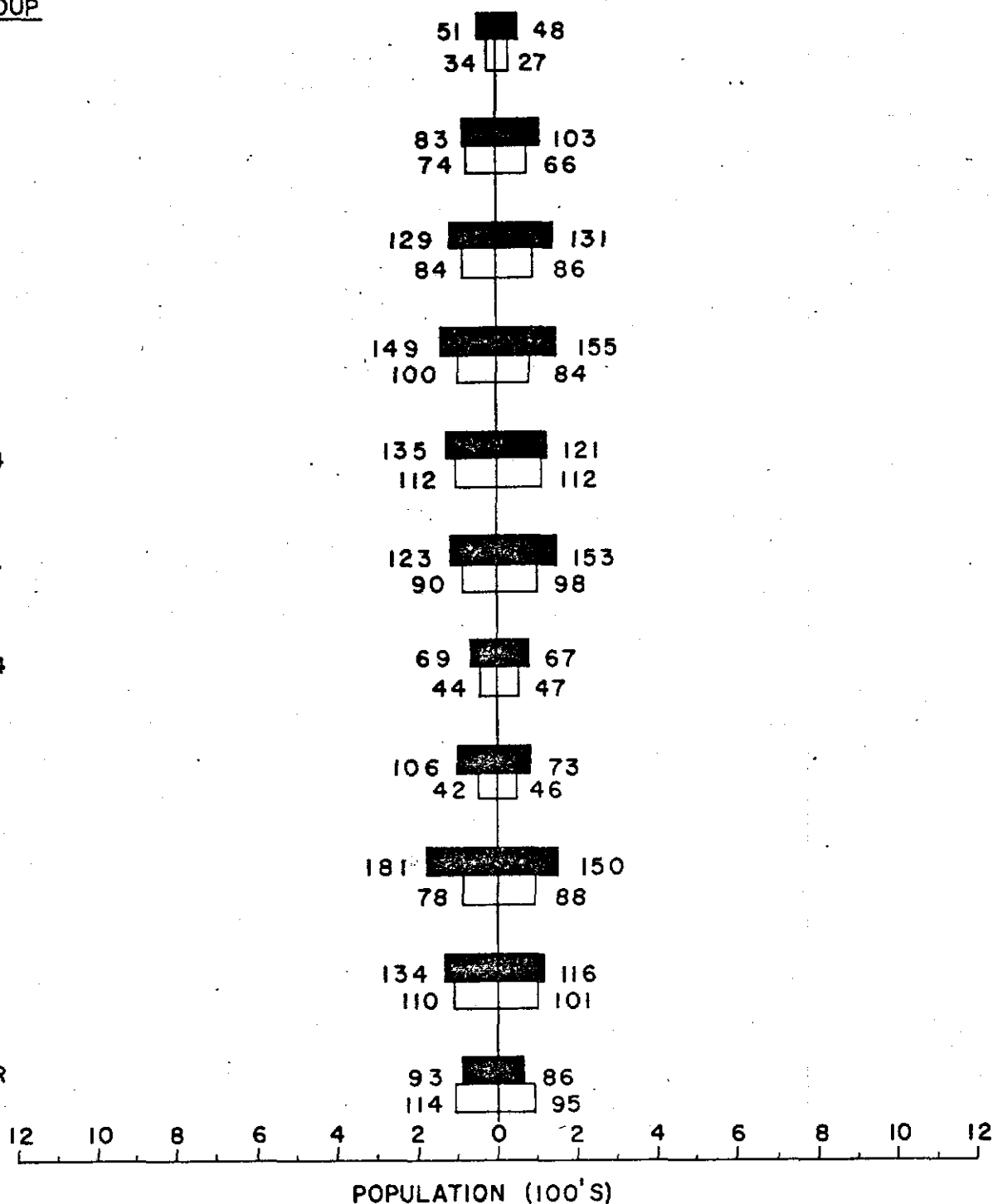
25-34

20-24

16-19

10-15

5-9

UNDER
5TOTALS

1. 1960=1732

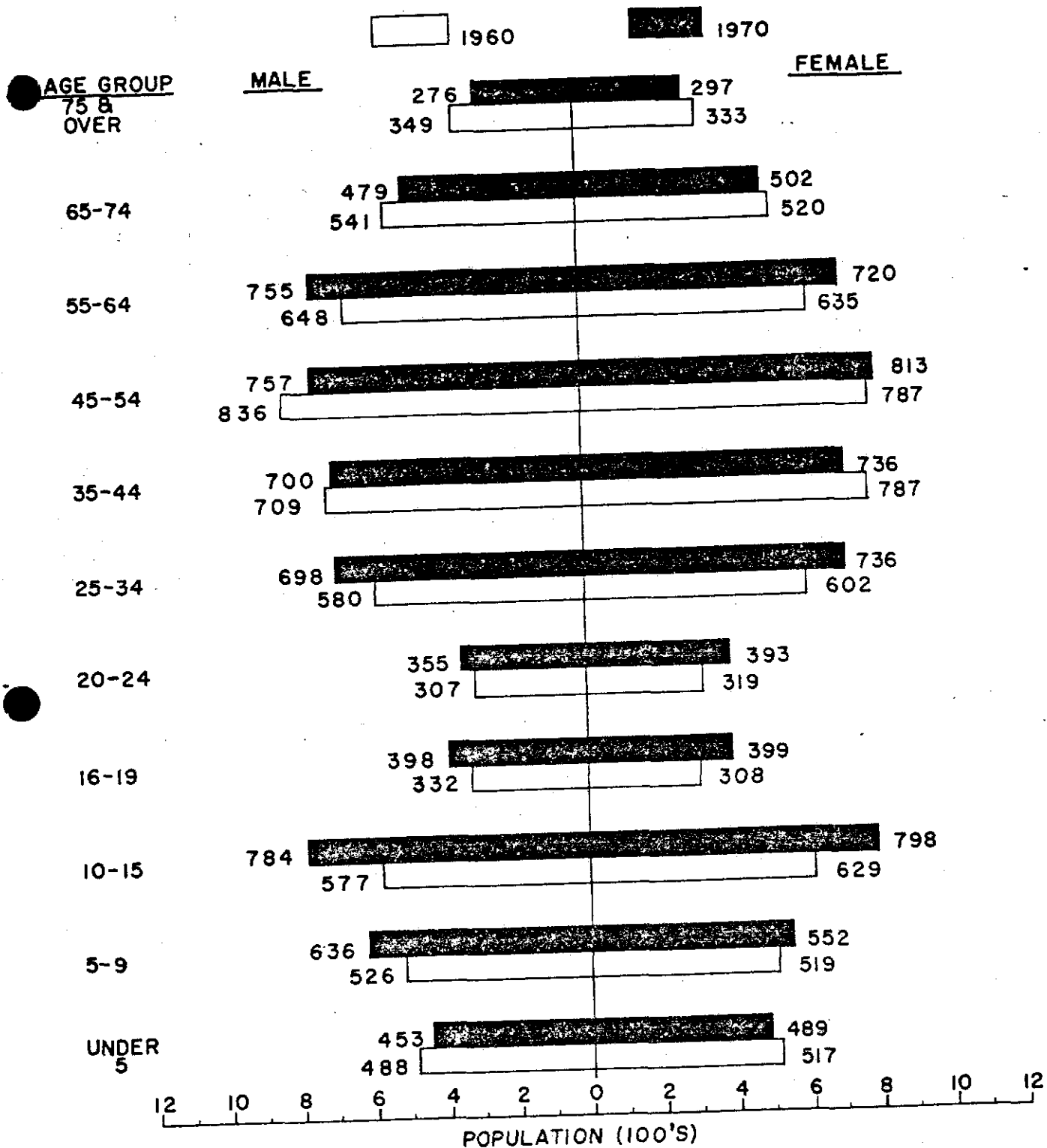
2. 1970=2456

3. Number of women of child-bearing years (16-45) - 1960=303, 1970=414

4. Number of births (Plus net migration ages under 10) - 1950-60=420,
1960-70=429

* Figures may be slightly distorted due to changes in census enumeration district boundaries between 1960-1970. Thus 1960 figures may be somewhat higher than shown here.

SEDRO-WOOLLEY NO. 101 AGE & SEX DISTRIBUTION 1960-1970



TOTALS 1. 1960=11,849

2. 1970=12,727

3. NUMBER OF WOMEN OF CHILD-BEARING YEARS (16-45)- 1960=2,016,
1970=2,264

4. NUMBER OF BIRTHS (PLUS NET MIGRATION AGES UNDER 10)- 1950-'60=
2,050, 1960-'70=2,130

2.9.2.3 STATE ASSISTANCE REQUIREMENTS

The state plays an important role in school district planning because of its assistance in financing projects. Financial capability and capital outlay expenditure is dependent upon bond monies. A ceiling amounting to 20% of the assessed valuation for school bond indebtedness has been established by state law. School districts must be bonded to at least 10% of their 20% capacity to qualify for state assistance in their construction programs. State funds are made available to school districts which qualify by placing them on a "priority of needs" list, which is referred to as the state "Gray Book." This book lists the school districts which are entitled to assistance and the corresponding percentage of state participation that they may expect.

The state standards for financial assistance are based upon a square footage allocation for each unhoused pupil in the school district. The allocation for each unhoused pupil of the school district. The allocation for elementary students is 70 sq. ft. per pupil and the allocation for junior high school students is 90 sq. ft. per pupil. In addition, the state also sets a ceiling for construction costs beyond which they will not participate. The state will participate with the school district in the percentage previously mentioned, up to a total cost per sq. ft. of \$27.11. Thus, any construction costs exceeding \$27.11 per sq. ft. would have to be assumed by the school district.

The formula for state assistance would be:

$$\begin{array}{rcl} \text{A percentage of the number} & 70 \text{ sq. ft./pupil} & \\ \text{of unhoused students} & \text{or} & \times \$27.11/\text{sq.ft.} \\ & 90 \text{ sq. ft./pupil} & \end{array}$$

2.9.3 PERSONAL SERVICES

2.9.3.1 EMERGENCY SERVICES

A revision of the Skagit County Emergency Services Operations Plan was completed in October 1972 by the Skagit County Department of Emergency Services. Further details involving emergency services may be obtained by consulting the above cited document and the Emergency Services Department.

The emergency services operation plan is primarily used as a guideline to develop a county civil defense network that is prepared for both military attack and natural disasters, as well as to provide for the effective utilization of all available governmental and private resources within the county, both manpower and materials, to minimize the effects of such a disaster. Coordination of the activities of all the organizations and manpower that may be involved in an emergency is a major element of the plan. It would also provide for effective utilization of all resources available from sources outside Skagit County.

Although Federal and State levels of government have responsibilities and controls in an emergency, the Skagit County Department of Emergency Services is the coordinator of all county and city officers and employees, together with those volunteer forces enrolled to aid them during a disaster, and all groups, organizations, and persons who may by agreement or law be charged with the protection of life and property during such an emergency.

Direction and control during a disaster would channel from the governor's office to the County Board of Commissioners.

For the purpose of coordination with the land use plan for the Island Region, this report regards the Emergency Services Operation Plan for Skagit County as the minimum standards for which emergency services should be maintained.

Since its completion in 1972, the Emergency Services Operations Plan has been updated three times: once to add a section on emergency welfare services; once to add a section on coping with natural and manmade disasters; and an update on the logistics of warning area citizens in the event of an emergency.

2.9.3.2 LAW AND JUSTICE

The following "Targeted Criminal Justice Incidents" Goals and Subgoals are cited from Crime Control and Delinquency Prevention Plan, FY 1978, developed by the Northwest Regional Council for the North Puget Sound Region. The

Northwest Regional Council is a four-county association composed of Skagit, San Juan, Island, and Whatcom Counties. The primary function of this council is to develop and adopt plans and recommendations to improve law and justice service throughout the region, therefore, the following Goals and Subgoals are used as the basis for the Law and Justice Section of this Comprehensive Plan.

2.9.3.2.1 TARGETED CRIMINAL JUSTICE INCIDENTS

Goals

- Reduce the incidence of Burglary
- Reduce the incidence of Larceny/Theft
- Reduce the incidence of Rape

Sub-goals

- Reduce the annual rate of increase of reported forceful entry daytime residential burglaries in Island, Skagit, Whatcom and San Juan counties to less than 10% by 1980.
- Reduce the annual rate of increase of reported theft of property from autos parked on or about private premises in Bellingham, Anacortes, and San Juan County to less than 10% by 1980.
- Reduce the annual rate of increase of reported theft of private property from residential premises in Whatcom, Island and Skagit Counties to less than 10% by 1978.

TARGETED JUVENILE JUSTICE INCIDENTS

The following goals are based upon extensive, and on-going regional research that has basically substantiated, in this region, the logical assumptions of Juvenile Justice and Delinquency Prevention Act. That they carefully coincide with those goals promulgated by the State of Washington and adopted by the Governor's Advisory Committee on Juvenile Justice reflects no lack of imagination on this region's part, but rather a statistically substantiated acceptance of previous empirical research.

Goals

To develop and implement effective methods for preventing and reducing juvenile delinquency and status offenses.

To develop and implement effective programs to divert juveniles from the juvenile justice system.

To provide community-based alternatives to institutionalization.

To provide for the separation of juveniles and adults in detention so there is no regular contact between the juveniles and adults.

To increase research, evaluation and training in juvenile delinquency prevention.

Sub-goals

To increase by 25% the rate with which status offenders and first time delinquents are given psychological and medical evaluations upon referral to juvenile court services.

Increase the effectiveness of staff and volunteers directing programs and providing services for the diversion of status offenders from the juvenile justice system.

Decrease the disparity between the number of juveniles, all offense categories included, who drop out or are suspended from school and those who are subsequently referred for a delinquency or status offense by 50% by 1980.

Reduce by 15% each year the rate of recidivism of status offenders.

Reduce significantly the rate of recidivism for all offenders, delinquent or status, through the use of innovative techniques and programming by 25% by 1978.

To reduce the rate of detention for status offenders by 50% in all jurisdictions by 1978.

To reduce the rate of detention in adult facilities of all juveniles to zero in the region by 1978, except as provided by Court Order.

To research the characteristics of the youthful offender and his environment as well as evaluate the relative effectiveness and efficiency of implemented programming in all jurisdictions.

NOTE: The Skagit County Sheriff's Department is the largest law enforcement agency in the county, with a staff of 40. It has assumed a great deal of responsibility within the county, including almost all of the criminal investigative work. The department continues to emphasize public safety in rural areas.

Future growth patterns in the South Central and Southwest Planning Districts will obviously put more demands on the Skagit County Sheriff's Department, although these demands could vary somewhat according to the pattern and form of development. The urbanized situation in the City of Mount Vernon will, in all likelihood, cause the municipal department there to grow with the increased population and concentration of development. The Sheriff's Department may have to increase its law enforcement services to assist the city and to handle the "spillover effects" of an urbanized situation. A more rural dispersed pattern of development would obviously cause an increase in demand for direct law enforcement services supplied by the Sheriff's Department. It is difficult to predict the exact needs of area law enforcement agencies in the future for much of the level of service provided is determined by public sentiment and availability of qualified personnel.

2.9.3.3 HEALTH SERVICE DELIVERY

The field of Health Services Delivery is addressed more fully in the documents developed by, and being developed by, the Comprehensive Health Planning Council of Whatcom, Skagit, Island, and San Juan Counties.

This Council is a four-county organization of elected officials and interested citizens, as well as health delivery professionals. The Council is partially supported by a grant from the U.S. Public Health Service. The Skagit Regional Planning Council has endorsed the ongoing activities of the Comprehensive Health Planning Council.

The Skagit County Planning Department solicits recommendations regarding Health Service Delivery from the Comprehensive Health Planning Council of Whatcom, Skagit, Island, and San Juan Counties.

2.9.4 WATER, SEWAGE AND DRAINAGE FACILITIES

To date, two major studies have inventoried existing county sewage, water and drainage facilities, with recommendations for future expansion of the systems. These studies are: The Skagit County Water, Sewerage and Drainage Facilities Plan, prepared by Stevens, Thompson and Runyan, June, 1970; and the Skagit County Water Quality Management Program, prepared by CH2M/Hill in 1973. Both of these studies conform to the goals and objectives of the comprehensive plan, and are available for review at the Planning Department Office.

Public water is provided to the southwest and south central areas by two sources: the Western Washington Transmission System (City of Anacortes) and Skagit County P.U.D. #1. The Transmission System provides water to LaConner while the remainder of the region is served by P.U.D. #1. In addition, there are 83 (1967 figure) other water supply systems which either produce their own supply or purchase it from other systems. Individual wells are also common in the rural areas of the county. Water for the two major suppliers is obtained from the Skagit River and from the Cultus Mountain watershed. According to demand projections, both the Anacortes and P.U.D. systems will have adequate capacity through 1980.

Sewage treatment and disposal systems in the planning districts are in operation only in the metropolitan areas of Mount Vernon and LaConner. Big Lake residents have approved a sewer system for their area; however, construction has not yet begun, as all of the necessary permits have not been granted. Other unincorporated areas in the planning districts are served by on-site septic systems.

Generally speaking, public sewer facilities are not considered economically feasible for areas with a total population of less than 400, or a population density of less than 4 persons per acre, according to guidelines established by the U.S. Department of Health, Education, and Welfare. As areas of the county become more densely populated, the likelihood of constructing sewerage facilities also increases, especially in areas with a history of septic tank failure. In addition to Big Lake, Clear Lake and Lake McMurray in the south central district are considered to be economically justified locations for public sewer treatment facilities.

Below-ground and over-ground drainage is closely associated with the flood potential of the Skagit River and its associated tributaries. From a planning perspective in Skagit County, there are four basic considerations related to drainage, not given necessarily in their order of importance. One is to ensure the continued, adequate drainage

of county agricultural land. Agriculture is the area's economic mainstay, and its productivity depends on well drained soil. Local diking and drainage districts are charged with implementing drainage practices, largely under the sponsorship of the Soil Conservation Service.

The second aspect concerns the maintenance and protection of the Cultus Mountain's watershed; the primary source of area P.U.D. water. Sound management should be undertaken to assure slope stability and water quality. A third related concern, is the water displacement that occurs in developed areas as the natural ground surface is covered with impermeable material. Care should be exercised so that areas designated for development have drainage facilities capable of handling seasonally high run-offs, excluding flooding.

Floods, which are the fourth planning aspect, have been addressed in Section 1.5 of the Comprehensive Plan.

SOLID WASTE DISPOSAL

The Skagit County Engineering Department maintains eight compactors, or "green boxes" throughout the county, as well as three landfill areas; Rockport, Inman and Gibraltar, none of which are in the planning districts. Of the "green boxes," three are in the planning districts; one on the Lake Cavanaugh Road; one on Howey Road near Clear Lake; and a third at Conway. The system serves present county needs, and no expansion is anticipated.

3 COMMUNITY GOALS AND OBJECTIVES

The two previous chapters of the Comprehensive Plan for the Southwest and South Central area have dealt with the Physical Environment and the Developmental Characteristics of those parts of Skagit County. Together, these chapters form the background against which information about the needs of these areas can be examined.

Citizen attitudes about potential land use patterns are addressed in this chapter. These citizen attitudes provide a tempering for the development of a Comprehensive Plan.

This chapter of the Southwest and South Central area Comprehensive Plan is composed of the following sections:

- 3.1 Level of Analysis
- 3.2 Citizen Input Questionnaire
- 3.3 Citizen Groups and Public Hearings
- 3.4 Planning Policy Objectives

- 3.2.2.7 73.5% did not feel floods represented a serious threat to them personally. However, 50% are in favor of increasing flood protection, but were not agreeable to sharing the expense; 39% agreed that the costs should be borne by those benefiting from the protection.
- 3.2.2.9 Agriculture was very important to 83% of the respondents. A majority (57%) were in favor of policy and standards for preserving farm land and a greater number feared that this resource could be threatened by urban related speculation and development.
- 3.2.2.10 Outdoor recreation qualities rated high with the respondents with a majority favoring the development of a moderate recreation/tourism program.
- 3.2.2.11 Regarding industrial development, all answers exhibited a strong preference for industry that did not conflict with the beauty and lifestyle of the area.

3.2.3 Conclusions

The Comprehensive Plan for the Southwest and South Central Areas should protect the agricultural lands, strive to protect the rural atmosphere, and expand indoor and outdoor recreational facilities while allowing for reasonable, well planned industrial, residential and commercial growth.

3.3 CITIZENS GROUPS AND PUBLIC HEARINGS.

Further citizen input and involvement has been enhanced by the involvement of a Citizen Advisory Committee and by regarding attitudes and consensus at public hearings.

The present Citizens Advisory Committee has been meeting to discuss planning goals and objectives and developmental models and patterns for the Southwest and South Central areas and for other projects. Their input has been invaluable in aiding the Department staff in establishing policies and recommendations for the Comprehensive Plan.

3.4 PLANNING POLICY OBJECTIVES.

After tabulating and reviewing the citizen input from the preceding techniques, the staff developed the following planning policy objectives. These objectives have formed the basis and rationale for the alternative models and subsequent alternative plans discussed in the following sections.

3.4.1 These planning policy objectives are:

- 3.4.1.1 Provide and maintain lifestyles which best preserve the natural beauty of the area, minimize public investments and which allows private investment the greatest possible latitude within the interests of community health, safety and welfare.
- 3.4.1.2 Preserve the agricultural base of the area so as to retain both the primary economic base and the rural atmosphere of this area.

4 COMPREHENSIVE PLAN ALTERNATIVES

4.1 No Comprehensive Plan

The alternative of not having a comprehensive plan is not applicable in this instance, as the Revised Code of Washington (RCW 36.70.320) requires that,

"Each planning agency shall prepare a comprehensive plan for the orderly physical development of the county and may include any land outside its boundaries which, in the judgement of the planning agency, relates to planning for the county."

In the instance of Skagit County and the Southwest and South Central Districts, a comprehensive plan already exists.

4.2 Utilize Existing Plan

The utilization of the present Comprehensive Plan, derived in 1968, would mean it would be used for a general guide for development for the next few years. The existing plan was developed on a "saturation concept" envisioning a rapid increase in population and development in the area. The plan text gives a cursory investigation into the physical characteristics considered in plan development but a more in depth investigation should occur. Besides the fact that community sentiment is against further implementation of certain aspects of the existing plan, the plan lacks some environmental considerations that also should be addressed.

In this period of environmental awareness, a stronger based information source should be included in the Comprehensive Plan in order to make more effective policy decisions. Any piecemeal amendments to the existing plan could have an unforeseen, undesirable impact on future land use and developmental patterns on the area.

4.3 Unlimited Growth Plan

An unlimited growth plan would allow for a variety of growth, which would be limited primarily by market demand and minimal constraints designated in the Comprehensive Plan. This loose framework of land use designations would allow market demands to control land prices, uses and developmental levels which would operate at a minimal level of restraint. Whereas the plan may address some of the environmental concerns, it would still allow maximum utilization of developable properties.

The unquantifiable environmental effect of an unlimited growth plan and the unascertainable costs associated with uncontrolled growth (utilities extensions, demands on public services, etc.) could also produce undesirable impacts in the area.

4.4 Limited Growth Plan

The limited growth plan, basically a no-growth plan, would in essence severely diminish the subdivision of property, provide

3.1 Level of Analysis

After the information relevant to the physical, developmental, and community facilities characteristics has been gathered and analyzed, it becomes necessary to use that information in accordance with the desires and needs of the community. This section attempts to provide that tempering.

Citizen attitudes were explored by several techniques: citizen advisory groups, surveys, public meetings and hearings and technical advisory committees. The outcome of these attitude assimilation techniques are discussed in the chapter on Planning Policy Objectives.

3.2 Citizen Input Survey

3.2.1 Purpose

This survey, in the form of a questionnaire printed in the Skagit Valley Herald in 1972, served to direct the development of the alternative land-use plans with regard to recommended lot sizes, distribution of development areas and promoting development in the upland areas of the county.

3.2.2 Analysis of Results

Compilation and review of the 351 responses (0.6% of county population) by Planning Department Staff allows some generalizations to be made as they apply to the planning area. It is believed that the countywide responses are also indicative of attitudes of the planning area residents.

3.2.2.1 People like the rural lifestyle of the area.

3.2.2.2 People dislike the lack of career employment opportunities.

3.2.2.3 Sixty percent (60%) of the respondents did not want a change in the general appearance of the area. Of those who wanted a change, a majority wanted a more rustic appearance. Physical aspects most often cited were the mountains, forested areas and aquatic environments.

3.2.2.4 Poorly maintained residences and urban clutter rated as the two most unattractive aspects of the area.

3.2.2.5 People seemed satisfied with the type and variety of housing available. Low income housing was not favored, except for the elderly.

3.2.2.6 Approximately sixty three percent (63%) felt that future residential development in the floodplain should be curtailed.

3.2.2.7 The people want a wide distribution of lot sizes throughout the county. The preferred size was a split between a $\frac{1}{4}$ acre lot and a one or more acre size lot. Also, respondents favored a 30 acre minimum lot size in the agricultural zone.

- 3.4.1.3 Protect agricultural lands from flooding to a 20 year frequency.
- 3.4.1.4 Protect existing urban areas from flooding to a 50 year frequency.
- 3.4.1.5 Exclude further development in the agricultural lands for economic, safety and aesthetic reasons; and conversely, to encourage the location of future development in suitable well planned uplands areas.
- 3.4.1.6 The location and quantity of land designated for urban related uses, i.e., residential, commercial and industrial should be based upon estimates of present and future needs, environmental impact, various private and public economic criteria and the resulting social ramifications.
- 3.4.1.7 Provide the public services required to fulfill state and federal regulations in a manner compatible with the general attitudes of the people of the Southwest and South Central areas.
- 3.4.1.8 The coordination of urban services should be handled on a metropolitan level to insure efficiency and economy of operation and to provide specialized regional facilities.
- 3.4.1.9 Municipal, public, quasi-public and private standards, plans, regulations and efforts should be coordinated with those of the area, the county and the region realizing that successful integration of development cannot be accomplished without coordination of efforts.
- 3.4.10 Future municipal annexations should consider such elements as: flood problems, drainage, topography, soils, septic suitability, population, the ability of the municipality to provide proper sewer and other utilities and services, regional land-use policies, and future land-use ramifications of the annexations.

for no new extensions of utility systems, public services nor road systems, as well as diminish the opportunities for employment in the area. This plan would provide environmental conditions in relatively their present situation, but would force development and population to other areas in Skagit County which could result in far greater adverse effects.

This plan is not representative of the majority of people in the area, not is it in the best interests of the entire population of Skagit County. Because of its unrealistic limitations and the evident adverse effect it could have on the area, it too, was found undesirable.

4.5 PROPOSED PLAN

The proposed plan is thought to be the most workable alternative and the most reflective of the needs and desires of the residents in the area. It addressed the goals and objectives of the area and also considers the environmental concerns from a solid background of base information.

4.6 PLANNING POLICY CONSTANTS

The following land use planning recommendations are felt to be of great significance to Regional planning regardless of which alternative land use plan is developed. Any of the strategies leading to a Comprehensive Plan for the Skagit Region should adopt these conclusions and recommendations.

4.6.1 General Recommendations and Conclusions

- 4.6.1.1 Existing agricultural and pasture lands in the floodplain should be protected from encroachment by other land uses.
- 4.6.1.2 The Open Space Taxation Law of 1970 and 1973 are viable and popular land use control methods within Skagit County and should be retained.
- 4.6.1.3 Existing urban areas should be protected from flooding to a 50 year frequency, either by means of dikes or by additional upriver storage.
- 4.6.1.4 Future commercial and industrial development should concentrate in the uplands areas, away from the prime agricultural/pastoral lands and out of the danger of flooding and the seasonal high ground water table.
- 4.6.1.5 Future urban expansion, especially residential, should focus on adjacent upland areas.
- 4.6.1.6 Expansion of city limits within flood hazard areas should not be proposed for areas which do not have 50 year flood protection.
- 4.6.1.7 The unincorporated upland areas with good physical characteristics are suitable for light residential use. The degree to which these areas are utilized varies with each alternative plan.

- 4.6.1.8 Library service within the county should become coordinated at the regional level to assure a more equitable, cheaper, efficient system throughout the county. This could also be accomplished through a statewide library system. Once these are accomplished, a more comprehensive service plan can be developed.

4.7.3 Policies Used to Develop Alternatives

The land use alternatives project various land use patterns which the area could assume in planning to the year 2000 and beyond. The amount of land shown in each land use classification is greater than the actual projected need in all cases. This was done to prevent the resulting Comprehensive Plan from becoming overly restrictive and, hence, possibly artificially inflating land values.

It is also recognized, however, that overemphasizing the projected need for any land use category produces a false sense of high valuation for many landowners. This situation might also tend to spread investment resources too thin. This demonstrates the necessity for scaling land use patterns when developing alternative plans.

5 COMPREHENSIVE PLAN - SOUTHWEST AND SOUTH CENTRAL DISTRICTS

5.1 PURPOSE OF PLAN

The purpose of this plan is to develop land-use policies consistent with the inherent capabilities of the land, while reflecting citizen derived goals and objectives. The plan attempts to incorporate environmental, social, and economic values to achieve optimum land-use and development guidelines.

5.2 ORIENTATION

The plan is intended to be comprehensive, general, and long range. The plan is "comprehensive" in that it encompasses all geographical portions of the planning area and all functional elements which relate to the physical development. "General" means that the plan is intended to serve primarily as a policy statement and does not contain detailed regulations. "Long range" means that the plan attempts to deal with long-term potential problems and possibilities to the end of the century. The plan also addresses pressing current and short range issues and concerns.

5.3 PLAN REVIEW AND UPDATE

The completion of this plan does not represent a completion of the planning process for the Southwest Planning District. Instead, it should signal the beginning of an ongoing land-use planning process for this area. This plan should and will be amended and revised as community needs, desires, and conditions change in ways that cannot be anticipated now. It is essential that this updating effort occur on a regular basis utilizing an open process that actively involves both citizens and public officials.

5.4 PLAN FORMAT AND UTILIZATION

The comprehensive land-use plan for the Southwest Planning District consists of a series of goals, policies, principles, standards, graphic statements, recommendations and forecasts which relate to its future physical, economic and social development. These goals and policies will establish the broad framework for action and form the basis upon which specific land-use development decisions can be made by elected officials, public administrators, land developers, private citizens, and local citizen groups.

5.5 GOAL STATEMENTS

This Comprehensive Plan is a continuation of the precedents set by plans for the North Central, Northwest and Islands Districts, by:

1. rejecting the concept utilized in the 1968 Comprehensive Plan of "saturation";
2. shifting the planning emphasis to one of a resource based economy; and
3. establishing land-use densities reflective of the natural limitations of the land.

These plan revisions will produce a pattern of development for Skagit County that will:

1. preserve, and where possible, expand the resource productive areas of agriculture, forestry, and fisheries;
2. provide a variety of living environments;
3. control the public costs associated with community growth and improvements;
4. minimize environmental disruption; and
5. accomodate projected population and economic growth.

5.6 PLANNING POLICY OBJECTIVES

These objectives derived using methods described in Chapter 3 of this plan.

- 5.6.1 Provide and maintain lifestyles which best preserve the natural beauty of the area, minimize public investments, and which allows private investment the greatest possible latitude within the interests of community health, safety, and welfare.
- 5.6.2 Preserve the agricultural base of the area, so as to retain both the primary economic base and the rural atmosphere of this area.
- 5.6.3 Protect agricultural lands from flooding to a 20 year frequency.
- 5.6.4 Protect existing urban areas from flooding to a 50 year frequency.
- 5.6.5 Exclude further development in the agricultural lands for economic, safety, and aesthetic reasons; and conversely, to encourage the location of future development in suitable well-planned uplands areas.
- 5.6.6 The location and quantity of land designated for urban related uses, i.e., residential, commercial, and industrial, should be based upon estimates of present and future needs, environmental impact, various private and public economic criteria, and the resulting social ramifications.
- 5.6.7 Provide the public services required to fulfill state and federal regulations in a manner compatible with the general attitudes of the people of the Islands area.
- 5.6.8 The coordination of urban services should be handled on a metropolitan level to insure efficiency and economy of operation, and to provide specialized regional facilities.
- 5.6.9 Municipal, public, quasi-public, and private standards, plans, regulations, and efforts should be coordinated with those of the area, the county and the region, realizing that successful integration of development cannot be accomplished without coordination of efforts.

- 5.6.10 Future municipal annexations should consider such elements as flood problems, drainage, topography, soils, septic suitability, populations, the ability of the municipality to provide proper sewer and other utilities and services, regional land-use policies, and future ramifications of the annexations.

5.7 GENERAL LAND-USE POLICIES

- 5.7.1 The existing agricultural and pasture lands should be protected from conversion to other uses.
- 5.7.2 Undeveloped land having soils in Capability Classes I-III and not in agricultural production is a resource and should be protected from intensive development.
- 5.7.3 No development should occur that will diminish the agricultural resource.
- 5.7.4 Water resources should be protected and maintained.
- 5.7.5 Development should be compatible with the natural constraints of slopes, soils, geology, vegetation, and drainage.
- 5.7.6 New development which will create undue demand for public facilities and services which will be incompatible with adjacent land uses should be discouraged.
- 5.7.7 Wetlands and woodlands are essential components of the hydrologic system as well as being valuable wildlife habitat areas and should be preserved.
- 5.7.8 The protection of important natural wildlife habitats should be encouraged.
- 5.7.9 Diking, drainage, and filling of the wetlands and mudflats of and adjacent to Skagit Bay should be prohibited.
- 5.7.10 Dredge disposal sites should be located so as to not adversely effect the natural productive capability of lands and water.
- 5.7.11 Aquacultural activities should be encouraged with reference to the county's Shoreline Management Master Program.
- 5.7.12 Historical, cultural, and aesthetic values should be preserved to the maximum extent possible.
- 5.7.13 Scenic and recreational resource areas should be preserved and enhanced.
- 5.7.14 Timber lands should be maintained for forestry, watershed, recreational, and wildlife habitat uses and protected from conflict with residential, commercial, and industrial development.
- 5.7.15 Use of land lying within the 100 year flood plain must comply with the provisions of the Skagit County Flood Damage Prevention Ordinance.

- 5.7.16 Mount Vernon should take advantage of the existing vacant land area within its boundaries and fill in these areas prior to expansion of its boundaries.
- 5.7.17 A development plan for the area served by Sewer District No. 2 should be formulated.
- 5.7.18 The county, in association with its towns and cities should establish a Boundary Review Board under the provisions of RCW, 36.93.
- 5.7.19 La Conner should take advantage of the existing vacant land area within its boundaries and fill in these areas in addition to considering its boundaries.
- 5.7.20 Use of land lying within the 100-year floodplain must comply with the provisions of the Skagit County Flood Damage Prevention Ordinance.
- 5.7.21 The Open Space Taxation Laws should be retained as useful methods of land-use control and the preservation of resources.
- 5.7.22 The elements and policies of the Shoreline Master Plan Program are an integral part of this plan.
- 5.7.23 The Land-Use Control Ordinances of Skagit County should be regularly amended to accomodate changes in community standards and needs.
- 5.7.24 Innovative methods of land-use control, resource preservation, and citizen participation in such matters should be explored.
- 5.7.25 The zoning map should be revised to conform to this Comprehensive Plan.
- 5.7.26 A coordinated county-wide Growth Management Plan should be developed, which incorporates the goals and policies of this Comprehensive Plan.
- 5.8 SOUTHWEST DISTRICT RESIDENTIAL LAND-USE POLICIES
 - 5.8.1 Residential development should not conflict with agricultural, aquacultural or forestry production or operation.
 - 5.8.2 The communities existing within the 100-year floodplain should not expand further into those lands.
 - 5.8.3 Improvement and rehabilitation of existing housing and established communities should be supported.
 - 5.8.4 New residential development should be compatible with the natural constraints of slope, soils, geology, vegetation, and drainage
 - 5.8.5 New sewer systems should not be developed outside of incorporated areas except to alleviate existing health problems or to accomodate projected growth in urban service areas.

- 5.8.6 Low residential densities should be assigned to areas where sewer and water systems are not planned. Lot size should be related to health standards, availability of services, need and natural constraints.

5.9 COMMERCIAL LAND-USE POLICIES

- 5.9.1 Commercial services within the incorporated area should be adequate to serve the majority of residents in the area.
- 5.9.2 Commercial activities directly related to agricultural productions may be allowed provided they can justify their location and existence.

5.10 INDUSTRIAL

- 5.10.1 Areas designated Industrial within other planning districts should be adequate to contain future industrial land needs for the county. Therefore, no areas except those already utilized as industrial are to be designated Industrial in the southwest district.
- 5.10.2 Industrial activities directly related to agricultural or forestry resources may be allowed provided they can justify their locations.

5.11 TRANSPORTATION

- 5.11.1 Prior to construction, the Skagit County Planning Department should have design review authority over any development adjacent to any scenic highway or major arterial. The density, depth, and type of screening shall be determined on each individual proposal.

5.12 COMMUNITY FACILITIES

- 5.12.1 Plans for new utilities should be coordinated on a regional basis to attain more efficient, equitable, and economical levels of service throughout the county.
- 5.12.2 New, improved, or expanded utility transmission lines should utilize existing corridors whenever and wherever possible. If unable to do so, new corridors should be designed to mitigate current and future environmental and aesthetic impacts.

5.13 OPEN SPACE AND RECREATION

- 5.13.1 Tourist and recreational activities should be promoted provided they do not conflict with resource operations and production.
- 5.13.2 A Recreational Trails and Open Space Plan for Skagit County should be developed.
- 5.13.3 User-orientated facilities should be designed to provide a wide range of recreational opportunities depending on age, abilities and interests.
- 5.13.4 The Skagit County Park and Recreation Comprehensive Plan is an integral part of this plan.

5.14 DISTRICT DESIGNATIONS - SOUTHWEST

The Southwest District lies almost entirely within the river floodplain, and contains some of the world's finest farmland. These lands of the Southwest Planning District, represents an important natural resource for present and future generations. The retention of agricultural lands for agricultural purposes is a proper public goal and one that has the support of the area's residents. For these reasons, the district should remain essentially as it is, without intensive development and commercial/industrial growth, should be limited to those activities directly dependent on and related to agricultural production. Residential growth (division of land into less than 40 acre lot sizes should be limited to those areas above the 100 year floodplain.

5.14.1 AGRICULTURE

Agriculture, the county's economic strength, is the Southwest District's primary land-use and should remain so. The only exception shall be those areas which are unsuited to crop production and pasturage and are out of the floodplain (Pleasant Ridge, Fishtown Hill), and those areas already developed for other uses. As stated, it is a goal to extend agricultural land where practical and feasible.

5.14.2 FORESTRY

No forestry zone is proposed for the Southwest District.

FISHERIES

Skagit Bay and the Skagit River support a rich fisheries resource, which should be protected to ensure its continued productivity. The intertidal wetlands of the Skagit River delta should also be maintained as a valuable wild-life habitat area.

5.14.3 RURAL OPEN SPACE

This classification is proposed for land above the 100 year floodplain in the Pleasant Ridge/Fishtown area.

5.14.4 RURAL RESIDENTIAL

No rural residential areas are proposed for the Southwest District.

5.14.5 RESIDENTIAL

This type of development in the Southwest District occurs only within and adjacent to the limits of the town of LaConner, and should be restricted to that location. High density development is neither suitable nor desirable elsewhere in the district.

5.14.6 PUBLIC USE

The Skagit Wildlife Recreation Area is within the District and should be kept in its present condition.

5.14.7 COMMERCIAL

Commercial services for the Southwest area are generally supplied by Mount Vernon, LaConner, and Conway. It is recommended that commercial services not be allowed to encroach on agricultural lands. However, if a need for agriculturally dependent services arises, such services should be located near arterial roads of sufficient capacity to accommodate any additional traffic. In every case, proposed commercial facilities should be reviewed and evaluated on a case-by-case basis. Random, indiscriminate strip development is strongly discouraged.

5.14.8 INDUSTRIAL

There is little industrial activity in the Southwest District. New industrial development should not occur in the district unless it is compatible with and dependent on the areas agricultural land base. Approval for any such use would be on a case-by-case basis.

5.15 SOUTH CENTRAL RESIDENTIAL LAND-USE POLICIES

- 5.15.1 No residential development should conflict with agricultural or forestry production or operations.
- 5.15.2 The communities existing within 100 year floodplain should not expand further into those lands.
- 5.15.3 Improvement and rehabilitation of existing housing and established communities should be supported.
- 5.15.4 New residential development should be compatible with the natural constraints of slope, soils, geology, vegetation, and drainage.
- 5.15.5 Residential development should be related to existing and planned activity centers, public facilities, transportation systems, and utilities.
- 5.15.6 Where possible, planned unit development (PUD) should be encouraged.
- 5.15.7 No sewer systems should be developed outside of incorporated areas except to alleviate existing health problems or to accomodate projected growth in urban service centers.
- 5.15.8 Low residential densities should be assigned to areas where sewer and water systems are not planned. Lot size should be related to health standards, availability of services, need and natural constraints.
- 5.15.9 Innovative methods of improving water quality and waste disposal by coordinating land-use development patterns with the application of new technologies, should be explored.
- 5.15.10 The area designated for high density residential development should only be fully developed when all urban services are available.

5.16 COMMERCIAL LAND-USE POLICIES

- 5.16.1 Commercial development should be directed away from the existing agricultural and pastoral lands and out of danager of flooding and the seasonally high water table.
- 5.16.2 Commercial activities directly related to agricultural production may be allowed in the agricultural areas, provided they can justify their location and existence.
- 5.16.3 Highway related commercial services should be located at major intersections.
- 5.16.4 A buffer should be established between commercial activities and other areas.
- 5.16.5 Commercial areas should be aggregated in cluster form, having specific design standards.

5.17 INDUSTRIAL

- 5.17.1 Areas designated Industrial within other planning districts should be adequate to contain future industrial land needs for the county. Therefore, no areas except those already utilized are to be designated Industrial in the South Central District.
- 5.17.2 Industrial activities directly related to agricultural or forestry resources may be allowed provided they can justify their locations.

5.18 TRANSPORTATION

Prior to construction, the Skagit County Planning Department should have design review authority over any development adjacent to any scenic highway or major arterial. The density, depth, and type of screening shall be determined on each individual proposal.

5.19 COMMUNITY FACILITIES

- 5.19.1 Plans for new utilities should be coordinated on a regional basis to attain more efficient, equitable, and economical levels of service throughout the county.
- 5.19.2 New, improved, or expanded utility transmission lines should utilize existing corridors whenever and wherever possible. If unable to do so, new corridors should be designed to mitigate current and future environmental and aesthetic impacts.

5.20 OPEN SPACE AND RECREATION

- 5.20.1 Tourist and recreational activities should be promoted provided they do not conflict with resource operations and production.
- 5.20.2 A Recreational Trails and Open Space Plan for Skagit County should be developed.
- 5.20.3 User-orientated facilities should be designed to provide a wide range of recreational opportunities depending on age, abilities and interests.
- 5.20.4 The Skagit County Park and Recreation Comprehensive Plan is an integral part of this plan.

5.21 DISTRICT DESIGNATIONS - SOUTH CENTRAL

The South Central Planning District contains land suitable for a variety of uses compatible with the desires of the area's residents. The district also contains a well established city which can be considered the county center for trade, government, and transportation. Of primary importance is the preservation of the District's agricultural, forestry, and fisheries resources, upon which forms the basis of the area's economy. While protecting the area's resource production capability there remains opportunity to expand both urban and rural living areas. However, care must be exercised to assure that new development is physically and aesthetically consistent with the area's character. Growth must also be planned to minimize the public costs associated with expansion.

5.21.1 AGRICULTURE

Within the South-Central District, most of the area lying within the 100 year Floodplain is currently agricultural production and should remain in that use.

5.21.2 FORESTRY

Over 70% of the South-West District is forested, characterized by the rugged, heavily wooded Cultus Mountains. This plan recommends that most of the present forested areas of the district be preserved for recreation, wildlife habitat, watershed management and timber production. Caution should be exercised to ensure that logging operations do not jeopardize the other uses of the forest zone, particularly its functions as a watershed.

5.21.3 FISHERIES

The fisheries resource of the South Central District should be protected and enhanced where possible. This refers both to the Skagit River and its native runs, and to area lakes, which are stocked annually.

5.21.4 RURAL OPEN SPACE

This classification is proposed for those areas unsuitable for agricultural production, large scale timber management or more intensive residential development. These lands are suitable for limited agriculture, pasture, or timber production.

5.21.5 RURAL RESIDENTIAL

This classification is for those areas suitable for more intensive residential development but not served by public water and/or sewer.

5.21.6 RESIDENTIAL

This type of development must be served by public water and sewer systems because of the poor septic suitability of the area's soils. With the exception of incorporated Mount Vernon, the only area within the South-Central District planned to have sewer service is around Big Lake. This system is expected to be in operation by the fall of 1979. When operable, the area served by the sewer will be capable of supporting a higher residential density than at present. To minimize

the impacts resulting from the system, this plan recommends the development of a plan to assure responsible managed growth of the Big Lake area. It is not within the scale or purpose of the South-Central District Comprehensive Plan to develop a plan specifically for the Big Lake area.

5.21.7 PUBLIC USE

The location of future Public Use areas is not attempted in this plan.