Final Environmental Impact Statement for the Clallam County Comprehensive Plan

Clallam County Department of Community Development

Date of Issuance: June 16, 1995

Cover Letter

This document is the final environmental impact statement regarding the updated Clallam County Comprehensive Plan. I want to thank everyone who commented on the draft EIS during the review process and all those who testified on the draft plan at the public hearing held before the Clallam County Planning Commission.

There will be an additional public hearing held on the draft plan before the Board of Clallam County Commissioners. Please contact the Planning Division or watch the news media for the date and time of this hearing. Written comments are also gratefully accepted, and may be directed either to the Board of Commissioners or the Department of Community Development, Planning Division.

If you have any questions about the draft plan or the EIS, I encourage you to contact the Department of Community Development. We will be happy to answer any questions you may have.

Sincerely,

Grant Beck,
Interim Planning Director

Fact Sheet

Project Title:	Clallam County Comprehensive Plan
Project Description:	Adopt the Comprehensive Plan, Title 31 Clallam County Code, in order to implement the requirements of the Growth Management Act.
Principal Alternatives:	Adopt policies either more or less restrictive than those proposed in the draft Comprehensive Plan, which is the preferred alternative.
Location:	Clallam County, Washington
Proponent:	Clallam County
Lead Agency:	Clallam County
Responsible Official:	Grant Beck, Planning Director
Contact Person:	Grant Beck, Planning Director Clallam County Department of Community Development 223 East 4th Street Port Angeles, WA 98362 (360) 417-2326
Licenses, Permits and Approvals Necessary:	Adoption of Comprehensive Plan by the Board of Clallam County Commissioners.
Authors and Principal Contributors to the EIS:	Bruce Emery, Assistant Planner David Stalheim, Planning Director (Former) Grant Beck, Planning Director Rich James, Senior Planner Bob Carl, GIS Coordinator Linda Stumbaugh, Secretary Marsha McKay, Secretary
Date of Issuance:	June 16, 1995
Location of Background Data:	Clallam County Department of Community Development 223 East 4th Street Port Angeles, WA 98362
EIS Availability:	Clallam County Department of Community Development 223 East 4th Street Port Angeles, WA 98362 North Olympic Library System - Port Angeles Branch 207 South Lincoln Street Port Angeles, WA 98362 North Olympic Library System - Sequim Branch 630 North Sequim Avenue Sequim, WA 98382 North Olympic Library System - Clallam Bay/Sekiu Branch

Highway 101 and 7th Street
Clallam Bay, WA 98326

North Olympic Library System - Forks Branch
224 Forks Avenue South
Forks, WA 98331

Cost of EIS:	$5.00
Cost of Comprehensive Plan:	$5.00

Table of Contents

Introduction

Project Summary

The proposed Comprehensive Plan will replace the present plan, which has been in place since the early 1980's. The plan includes policies dealing with: Urban Growth Areas; Rural Areas; Resource Lands; Economic Development; Transportation; Capital Facilities; Affordable Housing; Master Planned Resorts and New Communities; Environment and Open Space; and Archeological and Historic Sites.

The policies of the plan would be implemented through official land use controls such as the Zoning Code, subdivision regulations, and the Interim Critical Areas Ordinance, all of which will be reviewed for consistency with the adopted plan and updated, if necessary. Regional plans, consistent with the Comprehensive Plan, will provide policies which are focused on smaller areas of the County.

Phased Review

Phased review is a process that allows "agencies and the public to focus on issues that are ready for decision and excludes from consideration issues already decided or not yet ready" [WAC 197-11-060(5)(b)]. Phased review is intended to deal with issues from a broad to a narrow scope in order to ensure that issues of a particular threshold are considered in terms of their cumulative impacts and not separately.

Clallam County is comprised of four geographic regions, which contain many unique characteristics that distinguishes them from one-another. These regions are: Sequim-Dungeness, Port Angeles, the Straits, and Forks. These characteristics give rise to planning needs that create a dilemma which can only be solved by creating sub-area or regional plans that address the particular land use issues of these regions. This is why Clallam County has opted to use a phased review planning process for its comprehensive plans.

The first phase involves agency and public review of the county-wide comprehensive plan. These goals and policies are of a broad nature, and form the framework for regional or sub-area plans. They establish a vision for the future and address issues that effect all people of Clallam County.

The next phase involves review of regional or sub-area plans. These goals and policies are strategies for dealing with the specific land use problems of the four regional planning areas. At a minimum, they will address the issues discussed in the county-wide comprehensive plan in terms of their own situation. They should also provide additional goals and policies that further help to manage and mitigate land use conflicts that may exist or could exist in these areas.

There are several past decisions which have significantly contributed to the planning process in Clallam County. The Growth Management Act required counties planning under the act to make a series of interim decisions. Designation of interim Urban Growth Areas established the preliminary boundaries for future high density residential, commercial and industrial development. Designation of resource lands including mineral, timber and agricultural lands of long-term commercial significance was established to help prevent any continued net loss of these areas. The Clallam County Interim Critical Areas Ordinance was developed to help regulate lands of critical concern including: wildlife habitat, geologic hazards, wetlands, aquifer recharge areas, stream and lake buffers, and floodplains. The development of the county-wide planning policies helped establish the framework for the adoption of plans in Clallam County, including the cities.

Public involvement has and will continue to be the most important element in the phased review process. Citizen involvement from comment letters and participation in fact finding committees has aided the planning staff in considering community concerns and providing innovative solutions to problems and

issues. As the phased review process becomes more focused on particular issues concerning local communities throughout the county, public involvement will become even more vital. Only through public input can we be assured that the wishes of the citizens of Clallam County will be reflected in the final plan.

Background Information

Natural Environment (Earth)

GEOLOGY

Geologic evidence suggests that the Olympic Peninsula was a separate, miniature continent until about 30 million years ago, when this separate land mass collided with the existing North American continent. This collision pushed the oceanic crust and overlying sediment up against and onto the existing shore, creating the present day Olympic Mountains. The Olympics are composed mainly of basalt (rock formed by undersea lava flows) and sedimentary rocks (sandstone, siltstone) formed from sediments deposited in ancient oceans. The geologic forces that created the mountains physically altered these rocks through compression and heat. The magnitude of this force is evident by looking at the folded nature of rocks along mountain faces which become increasingly deformed towards the interior of the mountains.

Glaciers, both alpine and continental, have been the primary sculptors of the mountains, foothills, and coastal lowland areas. During the last Ice Age, which ended roughly 10,000 years ago, large *alpine* glaciers sculpted the Olympic Mountains, carving their way down the slopes, transporting debris, which they deposited at lower elevations. Every major river valley in the county has been formed by alpine glaciers. These valleys exhibit large deposits of glacial outwash material--boulders, cobbles, sands, and gravels.

The cooler temperatures of the Ice Age caused lobes of the *Cordilleran Ice Sheet* to move southward from Canada to Clallam County. The Olympics diverted this "river of ice", sending one lobe of the glacier to the east, scouring out Hood Canal, and one "lobe" west along the Strait of Juan de Fuca. Continental glaciation reached its greatest height at Blue Mountain, east of Port Angeles, at approximately 3500 feet above today's sea level. The most notable evidence of the tremendous forces and effect of this massive ice sheet are the large granitic boulders brought down from Canada and deposited throughout Clallam County.

As continental glaciers advanced across the landscape, they eroded and ground the underlying rock. The eroded material, consisting of clay, silt, sand, and boulders was deposited in the foothill and coastal zone areas. The weight of the ice sheet compressed these deposits, forming a relatively impermeable material called *glacial till*. Streams flowing from the glaciers sorted the eroded sediments and deposited sand and gravel over the till in many portions of the county, particularly the Sequim-Dungeness valley area. As the ice sheets slowly retreated (approximately 13,000 years ago), lakes formed along the face of the retreating ice front, and many areas of the coastal lowlands are former lake and shallow seabeds that have very fine-textured soils.

At the present time, glaciers still exist on the higher peaks of the Olympic Mountains. These glaciers extend to the lowest elevations in the continental United States. Glacial carving, freezing and thawing, and erosion by water from winter rains and spring snowmelt continue to wear down the Olympics and convey tremendous quantities of debris to lower elevations via the major rivers in the county.

Marine shorelines of the county are subject to natural erosion and deposition processes. Dungeness Spit, located near the mouth of the Dungeness River, and Ediz Hook, located near the City of Port Angeles, are prime examples of such natural processes. These natural sand spits are formed from the erosion of the unconsolidated, glacial materials contained within the marine bluffs to the west of these two features. The eroded material is carried eastward with longshore currents and eventually deposited on these two sand spits.

The landscape of the Peninsula is very young, geologically speaking, and is still changing rather rapidly. This evolving landscape makes for numerous natural or geologic hazards. In Clallam County, *geologic hazards* include areas subject to flooding, landslides, erosion, and seismic (i.e. earthquake) hazards.

These areas are generally not suitable for development or require more stringent and expensive construction designs and practices to protect public safety and welfare. The development of much of the most suitable county land, combined with the desire for property with views or close proximity to marine waters and major streams, has resulted in development pressures within areas of geologic hazards.

Flooding and stream-channel movement in lowland areas by excessive storm runoff and snowmelt is one of the most common and costly natural hazards. The 100-year floodplain is mapped by the Federal Emergency Management Agency for all major county streams, some minor streams, and low-lying coastal areas. The 100-year floodplain is that area that is expected to be covered by flood waters at least once in a 100 year period. Because of the characteristics of flow within a floodplain, floodplains are subdivided into floodways, characterized by higher velocity flows, and floodway fringes, comprising the remaining portion of the 100-year floodplain.

The most serious damage from flooding in the county occurs along the lower reaches of the Dungeness River. This river contains the largest floodplain area (about 30 square miles) in the county. The majority of this floodplain area is located within the rapidly-developing Sequim-Dungeness valley area. The Dungeness is a typical example of a braided stream. Flooding along braided streams is difficult to manage and predict because of the tremendous amounts of material transported by the river, which results in rapid shifts and changes of the stream bed.

Erosion is a natural process whereby the land surface is worn away by the action of water, wind, ice, glacial scour, or other geologic processes. Of these geologic forces, the primary agent of erosion is water falling or flowing across the land. Although all land surfaces experience erosion to some degree, some areas of the county are more prone to erosion and are classified as *erosion hazard areas*. Erosion-prone soils on slopes greater than 15 % are the primary determinants of erosion hazard. Marine bluffs, stream ravines, and the Olympic Mountains and Foothills areas typify erosion hazard areas within Clallam County.

A landslide is the rapid downslope movement of a mass of material such as rocks, soil, vegetation, and possibly homes, roads, and other human structures. The speed and distance of movement, as well as the amount and type of slope material, vary greatly, and depend on a combination of geologic, topographic, and hydrologic factors. The natural steepness of the Olympic mountains and foothills, downcutting of streams through glacial material to form steep-sided valleys, and erosion of the marine coastline have created numerous landslide hazard areas throughout the county. Especially susceptible to landslide hazards are marine bluffs, deposits of glacial lake sediments along stream valley walls, and unconsolidated glacial deposits on steep hillsides (greater than 40% slope).

Landslides occur naturally through a number of natural processes including: stream and wave action eroding the toe of steep slopes; gravity; saturation of slopes; and overloading of slopes from the weight of living and decaying vegetation. Human sources of landslides can include road-building and clearing and grading activities on steep slopes, buildings, septic systems, and drainage facilities, which may increase slope instability by undercutting, overloading, or saturating slopes.

Clallam County is located within a region highly susceptible to earthquake activity. Scientific evidence has shown that development in certain geologic settings is at a higher risk to damage from an earthquake event. These areas include soils containing high organic content (e.g. wetland soils), areas of loose sand and gravel, artificial fills, landslide deposits, and fine-grained soils with high water tables. The principal damage caused by earthquakes is due to settling which is caused by ground shaking that alters soil structure.

SOILS

Soils of the county reflect the geologic history of the region. The most rapidly-developing area of the county are east of Port Angeles and north of the Olympic foothills. The area is extremely desirable for residential development because of nearly level to gently rolling slopes, accessibility, and mild climate.

The most significant soil limitations are the potential for groundwater contamination on the highly permeable Carlsborg and Sequim soils, and septic system failures and foundation wetness in areas underlaid by very slowly permeable glacial till which is normally encountered at a depth of 14 to 32 inches. Current state or local health codes often require that non-conventional septic system designs such as sand filter and mound systems be constructed to overcome soil limitations in these areas.

Most development on the sparsely populated west end is located on soils formed on river terraces, alluvial fans, and floodplains. These soils are favorable for development primarily because of their generally level to moderate slopes. Soils on the upper foothills and mountainous portions of the county are basically formed from weathered parent material--sandstone, siltstone, conglomerate, basalt, and wind deposited silts. Soil limitations are similar to those described above for the eastern portion of the county, although slope steepness is more of a limiting factor.

Prime farmland soils are commonly found on terraces along the Dungeness River in eastern Clallam County, and on terraces of the Quillayute, Sol Duc, Bogachiel, and Calawah Rivers in western Clallam County. Irrigation water from the Dungeness River has allowed the sunnier, low-rainfall Sequim-Dungeness valley area to become very productive farmland, particularly soils formed on Dungeness River terraces and floodplains. On the west end, a limited amount of sunlight prevents profitable production of crops other than hay and pasture.

Soils west of Port Angeles and soils on the upper hills and mountainous areas east of Port Angeles are moderately deep to very deep and receive a great amount of moisture from winter rains and summer fog. These soil conditions, combined with the county's mild, maritime climate, make such areas generally well-suited for forestland. The main limitation for timber management operations in these areas is the steepness of slope. In contrast, low precipitation combined with the low water-holding capacity of the soils in the Sequim-Dungeness valley or the relative shallowness of the compact glacial till layer results in the majority of the low elevation, coastal areas east of Port Angeles being much less productive for timber.

TOPOGRAPHY

Clallam County contains the northern portion of the Olympic Mountains. The relative young age of the Olympics is evidenced by their rugged and precipitous peaks. Although the Olympics are not lofty, rising less than 8,000 feet above the sea, they stand almost as high above the Pacific Ocean as do the Rocky Mountains above the mile-high plains. Surrounding this central core of mountains are foothills and a coastal plain, which varies in width from 1/2 to 12 miles.

Map: Landslide Hazard Areas

Map: Erosion Hazard Areas

Natural Environment (Air)

AIR QUALITY

Regulation of air quality in Clallam County falls under the jurisdiction of the U.S. Environmental Protection Agency, the Washington Department of Ecology, and the Olympic Air Pollution Control Authority, a six-county regional control agency with authority to set emission regulations and air quality standards and to assess penalties for violations. The air quality in Clallam County is currently classified as being in attainment with all air quality standards.

CLIMATE

Clallam County has a maritime climate characterized by cool, dry summers and mild, wet winters. Average summer temperatures range in the upper 60s to low 70s. During a normal winter, afternoon temperatures in the lower elevations are generally in the 40s or low 50s and nighttime readings are in the 30s. Snow and freezing temperatures are uncommon in coastal areas, but such conditions are typical, even during summer months, at high elevations.

Clallam County lies in the heaviest precipitation belt in the continental United States. Precipitation distribution varies considerably across the county due to the orographic effect of the Olympic Mountains, which causes moist, marine air masses to lose most of their moisture over the mountains with little left over for the lowland areas along the northeastern facing slopes. For example, the City of Forks, situated on the western, windward side of the mountains has an annual precipitation of 116 inches. In contrast, the Sequim-Dungeness valley area, located about 80 miles east of Forks, receives only about 16 inches--just two more inches of rain annually than Los Angeles, California--and is frequently referred to as the "banana belt" of the northwest. Annual precipitation also quickly increases with elevation, exceeding 150 inches along southwestern-facing slopes within the core of the Olympic Mountains.

About 75% of the annual precipitation falls during the period from October to March. Most precipitation generally falls as rain below 1,500 feet, as rain and snow between 1,500 and 3,000 feet, and as snow in the higher elevations. Winter snowfall ranges from 0 to 30 inches over the foothill and coastal lowlands, to between 250 and 500 inches in the mountains. The higher elevations are covered with snow from November until June, with depths ranging from 10 to 15 feet. Any snowfall in elevations lower than 1,500 feet generally melts within two weeks, and it is not uncommon to have snow-free winters within the low-lying areas east of Port Angeles.

Natural Environment (Water)

SURFACE WATER MOVEMENT/QUANTITY/QUALITY

Clallam County is bounded on the north by the Strait of Juan de Fuca and on the west by the Pacific Ocean. With approximately 200 miles of marine shoreline, Clallam County has the largest amount of marine shoreline of any county in the nation. Swift rivers and creeks tumble down from snowfields and glaciers in the mountains to reach the sea. In the mountainous uplands are alpine lakes which are free of ice for only a few months of the year, while in the lowlands many lakes are open year-round.

Map: Surface Water Courses

Water flows from the crest of the Olympic mountains and foothills in Clallam County to marine waters in 25 different drainage basins. Many of the streams and rivers within these drainage's are less than 10 miles in length with only a few exceeding 20 miles--the 54-mile Sol Duc River is the longest county river. Rivers are generally fast moving as a result of short travel paths from high elevations to marine waters. The county's largest rivers are the Dungeness, Bogacheil, Calawah, Elwha, Quillayute, and Sol Duc rivers. The latter five contain mean annual flows in excess of 1,000 cubic feet per second, and all six are primarily fed by snowmelt.

Olympic National Park contains numerous lakes including Ozette Lake (7,787 acres) and Lake Crescent (5, 127 acres), which are the third and fourth largest natural lakes in the state, respectively. Lake Crescent's mountainous shorelines and deep (over 600 feet), turquoise blue waters make it one of the most photographed bodies of water in the state. Outside the Olympic National Park, there are eight lakes which are larger than 20 acres: Wentworth (54 acres), Aldwell (320 acres), Sutherland (360 acres), Beaver (36 acres), Pleasant (486 acres), Dickey (527 acres), Elk (59 acres), and Seafield (22 acres). Lake Aldwell is one of two reservoirs created by the damming of the Elwha River. The other, Lake Mills, is located in Olympic National Park. Many other smaller natural ponds and lakes occur throughout the county. Except for the small lakes located in the high elevations of the Olympic mountains, most county lakes are ice-free year round.

The lower Dungeness River watershed area is, for the most part, extensively irrigated. There are six irrigation diversions within the watershed and all originate from waters of the Dungeness River. Some of the smaller natural streams within the watershed also serve as conveyance for a portion of the irrigation water. Irrigation water is managed by nine irrigation districts with over 97 miles of ditches, not including the smaller delivery laterals. The irrigation ditch network irrigates about 3,300 acres of commercial farmland, 4,400 acres of small farms, and another 3,000 to 4,000 acres of lawns and gardens.

Erosion is a natural process whereby the land surface is worn away by the action of water, wind, ice, glacial scour, or other geologic processes. Of these geologic forces, the primary agent of erosion is water falling or flowing across the land. Although all land surfaces experience erosion to some degree, some areas of the county are more prone to erosion and are classified as *erosion hazard areas*. Erosion-prone soils on slopes greater than 15 % are the primary determinants of erosion hazard. Marine bluffs, stream ravines, and the Olympic Mountains and Foothills areas typify erosion hazard areas within Clallam County.

FLOODS

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GROUND WATER MOVEMENT/QUANTITY/QUALITY

Groundwater is contained in underground formations of porous rock or earth called *aquifers*. The water stored in aquifers reaches the ground surface through springs, wells, or by seepage into surface water features, including wetlands. Aquifers are naturally replenished or recharged from the ground surface by seepage from surface water bodies (streams, lakes, wetlands) and precipitation that percolates directly through underlying soils and rock. In addition, recharge can be augmented by artificial means such as irrigation ditches, drainage facilities, and septic drainfields. In the low-rainfall Sequim-Dungeness area, leakage from irrigation ditches is an important source of groundwater recharge.

Areas of the county which have the potential to transmit the greatest amounts of water to the aquifer are mapped as High Aquifer Recharge Areas. In general, the potential for recharge is greatest where the aquifer is close to the ground surface (50-100 feet), where ground surface slopes are relatively level, and where water can move freely through the overlying soils and geologic materials. High aquifer recharge areas are also areas that are the most susceptible to groundwater contamination.

Most of the citizens of Clallam County depend on the aquifers for drinking water. Human activities (farming, industry, households) within aquifer recharge areas have the potential to contaminate aquifers. The potential for water quality problems exists because many wells tap shallow aquifers (less than 100 feet) which are extremely susceptible to surface contamination, and many older wells lack proper sealing to protect them from sources of pollutants.

Natural Environment (Plants and Animals)

WILDLIFE HABITAT

The Olympic Peninsula is renowned for its extensive conifer stands of Douglas fir, Western red cedar, Sitka spruce, and Western hemlock. Douglas fir grows throughout the county, but is most abundant on elevations less than 3000 feet and on the drier east side. Conversely, Western red cedar occurs principally on wet flatlands and valley bottoms, and Sitka spruce is confined almost exclusively to the west side lowlands, which receive excessive rainfall and summer fog. Western hemlock is the dominant species on the wetter west side because it thrives in the dense shade of forested stands. Higher elevations support subalpine fir, mountain hemlock, Alaska yellow cedar, and scattered pockets of Engelmann Spruce.

The fir, cedar, and spruce are the largest tree species in the County. In mature stands, individual trees frequently surpass 250 feet in height and ten feet in diameter. Old-growth stands are primarily confined to public lands, due to the more intensive forestry management activity on private lands outside of the national park and forest lands.

Located within the conifer stands are deciduous trees--red alder, bigleaf and vine maples, willow, and black cottonwoods They thrive in bottomland environments, particularly alongside streams, but occasionally grow elsewhere. Pacific madrona, a broadleaf evergreen, also grows throughout the county at lower elevations.

The forest understory generally contains thick growths of green mosses, flowering plants, ferns, and bushy shrubs, particularly at elevations below 2,000 feet. The windward slopes on the county's west side are especially luxuriant. Clubmoss clings to almost every tree branch and the forest floor is carpeted with thick

Map: Priority Wildlife Habitat

growths of mosses, liverworts, ferns, and lichens. These areas are classified as *rain forests* because they receive rainfall amounts comparable to the great rain forests of the world.

Common plants in wetland areas include mosses, wire grass, reeds, cattails, rushes, willows, sedges, and many other water loving plants. According to the Washington Natural Heritage Program, the Olympic Peninsula has the greatest diversity in kinds of wetlands of any place in western Washington, and Peninsula wetlands support more rare plants than any other part of the state. In the saline environment of marine shorelines, common plant species include kelp, eel grass, pickleweed, cord grass, cat's ear, rush, and bullrush.

The isolation of the Olympic Peninsula has created an environment where numerous unique plant species either developed in isolation from other species, or survived on the Peninsula when other segments of the plant population were exterminated. Many of the unique plant species of the Peninsula occur in wetlands. The dry, coastal areas east of Port Angeles also support many species (some rare) of drought-tolerant plants that are uncommon in western Washington such as prickly-pear cactus, Rocky Mountain juniper, and lodgepole pine.

Clallam County provides a great variety of freshwater and marine environments. Anadromous fish utilize fresh and saltwater areas and include all five species of Pacific salmon (chinook, coho, chum, sockeye, and pink); steelhead (an ocean-going rainbow trout), sea-run cutthroat trout, and the sea-run dolly varden. Specific life histories vary with each species, but basically the patterns are similar. Eggs are hatched in freshwater streams, and each species spends some time in freshwater before migrating to saltwater. A period of feeding, growth, and development occurs in the marine environment before fish return to the freshwater environment where they fight their way up county rivers to spawn. Native resident, freshwater fish include brook, cutthroat, and rainbow trout, whitefish, and the Beardslee trout (known only to exist in Lake Crescent). Most of the resident fish thrive upstream from anadromous fish barriers.

The marine waters bordering the county contain an abundant resource of marine fish, shellfish, and marine mammals. Fish species include: Pacific Ocean perch; petrale, Dover and English sole; lingcod; true cod; halibut; herring; flounder; surf perch; and a variety of rock fish. In addition, there are many "scrap fish" species, such as dogfish, skate, ratfish and hake. Clallam County tidal environments provide for many species of clams, oysters, crabs, scallops, shrimp, and abalone. Octopus, sea urchins and sea cucumbers are also common, and Pacific Northwest waters contain the largest variety of starfish found anywhere in the world. Large marine mammals inhabiting nearby marine waters include sea otters, seals, dolphins, and Orca whales.

In total, there are 60 different species of mammals, 21 species of amphibians and reptiles, 82 species of resident birds, and 220 migratory birds that have been noted on the Olympic Peninsula. Large mammals include Roosevelt elk, black bear, mountain lion, bobcat, coyote, mountain goat, black-tailed deer and mule deer. The county provides significant habitat for four wildlife species listed by state or federal government as either threatened or endangered--the Bald eagle, Peregrine falcon, Northern spotted owl and sea otter--and seven other species which are being considered for possible listing as endangered, threatened, or sensitive--Olympic mud minnow, Van Dyke's salamander, Brandt's cormorant, Northern goshawk, Golden eagle, Marbled murrelet, and fisher.

Clallam County contains a variety of wetland environments, including both salt and freshwater wetlands. They can be divided, generally, into five classes: (1) *Riparian* wetlands, are associated with rivers and streams; (2) *Marine* wetlands, are found along ocean shores; (3) *Estuarine* wetlands, occur where fresh and salt waters meet; (4) *Lacustrine* wetlands, are associated with lakes; and (5) *Palustrine* wetlands (e.g.

Map: Wetlands

marshes, swamps and bogs), which are those upland freshwater wetlands fed by groundwater as well as surface runoff.

Wetlands perform many important functions. They help protect water quality through both biological and physical processes which help filter and settle sediments and absorb or convert many pollutants to less harmful forms. Wetlands along streams, lakes, and marine shorelines act as "flood storage" and the vegetation in them protects shorelines from erosion. Wetlands also act as giant sponges which soak up large quantities of water during the wet season and then gradually release the water during the dry season. In the state of Washington, they provide nesting, feeding, and rearing habitats for 236 wildlife species.

Natural Environment (Energy and Natural Resources)

AMOUNT REQUIRED

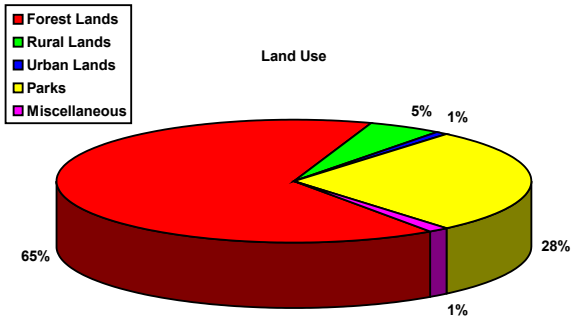
Electrical service to the citizens and businesses of Clallam County outside the City of Port Angeles is provided by the Public Utility District No. 1 of Clallam County. This publicly-owned utility first began electric service in 1943. The P.U.D. provides standard retail electric service to residential, commercial, agricultural, industrial, and schools. Power is supplied to the P.U.D. by the Bonneville Power Administration via delivery points at Fairmont, Happy Valley, Port Angeles, and Sappho. The P.U.D. delivers this power via a 69KV sub-transmission system to 26 distribution substations from which power is supplied to the urban and rural areas by 71 distribution circuits. The system capacities in 1994 are:

Bonneville Power System	425,000 KVA
P.U.D. substation power system	274,349 KVA
Latest system peak demand	151,263 KVA

Built Environment (Land and Shoreline Use)

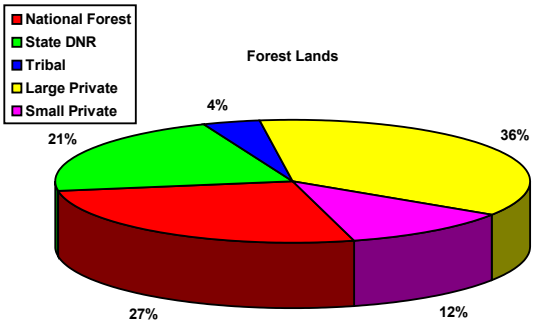
RELATIONSHIP TO EXISTING LAND USE PLANS

The Clallam County Department of Community Development conducted a land use inventory in early 1991. Land uses were generalized into five general categories: Forest lands, Rural, Parks, Urban, and Miscellaneous Uses.

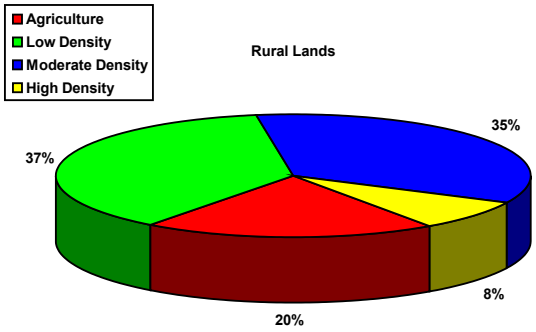


Forest lands are those areas with approximately five or more acres of contiguous forested land, excluding lands found in Olympic National Park. They are the dominant land use within the county, covering over 65 % of the land area. Federal and state forest lands constitute over 355,000 acres of forest land ownership. These lands are managed by the U. S. National Forest Service and Washington State Department of Natural Resources. Over 354,000 acres of forest lands are privately owned and managed. Most of the private timber lands are owned by several large companies which Rayonier, Bloedel, Merrill and Ring, Green Crow and, Cavenham. The majority of the 28,000 acres of Native American forest lands existing in the county are on the Makah Reservation.

Map: Generalized Land Uses



Rural lands are characterized by agricultural activities and residential development not associated with cities. Areas classified as agricultural lands are comprised of large blocks of land, typically larger than 20 acres, that are primarily used for agricultural purposes. Pasture land for livestock and hay cutting for animal feed are the dominant agricultural land uses throughout the county. The majority of agricultural lands are found within the Sequim-Dungeness valley. Fertile soils, mild maritime climate, and development of irrigation water from the Dungeness River promote a wide-variety of agricultural land uses within the Sequim-Dungeness valley including specialty crops, berries, seed growing, sod farming, and grape growing for wine production.



Residential development in rural land areas is classified into three categories based on the density of residential development. *Low density* rural lands have no more than one home on lots between 5 and 20 acres. *Moderate density* rural lands have no more than one home on lots between 1.5 to 5 acres. *High density* rural lands have one home on lots less than 1.5 acres. Agricultural activities are often associated with rural residential lands but not at a scale that provides the primary income of the landowner. Rural residential lands may also include some commercial or industrial land uses which serve the rural area (e.g. mini-market) or are associated with the home site.

Olympic National Park covers 27% of the county's land area. The national park is largely undeveloped wilderness. State, county, and city parks cover an additional 407 acres.

Urban lands include areas inside cities that have urban residential densities. This category also includes urban residential lands which exhibit urban densities (i.e. 1 unit/0.5 acres or less), but are located outside of Clallam County's cities and small urban centers. Examples of urban residential lands include mobile home parks, multi-family dwellings, and large rural residential communities.

Urban lands include commercial uses, airports and industrial uses primarily located in the cities of Forks, Port Angeles and Sequim but which may also be found bordering some of the major highways in the county.

The miscellaneous lands category includes mining sites, utility uses, cemeteries, schools, and lakes. This category also includes isolated commercial and industrial land uses found along major highways which are not associated with areas classified as Urban Lands.

Lands classified as mining sites include both commercial mining operations and borrow pits. Commercial extraction of sand and gravel resources is the dominant mining activity, although a clay mining operation exists near Clallam Bay. Many commercial mining operations are located in eastern Clallam County. The majority of small-scale mining sites located within areas classified as Forest lands are or were used for constructing logging roads. Most of these sites are not actively mined.

Map: Sequim Area Zoning

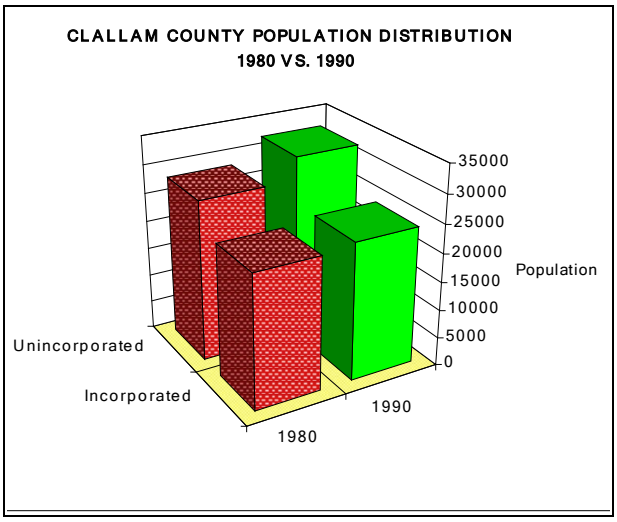
Map: Port Angeles Area Zoning

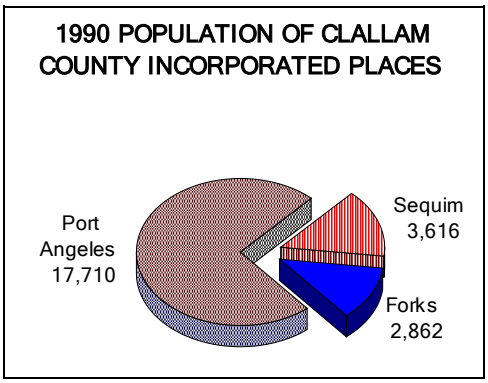
Map: Straits Area Zoning

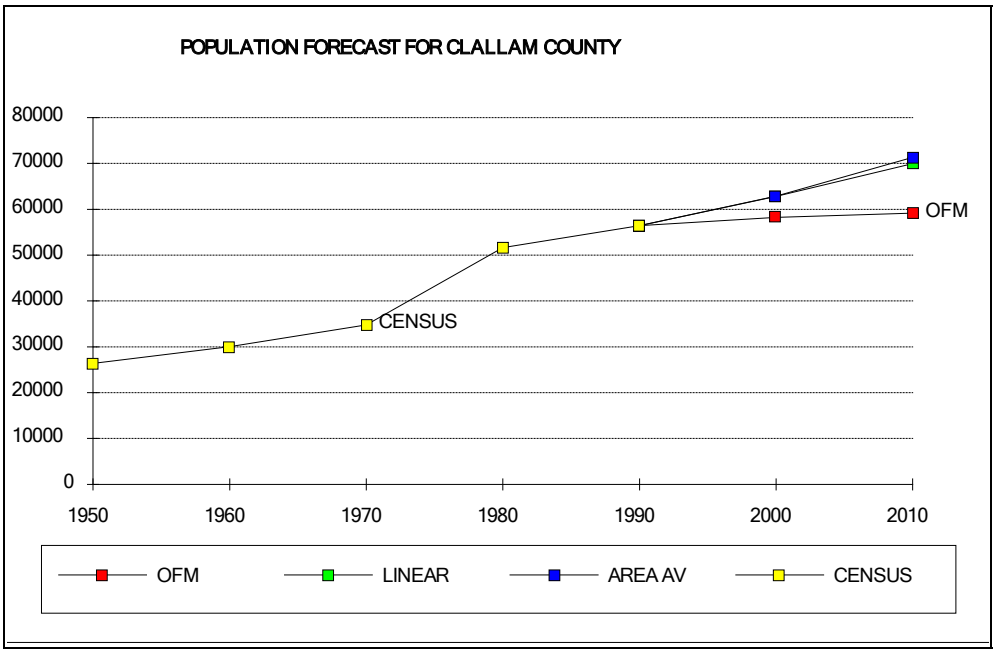
Map: Forks Area Zoning

HOUSING AND POPULATION

Current Population - The population of Clallam County as recorded by the 1990 U.S. Census is 56,464 persons. The State Office of Financial Management estimates that 50% of the population increase came from natural increase, the excess of births over deaths. The other 50% of the increase results from new arrivals to the County.







Population Distribution - Clallam County is experiencing much of its growth in the unincorporated, rural portions of the county. During the past 10 years there was a 14% increase in the number of persons living in unincorporated areas. This figure contrasts significantly when compared to the 4% increase in the population of the incorporated areas of Port Angeles, Sequim and Forks.

Clallam County has a very complex housing situation. In western Clallam County, housing is difficult to obtain due to the lack of new construction. Eastern Clallam County has experienced rapid growth but housing is in short supply due to demand. Housing prices have risen rapidly during the last ten years

largely due to the increase in the price of land. These increases have reached a level where the average wage earner in Clallam County has difficulty in obtaining affordable housing.

RECREATION

Clallam County supplies numerous and diverse recreational opportunities within its nearly 313,000 acres of public parks. Approximately 311,100 acres of Olympic National Park are located within the county and this park draws visitors from throughout the world due to its unsurpassed scenic areas. A dozen state parks and recreation facilities, nine county and several city parks, together with private recreational vehicle parks provide abundant recreational opportunities for residents and visitors.

Olympic National Park- -Renowned for the spectacular views at Hurricane Ridge, ancient rain forests, 600 miles of hiking trails, and 57 miles of undeveloped coastline, Olympic National Park dominates the park system in Clallam County. Olympic National Park extends across four counties and contains approximately 1 million acres. The Park ranks eighth nationally in visitation and accounts for about 40% of the use of the eight national parks in Washington State. The southerly boundary of Clallam County extends through the park so that about 311,100 acres of the park are located in the county. The park provides 469 campsites in the 16 developed campground facilities which are located within the county. There are approximately 40 miles of continuous beach along the Pacific Ocean offering a variety of sandy and rocky beaches, steep bluffs, and island rock formations known as *sea stacks*. Other park facilities located within the county include a visitor center at the entrance to Hurricane Ridge, alpine ski lifts at Hurricane Ridge, Sol Duc Hot Springs Resort, Lake Crescent Lodge, Fairholm, and the Log Cabin Resort. The Olympic Park Institute operates an environmental education program and elder hostels from the Rosemary Inn at Lake Crescent. The inn is on the National Register of Historic Places and dates back to the 1920s when it was Rosemary Resort, a major stopping point for visitors to the Olympic Peninsula. Rosemary Inn offers a meeting room location along with dining hall facilities and kitchen.

Other federal recreation facilities are operated by the Fish and Wildlife Service and the Forest Service. Dungeness Spit National Wildlife Refuge provides access via horse and pedestrian trails for nature studies of unique plant and animal habitat in Dungeness Bay. Dungeness Forks Camp and East Crossing are federal facilities which provide river access and camping.

State Parks - The State of Washington operates 12 park and recreation areas within Clallam County.

Sequim Bay State Park is located 4 miles southeast of Sequim and provides 86 campsites and a public boat launch on its 91 acres. The park also provides beach access, picnic areas, playgrounds, and play fields. Ramblewood Environmental Learning Center, located at the park, has overnight lodging for educational groups. Bogachiel State Park provides picnic areas, river access, and 42 camp sites within its 118 acres. The park is located five miles south of Forks. Snow Creek Camp is located approximately 6 miles east of Cape Flattery on the Strait of Juan de Fuca. This 6-acre facility provides 45 camp sites and 15 RV hookups with a boat launch.

Other state facilities include boat launches at Lake Aldwell, Lake Sutherland, and at Leyendecker and Bogachiel on the Bogachiel River; 15 miles of off-road vehicle trails at Sadie Creek; scuba diving at Slip Point Underwater Park; and camping, hiking trails, and picnic areas at other locations. Future plans for a third state park are developing in the Sekiu area.

Clallam County Parks - Nine county park facilities covering 450 acres serve the residents of Clallam County and its visitors. County facilities include two major recreation areas: Dungeness Recreation Area with 216 acres and 67 camp sites located adjoining the Dungeness Spit National Wildlife Refuge; and the Salt Creek Recreation Area with 193 acres and 80 camp sites on Crescent Bay, 13 miles west of Port Angeles. These and other county facilities provide beach access, picnic areas, hiking trails, and boat launches. In 1989, 15,575 overnight campers were accommodated by the county park system. A major goal of the Clallam County Park system is to expand public access to beaches.

City Parks - City parks are located in Forks, Port Angeles, and Sequim. Tillicum Park, in the city of Forks, covers 15 acres and features tennis courts, ball fields, a playground, and a covered picnic area. Lincoln Park in Port Angeles extends over 192 acres and includes camping areas, fishing ponds, tennis, and athletic fields. Additional park facilities in Port Angeles include the Fine Arts Center, City Pier (which is also the location of marine science exhibits at the Feiro Marine Laboratory), the 5,500 square foot indoor William Shore Memorial Pool, and the Vern Burton Community Center. Carrie Blake Memorial Park in Sequim features a duck pond, playground, picnic sites, and a meeting hall. Additional recreational facilities in Sequim are Pioneer Memorial Park, John Kirner Park, James Standard Memorial Field, and the Sequim Aquatic Recreation Center (SARC) whose facilities include three pools, racquetball courts, gymnasium, sauna, and an exercise room.

1990	National	State	County	Local	Totals
Total Acres	311,108	214	449	260	312,031
Camp grounds	16	2	3	1	22
Camp Sites	469	128	180	32	809

Private Recreation Facilities - In addition to the public campground facilities of the national, state, county, and local parks, the private sector has 600 recreational vehicle spaces in 15 parks county-wide. The average summer rate per vehicle is $14.06 per day.

Boating and Sport Fishing Facilities - The Port of Port Angeles operates John Wayne Marina and the Dungeness Bay Boat Launch in Sequim as well as the Port Angeles Boat Haven. The City of Port Angeles operates the Ediz Hook Launch in Port Angeles. Other major boat launches are located at the Bogachiel Boat Launch and Leyendecker Community Park, both near Forks on the Bogachiel River; Snow Creek Camp on the Strait of Juan de Fuca about six miles east of Cape Flattery; and Beaver Lake located about four miles north of the intersection of Highways 101 and 112. A charter fleet of fishing boats operates out of various locations along the coast--some independent and others associated with resorts.

Golf - Three 18-hole golf courses are located between Sequim and Port Angeles: SunLand Golf and Country Club located two miles north of Sequim; Dungeness Golf Course north of Highway 101 between

Map: Proposed Park Facilities

Sequim and Port Angeles; and Peninsula Golf and Country Club which is located on the east side of Port Angeles.

Bicycle Trails - Recreational bicycling on the Olympic Peninsula has greatly increased over the last ten years. Improvements to the bicycle transportation system include the proposed Olympic Discovery Trail which would connect the cities of Port Townsend and Port Angeles utilizing the abandoned right-of-way of the Chicago, Milwaukee, St. Paul and Pacific Railroad. The Peninsula Trails Coalition, a non-profit organization, is working with multiple agencies and private landowners to develop this 52-mile pedestrian/bicycle/equestrian trail. The trail will provide a safe, level, scenic route with spectacular water and mountain vistas, opportunities for local travel, and an international tour loop with ferry connections to San Juan Islands in Port Townsend and Victoria, B.C. in Port Angeles. The latest acquisition for the trail is the Dungeness Trestle Bridge at Hendrickson Road near Sequim. The newly-decked bridge will be the showpiece of the future Railroad Bridge Park. The Port Angeles Parks Department has also established the Centennial Trail which will eventually run from Ediz Hook to the Morse Creek Valley where it will connect to the Olympic Discovery Trail.

HISTORIC AND CULTURAL PRESERVATION

The following sites are included on the national and state historic registers:

Tatoosh Island
Dungeness School
Elwha River Bridge
Wedding Rock Petroglyphs
Ozette Indian Village Archaeological Site
Clallam County Courthouse
Masonic Temple
Naval Lodge Elks Building
Paris House
St. Andrew's Episcopal Church
U.S. Post Office
Blue Mountain School
Elwha River Hydroelectric Power Plant
Emery Farmstead
Glines Canyon Hydroelectric Power Plant
Humes Ranch Cabin
Rosemary Inn
Hoko River Archaeological Site
Sekiu School
Hoko River Rock Shelter Archaeological Site
Dungeness River Bridge
Manis Mastodon Site
McAlmond House
U.S. Quarantine Station
Surgeon's Residence
Sequim Opera House
Beaver School
Archaeological Site 45-Ca-32
Fort Hayden (Tongue Point)
New Dungeness
Copeland House (First Federal Savings & Loan Log Cabin)
Smith-Mansfield House
Roose Homestead
Quimper's Landing At Neah Bay
Graveyard Spit (Tsimshian)
I'e'nis S'Klallam Indian Village (Hollywood Beach)
Puget Sound Cooperative Colony
Bagley Lake Farm Tunnel
Ediz Hook Light Station
Sekiu School
Sequim Opera House
Sequim Town Hall
Gierin Farmstead
Port Williams
Suxtcikwi'in (Washington Harbor Indian Village)

Built Environment (Transportation)

TRANSPORTATION SYSTEMS

The Clallam County Road System consists of urban arterials and urban collectors, minor arterials, major and minor collectors, and rural roads. Deficiencies in the system have occurred along rural roads in the Sequim area which no longer carry rural traffic counts. Substandard roads are prevalent in heavily platted areas of the county. Points of congestion are typical at intersections entering and leaving Sequim along State Highway 101. Clallam County is undertaking transportation planning, as part of its efforts to meet the requirements of the Growth Management Act, and will be developing a gauge of reference to monitor and describe the deficiencies of roads. This "level of service" will indicate when a road or intersection has reached its threshold of performance.

The Clallam County Road Department maintains 487 miles of county road. Maintenance of the road system will be aided by the implementation of a new pavement management system which involves video-taping the county roads. The video camera will inventory the county roads and striping, and also

monitor the pavement condition. An up-to-date inventory of the county roads will be completed by 1993. The visual condition of the roads will be systematically recorded in the computerized County Road Information System (CRIS) which will be used to schedule subsequent road improvements.

The Clallam Transit System provides complete bus service throughout Port Angeles and to destinations such as Forks, Clallam Bay, La Push, Neah Bay and Diamond Point. The fixed-route service consists of 14 scheduled routes. These routes are broken into three service categories: intercity, urban, and rural. The "Bus" makes intercity connections in Sequim with Jefferson Transit for transportation to Port Townsend and other points in Jefferson County. Highway 101 commuter routes are available between Port Angeles and Sequim. Service standards apply to the three categories of routes based on performance. The performance indicators are used to show ridership trends or quality of ride. Special marketing efforts or improvements to routing and scheduling help to improve deficiencies. Base fares are structured for zones and premiums are charged for longer trips. Monthly passes are available for adults, youth, and the handicapped, while seniors ride for free. The physical and mentally handicapped and over-80 senior citizens have doorstep service available to them via Paratransit. People not capable of using Clallam Transit regular service can call a day in advance for Paratransit door-to-door travel. The paratransit service is provided by two private, nonprofit corporations on contract with Clallam Transit System.

The primary reason for riding the bus, as shown in the *Clallam Transit System 1992 Rider / Non-Rider Survey*, is lack of access to a car. Other major reasons are a preference for taking the bus, cannot or do not know how to drive, and monetary savings. A small percentage of the ridership stated their primary reason for riding the bus was a lack of parking at their place of destination. Frequent riders of Clallam Transit are usually characterized as Port Angeles residents, transit-dependent (no car in household) and with an average age of 43 years. The primary purpose of most bus trips was the commute to work. Of non-work related trips, the purpose of the bus trip was for shopping, recreation and medical appointments. Non-riders of the Clallam Transit System indicated they would switch from their vehicles to the bus if they were to lose access to a vehicle, the cost of driving was too expensive or in cases of inclement weather. Other physical changes to the system's routing and scheduling would have to take place before some non-riders would take advantage of the Clallam Transit System.

MARINE TERMINALS AND MOORAGE

The Port Angeles harbor is the westernmost natural deep water harbor in the Puget Sound which requires no dredging. The Port currently owns and operates two- deep-water terminals with a total capacity of five vessels. The predominate use of the terminals is for log-loading from dockside or from the water. Recently, Terminal 3 was reconstructed and now provides 475 feet of berth length at a depth of 42 feet. Three berths can load vessels from the water or dock. The remaining two are limited to water-loading only. All the berths are capable of handling deep draft vessels. Loading productivity has increased due to improvements made at the marine terminals.

The Port Angeles Boat Haven covers 16.1 acres on the south shore of the Port Angeles Harbor. Moorage space accommodates 563 commercial and recreational vessels. Services available include water,

Map: Sequim Area Average Daily Traffic Counts

Map: Port Angeles Area Average Daily Traffic Counts

Map: West End Average Daily Traffic Counts

Map: Sequim Area Level of Service

Map: Port Angeles Area Level of Service

Map: West End Level of Service

electricity, fuel, boat hoist and transient moorage. Businesses located in the adjacent area provide services which include marine supplies, charter service, tackle and bait. Adjacent to the Boat Haven, the Port operates a public boat yard for maintenance and repair of small vessels. The Boat Yard provides a covered and open work area with a 133-ton marine railway and a 40-ton mobile straddle hoist.

The John Wayne Marina is located at Pitship Point on Sequim Bay in Sequim. The John Wayne family donated the land to the Port Commission for development of a large boat basin. The marina lies within an area recently annexed to the City of Sequim. The marina provides 244 permanent moorage slips, plus 22 transient slips, and has an ultimate capacity of 355 slips. The facilities include water, electricity, fuel, a boat launch, a public service building and recreational access.

The Port staff is currently examining the feasibility of constructing a breakwater and a barge channel in the Clallam Bay area. This proposed project would require the U. S. Army Corps of Engineers to forecast the market feasibility of commodity movement and to permit dredging. Some advantages of this project are added efficiency of wood chip movement, expansion of markets in the Columbia River and Puget Sound, and decreased truck traffic to the Port Angeles Harbor.

AIRPORTS

The Port of Port Angeles owns and operates two airports, an international airport in Port Angeles and a basic utility airport in Sekiu. William R. Fairchild International Airport was originally developed in 1934 by Clallam County with assistance from the City of Port Angeles, the State of Washington, and the Federal government. The U. S. Army expanded the airport to accommodate P-38s during World War II by constructing connecting taxiways and paved aircraft parking areas. Through the years, the airport has transferred ownership several times. In 1951, the ownership was transferred to the Port of Port Angeles.

The scheduled passenger airline carrier is Horizon Airlines, a commuter airline subsidiary of Alaska Airlines. Sea-Tac International Airport is a 30 minute flight with 14 flights available daily. Horizon Air, flying out of Fairchild Airport, also operates two flights to Victoria, British Columbia. In 1990, the total number of flights into and out of Fairchild amounted to 68,612, a 28% increase from the previous year. Consistently, the predominant type of flight has been arrivals from Victoria who re-board for a continuation of their flight. Four carriers provide air cargo service: Horizon airlines, Federal Express, United Parcel Service and Pony Express. For 1992, the total air freight flown out of Fairchild was 335 tons. The air freight industry has increased the tonnage flown out of Port Angeles by over 37% in the last decade.

The airport facilities cover 797 acres and have two runways with the longest one being 6350 feet The runways have parallel taxiways and will accommodate aircraft of up to 110,000 pounds. A general aviation parking area covers 18,600 square yards with tie-downs for 65 aircraft. The 4928 square foot terminal includes an operations office, two ticket counters, a baggage claim shelf, a restaurant, a duty-free gift shop/news stand, and a car rental office.

The Sekiu Airport is located on the shore of the Strait of Juan de Fuca adjacent to the community of Sekiu in western Clallam County. It is a basic utility airport with a 60-foot x 2980-foot paved and lighted runway that serves the Clallam Bay area's fishing, commercial and industrial activities. The airport has 410-acres and is equipped with a paved aircraft apron with 6 tie-downs, 9 hangars and VASI navigational aid.

The Sequim Valley Airport is a private charter and utility airport serving the Sequim Valley. Flight instruction and twenty-five minute charter flights to Sea-Tac airport are available. The facilities include a 3500-foot lighted runway, 20 T-hangers with tie-downs and a passenger terminal. It is adjacent to the Carlsborg Industrial Park.

The Sunshine Acres Aero-Industrial Park is a 50-acre facility on the Miller Peninsula. The private airfield is part of a planned development which includes residential and commercial use. It has a 2200-foot. runway and limited services.

The Forks Municipal Airport is open to the general public. The airport has a 2400-foot. lighted runway and is equipped with 15 hangers and 10 tie-downs. The former Quillayute Air Base, 10 miles west of Forks, is owned by the Washington State Department of Transportation. It has a 5000-foot concrete runway and no services.

PARKING

Clallam County has two park-and-ride lots operating and serving the public in the west portion of the county. Sappho and Forks park-and-ride lots are served by Clallam Transit System routes 14, 15 and 16. Other park-and-ride lots to the west of Port Angeles have been abandoned. The park-and-ride lot experiencing the highest degree of success is at Forks. It was developed in cooperation with the State Department of Transportation, the city of Forks and Clallam Transit System. It serves residents in the Forks area who commute to La Push, Clallam Bay and Neah Bay. A vanpool is also operating from Clallam Bay serving the employees of Clallam Bay Correction Center.

Built Environment (Public Services and Utilities)

FIRE

Fire protection in the county is provided by the City of Port Angeles, six fire districts, the Washington State Department of Natural Resources, the U. S. Forest Service, and the Olympic National Park. The Washington State Department of Natural Resources provides fire protection within Fire Patrol districts which contain department-administered lands and adjoining private forest lands. The U. S. Forest Service protects the Olympic National Forest. Olympic National Park provides fire protection for facilities within its boundaries. The Clallam County Fire Marshall assists the fire districts in administration of the Uniform Fire Code.

City Fire Departments - The City of Port Angeles Fire Department employs 13 full-time fire fighters, seven paramedics and four administrative staff and uses 27 volunteers to respond to approximately 490 fire and 1,400 emergency medical calls. The department provides fire protection, fire prevention educational services, and advanced life-support Medic One services.

The City of Forks receives fire protection from Fire District #1 and the City of Sequim from Fire District #3.

Fire District Facilities and Services - Fire protection in unincorporated areas of the county is provided by six fire districts under the direction of fire district commissioners.

Forks and the surrounding area north to Sappho and south to Bogachiel are served by Fire District #1. A volunteer force, including two chiefs and two assistant chiefs, operates from stations in Forks and Beaver. Response to emergency medical calls is provided by the hospital district which operates from Forks Community Hospital. The fire district has mutual aid agreements with District #6, the Washington Department of Natural Resources, and the U. S. Forest Service. The district also provides structure fire protection for Olympic National Park.

Fire District #2 is comprised of the Port Angeles area (excluding the city) and extends to Freshwater Bay at the west and Deer Park Road at the east. The volunteer force, headed by a chief operates from three stations located in Gale's Addition, Dry Creek, and Black Diamond respectively. The district has mutual aid agreements with Districts #3 and #4, the City of Port Angeles, the Washington Department of Natural Resources, and the U. S. Forest Service. It also provides services to the Lower Elwha Indian Reservation and structure fire protection for Olympic National Park. Other programs include fire prevention and education, emergency training for baby sitters and "elder care." The elder care program is designed to provide information about the chronically ill to medical aid teams who may be called to provide emergency services. The program provides decals which are installed at residence entrances to signal

the emergency medical team that medication schedule, medical history, and insurance information is stored in a vial in the residence refrigerator.

Fire Protection District #3 covers about 135 square miles in the easterly portion of the county extending from the Clallam-Jefferson county line to Deer Park Road, and from the national park to the Strait of Juan de Fuca. This district serves a population of approximately 20,000 people, including the City of Sequim. The district has mutual aid agreements for fire protection and emergency medical services with the City of Port Angeles, Clallam County Fire Districts #2 and #4, Olympic National Park, Jefferson County Fire District #5, and the Washington Department of Natural Resources.

Fire District #4 serves the Joyce, Lake Crescent, and Ramapo areas. The extent of fire and aid services has been expanding as service contracts with home owners associations have been implemented. The district has mutual aid agreements with surrounding districts and the Washington Department of Natural Resources.

Clallam Bay and 75 square miles of the surrounding area is served by Fire District #5. The fifteen member volunteer staff provides fire protection and prevention and life support services from stations in Clallam Bay and Old Royal. The average response time for all calls is 3 to 5 minutes.

Fire Protection District #6 serves the sparsely populated Quillayute Prairie and Three Rivers Area. The boundaries of the district meander from Highway 101 to the coast. The district depends on hospital district volunteers working out of Forks Community Hospital for EMT support.

The Makah Tribe operates the Neah Bay Volunteer Fire Department. Its headquarters are at the fire station in Neah Bay. Staff consists of a fire chief who supervises 20 to 70 volunteers, seven of whom are trained as EMTs and another seven who are first responders. Facilities include two pumper trucks and two ambulances.

The Olympic National Park provides fire and medical aid services from four stations located at Kalaloch, Lake Crescent, Elwha, and Port Angeles. A full-time staff of five (summer only) draw upon an additional 75 field rangers trained in wildfire fire fighting. Thirty five (twenty in winter) field rangers are also trained in emergency medical treatment. These personnel operate six pumper trucks especially equipped for wildland fire fighting to fight approximately 50 fires per year--half caused by lightning and the other half by human actions.

The Washington Department of Natural Resources (DNR) provides fire patrol and protection services for state and private forest lands. The staff in Clallam County includes two full-time administrators at headquarters offices in Port Angeles and Forks and about a dozen full-time seasonal fire fighters who can call upon approximately 120 DNR staff and 15 ten-man crews located at the Hoh-Clearwater Honor Camp who are also trained to fight fires. Crews trained in blasting of fire lines, repelling teams for access or evacuation, and crews trained in other specialized techniques are available as needed. DNR operates three stations in Clallam County, including one each at Forks, Clallam Bay, and west of Port Angeles. Equipment for wildland fire fighting includes communications vans; mobile kitchens; refrigerator vans and shower trailers sufficient to sustain crews in the field; and heavy equipment for cutting roads and fire lines; as well as aircraft, vehicles, and other fire fighting equipment. Over the past five years the DNR has responded to an average of 120 calls and fought an average of 26 fires of 160 acres or larger per year.

The U. S. Forest Service operates the Louella Guard Station which serves the easterly portion of the county and the Sol Duc Station with 12 full-time fire fighters and up to 50 staff trained in wildland fire fighting. The Forest Service provides fire patrol and protection to the National Forests and collaborates with the Washington Department of Natural Resources, Olympic National Park, and local fire districts through mutual aid agreements.

POLICE

Police protection in the county is provided by the Washington State Patrol and Clallam County Sheriff in the unincorporated portions of the county, and by city police departments in Port Angeles, Sequim, and Forks.

The Sheriff's Department divide's the county into four patrol areas: Forks, Clallam Bay, Port Angeles, and Sequim. Twenty-two deputies handle over 16,130 calls for service per year, of which 5.5% are serious. In 1990, the Drug Task Force seized property and drugs in the excess of $2 million. The task force received 195 calls and made 47 arrests for violations of the Uniformed Controlled Substances Act.

The City of Forks maintains a police department employing 14 people, including seven police officers performing patrol, detective and supervisory duties, two administrative staff, and five corrections officers operating the jail. These staff are supplemented by seven reserves performing police and dispatch duties. In 1991, these personnel investigated approximately 2,400 reported crimes.

The Sequim Police Department investigated over 4,500 calls in 1991, using its staff of nine police officers, three administrative staff, and a crime scene technician.

The Port Angeles Police Department has a total of 50 employees including: 24 police officers performing patrol and detective duties; one animal control officer; one parking enforcement officer; 14 communications staff performing police, fire, and 911 services dispatch; and five management and five records staff. These personnel are supplemented by 20 reserve officers.

The Lower Elwha S'Klallam Tribal Police operate out of the Tribal Center located west of Port Angeles. The four members of the tribal police force--a chief of police and three deputies--are cross-deputized with county police and work within the county's jurisdiction.

The Neah Bay Police Department operates as the tribal police force for the Makah tribe. The staff is comprised of seven full-time and two part-time police officers as well as four full-time and two part-time dispatchers and one secretary.

The LaPush Police Department and Quileute Public Safety Department operate out of the Manpower Building on the Quileute Reservation at LaPush. The department has a staff of five full-time officers; they contract for dispatch and jail services with the City of Forks. The department answered 2,582 calls for service and made 379 arrests in 1991.

SCHOOLS

Educational facilities in Clallam County include college and vocational programs at Peninsula College, vocational training and employment support programs as well as elementary and secondary education programs throughout the county.

Peninsula College offers associate degrees, college transfer credits, vocational-technical training, and continuing education courses on its campus in Port Angeles and in other north Olympic Peninsula satellite locations. Associate degrees in 14 different career areas have provided Peninsula College students with strong employment credentials in their chosen specialties. The public can also enjoy the scenic campus and use the exercise course, tennis courts, and the library which has over 35,000 volumes and 350 periodicals available.

Western Washington University offers upper-division courses leading to a bachelor's degree in Human Services at the Peninsula College campus. Washington State University also offers an upper-division program leading to a bachelor's degree in Criminal Justice. Pacific Lutheran University offers a Registered Nurse, Bachelor of Science in Nursing degree in cooperation with Olympic Memorial Hospital. The Olympic Park Institute offers two-day courses in natural history for university credit.

Peninsula College provides re-entry programs and adult basic education. Practice testing and classes prepare adults without a high school diploma for the GED. The college's Re-Entry Program provides resources and classes designed for students who have been out of school. Corona Enterprises provides vocational training and long-term employment for moderately and severely developmentally disabled adults. They also provide supported employment for developmentally and physically disabled adults. Diversified Industries is an employment support program that locates jobs and provides job training and placement to people with disabilities. The New Broom Janitorial program gives assessments of vocational capability training in janitorial work. Olympic Job Training Center has both youth and adult programs. The Northwest Services Council provides job training, job search assistance, career planning, vocational skills training, GED preparation, remedial education, and life skills training to low-income or handicapped youths in Jefferson and Clallam Counties. The Adult Program, administered through Washington State Employment Security, provides retraining, relocation services, and job search assistance.

Elementary and secondary education is provided by five public school districts and six private schools in Clallam County. Enrollment has increased for all but the Crescent and Cape Flattery Districts.

Port Angeles School District covers 330 square miles in the Port Angeles vicinity and extends from Lake Sutherland in the west to Siebert Creek at its eastern edge. The district has three elementary schools with grades kindergarten through fifth grade, two middle schools with grades six through eight, and one high school with grades nine through twelve. The average monthly enrollment in special education programs is 448 students. There were 518 Individual Education Programs written in 1991 for students with health impairment, speech, language, and learning disabilities.

The Sequim School District covers the area around Sequim from the east county line to Siebert Creek Road. The district has two schools which include grades preschool to fifth; one middle school which includes grades six through eight; and one high school with grades nine through twelve. The new Greywolf Elementary School opened in September 1991 and relieved the overcrowding conditions at Helen Haller Elementary School. The 43,659 square-foot school, funded by bond issue, was designed for an occupancy of 600 students and is already at 85% of its capacity. Approximately 400 students benefit annually from programs in special education, gifted education, remedial reading, and remedial mathematics.

Quillayute Valley School District No. 402 covers approximately 667 square miles. The district encompasses the City of Forks and surrounding communities in western Clallam County. Facilities include one elementary school with grades kindergarten through fifth, one middle school which includes grades six to eight, one high school with grades nine through twelve and one alternative school.

The Crescent School District covers the middle section of rural Clallam County and includes the community of Joyce. The district has one campus consisting of nine separate buildings for a total 55,000 square feet.

The Cape Flattery School District extends from the Pacific Ocean to the Pysht River and from the Strait of Juan de Fuca to Ozette Lake. The district serves the communities of Clallam Bay, Sekiu, and Neah Bay. There are two campuses--one in Clallam Bay and the second in Neah Bay--each with elementary, middle school, and high school facilities. Plans for new facilities include a separate middle school and more elementary classrooms in Clallam Bay.

The Lower Elwha S'Klallam Tribe runs a Headstart Preschool based at the Headstart Center west of Port Angeles. The nine-month program has 56 students and a staff of nine. The program is entirely funded by federal moneys. The Lower Elwha S'Klallam also offer a summer cultural program with 75 students participating. It has a staff of approximately ten teachers and one administrator and is based at the Tribal Center 10 miles west of Port Angeles. The program is completely federally funded.

The Jamestown S'Klallam Tribe provides a four-week cultural education program during the summer. During the school year the program continues two afternoon per week. The program serves 40 children and is conducted at the Tribal Center on Sequim Bay. The three staff members are assisted by approximately six volunteers. Ninety-five percent of the participants are tribal members.

The Quileute Tribe in LaPush operates the Quileute Tribal School for kindergarten through eighth-graders. The school is housed at the old Coast Guard Station on reservation lands and currently has an enrollment of 61 students.

The Makah Tribe administers a Headstart program based in the Makah Head Start Building at Neah Bay. The program staff of 14 serves 64 children, 90% of whom are Native Americans. The Makah Cultural and Research Center staff supplement the program by teaching classes in singing, dancing, and language. The program receives its funds from federal, state, and tribal sources. Museum staff also teach language classes, offered through the Cape Flattery School District, for elementary through high school students. In addition, the school district sponsors classes taught by traditional carvers and basket weavers for junior and senior high school students.

WATER/STORM WATER

The county water supply is provided by the Clallam County PUD #1; the Cities of Port Angeles, Sequim, and Forks; and by multiple private irrigation districts, water associations (for example: Dry Creek, Black Diamond, SunLand), and community well systems.

The PUD operates eleven community water systems located in three general areas: 1) east of Port Angeles, 2) Sekiu and Clallam Bay, and 3) Carlsborg. These community systems range in size from 9 to 1,154 connections with several systems having been developed as individual systems which were later acquired by the PUD. The seven community systems (2,248 connections) located east of Port Angeles, including Gales Addition, The Bluffs, and Monroe, obtain their water by purchasing it from the city, from a treatment facility at Morse Creek, or from a well near The Bluffs subdivision. The two community systems in the Sekiu and Clallam Bay areas serve a total of 337 connections with water taken from the Hoko River or Olsen's Creek. A well drawing from the Dungeness River supplies the two community systems (27 connections) located in the Carlsborg area. Combined, these systems serve 2,612 customers.

Most of the Forks Prairie water supply is provided by five wells with a combined maximum daily capacity of over 2.1 million gallons. The city's reservoir storage capacity is 1.9 million gallons. Its peak load has been estimated at 800,000 gallons. There are 1,599 service connections. Rates vary depending upon whether the property is on the sewer system or outside the city limits with no difference between residential and commercial rates.

Port Angeles' water supply is drawn from the Lower Elwha Ranney Well. Five reservoirs, situated around the city, receive water via 24-inch lines situated along the old railroad grade. The storage capacity of the five reservoirs is 11 million gallons. The city is divided into three pressure zones due to major differences in elevation within sections of the city. Over 7,000 customers consume 4 million gallons per day.

Sequim's water supply is from an infiltration system drawn from the Dungeness River. The water is filtered in the ground and is treated with chlorine. The number of residential service connections is 1,488.

Many community well systems operate in the county. These systems supply water for thousands of county residents.

SEWER/SOLID WASTE

Solid waste collection is provided as a municipal service in the cities of Port Angeles and Sequim. Other areas of the county are served by private collectors. Landfills are located in Port Angeles and near Forks, with transfer stations in Clallam Bay and near Sequim. Clallam County generates 45,000 tons per year of solid waste, most of which is transported to the Port Angeles Landfill. The Port Angeles Landfill expansion project is near completion, at a cost of $5.8 million. Improvements include the installation of a methane gas extraction and disposal system, installation of a storm drain system, a new disposal cell, and a new transfer facility. The approximate life of the entire landfill without recycling is 20 years. Curb-side recycling efforts began in the fall of 1991 in the cities of Port Angeles and Sequim. Collection occurs at all municipal residences for paper, metal, cardboard, and glass.

SOCIAL AND HEALTH SERVICES

The Port Angeles Community Service Office, *Community Resource Directory* [February, 1992], identifies 124 government and private agencies providing social services in Clallam County. Government agencies offering social services include the Washington State Department of Social and Health Services (DSHS) and the Clallam County Department of Health and Human Services. Independent agencies such as the Clallam/Jefferson Community Action Council, Umbrella Community Services, and the Salvation Army provide also provide social services. Clientele of social service agencies includes victims of domestic violence, child abuse, and sexual assault; vulnerable adults and children; physically, developmentally or mentally disabled or impaired persons; and low income households. Social services vary widely in scope from employment referral or public utility fee-relief for low-income households; referrals to specific agencies based on agency eligibility requirements and the client's needs; to provision of a broad combination of shelter, clothing, food, health care, protection, legal aid, counseling, and emotional support programs.

Health care services in Clallam County are provided by the hospital district clinics and public hospitals in Port Angeles and Forks, Native American tribal clinics, the Clallam County Health and Human Services Department; and other medical and dental services.

The Olympic Memorial Hospital (OMH), located in Port Angeles, serves as the medical center for major in-patient and emergency services, and as a referral center for the general hospital in Forks. With a medical staff of 98 physicians and 175 nurses--including most specialties--the majority of patient needs are met locally. Twenty-four-hour emergency service is offered on site by certified emergency room physicians who also direct emergency medical treatment (EMT) in the field.

This 126-bed facility offers chemotherapy, kidney dialysis, respiratory and physical therapy. It provides in-house laboratory and radiology departments. A Life Line program allows elderly people to live independently while obtaining the medical supervision they need. OMH has also expanded outpatient radiation-oncology, physical therapy, and health promotion-cardiac rehabilitation service facilities to Sequim. The patient-charge rates at Olympic Memorial are below both state and peer group medians.

A $7 million, 34,000 square-foot expansion was completed in June of 1992. New space provides for larger laboratory, radiology, emergency, and short-stay departments. The expansion was funded entirely out of the hospital's reserve funds.

The Forks Community Hospital provides a broad range of basic health services in the west end of Clallam and Jefferson Counties. Services include general medical, surgical, obstetric care; long-term care; physical therapy; diagnostic, radiology, and laboratory. The staff consists of two physicians, four nurses, and a four-vehicle ambulance corps. Eight physicians have hospital privileges and five physicians (with specialties in family practice, geriatrics, internal medicine, general surgery, radiology, and psychiatry) practice in Forks and staff the emergency room on a 24-hour rotational schedule. The hospital has plans to expand the long-term care unit from 20 beds to 38 and to remodel emergency room, radiology, and laboratory facilities in 1992.

The hospital district operates a rural primary medical clinic in Clallam Bay, with outpatient mental health, family counseling, and substance abuse services. West End Outreach Services employs a professional staff of ten, including a psychiatrist and a psychologist, and provides comprehensive mental health services and alcohol/drug counseling to meet the needs of the community. The use of these services has recently tripled in response to increased needs and public awareness.

The Neah Bay Health Center, operated by Indian Health Services, provides general medical and dental services to the community. Public health nursing, environmental health, and immunization services are available.

The Quileute Tribal Indian Health Services provide medical, dental, well-child clinics, and women/infant/child nutrition programs.

The Lower Elwha Health Center services consist of a tribal medical and dental clinic; women, infant and child nutrition program; food commodities program; and substance abuse services. The Center serves the Jamestown S'Klallam and the Lower Elwha S'Klallam Tribes.

The Clallam County Health and Human Services Department operates many programs, including communicable disease, adult health (including home health), parent/child health, oral health, and vital records. The main office is located in Port Angeles and satellite facilities are located in Forks and Sequim.

Communicable disease services include: 1) an AIDS program providing AIDS-HIV testing, pre- and post-test counseling, and HIV-positive support services; 2) child and traveler immunizations; 3) tuberculosis prevention and control; 4) sexually transmitted disease (STD) control and prevention; and 5) information on other communicable diseases.

Parent/child health services include maternity support, high risk newborn and well-child clinics, child protective services, school health, and handicapped-children programs. The Health Department's Maternity Support Service team includes nurses, social workers, and nutritionists who help pregnant women with pre-natal health care and preparation for birth and parenting.

Adult health services include jail health and home health services. Home Health Services provides nursing and therapy services to patients in their place of residence. Services are provided on an intermittent basis under order of an attending physician.

Hospice of Clallam County provides in-home care, hospital equipment, and counseling to terminally-ill patients and their families. The hospice in Port Angeles serves the Joyce, Port Angeles, and Sequim areas and a second facility in Forks serves the westerly portion of the county.

The Clallam/Jefferson Community Action Council provides a Home Care Program and a Health Care Access Program. The Home Care Program is an in-home assistance program for daily household and personal hygiene needs. The Health Care Access Program provides assistance to low-income families in accessing dental and medical services and providing transportation to these services.

Environmental Health programs dealing with food protection, water systems, waste disposal, and other sanitation issues are provided through Clallam County Department of Community Development.

The Jefferson County Health Department has a primary care dental program open to low-income residents of Clallam County. They provide oral health assessment, X-rays, professional cleaning, dental treatments, and periodontal therapies.

The Washington Basic Health Program provides low-cost medical insurance to low-income individuals who do not qualify for Medicare or Medicaid.

Alcohol and chemical dependency preventative and treatment programs are provided by public and private agencies, including counseling services for victims and their families, medical intervention, and long-term assistance.

Mental health treatment and crisis intervention programs are provided by the Peninsula Community Mental Health Center and multiple private agencies.

Proposed Plan, Significant Impacts, and Mitigation Measures

Urban Growth Areas

DISCUSSION OF ISSUES

The projected population increase in Clallam County is between 10-12,000 people by the year 2010. Both the County-wide comprehensive plan and the Growth Management Act seek to accommodate and direct anticipated urban growth to areas where adequate public facilities and services can be provided in an efficient and financially feasible manner. Under the proposed comprehensive plan, Urban Growth Areas (UGAs) will be designated in areas where high-density residential, commercial and industry will be encouraged. Designated Urban Growth Areas will incur the most significant environmental impacts in the county. They will increase single family dwelling densities, encourage the construction of pavements and roadways, and provide for an increase in commercial and industrial facilities and appropriate upgrades and additions to existing public utilities and facilities. Growth occurring outside designated Urban Growth Areas will be allowed according to two provisions: 1) growth is not urban in nature (this excludes housing densities exceeding one dwelling per acre, and large-scale commercial or industrial development which encourage adjacent high-density residential development); and 2) growth is consistent with current and intended land use.

Clallam County has identified seven Urban Growth Areas that meet the criteria for designation. These areas are Sequim, Port Angeles, Clallam Bay/Sekiu, Forks, Diamond Point, and Sunland. Particular designation criteria for areas will be addressed in regional or sub-area plans where careful consideration of specific needs and conditions of these areas can be evaluated.

The following is a general statement regarding Urban Growth Areas county-wide.

PLAN OBJECTIVES

The intent of the proposed updated comprehensive plan is to encourage a shift from rural to urban growth, where adequate public facilities and services can be provided in a financially feasible manner while conserving resource lands, rural landscapes, and environmental quality. The following objectives form the framework for achieving this:

1. Designate Urban Growth Areas sufficient in size and densities to accommodate projected population increases over the next twenty years.

2. Designate Urban Growth Areas around existing urban centers where adequate public facilities and services already exist or can be provided in an efficient and financially feasible way.

3. Insure the exclusion and/or protection from Urban Growth Areas of viable agricultural, commercial timber, critical areas and open space.

4. Insure that land use conflicts are minimized within Urban Growth Areas by allocating sufficient land and strategically allocating such land for designated residential, commercial and industrial uses.

5. Insure that lands outside of designated Urban Growth Areas do not exceed rural densities and are not annexed by neighboring cities.

PROPOSED GOALS AND POLICIES

From 1970 to 1990 growth has occurred primarily in the unincorporated rural areas of Clallam County, especially in the eastern section. Future growth forecasts indicate that people moving to Clallam County prefer rural settings. One of the most challenging tasks for the County is directing growth into Urban Growth Areas in order to discourage suburban sprawl. Urban Growth Area policies will encourage a shift to urban growth where adequate public services can be provided in a fiscally responsible manner.

Urban Growth Areas - The following areas should be designated as Urban Growth Areas: Port Angeles, Sequim, Forks, Sunland, Diamond Point-Sunshine Acres, Clallam Bay, and Joyce.

The following are the goals of the Urban Growth Area policies:

1. Designate unincorporated areas not in proximity to existing cities as Urban Growth Areas, if characterized by urban growth.
2. Include areas characterized by urban growth adjacent to existing city boundaries.
3. Land designated for commercial or industrial uses should be located inside of Urban Growth Areas.
4. Establish Urban Growth Areas to avoid critical areas.
5. Urban Growth Areas should not include designated resource lands..
6. Consider linkages with open space corridors

Urban Growth Implementation - The County and cities will ensure that appropriate techniques for managing future growth are consistent with the designation of Urban Growth Areas and rural centers.

In order to implement Urban Growth Areas, lands adjacent to existing cities should be annexed according to an annexation plan developed by cities, the County, and service providers. Annexations should provide logical boundaries. Such a plan should include reimbursement agreements with public service providers for capital improvements acquired by cities upon annexation. Urban services should be identified through regional or subarea comprehensive plans and should include sanitary waste facilities, solid waste disposal, water systems, roads, transit, stormwater systems, police, fire and emergency systems, communications systems, schools, health care facilities and community parks.

Urban Growth Area Amendments - County-wide planning policies call for a review of population growth every five years, with provisions for Urban Growth Area amendments. Urban Growth Area boundary amendments should be discouraged except as required for a the 10-year review mandated by the Growth Management Act.

Commercial and Industrial Land Uses - Commercial and industrial land uses in Clallam County should generally be limited to designated Urban Growth Areas. Grouping commercial and industrial areas should be encouraged. Land designated for uses which encourage adjacent urban development shall not be located outside Urban Growth Areas. Small rural villages with convenience services should be encouraged.

Public Facilities - A transportation network shall be established to encourage development with Urban Growth Areas and discourage growth in rural areas. The County, Public Utility District, and cities should work cooperatively to encourage expansion of water systems within Urban Growth Areas. In rural areas, expansion of water systems within existing boundaries should be permitted, as well as the interconnection of existing rural systems. Public sanitary sewer systems should be provided in Urban Growth Areas and rural centers and prohibited in rural areas, with some exceptions relating to public health. On-site sewage disposal systems are appropriate in rural and resource areas. Fire protection and suppression in urban areas should receive first priority. Fire hydrants and suppression facilities in rural areas should not be encouraged except for commercial/industrial uses. Public school facilities are encouraged in Urban Growth Areas where there are adequate transportation facilities and population to support the facility. Public school facilities are to be discouraged in rural areas. Park facilities should be acquired, developed, and maintained to serve larger communities than single neighborhoods. Electric and telecommunications services are required County-wide. Siting of essential public facilities is allowed in designated forest or rural lands.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impacts to the Earth - Land development of any kind alters topology and disrupts surface soil structure, compacts soils, and increases the possibility of erosion. Buildings, roads, and compacting of soils with heavy equipment increases the area of impermeable surfaces and results in a higher quantity and rate of surface water runoff. Increased runoff can cause accelerated erosion of soils in the immediate and lower lying areas. High density development will also increase the contamination of soils due to increased human activities: automobile effluents, possible sewage failure, landscaping fertilizers and pesticides, industrial and commercial effluents and the potential for industrial spills and accidents. An increase in impermeable surfaces will increase quantities and rates of surface water runoff, thus increasing the potential for soil erosion and the spread of contamination to immediate and lower lying areas.

Mitigation Factors - Areas that are particularly prone to erosion or landslide are identified and given special regulatory protection under the Clallam County Interim Critical Areas Ordinance C.C.C. 27.12. Little can be done to prevent increases in impermeable surfaces, but much and be done to mitigate adverse effects of this condition. Adopting performance standards in storm water management can help control excessive and concentrated flows of surface water into the surrounding area. Treatment facilities can help prevent the spread of contaminants from urban sources to outlying areas. Preserving and enhancing open space corridors and wetlands provides natural means for dispersal and purification of surface water at little or no cost to the public. Standards can be adopted for the interim stabilization of disrupted soils on a construction site between the time of clearing and grading, and the completion of a project. Innovative landscaping techniques will help stabilize erosion-prone areas in direct line of storm water drainage paths. Vegetation buffers and landscape screening can reduce disruptions of topology.

Impacts to the Air - Air quality in Clallam County is affected by both population density and geography. Higher densities of traffic, woodstoves, industry, and slash burning from construction sites will make Urban Growth Areas the most significant point and non-point sources of air pollution in the county. The geographical location of Urban Growth Areas may increase pollution in those areas.

Industrial zones within Urban Growth Areas will produce some levels of point source ambient air pollution. Studies cited in the November/December 1993 issue of Planning Northwest show that non-point air pollution from residential and high density commercial areas exceeds average emissions of industrial zones of comparable size. Therefore, it may be projected that urban residential and general commercial zones within Urban Growth Areas will produce the highest levels of ambient non-point air pollution in the county. The possibility exists that impurities from smokestacks, dust, and exhaust may reach concentrations high enough to adversely affect immediate and surrounding areas. Under such circumstances, odors, smog, and acidic or corrosive agents could pose a threat to the natural and human environments.

Additionally, there are two significant geographical features of Clallam County's proposed Urban Growth Areas which could contribute to increased pollution levels. All are located next to a large body of water (the Pacific Ocean or the Straits of Juan de Fuca), and all are located near or at sea level. Because of their close proximity to water and low elevation, these areas are prone to temperature inversions, where air masses are stabilized by cooling lower levels of air. Inversions can trap air pollutants in low-lying areas, subjecting them to higher concentrations of pollutants and compounding the initial problem of ambient air pollution.

Mitigation Factors - Some level of ambient air pollution are unavoidable, but much can be done to reduce excessive amounts of pollution. Industry performance and safety standards need to be observed and strictly enforced. The economic development element of the proposed comprehensive plan encourages the development of "environmentally friendly industries" within Clallam County. The presence of these industries, while not creating significant levels of air-born effluents themselves, can help create the standard by which other industries will be judged and encourage high standards for air quality. By promoting "pedestrian friendly" facilities and transit facilities in general commercial zones, traffic and subsequent air pollution can be significantly reduced. Educational programs should be

implemented to encourage the public to decrease their personal automobile use and encourage use of public transportation and carpooling.

High concentration of ambient air pollution due to temperature inversions occur during warmer weather when the temperature of surrounding bodies of water significantly are less than that of the local air temperature. Fortunately, the use of woodburning stoves decreased during this period and reduced an initial source of air pollutants. Prevailing wind patterns from the west bring a relatively steady flow of fresh coastal air, free from human induced air pollution. This air movement reduces the potential for stagnant concentrations to occur. Air pollution due to temperature inversions does happen and regulations on woodburning and automobile emissions (testing) should be enforced.

In addition, the use of vegetation can help minimize levels of air pollution. Trees and shrubs help to filter particles and dust from various urban activities. Preservation of open space within Urban Growth Areas will serve this function as well as provide buffers from noxious smells and noise from industrial and other urban activities. Planned vegetation and landscape buffers will also contribute to cleaner air.

Impacts to Water - Much of what happens to soils, vegetation, and population has a direct effect on water quality and quantity. High-density developments, and general commercial and industrial uses will place high demands on water supplies as well as disrupt and re-route surface water movements, increase collective runoff and the potential for flooding, and restrict percolation for aquifer recharge.

High-density residential development, heavy commercial and industrial areas, and the increase in essential services will put a drain on the public water supply. Urban Growth Areas may be serviced by sewer systems and community on-site disposal methods. Increased demands on current facilities and the development of new facilities, with increase in mainline and household hookups, will proportionately raise the risk of accidental spillage. Primary sewage treatment, although effective in treating most of the biological hazards from waste, is not 100% effective. On-site septic systems can fail either through improper soil structure or disruption by tree roots, although they are a cost-effective and efficient means for septage treatment. Outflow from sewage treatment facilities and the potential for spillage, line breaks, and septic system failure pose a threat to water quality in Clallam County, which will be increased in Urban Growth Areas.

The increase in impermeable surfaces in Urban Growth Areas will also contribute to water quality and quantity concerns. As a result of the increase, underlying aquifer systems may lose some of their recharge areas and water that does seep into recharge areas runs the risk of contaminating aquifer systems due to increase in human activities. Critical aquifer recharge areas allow rapid movement of surface water to the ground water table. These areas are characterized by highly permeable soils, little or no slope, and close distances between surface and aquifer reservoirs. Groundwater in these areas is susceptible to contamination and depletion because fast percolation rates allow less time to filter contaminants. Buildings, asphalt surfaces, and compacted soil create impermeable surfaces which prevent water from seeping through to recharge areas. In addition to depleting water in the aquifer recharge area, this may cause wells in outlying areas to lose some or all of their holding capacity. There is also greater potential for contaminating the recharge area.

Gutters, ditches and storm drains collect water in unnaturally high volumes and add to the problem of surface water runoff. Increased drainage into river systems during high water situations can push rivers past flood stage increasing the likelihood of erosion and increased pollution levels in the river. Secondary erosion, flooding and contamination may occur in areas away from the river system proper. Flooding can also damage valuable riparian ecosystems by destroying habitat, destabilizing the river and stream banks, and increasing the risk of future flooding. Wetland habitat provides natural filtration systems that purify water, helps prevent flooding, and stores and regulates water for a more even release into river systems. Accumulated flows from increased impermeable surfaces can innundate wetland habitat, causing irreversible damage to these systems.

Airborne pollutants also affect water quality. Airborne effluents from point and non-point pollution can enter the hydrologic cycle through precipitation. These contaminants can reach high concentrations in streams and rivers where surface water accumulates..

By replacing the naturally vegetated state of undeveloped lands in Urban Growth Areas with impermeable surfaces, the lands water retention capability is reduced. Vegetation slows runoff and retains moisture, releasing it through time. This helps maintain water levels during periods of drought in streams and rivers. Eliminating vegetation and increasing the rate of runoff can adversely effect water quantity and quality.

Wetland habitat provides natural filtration systems that purify water, a diverse ecosystem, helps prevent flooding, and stores and regulates water for a more even release into river systems. Accumulated flows from increased impermeable surfaces can overflow wetland habitat, causing irreversible damage to these systems.

High density residential development, heavy commercial, industrial, and extension of essential services will require a public, potable water supply.

Urban Growth Areas may be serviced by sewer systems and community on-site disposal methods. Increased demands on current facilities, the development of new facilities, and increases in mainline and household hook-ups will proportionately raise the risk of accidental spillage through improper installation or line breakage. Primary sewage treatment, although effective at treating most of the biotic hazards from waste, is not 100% effective. On-site septic systems, while being a cost effective and efficient means for septage treatment, can fail. Improper soil structure or disruption by tree roots can cause a septic system to percolate too fast causing the ground water to become contaminated, or percolate too slow causing contamination of surface water in high precipitation periods. Outflow from sewage treatment facilities and the potential for accidental spillage, line breakage or septic system failure pose a threat to water quality in Clallam County.

Mitigation Factors - The proposed comprehensive plan calls for the preservation of critical and open space areas. Major stream beds, providing healthy riparian stability, steep slopes, and aquatic diversity will be regulated under the Clallam County Interim Critical Areas Ordinance protecting them from common development practices. These areas will help maintain flows, sediment loads, and water quality. In areas where growth is eminent, performance standards for the collection and treatment of storm water should be implemented. Land use of flood prone areas will be limited to non-intensive activities as prescribed by the Clallam County Interim Critical Areas Ordinance. This will help prevent the destruction of riparian vegetation and exposure to contaminants. Landscape techniques should be developed to help stabilize and retain storm water flows and sediment loads. To help further this goal, public education and incentive programs should be implemented to ensure prevention of adversities from private sources. Incentives to encourage residents to use landscaping methods that do not require fertilizers, pesticides or excessive amounts of water should be considered.

In aquifer recharge areas that are susceptible to contamination from chemical or other pathogens, restrictions and best management practices should be firmly instituted to ensure their protection. In aquifer recharge areas of critical importance that coincide with commercial and industrial areas of a significant size, storm water releases should require treatment prior to release to safeguard against contamination. Landscaping that helps control and retain storm water runoff will also help to mitigate loss of aquifer recharge surface by prolonging the presence of surface water and giving it more time to percolate.

Risks associated with sewage treatment can be reduced by careful maintenance and up-grading current systems. The capital facilities element implements a six-year financial plan that includes maintenance and upgrades to existing treatment facilities. While the initial projects may involve some risk, the long-term result will be safer systems. Contamination from the outflow of treatment facilities due to marginally treated sewage can be curtailed by adding secondary or tertiary treatment facilities.

Airborne contaminants that make their way into the hydrologic cycle can be reduced through air quality measures as prescribed in the section on air quality of this document.

Water quantity can be provided for with the implementation of proof of potable water. This will mandate that prior to construction, availability and financial feasibility of water resources is assessed and determined to satisfy a prescribed level of service. Construction should be contingent upon this requirement. Public education and incentive programs should be implemented as well to ensure continued availability of potable water, and further research on quantities should be pursued.

Impacts to Plants and Animals - Urban Growth Areas will incur the greatest impacts to plants and animals in the county. Urban development will replace trees, shrubs, grasses, and the animals that depend on them for food, shelter and cover from perdition with buildings, roads, and man-made landscapes. The threat of introduction and encroachment by non-native species will increase. Increases in commercial, industrial, and residential activities will increase the threat of possible contamination by air, ground, and water to surrounding ecosystems. The Bald Eagle is a species particularly sensitive to contaminants in the environment. Fish and other animals contaminated by industrial, agricultural or residential effluents fall prey to the Bald Eagle due to their weakened condition. These contaminants become concentrated in the eagle's body causing the same effects to it which affected its prey.

Accelerated erosion and runoff can cause the loss of riparian zone vegetation. Increased siltation of the county's streams and rivers can destroy valuable anadromous fish spawning habitat. Many of these species are already threatened or endangered and their loss could have a devastating effect on the rest of the natural ecosystems of the county. Anadromous fish provide Clallam County with a world renowned commercial and sports fishing industry. These industries and many more that are closely associated with them depend on health and careful management of this resource. Declines in recent years of anadromous fish stocks are forcing Fish and Wildlife and other regulatory agencies to reduce catch limits, and in some cases eliminate seasons. If this trend continues, it will have far reaching effects economy and bio-diversity of Clallam County.

Mitigation Factors - Many of the measures implemented for mitigating impacts to water, soil and air will, in turn, help mitigate impacts to plant and animal species. By stabilizing river and stream banks and regulating seasonal flows, water quality and quantity will ensure the continued viability of surrounding aquatic ecosystems and help maintain their carrying capacity. Preservation of open spaces, critical areas, and migration corridors will not only provide habitat for animals using them, but the plants they depend on for food, shelter, and cover from predation. Preservation and enhancement of wetland habitats serves not only purify and store water, but provides excellent habitat for a variety of plants and animals including migratory waterfowl. The presence of sensitive species like the Bald Eagle can aid planning efforts in the protection of environmental quality. These unique and diverse ecosystems have far reaching benefits for neighboring habitats. Restrictions placed on the development of flood prone areas through the Clallam County Interim Critical Areas Ordinance will serve not only to preserve water quality and river channel integrity, but will provide additional habitat for plants and animals in close proximity to necessary water resources.

Further contributions can be made to the natural environment through public education programs and incentives for habitat restoration and preservation by the private sector. Public education on the impacts and sources of non-native species should be provided. Public programs involved in habitat restoration and land acquisition of viable habitat should also be implemented.

Impacts to Energy and Natural Resources - Despite the fact that one goal for designating Urban Growth Areas is to provide public facilities and services in an efficient manner, Urban Growth Areas will have higher needs for energy than other areas in the county. New homes, businesses, industries, and essential services will increase energy demands proportionately.

Land is one of the county's most precious nonrenewable resources. Land having the potential for other uses may be developed when placed in an urban growth area boundary. Once land is developed,

packing of soils, possible contamination, and the loss of biotic activity renders it useless in any other fashion.

Natural scenery abounds in Clallam County and is a primary attraction for visitors and new residents. Views of the Olympic Mountains, The Strait of Juan De Fuca, and the Pacific Ocean provide a backdrop to gently flowing streams, green meadows, and tall stands of lush forests. Urban Growth Areas present a potential problem for scenic vistas. The potential for urban haze from air pollution mixing with moist marine air could tint or make it difficult to enjoy these views. Development of land destroys small local habitats. These not only provide for a diverse and contiguous ecosystem, but provide residents with an aesthetically pleasing experience as well.

Mitigation Factors - Assessment of energy needs and future demands will be part of the county's and cities' capital facilities element of their comprehensive plan. It will require that needs can and will be met to a prescribed level of service prior to construction or construction will not be allowed..

Efficiency will be aided by the requirements for urban growth area designation - that boundaries will exist where much of the needed infrastructure (i.e. roads, city water, sewer, power) already exists. This will reduce the cost and energy needed to construct and service these areas. Shorter distances from resources will create greater efficiency. By having growth areas planned, and high density infrastructure limited to these areas, uncontrolled growth and unplanned demands on energy and other resources can be avoided.

Land within designated Urban Growth Areas already has the characteristics of an urban landscape. Inclusion into an urban growth area boundary is by far its most valuable use. Preservation of open space, critical areas, and agriculturally viable land will ensure that land with non-urban characteristics will be preserved to maintain their current use. Small footholds of micro habitats will be lost to urban development, but with the provision of landscape conservation, preservation of critical and open space areas, and increased public awareness as defined by the comprehensive plan, their loss will have less impact.

Mitigation measures for the loss of scenic views by urban haze can be found in the section on air quality.

Impacts to Environmental Health - Environment affects human health. What we come in contact with, breath, drink and eat should not cause us harm. In high density urban areas, this goal becomes more difficult to sustain. There is an increase in the risk of explosion and other industrial accidents, noise, releases of chemical and biological hazards to our environment, and sanitation problems associated with solid and liquid waste management.

Industrial zones within Urban Growth Areas will present some risk to the public. Industrial hazards such as explosion, chemical accidents, noise, and hazards associated with heavy equipment will certainly increase with the development of these areas. General commercial zones will have risks associated with traffic congestion: increased traffic accidents, noise, and respiratory problems from air pollution to those residents who are susceptible.

Problems associated with sewage treatment will be most pronounced in urban residential zones of Urban Growth Areas. The proposed comprehensive plan encourages the construction of sanitary systems in UGA's rather than individual on-site disposal methods. This will increase pressure on current sewer systems and may require the development of new treatment facilities. Additional sewer lines and treatment facilities raise the risk of possible line breakage, system failure and contamination of surrounding areas.

Mitigation Factors - The proposed comprehensive plan states that "those industrial uses that are objectionable due to nuisance characteristics, size or potential for danger may be located outside Urban Growth Areas...." This can help reduce the threat of industrial accidents, smell, and noise that may degrade the quality of life for urban growth area residents. Safety awareness programs both for the employees of industry and the general public, and implementing best management practices for

processing and handling of hazardous substances will help mitigate risk. Landscape screening and setbacks from roadways will reduce industrial visual impacts.

Traffic hazards can be reduced through the creation of frontage streets, commercial setbacks which separate pedestrian and automobile traffic, re-routing of through traffic, and public awareness programs aimed at promoting public transportation, car pooling, and other alternative forms of transportation. Street trees and other landscaping techniques can reduce noise, glare, airborne emissions, smell, and even stress which can accompany a bad traffic situation.

Environmental hazards associated with sanitation and sewage treatment can be significantly reduced by a variety of measures. Requiring adequate facilities prior to development means that pre-assessment of sanitation needs and available facilities will determine whether or not growth can be accommodated. This reduces the possibility of overloading systems and the threat of system failure. Using best management practices and new technologies will help safeguard against the possibility of accidents.

Impacts to Land and Shoreline Use - Commercial, industrial, and high-density residential development in Urban Growth Areas can profoundly impact land and shoreline use. Under the proposed comprehensive plan, growth will be encouraged in Urban Growth Areas, thus accelerating population increases in relation to current trends. Increased development will reduce open space and potential access to shorelines and other natural features that are desirable for recreational use and aesthetic ambiance. Impacts from recreational use can be expected to increase due to more people using these areas. Additional light and glare from the removal of trees, construction of buildings, and traffic can be expected.

Demands on housing will rise to accommodate anticipated growth in the population. Managing the need for affordable housing will produce some significant environmental and social impacts. In the housing section of the proposed comprehensive plan, strategies are suggested to encourage simultaneous development of medium and high density low-income housing with construction of new residential housing developments within Urban Growth Areas. New trailer parks are also encouraged. These types of development will concentrate urban residential impacts typically associated with such areas by adding impetus to any problems which might arise. Crime and other adversities commonly associated with low income housing projects are likely to rise.

Mixed commercial/residential uses will be encouraged in order to increase the stock of rental units within Urban Growth Areas. Vacant houses within commercial centers and the second and third floors of businesses are targeted locations for this goal. Although this is an efficient use of space, these areas may experience an increase in congestion, risk of conflicting uses, and reduction of parking space.

Mitigation Factors - Preservation of open space is ensured as a provision for Urban Growth Areas. Many open spaces coincide with critical areas. Protection of these areas is primarily limited to development and land use. Public recreational use of these areas should be monitored in order to ensure their complete preservation and prevent excessive deterioration. The provision of parks and other recreational facilities will help to reduce the impact on these areas by providing a diverse array of recreational alternatives. Public education programs can help to limit high impact recreational uses. If necessary, regulation of these areas may need to be implemented.

Mitigation of light and glare can be achieved through street trees and other landscaping techniques. Reflectors for street lights can be used to ensure public safety while reducing night time scattering of city light.

Trailer Parks and High Density - Low-income housing can use tree and landscaping buffers to limit visual impacts to surrounding communities. Innovative use of landscaping can remove the negative stigma from a low-income housing area and positively affect the quality of life. Crime and other low-income community problems can be mitigated by reducing the size of these projects and scattering them throughout Urban Growth Areas as encouraged by the proposed comprehensive plan. (For further analysis, refer to the Affordable Housing section of this document.)

Traffic congestion in commercial centers where rental stock is encouraged can be reduced through increased service by public transit. Conflicts in uses can be avoided through noise level ordinances and regulated rental agreements. Parking space should be evaluated under concurrency to insure its adequate provision (for additional analysis, please refer to the Affordable Housing section of this document).

Impacts to Transportation - Demands on road infrastructure, transit, waterborne, rail, and parking facilities will increase in order to accommodate projected population growth. The capital facilities element, in concert with the transportation element of the proposed comprehensive plan, implements a six year plan for achieving necessary infrastructure in a financially feasible manner. The possibility exists, however, that growth may precede these necessary elements, causing impacts to existing structures and facilities. Increased use will increase congestion, create more risks for motorists and pedestrians, and increase associated noise and stress that often accompanies congested traffic conditions. Need for additional parking space will increase as growth in commercial and industrial areas attracts more businesses and employees. Increased traffic congestion will add to this demand making street-side parking more difficult to accommodate. Increases in population groups without automobiles will place demands on the current transit system.

Expanding business and industry will mean an increase in the transportation of goods. This will attract more large transport vehicles, furthering congestion on state highways and urban corridors.

Mitigation Factors - Traffic congestion and risk can be mitigated by reducing the number of street accesses and implementing traffic demand management strategies aimed at reducing the number of single occupancy vehicles as prescribed by the transportation section of the proposed comprehensive plan. By creating frontage roads to be shared by multiple businesses, frequent stops along arterial and other major urban streets and the need for additional traffic lights can be avoided. By limiting the number of access points, direct control of potential hazard areas is easier to achieve. Providing bicycle and pedestrian friendly facilities can reduce risk and enhance the acceptability of alternate modes of transportation. Scarcity of parking space and limited accessibility will also encourage the use of those options.

Large vehicle traffic can be accommodated through limiting its use to truck routes. Setbacks and rear loading facilities can help avoid increased congestion and risk in local areas.

Street trees and other landscaping can reduce the adverse effects of traffic congestion. By creating natural barriers, noise, glare, and smell to neighboring areas can be reduced. stress can be reduced by the beautification of the roadway experience.

Impacts to Public Services and Utilities - High density residential, commercial and industrial growth within Urban Growth Areas will place heavy demands on existing services and utilities. Assessing specific urban growth area needs for public services and utilities will be provided for in regional or sub-area plans. The following is a general statement that can be applied to Urban Growth Areas county-wide.

Fire and police protection will have to be extended in order to accommodate new development. Parks and recreational facilities will need to be developed, taking valuable land out of the limited market. Schools will have to be expanded and new schools built, if necessary. Increased maintenance of public facilities will be necessary. Extension of communication services will have to be addressed. Facilities to accommodate stormwater, sewer and solid waste disposal, and freshwater supply will have to be upgraded and constructed where needed.

Although the capital facilities element of the proposed comprehensive plan has a six year financial plan for these facilities, the possibility exists that growth may precede necessary facilities. Under these circumstances, demands on essential services increase to the point of impairing their ability to provide adequate levels of service. This could pose a potential threat to public and environmental health,

especially as regards to sewage treatment and other sanitation measures. Over-extending fire and police protection could also threaten public safety should increased demands erode their efficiency.

Mitigating Factors - Mandating adequate public facilities ensures that proper utilities and services will be in place prior to, or concurrent with, the construction of major new housing, commercial, and industrial developments requiring these accommodations. Criteria for designating Urban Growth Areas link essential services and utilities. This will lead to greater efficiency in service levels and lower the impact of urban growth. The proposed comprehensive plan encourages development of a reimbursement plan to other public service providers for capital improvements to public utilities and facilities acquired by cities upon annexation. This will provide financial incentives and help facilitate the adequate provision of these essential amenities while reducing economic burdens placed on service providers from increased demands.

The proposed comprehensive plan requires that annexation of adjacent urban areas by cities forms logical boundaries that do not isolate service providers. It also maintains the cities' responsibility to adjacent communities and ensures that essential utilities, facilities and services will be provided whether annexed or not.

ALTERNATIVES

No Action Alternative - Failure to pass the proposed updated comprehensive plan would result in the loss of the legislative authority of the Clallam County Interim Critical Areas Ordinance. This will eliminate regulatory protection of geologically hazardous areas, stream and wetland buffers, critical aquifer recharge areas, and critical wildlife habitat. Continued protection of these areas would become a direct function of voluntary compliance by land owners and result in fragmented efforts that may fall short of providing adequate protection. Risk to property and lives would result in areas considered unsuited for development under the current ordinance such as flood plain and landslide areas. Continued loss of habitat for threatened and endangered species could bring additional state and federal legislation aimed at their protection. Such legislation could increase adverse effects on the local timber and fisheries industries.

Water and soil resources would be threatened due to uncontrolled growth in rural and resource areas. Urban sprawl would continue to claim rural and resource lands. This would reduce open space, productive natural resource areas, and scenic areas that help attract tourists to the county. Public facilities and services would be constrained to meet the needs of increased development. It is likely that the levels of service for roads, utilities, and essential public services like schools, fire and police protection
would be reduced due to accommodate growth.

Alternative Means to Achieve Plan Objectives - Management of development within Urban Growth Areas can be achieved through stronger regulations requiring higher densities of development within the urban growth area and lower densities outside of the urban growth area. Minimum densities could be set for urban areas, using existing urban densities as a base. Maximum densities could be set for rural areas less than what is proposed within the plan (one unit per acre).

The county-wide comprehensive plan could establish Urban Growth Areas delimited by twenty-year population and employment forecasts. This would limit the size of Urban Growth Areas but may not be consistent with the economic development element of county or city comprehensive plans. The twenty-year projection may adequately predict development within the urban growth area, but might also preclude future expansion based on unforeseen growth. Urban Growth Areas could be planned based on a two- or three- tiered programs. For example, ten- and twenty-year growth boundaries could be established which would adequately reflect predicted changes and allow for management of growth based on those changes.

Implementation of Urban Growth Areas could include specific requirements for provision of sanitary sewers and other types of urban services and facilities. This would facilitate planned and efficient growth

of the urban areas, but may preclude development in some of the outlying parts of urban growth area boundaries.

Resource lands (agriculture, forest and mineral), critical areas and open space corridors could be included in Urban Growth Areas with implementation of a transfer of development rights program. Inclusion would achieve plan objectives of providing logical growth, open space, property rights and protection of the environment. Success would be dependent on densities allowed within urban and rural areas and this would require review of market demands for this type of program.

Commercial and industrial land uses outside Urban Growth Areas could be prohibited. This would ensure that land use conflicts with adjacent rural land uses are minimized. It would also limit the delivery of urban services such as police, fire and transportation outside Urban Growth Areas. This stringent alternative would not recognize existing well-established developments and could preclude options for replacement of structures or conversion of uses.

Rural Areas

DISCUSSION OF ISSUES

Provisions for a wide variety of uses in rural areas are made in the proposed comprehensive plan, provided they are compatible with the rural character of the land. These uses include low density residential dwellings, small-scale resource production/extraction, tourism and recreation, home based industries, capital facilities, rural villages, and limited commercial and industrial uses.

Because rural lands differ greatly in character between the east and west ends of the county, specific planning strategies and environmental analysis will be presented in regional sub-area plans. Additionally, many of the allowed uses in rural lands have considerable overlap with urban and resource lands and have already been analyzed in other sections of this document. The following is an environmental analysis of general County-wide policies concerning rural lands not already addressed in previous sections.

PLAN OBJECTIVES

It is the intent of the proposed comprehensive plan to allow a wide variety of land uses in designated rural areas while protecting the rural character of Clallam County. The following objectives form the framework for achieving this:

1. Ensure that housing densities do not exceed one unit per acre.

2. Ensure that rural development does not significantly impact urban services.

3. Ensure that rural developments are compatible with adjacent uses and the rural character.

PROPOSED GOALS AND POLICES

Rural Centers and Rural Growth - Rural centers with some characteristics of urban growth but not spread over wide areas requiring urban governmental services should continue within the context of rural areas. Residential densities should be rural and commercial uses should focus primarily on serving the rural community or the traveling public. Specific policies and actions to implement the Rural Land Use Element of the Comprehensive Plan will be found in separate regional or sub-area comprehensive plans.

Housing - Housing opportunities should be distributed throughout most of Clallam County with some proposed restrictions. Urban Growth Areas shall promote a variety of housing types and rural areas shall focus on single-family dwellings. Preservation and enhancement of existing mobile home parks is encouraged. Provision of additional rental housing stock is also encouraged.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Exceptions to Acceptable Housing Densities - The proposed comprehensive plan's section on rural growth considers densities or lot sizes over one acre rural in character. Exceptions to this rule are:

a. Cluster and planned unit developments which provide specific public benefits;
b. Approved affordable housing projects;
c. Development within designated rural villages or rural centers; and
d. Development within approved master-planned resorts.

By awarding density bonuses for developments that benefit the public (through preservation of open space, affordable housing and other provisions), the county is able to encourage cooperation by private development companies and land owners that achieves planning objectives with little or no cost to the public. Rural villages and master-planned resorts have higher densities and help prevent sprawl by providing existing services more efficiently. (For further analysis on master planned resorts, please refer to the section on New Fully Contained Communities and Master Planned Resorts of this document.)

However, there are potential significant environmental impacts associated with allowing higher (urban) densities in rural areas. Hazards associated with septic disposal are increased due to increased concentrations in developed areas. The potential for ground or surface water contamination and the subsequent contamination of local soils increase as well as contamination from non-point sources (i.e. paved surfaces, lawn fertilizers). Lower density developments can accommodate these hazards more efficiently. Spreading contaminants over a larger area maximizes bio-filtration. Concentrating effluents in a smaller area creates the risk of over-burdening the treatment capability of the land. Degradation of local areas could lead to the contamination of surrounding and lower-lying areas.

Mitigation Factors - Because there is great public benefit in providing density bonuses for cooperation in securing open space and affordable housing, higher density development should be accommodated in rural areas. Alternative strategies for dealing with effluent problems from high density developments should be developed. The siting of higher density developments should avoid critical aquifer recharge areas, erosion and landslide areas, buffers of streams, rivers, floodplains and wetlands. This will help prevent excessive damage should system failure occur. Extension of sewer and other services is provided for by the proposed comprehensive plan if there is a determination that environmental health is threatened. New developments with density bonuses should be required to examine the feasibility of providing such a service should it become necessary. Periodic monitoring and testing, coupled with specific procedures for action, should also be developed to ensure that public safety and environmental health is protected.

ALTERNATIVES

No Action Alternative - Impacts to rural areas from current growth trends would continue. Loss of open space, incompatible development, and the eventual loss of the rural character would likely be experienced in places throughout the county - especially in the east end where this trend has been occurring for some time. Roads would become more congested. Services would be less efficient. Soil and water quality would be jeopardized due to lack of environmental protection and a general increase in the incidence of septic system failure may occur. Conflicts due to incompatible uses on adjacent land would be more difficult to resolve.

Alternative Means to Achieve Plan Objectives - Setting a county standard does not recognize community desires or geographical differences. The County-wide comprehensive plan leaves the setting of rural densities to regional comprehensive plans. The plan recognizes densities exceeding one unit per acre as urban and densities less than one unit per acre as rural. The County-wide comprehensive plan could set lower densities for rural areas, such as one unit per five acres. A lower density standard would help ensure that rural development does not require the extension of urban services, affect rural character, or impact natural resources.

Resource Lands

DISCUSSION OF ISSUES

In compliance with the Growth Management Act, the proposed comprehensive plan calls for the designation of resource lands within the county. This measure is designed to "Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries...[and] Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses." Reserving resource lands of long-term commercial significance for their prescribed use will significantly limit impacts from other potential uses such as residential or industrial. Appropriate land use buffers are implemented to maintain compatible uses on adjacent lands so as not to interfere with the economic use, maintenance, and enhancement of resource lands. However, this does not safeguard against environmental impacts that may occur on resource lands from intended uses.

The predominant resource land in Clallam County is commercial forest and is found in large tracts of every regional planning area in the county. Mining and mineral resources, although relatively small in comparison, can also be found throughout the county. Agricultural lands of long-term commercial significance are found only in the Sequim-Dungeness valley, and policies and management strategies for these lands are addressed in regional or sub-area plans for that region. Because agricultural lands are of regional concern, the environmental issues of these areas are addressed in the supplemental EIS for regional or sub-area plans.

Most of the commercial forests of Clallam County are in federal, state, or large private land holdings committed to long-term commercial timber production. These areas are administered by the National Forest Service or the Washington State Department of Natural Resources. Only those privately owned lands in class 4 conversions, or in mixed use residential/commercial forestry fall under the jurisdiction of Clallam County. These areas will be discussed in the following sections. Clallam County has no management policy on state and federally administered lands so little consideration will be given to these areas.

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to develop strategies to maintain, enhance, and to conserve resource lands of long-term commercial significance, and to discourage incompatible uses adjacent to resource lands, particularly forest and mineral lands. The following objectives form the framework for achieving this:

1. Ensure the protection and retention of lands in agricultural use.

2. Ensure the protection and retention of lands in commercial forest use.

3. Allow for multiple uses of forest lands provided such uses do not adversely impact forest resource production.

4. Encourage mining operations throughout Clallam County.

5. Ensure that adjacent land uses are compatible with resource production/extraction.

PROPOSED GOALS AND POLICIES

Clallam County has classified and designated agricultural, forest, and mineral lands and adopted interim development regulations. The primary goal for Clallam County in management of resource lands is to maintain, enhance, and conserve those lands and to discourage incompatible uses adjacent to resource lands, particularly forest and mineral lands.

Agricultural Goals - Clallam County should encourage continued agricultural operations by providing property tax incentives, educational and technical assistance, and right-to-farm provisions. Agricultural land uses are encouraged to maintain and protect water quality, fisheries, and wildlife and to prevent erosion of agricultural soils. Disruption of agricultural lands should be minimized. Clallam County will work cooperatively with other governmental agencies and service providers to conserve agricultural areas. A special feature of agricultural lands in Clallam County is the designation of agricultural lands of long-term commercial significance. Agricultural lands of long-term commercial significance shall not be annexed to cities, incorporated, or included in Urban Growth Areas unless development rights have been purchased or transferred. Clallam County should actively pursue purchase of development rights in order to conserve agricultural lands.

Forest Land Goals - As a renewable resource, Clallam County's forest resource lands are of significant value to the County, Washington State, and the nation. Goals have been developed to both manage and protect these resource lands. The primary goal is to retain suitable forest lands as forest lands because of general economic benefits to the people of Clallam County. This includes retention of public and private forest lands as a timber resource base for the perpetuation of the County's timber-based industries.

Clallam County shall conserve forest and mineral resource lands for productive use by designating resource lands where the principle and preferred land uses will be commercial resource management activities. The primary land use within designated commercial forest land shall be commercial forestry. Development and subsequent site rehabilitation of mineral extraction sites may be considered compatible with other forest land use goals. Land designated as Commercial Forest shall remain in this classification unless a strong case can be made that the zoning could be changed without affecting commercial viability of surrounding forest lands. Clallam County policy on lands harvested and not reforested under a Class I, II, or III permit and which are being converted to non-forest uses is that all local permits should be withheld for a period of six years. Clallam County requires a Conversion Harvest Plan on Class IV forest practices in addition to the forest practices application.

Areas found in close association with large blocks of commercial forest land and which buffer commercial forest lands from rural development patterns may be designated as Commercial Forest/Residential Mixed Use Zone. Residences located in forest land areas shall be designed and sited in a manner which maintains the productivity of the district. A private dwelling in a forest production area shall have an approved on-site domestic water supply or be connected to an approved water system. Within certain provisions, new residential development shall be discouraged in forest areas.

The County should also foster conservation of lands for their scenic value, recognizing that certain limited development maybe necessary in furtherance of other forest land goals. Forest-related industries may be located in forest lands. Recreational developments providing primarily outdoor recreational opportunities which are compatible with the Forest Lands designation may be allowed. Resource industries shall use management practices that maintain forest land productivity, protect the environment, and also protect adjacent land uses. Essential public facilities and industrial uses may be located in designated forest lands provided that such facilities cannot otherwise be located in urban areas, are largely self-contained, or served by urban governmental services. Master-planned resorts and new, fully-contained communities may be proposed for and located in designated forest lands provided they comply with criteria and goals delineated in the section on Urban Growth and Sprawl. Clallam County should offer incentives to encourage conservation in forest lands in commercial forest, commercial forest/residential mixed resource lands and rural areas.

Mineral Resources - The County should recognize that mineral extraction sites can be developed only where the deposits are found and, if adequately planned, can be compatible with other land use goals that mineral extraction in designated forest lands should be a permitted use; that those areas with a likely occurrence of mineral resources should be designated as a mineral overlay district; and that mineral extraction operations should use "best management practices".

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impacts to the Earth - Timber harvesting can have significant adverse environmental impacts to the immediate and surrounding areas. Removal of trees weakens soils and reduces the land's ability to retain and moderate flows of surface water runoff. Heavy machinery and yarding or skidding logs can disrupt surface soil and create trenches that accelerate surface runoff and erosion. Creating landings and logging roads replaces native vegetation and surface soil structure with compacted soils, impervious to water percolation and void of vegetation. Increasing quantity and rates of surface water runoff will cause accelerated erosion. Soils loosened by logging activities and lacking vegetation will be very susceptible to this problem. Effluents from chainsaws, skidders, loaders, yarders, and logging trucks can produce cumulative levels of oil, gas, diesel, and engine emissions that can contaminate soils in the immediate area. The presence of accelerated erosion can cause the transport of these contaminants to lower lying areas.

Mitigation Factors - The Clallam County Interim Critical Areas Ordinance has provisions for the interim management of commercial forests in Urban Growth Areas or to be converted to other uses (class IV-General, under the forest practices code), in areas of critical concern. These measures include applicable buffers, reforestation of logged areas, stabilization and protection of critical areas, and approval of a conversion harvest plan that includes provisions for erosion control and protection and/or enhancement of fish and wildlife conservation areas.

To help further this effort in a county-wide format, the county should adopt a comprehensive drainage ordinance that would address and regulate grading, road building, and erosion prevention measures on lands not protected by the critical areas ordinance. Penalties should be considered for non-compliance, and incentive programs for environmental enhancement. Criteria should be developed for the suitable location of landings in logging operations. Considerations should be given to locations in relation to critical and sensitive areas and the possibility of extending buffers to incorporate lands uphill from these areas may be implemented. This could help mitigate impacts from contaminants and surface deterioration on landing sites. Educating all forest industry employees regarding not only the harmful effects of unsound practices, but the cumulative effects this has on the resources they depend on for their livelihood should also be implemented.

Impacts to Air - Commercial, industrial and recreational use of resource lands will result in certain levels of machinery and automobile exhaust and dust . Although these sources can contribute to the cumulative problem of ambient air pollution across the county, it is likely that location in commercial forests will mitigate the problem. Trees can filter and reduce wind speeds, allowing air-born particles to fall back to earth. The general mountainous topography of the county's commercial forests promotes dynamic wind

activity. This can quickly disperse contaminated air and successfully mitigate any potential problems which could arise.

Impacts to Water - Logging and mineral extraction in commercial forests have significant impacts on water quality and quantity. The removal of vegetation lowers surface water retention value of the land and accelerates water runoff causing increased erosion and flood potential. Compounding this is the compaction of soils, making them impervious to water. Aquifer recharge is reduced. Increases in human activities mean the risk of groundwater contamination. Water carrying contaminated soils can pollute stream and river systems. Increased water volumes can destroy riparian vegetation, over-run wetlands and stream banks, and increase contamination by other land sources.

Rapid runoff not only creates problems associated with flooding, but can create water shortages as well. Aquifers impacted by impervious surfaces experience a drop in the amount of time exposed to surface water. This equates directly to a loss of the amount of available water. Surface reservoirs depend on a steady source of fresh water throughout the summer months to help meet the demands of the season and compensate for evaporation. With retention and release mechanisms of the surrounding watersheds adversely impacted, fresh water volumes can be severely depleted, effecting quantity and quality of the water reserve.

Slag piles from mining operations can cause contamination of streams and rivers. Leaching and chemical reaction due to interaction with water can create an environmental hazard for aquatic systems near and downstream from a site.

Mitigation Factors - Measures proposed under the section on "Impacts to the Earth" for the mitigation of the problems cited will also help protect water quality and quantity from commercial use in forested lands. Additional measures may include preliminary testing for water quality, and performance standards that leave aquatic systems in their original state. Public education programs aimed at increasing conservation awareness should be implemented.

Best management practices for the excavation and handling of slag and other debris from mining operations should be adopted. Covering slag piles until their removal may help to reduce exposure to water and weathering and also reduce the potential for contamination.

Impacts to Energy and Natural Resources - Timber is a renewable natural resource. Theoretically it should be able to sustain a certain rate of use without being depleted. At present, there is very little agreement on what a sustainable level of harvest is. It is, however, dependent on the availability of harvestable stock. In recent years, several thousand acres of commercial timber have been removed from commercial use due to state and federal initiatives aimed at preserving habitat for a variety of endangered or threatened species of plants and animals. These policies are beyond the control of the county, and adversely effect the amount and rate of timber harvesting in Clallam County. The county's critical areas ordinance further removes harvestable timber from the commercially useable stock.

The proposed comprehensive plan makes allowances for the conversion of land in mixed use commercial forestry to be re-zoned for other uses. This will result in the loss of still more timber land from the county's timber stock. Although timber harvesting does have some environmental impacts associated with it, these impacts are largely temporary or until the next generation of growth can maintain environmental stability. Conversion to non-forestry use inevitably means the development of buildings, roads, and other necessary amenities for residential, commercial, industrial, or governmental uses. These uses have long term effects that may never be reversed. Construction permanently removes land from tree production.

Under the proposed comprehensive plan, several non-forestry uses are allowed in designated forest lands. Essential public services and industries that are difficult to site due to their size, noise or other conflicts are likely candidates to be placed in forested areas. New fully contained communities and master planned resorts are most appropriate for a forest location. All these uses will remove areas of timber production from the county. There will be additional need for essential services and public utilities.

Increases in traffic are likely causing strains on the transportation system. New roads, buildings, and parking lots will increase the area of impervious surfaces and result in accelerated erosion and the spreading of contaminants.

Commercial forests provide other valuable assets that contribute to the economic health of the county. The beauty of mountains, rivers, and lakes attract large numbers of tourists annually. Game fish and animals attract hunters and fisherman in the off seasons making the tourism a year round industry. Commercial fishing thrives in our coastal waters and so the link to a healthy forest management plan is that much more important. If left unmitigated, forest practices and non-forestry use of commercial forests can have far reaching consequences to the industries dependent on them.

Mitigation Factors - The proposed comprehensive plan promotes the preservation of resource lands to ensure continued economic welfare and diversity. Incentives can be implemented to encourage private land owners to maintain timber production. Consideration should be given to other dependent industries when determining harvest levels and areas. Special tax status and purchase of development rights at fair market value are measures which can help to maintain timber stocks in Clallam County.

Preservation of open space and critical areas help to prevent degradation of aquatic systems due to commercial forest use. Additional measures may include seasonal considerations; limiting harvest to times when soils are less susceptible to degradation and erosion.

Impacts to Environmental Health - Many potential impacts that would normally occur in residential or urban areas are mitigated simply by placing the proposed use in commercial forest zones. However, some impacts may still exist and require some attention. Risk of explosion from industrial sites exists regardless of where a facility is located. Although the number of people in potential danger may be reduced, the health and safety of the employees still needs to be addressed. Logging operations have many safety risks associated with them. The release of harmful substances in even remote locations can impact environmental health in areas where appropriate public facilities for treatment are not available.

Mitigation Factors - Adoption of best management practices and current technology should apply to industrial uses in commercial forest zones. Additional on-site treatment facilities for effluents should be required. Employee awareness programs should be implemented to ensure proper safety is instituted. Due to the remote locations of commercial forest areas, additional safety measures may need to be observed, such as mandatory first aid and emergency procedures for employees. These plans could help reduce the need for immediate response by emergency professionals in case of accidents.

Impacts to Land and Shoreline Use - There will be significant impacts associated with forestry and non-forestry uses of designated commercial forest lands to recreation and aesthetics. Construction of new facilities, and the associated noise and activity of these uses will adversely effect the aesthetic experience of outdoor recreation. Wild animals may be scared off due to these intrusions, detracting from the outdoor experience. Risk of forest fire is likely to increase due to increases in human activities. Excessive clearcutting can also destroy the natural beauty of our wild and scenic setting as well as animal habitat. Because the tourist industry is important to the economy of Clallam County, care should be given to the preservation of scenic and outdoor recreational resources.

Mitigation Factors - Careful placement of buildings and facilities in commercial forest areas is the best strategy for mitigating impacts. By locating structures in areas that are well hidden - using topography and natural vegetation as barriers - noise and visual adversities can be prevented from affecting the public adversely. Observation of view sheds can help guide planning where the most appropriate locations for structures and other commercial activities are. Natural buffers along roadways can help increase the area of usable land without visually impacting the public in transit. By observing migration routes and key habitat along with recreational areas, conflicts between sportsman and recreationalists and the industrial and commercial users of these areas can be minimized. Public awareness programs and dry weather restrictions can help reduce the risk of forest fires during dry seasons.

Impacts to Infrastructure and Services - The construction of public and industrial facilities in commercial forest areas will increase traffic demands on the current road system. Appropriate upgrades and additions will have to be constructed along with extension of essential and safety services. Costs associated with these provisions will be great due to the remote locations. Police and fire protection will be hindered due to transportation time. Because many of these locations are in higher elevations, cost of maintenance will be higher due to impacts from weather.

Mitigation Factors - Most of the likely candidates for location in remote commercial forests are large industries and public facilities. These will likely employ many people and/or significantly increase the tax base of the county. Although locating them in remote areas increases the cost of servicing them, it is more than likely that the benefit will out weigh the cost associated with location. Private security companies may be able to provide service at a more financially feasible level - while providing increased employment opportunities for county residents.

ALTERNATIVES

No Action Alternative - Current trends on resource lands would continue. The greatest threat to resource lands is the conversion of these lands to residential or other non-resource uses. Loss of commercially significant agricultural lands in the Sequim-Dungeness area could result in the loss of the agricultural industry in Clallam County. This is a very real threat given the current growth situation. Commercial forest lands would continue to be converted, removing more of the net commercial forest base. Lack of adequate protection for threatened or endangered species could lead to the loss of additional commercial forest lands to state and federal initiatives. Continued degradation of stream buffers to un-regulated or improper logging practices could lead to the continued destruction of once commercially viable anadromous fish stocks.

Alternative Means for Achieving Timber Resource Goals - Forest Resource Lands of Long Term Commercial Significance were protected in large measure by adjusting the comprehensive plan designations and zoning to reflect 80 acre minimum lot sizes rather than the 20 acre lot sizes that had been utilized to protect the majority of the forested areas prior to the Growth Management Act. The Task Force that studied this issue rejected the "do nothing" alternative by concluding that 20 acre minimum lot sizes where completely ineffective in conserving forest resource lands and that these lands were rapidly being converted to residential uses. Additional actions to protect forest resource lands included development of a Right to Practice Forestry Ordinance and the implementation of Forestry Cluster Comprehensive Plan designations and zoning to protect the transitional commercial forest area between areas of commercial forest and rural lands. These three methods of forest protection where originally considered as separate alternatives but all three became part of the final recommendations and were adopted. An alternative that was studied and rejected was to create exclusive forestry zones where no residential uses were allowed. Although this alternative would have been effective it was considered to be unfeasible due to its severe impact on some of the smaller private land owners.

Alternative Means for Achieving Agricultural Goals - Agricultural Resource Lands of Long Term Commercial Significance were protected by developing comprehensive plan goals and implementing ordinances that placed lands that met agricultural criteria in Agricultural Cluster Zoning districts. In these districts two development options were available. First, a property owner could split his/her land into 30 acre lots without county involvement. Alternatively, the property could be developed in a cluster pattern where 70% of the site would be reserved for agricultural land use and 30% could be used for development utilizing previously held development rights. Additional recommendations that were adopted included development of a Right to Practice Agriculture Ordinance and policy support for developing a Transfer of Development Rights program. The task force that studied the issue examined and rejected the "do nothing" alternative because zoning in place at the time did nothing to protect agriculture resource lands and prime agricultural lands were being rapidly converted to residential uses. They also rejected exclusive agricultural zoning as being overly severe in its impact to private property owners. Other options examined but not recommended included requiring Planned Unit Developments, which was rejected due to lack of requirement for any agricultural open space; purchase of development rights,

which rated favorably but was not feasible to implement in the time allotted; and outright land purchase with lease back, which was rejected due to lack of funding.

Alternative Means for Achieving Mineral Resource Goals - Mineral Resource Lands of Long Term Commercial Significance were protected through development of comprehensive plan policies and implementing ordinances which made mineral extraction a permitted use in commercial forestry zones and the development of a Right to Practice Mining Ordinance which contains protections for this use from county actions resulting from nuisance complaints. Additionally, a Mineral Overlay Zone was adopted which allowed mineral resource sites to be designated and receive protection under the Right to Practice Mining Ordinance as well as requiring the county to review development applications within 600 feet of a designated mineral resource site for compatibility with resource extraction. An alternative which was considered was to establish exclusive Mineral Extraction zoning where this was the major permitted use, but this was rejected due to the diverse locations and present zoning of mineral resource lands, as well as its severe consequences to existing property owners.

Economic Development

DISCUSSION OF ISSUES

The Washington State Growth Management Act of 1990 requires that all counties experiencing growth that meets the criteria of the act to develop or update their comprehensive land use plans to meet the provisions of the act. One optional element of the act is for the comprehensive plan to include a section on economic development. In compliance with the Act, Clallam County has developed a set of economic goals and policies aimed at stabilizing and enhancing the economic climate of the county. These goals and policies are contained in the economic development element of the proposed comprehensive plan.

The Washington State Environmental Policy Act requires that legislative actions affecting land use regulations be evaluated for significant environmental impacts resulting from such legislation. Although the economic development section does not deal directly with land use issues, it does present goals and policies which could encourage growth and development which, in turn, could result in significant environmental impacts. The following will be an evaluation of the probable significant environmental impacts resulting from the economic development goals and policies of the proposed comprehensive plan. It will also contain possible mitigation measures for reducing environmental impacts, and identification of those impacts that are unavoidable. A more specific analysis will be done for regional or sub-area plans which will deal with location and extent of commercial and industrial facilities likely to locate within Clallam County.

Due to the way the economic development section is organized, it is more appropriate to change the format of this analysis in order to avoid repetition and provide clarity. Critical elements (those which may result in significant environmental impacts), will be addressed separately in terms of the affected environment(s) rather than analyzing them in terms of the proposed action (as is the case with previous sections of this document).

PLAN OBJECTIVES

It is the intent of the proposed comprehensive plan to promote and encourage economic growth and development that is beneficial to the residents of Clallam County. The following objectives form the framework for achieving this:

1. Encourage industries that pay family wages and are environmentally friendly to locate in Clallam County.

2. Promote economic diversity.

3. Encourage small businesses.

4. Encourage government participation in economic development.

5. Promote the tourism industry in Clallam County.

PROPOSED GOALS AND POLICIES

There are three underlying goals which direct the formulation of Clallam County's economic development policies: 1) strengthening and diversifying the County's economic base; 2) creating family wage jobs; and 3) the promotion and protection of the natural environment. The County will both support and recruit business which contribute to these goals.

Economic Diversity - The County should work with the Economic Development Council (EDC) to develop a program to aggressively recruit a variety of commercial and industrial enterprises to locate in the County. Industrial economic strategies should be focused on attracting small- to medium-sized industries which pay wages exceeding the county average annual wage. In addition to recruiting new business, the County will work to retain local industries and help to expand the existing industrial and business base. Home-based businesses and small-scale home industries should be encouraged. The County should continue to support efforts to market the county as a center for tourism and retirement.

These goals can be accomplished by further developing public-private business partnerships. Clallam County and other economic development interests should communicate with Native American Tribes within the county to encourage Native American economic development efforts. Clallam County will develop a business assistance team among County staff to work with new or expanding businesses. A mechanism to coordinate infrastructure among jurisdictions and service providers should be developed by the County.

Environment - Renewable, natural resources in the county should be plentiful and usable. Clallam County will discourage the conversion of forest and agricultural lands to other uses. These lands will not be regarded as vacant but as lands for commercial production of products which provide the county with sizable revenues. The quality of life in Clallam County should be maintained and improved by promoting environmentally clean industrial developments on industrial park sites naturally suited to intensive land use.

Communication, Coordination, and Media Relations - The County will work with local and regional media to improve perceptions about this area as a good place to locate business or industry. Clallam County will work with other governmental bodies and economic development agencies to develop a system of effective two-way communication with federal, state, private decision-makers and absentee business owners to ensure that their decisions take local concerns and the local economy into consideration. Biannual economic development forums will be encouraged for better coordination among agencies.

Education and Culture - The maintenance and improvement of educational systems in the county will be encouraged. Technical training and life-long learning resources should be readily available to all county residents. Programs that promote awareness of cultural diversity will be promoted, as will programs which promote the county as an international destination.

Regulatory Framework - The County will work to develop regulations which are consistent, fair, timely, and predictable. Goals for the development of these regulations include: evaluation of the feasibility of a programmatic environmental impact statement for areas identified as suitable for commercial or industrial development; continued evaluation of local regulations; mandatory timelines for the issuance of each type of permit; and a review and streamlining of state regulations.

Monitoring and Reporting Results of County Economic Strategies - Clallam County will support, coordinate, and participate in a semi-annual Economic Development Forum where participants will monitor the economic progress of the county as it is affected by the Comprehensive Plan and report goal progress to economic development officials. Studies for the forum will include a semi-annual performance report developed by the EDC and details of the costs of operating various kinds of industries and businesses in Clallam County as compared to costs in other counties and states.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Tourism Promotion - Supporting efforts by the Visitor and Convention Bureau to market Clallam County attractions to convention schedulers, visitors, film industry and recreational users will boost the tourism industry and strengthening the economy. However, there are certain environmental impacts associated with tourism and temporary influxes of people.

Allowing publicized public access to shorelines and bodies of water that are recreational attractions will increase their use. Impacts associated with recreational use of public lands are likely to increase as a result (see section on land and shoreline use of this document).

The proposed comprehensive plan's section on commercial forests indicates that state and federal regulations for the protection of threatened and endangered species are the greatest cause for reduction in the commercial forest resource base. Further loss due to conversion to non-forestry uses such as parks, residences or other non commercial forest uses should be avoided. Setbacks along Highway 101 and other scenic routes in Clallam County in order to enhance their beauty and attractiveness to the vacationing public are proposed. These setbacks would remove significant portions of land from the commercial forest base, further increasing the economic hardship currently being experienced by this industry.

The tourism season brings large numbers of motorists and recreational users to Clallam County. It is important to consider seasonal changes in traffic densities when establishing levels of service for county roads. Unfortunately, some circumstances cannot be accurately anticipated. Extended periods of bad weather into the summer months, followed by exceptionally good weather, can cause unusually high densities of motorists to the Olympic Peninsula. Conventions and other major social events attract large numbers of motorists for short periods of time. It is likely that circumstances like these will have significant impacts on county road levels of service and congestion that will be unavoidable.

Mitigation Factors - Protection of shorelines and other natural recreational features can best be realized through public education and awareness programs. It is generally less costly than maintenance and restoration, and does not undermine county efforts to market Clallam County as an outdoor recreational destination. In areas where excessive degradation from recreational use is occurring, restoration and regulation should be considered. Impact fees in the form of user permits could be implemented to place the financial burden on the user.

Although implementing vegetation buffers along scenic highways will result in some net loss of productive commercial forest base, the benefits may out-weigh the adversities of their presence. The primary goal of maintaining scenic highways as scenic and enjoyable to the traveling public will result in a more stable

tourism industry and help offset economic impacts from reduced logging revenues. Vegetation buffers can provide wildlife habitat and help maintain bio-diversity. They also help reduce the introduction of pollutants into both rivers and air by enhancing the surface water retention capability and filtering airborne contaminants.

ALTERNATIVES

No Action Alternative - Promoting Clallam County as a tourist destination will require a commitment to the preservation and enhancement of its scenic and recreational opportunities. Uncontrolled growth and sprawl could jeopardize this amenity. By not encouraging industries that are environmentally friendly or increase the earning power of its employees, Clallam County will not be able to effectively enhance the general standard of living for its residents or effectively maintain the characteristics that make the county's tourism industry as successful as it is. Loss of scenic areas to development and continued degradation of the sports fishing industry will continue to be counter-productive.

Alternative Means to Achieve Economic Development Goals - Economic development alternatives includes developing a low-key recruitment program, continuing existing trends in communication between development agencies and following existing development strategies. An alternative to providing infrastructure prior to need would be to try and meet an immediate need as soon as it is identified, and limit city services to just the area of the present city limits until annexation occurs.

Transportation

DISCUSSION OF ISSUES

The Growth Management Act of 1990 requires the development of goals and policies in the form of a transportation plan that is consistent with the land use element of the comprehensive plan. The county-wide transportation plan consists of goals and policies aimed at reducing the use of single occupancy vehicles and promoting the use of alternative modes of transportation. As required by the Growth Management Act, it contains a concurrency policy which prohibits development approval if the development causes the level of service of a transportation facility to be reduced below a prescribed level, unless measures are implemented concurrent with construction to accommodate or offset the impacts on that facility. Other policies contained in the transportation element focus on finance, public awareness of alternate modes of transportation and services available.

The following is an environmental analysis of the significant impacts likely to arise as a result of the goals and policies contained in the transportation element, and possible measures to mitigate these problems where possible.

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to provide for transportation facilities that meet the needs of Clallam County residents for the next twenty years. The following objectives form the framework for this:

1. Promote alternate modes of transportation other than single occupancy vehicles.

2. Improve the aesthetics of the Highway 101 corridor.

3. Establish standard levels of service for county roads.

4. Preserve existing road and highway systems.

5. Develop strategies that make the transportation system compatible with land use.

6. Implement concurrency policy to ensure that roads are adequate prior to or concurrent with development.

PROPOSED GOALS AND POLICIES

The primary transportation planning goal in Clallam County is to provide acceptable levels of transportation services using travel modes already in existence and, at the same time, to minimize maintenance costs and system expansion needs.

Specific planning goals are formulated around major categories of service, including roads and highways, marine transportation, public transportation, air transportation, and the network of trails, paths, and sidewalks within the County. Financial goals have also been formulated. Specific policies may be reviewed in the Draft Design Standard Policy Matrix for transportation which is included in this section.

Roads and Highways - One of the major goals of transportation planning in Clallam County is to preserve and enhance the Highway 101 corridor, the County's major scenic and commercial thoroughfare. Enhancement includes aesthetic improvements along the corridor as well as increased regional mobility for goods, services, and passengers, and increased access to regional attractions. Preservation of the existing highway system is compatible with this goal as well as a goal in its own right. Planning efforts should be directed towards developing design standards which preserve the strong rural character of the county and provide adequate safety for roadway travelers. Further goals for the road and highway system include: developing and implementing standards for access to all roadway types; consideration of school bus transportation consistent with WSDOT service objectives; increased awareness of the need to share the roadway with bicyclists and road safety; and reduced reliance on single-occupant vehicles and increased use of alternative modes of transportation. Transportation planning for roadways also seeks to protect wildlife habitat and prevent watershed degradation.

Marine Transportation - Port Angeles Harbor is the center for marine traffic in Clallam County and the focus of planning activities in the region. The goal of marine transportation planning is to enhance facilities use and economic benefit to the community. This goal can be accomplished by providing adequate marine terminals throughout the harbor to serve the needs of various types of marine transportation including cargo vessels engaged in international trade, international ferry services, and barges. Provisions should include additional berths, maintenance of existing berths and terminals, and adequate surface transportation to marine facilities through intermodal links.

Public Transportation - In a county where the primary mode of transportation is the single-occupant vehicle, planning efforts are directed toward encouraging ridership and support for transit expansion. Planning goals include encouraging public transportation service around the Olympic Loop; promotion of partnerships between government and private carriers; transit service levels consistent with population and employment densities; development of transit-friendly design standards for high capacity and priority transit corridors; and neighborhood park-and-ride lots at Highway 101 with collectors.

Air Transportation - Clallam County has a variety of air transportation planning goals. The primary goal is the development and maintenance of safe, efficient, economical, and environmentally acceptable air travel within and to the County. Implementation of this goal requires maintenance of up-to-date airport master plans which meet Federal Aviation Administration requirements. Other specific goals include coordinating land-use development in and adjacent to airports, reflecting good safety measures which do not negatively impact the regional transportation system, and adequate surface transportation between airports and Urban Growth Areas, with a preference given to transit. A concomitant goal is to ensure that existing major arterials, roads, and highways provide adequate service to the airport. A long-term link between Seattle-Tacoma International Airport and the Sequim and Port Angeles airports should be promoted.

Trails, Paths, and Sidewalks - The creation of a system of intermodal travel routes is an important goal in Clallam County's transportation planning. In accordance with this goal, the county seeks to improve the safety and quality of travel for non-motorized travelers. Planning policies directed toward this goal

include identification and location of safe alternate bicycle routes and trails; development which promotes pedestrian and bicycle use; safer access to transit stops for pedestrian traffic; storage and security for bicycles at transit shelters along Highway 101; and the installation of bicycle detection traffic control devices at the intersections of minor roads connecting to arterials. Goals for non-motorized transportation planning also include the acquisition and maintenance of several different sites within the County. The Olympic Discovery Trail should be designated as the primary route for non-motorized travel between Jefferson County and the Port Angeles Region. The former railroad right-of-way east of Morse Creek should be obtained with funds designated for County trails and paths and subsequently designated in the bicycle plan as a future regional transportation facility. A westerly extension of the Waterfront Trail from Daishowa Mill should be encouraged.

Financial Planning for Transportation Goals - It is the intent of Clallam County to identify and develop a realistic financial plan adequate to meet the needs of County residents which also allows efficient and effective services and facilities. The goal may be accomplished by: maximizing private funding of transportation facilities and maintenance of those facilities or encouraging public-private partnerships; ensuring that new development projects contribute a fair share to financing transportation goals associated with those projects; encouraging and supporting volunteer participation in trail construction and maintenance; coordination of federal, state, and private funding; and the development of joint projects to consolidate funding and benefit multiple jurisdictions.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impacts to the Earth - The construction of roads involve grading, removing or adding fill material, compacting soils, and spreading asphalt and other impermeable surfaces. The transportation element of the proposed comprehensive plan has several goals and policies which may require the construction of new roads and additions to existing ones. The expansion of shoulders to accommodate bicycle lanes will require additional asphalt surfaces where needed. The construction of new roads in Urban Growth Areas to accommodate high density development will occur. The creation of frontage streets, while reducing access points and risks associated with them, will demand a greater area of paved surface than before. While new roads outside of Urban Growth Areas will be very limited, upgrades will be needed in order to achieve prescribed levels of service where deficiencies exist. It is likely that there will be significant environmental impacts associated with these activities and structures.

Grading for road construction and the adding or removing of soil changes the topography of the landscape. This has the potential to divert stream flow and change surface drainage patterns. Because roads are usually long and continuous, stream flow diversion can be extensive. Natural stream beds are shaped through time and usually achieve a high level of stability through healthy riparian vegetation and topographic conformity (i.e. rock and gravel bottoms, slope easing). Diverting stream flows to accommodate roads requires culverts and ditches that collect water in unnaturally high volumes. Scouring and erosion is likely to occur where water is diverted.

The compaction of soils and the introduction of other impermeable surfaces reduces the soil's natural function and increases contamination and erosion of immediate and lower lying soils. Surfaces that formerly were able to absorb and moderate surface water runoff are replaced by non absorbing surfaces that shed water upon contact. The paved surface is also a source of non-point pollution: exhaust, oil, transmission and radiator fluid from old and unmaintained automobiles find their way to this surface and accumulate over time. Rain washes these pollutants into ditches and from there to surrounding and lower lying soils rendering them less productive. Loss of riparian vegetation due to pollution can complicate this problem and increase erosion of lower lying areas.

Mitigation Factors - In order to maintain the scenic qualities of the state highways in Clallam County and enhance the driving experience, the transportation element's policy requires the retention of a scenic buffer zone along state highway corridors SR101 and SR112. While the preservation of adjacent greenbelts provides an aesthetically pleasing experience for the commuter, they also help mitigate erosion impacts from increased surface water runoff. The transportation element’s section on wildlife and

watershed protection encourages the maintenance of roadside ditches for biofiltration functions and grassy swales should be designed to collect pollutants from highway run-off.

During the construction of new roads or additions to existing ones, performance standards for the interim stabilization of soils should be developed. Siltation traps and water control through landscaping techniques could help retain soils which come in contact with water. Soil contamination could be reduced through performance standards and enforcement of existing emissions laws for automobiles. Public education on the various environmental effects of automobile emissions could provide a non-regulatory means for achieving this goal and should be considered. The section on the protection of wildlife and watersheds requires that county roads will be managed in accordance with the WSDOT Highway Puget Sound Runoff Manual that incorporates Department of Ecology's best management practices.

Impacts to the Air - The transportation element of the proposed comprehensive plan introduces a variety of strategies aimed at reducing single occupancy vehicle use and promoting the use of alternate modes of transportation. It is likely that impacts to air will be reduced as a result of these goals and policies. Traffic demand management strategies include incentives for the use of alternative travel modes and disincentives for the conventional use of single occupancy vehicles. Unfortunately, disincentive strategies may take a certain period of time before they become effective. Disincentive strategies require a change in automobile use as a result of increased adverse driving conditions that can only be avoided by using alternative modes of transportation. In effect, things have to get so bad that people are willing to forego the convenience of the personal automobile for other modes. As a result, there may be increases in traffic before changes in driving behavior are realized. For analysis on the environmental impacts associated with automobile use, please refer to the "Impacts to the Air" portion of the section on Urban Growth Areas of this document.

Impacts to Water - Impacts to water resources associated with the construction of new roads and additions to existing ones can be found in the "Impacts to Water" portion of the section on Urban Growth Areas of this document.

Impacts to Plants and Animals - The section on the protection of wildlife and watersheds of the transportation element provides many policies aimed at wildlife protection in the context of transportation planning. Avoidance of wildlife and stream corridors, enhancement and restored connectivity between habitat areas, separation of hazardous material transport and shorelines or other critical areas, and design specifications that are environmentally friendly are proposed to help reduce impacts on wildlife.

Although these policies help to mitigate impacts to plants and animals as a result of the transportation element, other sections will contribute some unavoidable impacts. The preservation of roadside vegetation buffers for the enhancement of scenic highways may increase the number of animals exposed to the threats of traffic. Greenbelts located in close proximity to open areas, such as clear-cuts, provide deer and other animals with shelter and food. Increasing the number of animals in close proximity to state highways will also increase the number of animal related car accidents, threatening not only the animal, but people as well.

Mitigation Factors - Technologies are currently being developed to deter large animals such as deer and elk from entering into a highway corridor. These measures could be implemented in wildlife corridors which come into contact with major roadways. Fencing should also be considered in these areas to help prevent accidents. Public awareness can help inform travelers about the hazards of automobile/animal accidents.

Impacts to Energy and Natural Resources - The transportation element of the proposed comprehensive plan contains goals and policies which offer alternative modes of transportation, and strategies on how to make them feasible. By reducing single-occupancy vehicles and making provisions for the construction of new roads and facilities in an environmentally friendly manner, coupled with the concentration of facilities in Urban Growth Areas, it is likely that demands on energy and other natural resources will be reduced from previous policies. Therefore this section warrants no additional environmental analysis.

Impacts to Environmental Health - Impacts from transportation associated with environmental health are primarily centered around water and air quality. For further analysis, refer to those portions of the section on Urban Growth Areas of this document.

Impacts to Land and Shoreline Use - Impacts to land and shoreline use are taken into consideration in the transportation element of the proposed comprehensive plan. As required by the Growth Management Act, the plan is consistent with the land use element. It contains policies which enhance the aesthetic character of streets, roads, and highway corridors. Preservations of resource, rural, and open space land is achieved by limiting construction of new roads and upgrades to existing roads; by providing levels of service determined by existing need; and by not encouraging adjacent growth through exceeding these levels of service. Impacts to other services are reduced by concentrating transportation improvements in Urban Growth Areas where essential facilities and services can be provided in an efficient manner. Concurrency ensures that new development will be serviced adequately upon project completion, or construction will not occur. By extending transit service to include regional attractions, impacts of recreation areas will be reduced.

Eliminating off-site commercial signs from the Highway 101 corridor will impact those businesses who use them to promote their establishments. However, it is likely that enhancement efforts will have a positive effect on the tourism industry of Clallam County and off-set any adverse economic impacts incurred by the removal of roadside advertising.

Impacts to Transportation - There will be significant changes to transportation as a result of the transportation element. Many goals and policies contained in the transportation element will initiate improvements to the transportation network of Clallam County. By increasing public awareness, providing upgrades in the current transit system and creating new facilities for other modes of transportation, eventually streets and roads should become less congested and travel more efficient.

Part of the traffic demand management strategy is to employ disincentive as a means for achieving certain transportation goals and encourage alternate modes of transportation. This strategy requires time to implement and become effective. First, traffic has to increase to so that lack of parking, congestion and other driving adversities stimulate a change in travel behavior. Second, construction of new facilities and upgrades in alternate modes of transportation have to be complete. Third, the public has to be made aware of these new facilities and modes in order to use them. Because of these factors, it is likely that before some of the goals of the transportation element aimed at increasing alternate modes of transportation are realized, there will be a substantial drop in levels of service for county roads and city streets which currently serve a majority of single occupancy vehicles.

Impacts to Public Services and Utilities - It is unlikely that the transportation element will result in significant impacts to public services and utilities. Construction of new roads will be limited in rural and resource lands and encouraged only in Urban Growth Areas where adequate public services and utilities can be provided in an efficient manner. This will discourage growth in outlying areas where costs associated with services and utilities would be great.

ALTERNATIVES

No Action Alternative - Construction of new roads and the maintenance of existing ones requires significant capital investments. If current trends continue, new roads will have to be built in order to meet the needs of development in rural areas. As populations increase in these areas, traffic will also increase on arterial and collector routes. Many of these roads will require additions and repairs to achieve standard levels of service. Because public funds are limited, it is likely that many necessary projects will have to be delayed or curtailed due to lack of financing. Access created by new roads is likely to encourage adjacent growth. This in turn will add to the strain placed on roads, utilities, and essential public services.

The construction of new roads will result in significant environmental impacts. Because no policy concerning critical areas will be in place under the no action alternative, a significantly higher degree of environmental degradation can be expected. Wildlife corridors will be fragmented. Hydrologic flows will be disrupted, causing harm to wetlands and stream ecosystems.

Alternative Means for Achieving Objectives - The guiding objective of the transportation element is to encourage alternative means of transportation to the single-occupant vehicle in order to decrease future highway system needs. The alternative to a multi-modal transportation system is the traditional road network that assumes everyone has and can use a car. A private vehicle is a way of life in rural communities, especially when they are situated some distance from a metropolitan area. Although not all vehicle trips have independent origins and destinations, motivations for the single occupancy vehicle travel may be assigned according to categories. The Clallam Transit System Ridership Survey is supported by the 1990 US Census Bureau report which shows that only 2% of Clallam County work force rides the bus and 73% of the work force drives alone. These are the primary personal vehicle trips which are targeted for change in travel mode. Continuation of single-occupant vehicle trips to meet the individual demand will cause congestion to worsen and impacts to be mitigated by the taxpayer or developer. Traditional means (road widening, traffic signals, passing lanes) of resolving congestion problems have their own impacts and may degrade the livability or character of a neighborhood. The proliferation of vehicles will contribute more noise, odor, non-point pollution, and impervious surfaces. Therefore, alternative means to the private automobile such as Clallam Transit, private shuttle services, bicycles, and walking are greatly emphasized in the plan. Creating a safe and accessible environment for these modes is referred to as transportation supply management. Modifying travel behavior is called transportation demand management. The plan suggests both types of strategies to offset costly urban road expansion treatments.

In air quality attainment areas of Puget Sound, a regulatory approach Is working to achieve similar travel behavior modification that is encouraged in the Clallam County plan. Metropolitan employment centers must prove the reduction of single-occupant vehicle trips or face civil penalties. Mandatory congestion management strategies are intended to reduce demand for road expansion improvements and improve air quality. Another planning approach would be to set single-occupant vehicle reduction goals in increments, such as a 15% reduction by 1995, 25% reduction by 1997 and 35% by 1999. Clallam County is exempted from State Transportation Demand Management Legislation because of its size and will seek a cooperative effort between public education, travel and development incentives and land use planning.

Bicycle and pedestrian facilities are highly important in the plan to address the multi-modal objective. Transportation facilities will be considered in every road construction or improvement project. An alternative to the plan would be to construct a paved concrete/asphalt trail separated from traffic adjacent to every county road. Financially, this is a prohibitive alternative. Another alternative would be to designate an east-west bicycle route on satisfactory roads that would eliminate conflict between vehicles

and bicycles on SR101. The shoulder would remain one foot wide in locations and bicyclists would make optional detours according to markers. This alternative failed because bicyclists, as do vehicles, prefer to take the shortest path and would probably not use the detours. The Waterfront Trail in Port Angeles could perform as a portion of an east-west bicycle route, but urban services still require satisfactory bicycle routes on SR101.

The Port of Port Angeles comprehensive plan was endorsed for marine vessel and aircraft freight movement needs. Traditionally, ferry travel has been regarded as seasonal or tourist related travel between Port Angeles and Victoria B.C. Other destinations should be considered as alternatives to highway travel. Expansion of terminal berths or airport facilities should occur based on economic growth trends. Airport growth other than commuter services to SEATAC and Portland terminals was not considered.

Capital Facilities

DISCUSSION OF ISSUES

The Capital Facilities element of the proposed comprehensive plan contains an in-depth discussion on the establishment of criteria for the determination of levels of service for a variety of county administered public facilities and services. It also contains an inventory of existing facilities and services, current capacities, as well as current and future demands which have and will be placed on these facilities and services. Based on these levels of services, capacities and future demands, the plan calls for the development and construction of new facilities and services to help meet the prescribed levels of service which are determined by the plan. The following is an environmental analysis of significant adverse impacts likely to arise from the general capital facilities projects.

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to provide a financial plan for the development or improvement of needed capital facilities that are sufficient to accommodate populations for the next twenty years. The following objectives form the framework for this:

1. Develop standard levels of service for county capital facilities.
2. Develop a needs assessment for capital improvements based on prescribed levels of service and projected populations.
3. Cite sources and time-line for funding of capital projects.
4. Indicate capital projects.
5. Insure that capital facilities are adequate to accommodate growth.

PROPOSED GOALS AND POLICIES

The Capital Facilities element of Clallam County's Comprehensive Plan considers roads, sewer, recreational and open space areas, flood control devices; and facilities for general administration, courts, detention and corrections, law and justice, and solid waste and equipment. There are four major steps involved in the implementation of the Capital Facilities plan:

1. An inventory of existing capital facilities;
2. A forecast of future needs;
3. A survey of proposed location and capacities of capital facilities;
4. A six-year financing plan.

Specific goals for the Capital Facilities plan fall into three categories including discussion of development, levels of service, and cost and coordination with other plans.

Development - Clallam County should ensure that County public facilities necessary to support development are adequate to serve the development at the time it is available for occupancy and/or use.

This goal should be accomplished without reducing current service levels below locally established minimum standards. Development in urban areas should be encouraged where adequate public facilities exist or where they can be provided in an efficient manner. The County should encourage the retention of open space, the development of parks and recreational areas, and access to natural resource lands and water.

Levels of Service - Clallam County will establish level of service (LOS) standards for County public facilities. These standards will be based on an analysis of the adequacy of existing level of service for public facilities. The County will also prepare a six-year financial plan for any public facilities which need to be developed as a result of LOS requirements and projected changes in population. The six-year financial plan should be based on cost-estimates for capital improvements which are identified in the plan. The County should allow private investors to assist in achieving established and planned levels of service.

Cost and Coordination - Clallam County should insure that the costs of operation and maintenance of capital facilities are analyzed to assure that future budgets will be able to maintain facilities. The Capital Facilities Plan should be coordinated with other elements of the Comprehensive Plan. Where possible, the plan should also be coordinated and consistent with plans and policies of other public entities in the region and also with adjacent counties.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impacts to the Earth - There will be some significant adverse impacts to the earth resulting from the capital facilities element of the proposed comprehensive plan. In order to maintain prescribed levels of service, some additions to existing county buildings will need to be constructed. Because these additions will be added to existing public buildings, there will be little or no loss of undisturbed surface soil area. Soils likely to be impacted are those found in landscape islands along sidewalks and building perimeters.

Converting acquired lands into parks will help to protect those areas from other types of development, but will also cause some adverse impacts to soils in the area. Construction of outdoor recreational facilities like covered picnic areas, fire pits, restroom facilities, picnic benches and trails will result in the compaction and devegetation of immediate soils. These soils will become more susceptible to erosion and loss of aquifer recharge capability. Additional loss of vegetation and soil compaction will result from improper or high intensity recreational use (i.e. trail cutting), and increase the magnitude of soil erosion.

Mitigation Factors - The county should require that any loss of landscaped area be offset by providing new landscaped areas of equal or greater size. This will help mitigate loss of permeable surfaces, offset impacts from the altered landscape, and help maintain the aesthetics of the area.

To help prevent significant degradation of county parks, public education and awareness programs should be developed, aimed at making the general public aware of the impacts of recreational use on these lands. In cases where significant degradation is taking place, regulations should be considered prohibiting inappropriate use of these areas.

Impacts to Air - There will be no significant impacts to air quality resulting from the capital facilities element of the proposed comprehensive plan.

Impacts to Water - Impacts associated with soils are often inter-connected to water. The conversion of lands into county parks will cause the compaction, disruption and devegetation of some surface soils. Devegetated and disrupted surface soils will increase the sediment load of surface water and contaminate stream and river beds with these sediments. Increased areas of impermeable surfaces will result in accelerated surface water runoff. Increased surface water runoff coupled with a net loss of surface water retention capability will increase the likelihood of flooding in high precipitation periods while times of low precipitation will result in reduced water levels in streams and rivers. Aquifer recharge rates can be reduced due to high sediment content in surface water.

Mitigation Factors - Problems associated with surface water in county parks can be reduced by several means. Public education targeting the harmful effects of high intensity or improper recreational use of county parks is a cost effective way to help prevent these problems. In areas of more critical concern, structural devices such as access barriers and catch basins, settling ponds or grassy swales, can restrict harmful use and reduce the sediment load of the surface water. Revegetation and restoration projects can help to restore biofiltration and water retention capabilities of the land. Projects like these provide an opportunity for public education. Through citizen participation in such projects, restoration is accomplished and community stewardship is fostered.

Impacts to Plants and Animals - Landscaping provides habitat for birds and some small mammals. While these micro-habitats may not be significant in size when compared to open space or natural wildlife corridors, they do provide links between these corridors. Trees and shrubs provide cover and forage for their transient residents. Birds help to keep the insect population in check. Furthermore, birds and small mammals contribute to the aesthetic character of landscaped areas. Loss of landscape trees and shrubs due to expansion of capital facilities will directly impact these micro-habitats and the animals who use them.

Recreational use of county parks may result in increased siltation of streams and rivers. High sediment loads can choke out anadromous fish spawning habitat . Salmon, steelhead and trout depend on gravely streambeds in order for their young to survive and develop properly. Siltation can infiltrate the gravel bottoms, causing the spaces between the rocks to fill in. Many rivers in Clallam County have already experienced a severe reduction in returning salmon and steelhead on their spawning migration. Therefore, increasing damage to our streams and rivers could be devastating to these species.

Riparian vegetation is important for a variety of reasons. It provides habitat for birds and other animals, It provides a base for aquatic insect life that in turn provides food for fish and other aquatic animals, and it helps to regulate and stabilize stream and river channels during periods of high water. Because streams and rivers are valued for their aesthetic and recreational opportunities, they are the preferred location for parks and recreational facilities. High intensity recreational use of these areas is likely to have a significant adverse impact on riparian vegetation.

Mitigation Factors - Loss of landscape vegetation and habitat values can be mitigated by requiring that any construction resulting in a loss of these areas should include landscaping of equal or greater area in the construction of the facility.

By implementing strategies (as prescribed in the section on impacts to water) aimed at mitigating the effects of surface water on county parks, impacts to anadromous fish spawning beds can be significantly reduced. Further measures should be considered for the protection of riparian vegetation. Public access may need to be controlled in areas where significant damage is experienced. Restrictions on areas of critical concern (i.e. erosion or landslide prone areas) should be developed.

Impacts to Energy and Natural Resources - The capital facilities element requires that essential public facilities be adequate prior to, or concurrent with, or be financially planned for, within six years of a development giving rise to the need for such facilities. This ensures that energy and natural resources required for such facilities will be planned for prior to development. In these circumstances, further analysis of mitigating factors is not required.

Impacts to Environmental Health - The capital facilities element recommends the construction of additions to existing county buildings to provide additional needed space. It also recommends the maintenance and up-grade of sewage treatment facilities. While these projects may produce some levels of noise and other nuisances, there are no long-term significant impacts associated with them and no further analysis is needed.

Impacts to Land and Shoreline Use - The capital facilities element includes parks and recreation facilities as required provisions to accommodate future growth. This involves the acquisition of lands in other uses and conversion to parks. Although there may be some economic impacts in terms of forfeited

use, increasing parks and recreational facilities can only add to the promotion of Clallam County as a tourist destination and will, in turn, offset economic impacts. Because parks tend to favor open space, it is unlikely that there will be any significant changes to land and shoreline use beyond those already discussed in previous sections.

Mitigation Factors - To prevent the loss of additional commercial agricultural or forest lands, lands selected for acquisition and conversion to parks and recreational facilities should not come from previously designated commercial forest or agricultural zones.

Impacts to Transportation - Financial planning for transportation needs is covered by the capital facilities element. It requires that adequate transportation facilities be in place prior to or concurrent with the development giving rise to the need for such improvements. Therefore, there will be no significant adverse impacts to transportation resulting from the capital facilities element.

Impacts to Public Services and Utilities - Public services covered in the capital facilities element shall be adequate to maintain a standard level of service. Public utilities and other services provided by other entities (i.e. PUD #1 and Port Angeles City Light), are not covered by the capital facilities element and are not impacted by it.

ALTERNATIVES

No Action Alternative - Capital facilities are often large and expensive to develop or acquire. In a region or area that is experiencing a level or declining growth rate, this problem is simplified by concentrating financial resources on general maintenance and operation of facilities. Areas experiencing significant growth are forced to deal with the additional problem of having to develop new facilities in order to accommodate additions to the local population. As Clallam County grows, it is likely that increased pressure on current facilities may require the expansion and development of new facilities. Without a capital facilities plan, the potential exists for funding to fall short of what is needed to produce necessary facilities. This will reduce existing levels of service for those facilities needing improvements and/or delay or preclude the development of new facilities. In addition, some state funding is available only to those jurisdictions who have a capital facilities plan.

Alternative Means to Achieve Plan Objectives - The Capital Facilities plan could include other capital facilities owned by public entities. Other public entities include local school districts, State of Washington, Port of Port Angeles, Public Utility District No. 1 of Clallam County, nine irrigation districts, six fire districts, a Library District, one park and recreation district, two hospital districts, and public transit. Having an inventory, level of service standards, and adequacy requirement for those facilities needed for development would satisfy growth management objectives. The ability to collect necessary information and set standards for other agencies is questionable. In addition, the legislation for the Growth Management Act specifically exempted special purpose districts from complying with the requirements of the Act.

Capital Facilities - Site Specific Projects

DISCUSSION OF ISSUES

The Capital Facilities element of the proposed comprehensive plan contains a "Projects and Financing Plan" based on a prescribed level of service. Some of these capital projects involve general maintenance or minor improvements to existing facilities (i.e. inflow/infiltration repair of existing sewage treatment facilities), that have minor or no impacts associated with them. Other projects involve more intensive measures to achieve their completion. The following is an analysis of the projects which may result in significant environmental impacts. In order to reduce repetition, projects resulting in similar impacts will be addressed as one group.

Some of the projects involve construction of new county buildings or additions to existing ones. Others involve the acquisition or development of additional park facilities. Projects of this nature have already been addressed in the environmental analysis of the general capital facilities element. These projects are:

A. GENERAL ADMINISTRATION FACILITIES PROJECTS:

1. Add space at County Courthouse/Veterans Center
2. New 8,000 sq. ft. office space to existing county property

B. PARKS AND RECREATION FACILITIES PROJECTS:

1. Clallam County Fairgrounds:
   a. new multi-purpose barn
   b. new merchant's building
   c. west midway restrooms

2. New 40 acre day use park at Port Williams

3. Dungeness Recreation Area:
   a. develop day use area
   b. develop bicycle primitive camp area
   c. build third camp loop

4. Salt Creek Park:
   a. develop group camp area
   b. develop new day use area
   c. construct hard surface trail
   d. build tennis court

5. Pillar Point:
   a. new picnic shelter at beach
   b. extend culvert and add parking

6. Build picnic shelter at Clallam Bay

C. EQUIPMENT MAINTENANCE FACILITIES:

1. New oil and parts room at Sequim.

2. New equipment shed at Port Angeles

3. Close in shop and add bay at Clallam Bay

Sewage treatment facilities projects - Capital projects for sewage treatment facilities include some maintenance and upgrades that could involve some initial risks to the environment. These projects are:

1. Solids handling at Clallam Bay and Sekiu
2. Disinfection at Clallam Bay and Sekiu
3. Insulating digesters at Clallam Bay and Sekiu

While the installation and/or renovation of these facilities may involve some risk due to accidental spillage or improper installation, these up-grades will result in significant benefit to the environment. Improvements to the solids handling facility will result in more thorough treatment and reduce the amount of harmful effluent discharged to the environment. Up-grading the disinfection systems will either incorporate ultra-violet light or chlorine treatment with a neutralizing process that eliminates any trace of chlorine upon discharge. Either method will eliminate the discharge of harmful chemicals at the outflow. Insulating digesters will help the system function more effectively during the cold months of the year. This will ensure that the same level of treatment is accomplished throughout the year.

Chip and Oil Seal Trails in County Parks - Improvements to county parks, in order to accommodate future population needs, involve the maintenance and extension of developed surfaces such as trails, campsites and parking lots. Some of these projects require oiling of gravel surfaces to seal them for greater stability and durability. These projects include:

1. Oil and chip seal trail at Panorama Vista
2. Oil and chip seal campsites at Dungeness Recreation Area
3. Oil road and lot at Camp David Jr.
4. Oil trail to footbridge at Clallam Bay

The long-term benefits of these projects include slope and soil stability and a reduction in sediment loading from the original trail surface. However, in the short-term these projects could involve some contamination of soils and water resources, as well as adverse impacts to plants and animals of the immediate area. This could occur if a freshly oiled surface encounters heavy rainfall where rain would transport dust and other small debris soaked with oil to immediate and lower lying areas.

Mitigation Factors - The risk of contamination can be significantly reduced or avoided altogether by requiring that this task be carried out during dry periods. Further environmental protection can be achieved by incorporating landscape techniques that encourage bio-filtration and purification of surface water that comes in contact with man-made surfaces.

Providing Power to Campsites - Accommodating a diverse range of recreational users in the county's parks and recreational facilities benefits Clallam County in both economic terms and quality of life. One of the capital facilities projects involves providing electricity to the picnic shelter at Dungeness Recreation Area, and to campsites #1-49 at Salt Creek Park. The presence of electrical outlets could provide some recreational users the chance to play music from tape decks, radios and CD players at inappropriately high volumes. The sound could be considered unpleasant by some of the other users of the facility. Additionally, wildlife in the area may be impacted by this type of intrusion.

Mitigation Factors - In order to prevent such conflicts from arising, parks could incorporate noise ordinances. Maximum volumes could be set. Quiet hours could be implemented to control the times at which loud music or other types of noise are to be allowed.

Dike Facilities Projects - There are two dike facilities on the Dungeness River maintained by the County that are noted in the capital facilities element. Capital projects planned at these facilities include:

1. Vegetation control on the dike facilities,
2. Maintenance of functioning appurtenances (i.e. tide gates on drainage culverts),
3. Maintain 100 year flood elevation by raising the dike facilities,
4. Maintain 100 year flood elevation by lowering the river channel.

The Dungeness River is an agrading river; the river bottom is raising due to gravel and other debris deposited on the channel floor. Historically, when the river bottom would raise to a significant degree, the river would break its natural channel and forge a new direction. Topographic evidence indicates that the river channel has covered land from Siebert's Creek to the west, all the way to Sequim Bay to the east. Houses, farms, roads and other structures are now located within close proximity to the river. Allowing the river to change its course would have disastrous consequences to property and endanger the lives of residents. It is these circumstances that justify capital projects three and four.

Vegetation Control - Use of herbicides in close proximity to the Dungeness River could have significant impacts on water quality and the aquatic ecosystem. Chemical sprays can be carried by the wind away from their target and come in direct contact with the river. Properly applied chemicals can be transported by surface water during rainy periods. This water is likely to drain into the river and cause harm to the plants and animals who live there.

Mitigation Factors - Use of herbicides should be limited to those chemicals that have a rapid breakdown period. This would reduce the chance of significant interaction with surface water and reduce the risk of chemical contamination. Restricting spraying to dry periods and low wind periods would also reduce the chance of wind or water transport of chemicals to the sensitive ecosystems of the Dungeness River.

Mechanical alternatives to vegetation control have less impact on the environment. Use of large scale landscape equipment such as industrial lawnmowers and bladed weed eaters can effectively remove vegetation with no significant long-term effects.

Lowering of the River Channel - Because of the long-term commitment to public safety, the lowering of the Dungeness River channel is preferred to raising the dike. The Dungeness River moves some 40 to 45 thousand cubic yards of gravel each year. Most of this debris never makes it to the mouth of the river. If raising the dike was the only course of action, river elevation would soon be greater than the surrounding land. This would create a greater potential for disaster than just allowing the river to change its course at will. Unfortunately, this lowering the channel has the potential for destroying anadromous fish habitat. Pink and fall Chinook salmon are threatened species on the Dungeness River. It is crucial to these species that activities on the river do not interfere with their recovery.

Mitigation Factors - Gravel removal from the stream channel can be accomplished with minimal impacts to anadromous fish habitat. Locations should be considered based on where the fish are least likely to spawn and more likely to hold or rest on their journey. By selecting these areas, habitat can actually be created. Deep pools provide fish with slow moving water which requires less effort for the fish to maintain their position. These pools provide fish with cover and help to regulate the temperature of the water - another crucial element of fish habitat.

Because the river is now in a somewhat fixed position, the deposition of gravel on the river bottom has become a threat to the rearing of anadromous fish. Eggs and young smolt can be covered by the gravel and crushed under its weight. The removal of gravel in strategic locations will effectively reduce the source of this problem and decrease harm to the fish.

Additional measures include the restoration of riparian vegetation. Riparian vegetation helps to stabilize the river banks and moderate stream flow. Friction created by the roots of trees forces the water to flow more rapidly in the center. This flushes gravel and other debris through the channel by avoiding

excessive deposition and creates a deeper river bottom. Additionally, the river is prevented from sprawling over its banks by the retention of soils from the trees and shrubs along the bank.

Septage Handling Facilities - The Bio-Solids Task Force under the direction of the Clallam County Department of Community Development is exploring alternatives to deal with the problem of septage handling. Currently there is no such facility in Clallam County, and septage must be transported at significant costs and risk to facilities in Seattle and Tacoma. The Capital Facilities element becomes operative when this facility passes the planning stage and becomes an actual project. Because there is no actual design or location at this time, environmental analysis can not be accomplished and should be considered when more information becomes available.

ALTERNATIVES

No Action Alternative - Under the no action alternative, it would be more difficult to develop and up-grade capital facilities. Allocating funds for needed projects would become a greater problem as increases in demand coupled with a loss of some revenue sources (i.e., grants, impact fees and real estate excise taxes) place a strain on fiscal resources. Many needed facilities may not be constructed due to lack of funds or planning. Many areas needing such facilities would be impacted by reductions in levels of service. Impacts to the natural environment may occur. Parks and recreational facilities in scenic areas may be over-burdened by too much traffic. Increases in soil erosion, devegetation and sediment loading in streams and rivers may occur in some areas.

Alternative Means for Achieving Goals - The Housing Element of the comprehensive plan contains several strategies to encourage affordable housing. The focus of the affordable housing policies is directed at increasing the supply of very low, low and moderate income housing through public assistance for very low income housing and incentives for low and moderate income housing. An alternative that was considered included focusing the affordable housing policies on increasing the supply of very low, low and moderate income housing without specifying that public assistance would apply only to very low income residents. This approach was considered because it would allow affordable housing developments to contain a mix of housing prices and types but was rejected because it was felt that the market was already providing units affordable by low and moderate income households. Additionally, impact fees exemptions were considered for low income housing but all references to impact fees were dropped. The "no action" alternative was rejected due to a well documented shortage of affordable housing units for people at low income levels.

Affordable Housing

DISCUSSION OF ISSUES

In compliance with the Growth Management Act of 1990, the proposed comprehensive plan contains a section on affordable housing. The section presents policies and goals aimed at providing a reasonable stock of affordable housing for all economic segments of Clallam County.

According to the proposed comprehensive plan, affordable housing for low and very low income segments of the population will be provided for by efforts from public and private sources. Incentives such as density bonuses and financial assistance will encourage developers to include affordable housing within their new developments. Acquisition of suitable lands by governmental agencies for the purpose of low income housing is another method described by the proposed plan.

The affordable housing section is developed to ensure that adversities commonly associated with low income housing (i.e. crime and reduced property values) are prevented. Provisions for landscaping and buffering from adjacent lands and scattering developments throughout the County in smaller scale developments will significantly reduce adversities and aid in social acceptance of these facilities.

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to provide affordable housing opportunities for all the county's population for the next twenty years. The following objectives form the framework for this:

1. Encourage a range of housing types.

2. Increase supply of affordable housing stock by incentives to developers.

3. Increase supply of affordable housing stock by government acquisitions/funds.

PROPOSED GOALS AND POLICIES

The primary goal of County-wide housing efforts is the development of a range of housing types which results in affordable housing for those in need of assistance for very low-, low-, and moderate income housing. In order to accomplish this, Clallam County should form, coordinate, support and participate in a Housing Task Force comprised of representatives from various governmental and private resources. The goals of the Task Force should include:

1. developing a rapid review and financing program for those in need of affordable housing;
2. monitoring and reporting progress toward meeting housing production and rehabilitation goals;
3. develop a Housing Rehabilitation Program;
4. identify and aid public and private agencies which sponsor self-help housing projects;
5. explore methods to encourage the purchase of single-family dwellings to be offered as rentals.

Beyond the establishment of a Housing Task Force, Clallam County's housing goals fall into three categories: 1) goals formulated around zoning; 2) those formulated with regard to land availability; and 3) goals which provide education and offer incentives to provide affordable housing.

Zoning Goals - The County should develop innovative zoning techniques to create and maintain affordable housing opportunities. These techniques could include creative use of subdivision techniques; accessory rental housing conversions; review of current mobile home park ordinances to provide quality mobile home parks in Urban Growth Areas; allowing detached guest housing on lots of sufficient size to be used for rental purposes; provision of increased opportunities to develop high-density housing. Opportunities for residential development should be increased within commercial zoning districts.

Land Availability - The County should develop a program to assemble packages of publicly-owned land and homes which could be used for low income housing. Lands so identified and designated should be sold or leased at prices reflecting the value for this use. Clallam County should work with other governmental agencies to inventory and designate lands suitable for mixed residential density housing to be annexed to cities. The County should locate, designate, and zone vacant lands for mixed residential use prior to annexation. Housing acquired through tax default which is suitable for low income housing should be transferred to the Clallam County Housing Authority or other low income housing providers.

Education and Incentive - Clallam County should design and support educational efforts which increase awareness of County ordinances regarding affordable housing. Such efforts should be directed toward governmental agencies, private investors, and those who seek such housing. The County should insure that all housing projects are well-designed and include quality landscaping, playgrounds, community services, green spaces, and amenities which help create a quality living environment. The County should provide incentives for housing projects which will become part of the affordable housing stock. Non-profit groups, for-profit developers, and the Housing Authority should be encouraged to initiate a Scattered Site Housing Construction program to encourage small scale affordable housing on scattered sites throughout the County. Programs to encourage the improvement of sub-standard housing by identifying funding sources for rehabilitation should be developed.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Significant Impacts - Significant environmental impacts likely to occur as a result of the affordable housing section are primarily from the development of new facilities and problems associated with the higher dwelling densities of these areas. Impacts associated with the construction of new residential developments (whether low income housing or not), are discussed in detail under the section on Urban Growth Areas of this document and warrant no further analysis. The fact that these areas will contain higher unit densities merely requires that a more stringent application of the mitigation measures presented in that section be considered.

The plan allows for the conversion of pre-existing, detached, accessory structures to rental housing on lots containing single family dwelling units. This will provide affordable housing at little or no cost to the public; however, the potential exists for this type of housing activity to spread throughout the county. This would create cumulative effects that could decrease prescribed levels of service for transportation, utilities and facilities and some public services. Increases would be difficult to manage due to lack of phased implementation or regulation of this type of use. Rural areas, where priorities on infrastructure are lower than those in Urban Growth Areas, could develop unplanned or unanticipated deficiencies resulting from increased population densities and the services needed to accommodate them.

Mitigation factors - The development of a phased implementation plan aimed at giving priority to areas where public facilities and services capable of handling significant increases in demand should be considered. Siting regulations could aid in controlling unplanned and unmanaged residential conversions for accessory rental units. Density controls could be amended to include accessory unit development. Actual implementation of such strategies should be considered only if significant need warrants such an effort. The goal of the proposed comprehensive plan is to promote affordable housing, not restrict it, and the application of regulations should be implemented only when pressure on levels of service, or environmental impacts require such governmental intervention.

ALTERNATIVES

No Action Alternative - The no action alternative would result in a continued shortage of low-income housing in Clallam County. Because economic development of higher paying industries would not be encouraged, the number of people needing this type of facility would likely increase as the population increases. This could also increase the number of homeless people in the county and place additional pressure on County Social Services.

New Fully-Contained Communities And Master-Planned Resorts

DISCUSSION OF ISSUES

New fully-contained communities and master-planned resorts may be located outside Urban Growth Areas provided they comply with the procedures and criteria described in the land use element of the proposed comprehensive plan.

Under the proposed comprehensive plan, new fully-contained communities will be considered an amendment to the comprehensive plan by being re-designated as Urban Growth Areas. They will be allowed only as a condition for accommodating increased growth projections that cannot be accommodated by existing Urban Growth Areas. Under these conditions, impacts from growth will have already reached a maximum level in other areas of the county. Care must be taken in deciding the location of these new communities. For associated problems and mitigation factors, please refer to the section on Urban Growth Areas in this document.

Master-planned resorts will likely be located in commercial forest areas due to scenic and recreational considerations and the scarcity of large rural acreage outside of commercial forest designations. Due to the large-scale nature of these facilities, it is likely that a master-planned resort will have significant environmental impacts associated with it.

PLAN OBJECTIVES

It is the intent of the proposed up-dated comprehensive plan to present a framework which would allow the development of new fully-contained communities and master-planned resorts within Clallam County. Master-planned resorts , with a primary focus on destination resort facilities consisting of short-term visitor accommodations, indoor or outdoor recreational facilities and other residential uses should be considered feasible in Clallam County provided they comply with the provisions of this section. New fully-contained communities which include areas for housing, employment, recreation, public services and facilities, and open space corridors should also be considered feasible in Clallam County. Whether or not such areas would be proposed is not known; however, provisions should be made to allow such new communities within the County if appropriate standards are met.

PROPOSED GOALS AND POLICIES

Special Communities - A master-planned resort could be proposed within Clallam County and consideration given to siting such a resort (or resorts) in forested or rural areas. Fully-contained communities should also be considered feasible in Clallam County and provisions made to allow such communities. Both master-planned resorts and fully-contained communities may be proposed outside of Urban Growth Areas if they meet specifications detailed in the Urban Growth and Sprawl section of the Environmental Impact Statement.

Master-planned resorts may be located outside of Urban Growth Areas provided they are sited on parcels of land no less than two hundred-forty (240) acres; existing state or county roads are adequate, or need minimal improvements to serve the development; public water and sewage systems are provided on-site; a buffer adequate to ensure that harvesting of timber or crops on adjacent resource lands is not precluded; notice regarding adjacent resource lands and the potential nuisance and conflicts is provided to future property owners; and the resort is not be located within one mile of an urban growth area.

New fully-contained communities may be located outside existing Urban Growth Areas provided the proposal is considered an amendment to the comprehensive plan designating the new fully-contained community as an urban growth area. Proposals must meet the following conditions: They shall include no less than six hundred forty (640) acres of land; infrastructure is provided within the community; traffic demand management programs and transit services are implemented; the community is not located within five (5) miles of a designated urban growth area. At least ten percent (10%) of the housing units must set aside for low and moderate income housing; the new community provides a 1 : 1 ratio of jobs to housing units; commercial services such as gas stations, restaurants, goods and services are provided; open space corridors within and at the edge of the community are provided; provisions are made to mitigate impacts on designated resource lands; and the community is developed consistent with the Clallam County Critical Areas Ordinance.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Potential Impacts - Construction of roads, buildings and parking lots for both new fully-contained communities and master-planned resorts will remove natural vegetation and compact and disrupt surface soils. This will increase the area of impervious surface causing a reduction in aquifer recharge and accelerate surface water runoff. This, in addition to a reduction in the land's capacity to retain and moderate flows will result in increased flood potential. Disrupted and devegetated soils will be more susceptible to erosion. Risk of water contamination due to contact with man-made surfaces will increase. Plant and animal habitat will be curtailed. Noise and other human activities may scare off some species of animals sensitive to such intrusions. Encroachment on migration routes could further impact wildlife in the area.

Extension of public services and facilities are likely to be difficult and costly. Appropriate upgrades in roads and utilities will be more costly and labor intensive due to the mountainous terrain of most of our

commercial forests. Maintenance of roads and some facilities will also be impacted due to the harsher climate of these remote areas.

The section on master-planned resorts contains a provision for allowing "other residential uses" without further definition or restriction of this provision. It is possible that this provision could be used by large-tract landowners wishing to develop their land for residential use. Because there is no restriction on the size of a resort facility in relation to "other residential uses," technically, all that would be required is the provision of a resort facility regardless of the size. In this circumstance, developers could provide a resort facility on a small portion of land and subdivide the remainder into residential lots. Such action undermines the purpose and intent of a master-planned resort and contributes to residential sprawl.

Mitigation Factors - Measures can be implemented to mitigate the potential impacts to soil and water resources in master-planned resort areas. Observation of stream and river buffers and aquifer recharge areas can help guide planning to areas more suitable for development. Strategic landscaping techniques can be used to further mitigate problems with soil erosion or water quality.

Avoiding migration routes and sensitive habitats will help prevent conflicts between humans and other users of the forests where master-planned resorts are located. Public education programs aimed at making people aware of the effect recreational encroachment has on wildlife habitat can help to prevent further conflict arising from human activities.

Protection of commercial forests from the damaging effects of development goes beyond the mitigation of certain environmental concerns. Careful consideration should be given to the preservation of the natural landscape. This will ensure outdoor experiences will not be jeopardized and that the recreational industry will benefit from the resort. Provisions for the removal of trees and topographic features should be based only on what is necessary for the construction of the facility. Design should reflect consideration of topography and geographic features. Placing facilities away from the scenic vistas on major roadways will help to maintain the rural character of commercial forests.

The economic benefit (increased tourism and new jobs) of having a master-planned resort in Clallam County can help compensate for the economic burden on essential services and utilities. The proposed comprehensive plan requires that adequate essential services and utilities are in place concurrently or prior to the construction of such a resort or be financially planned for within six years. Assessment of service and utility capacity required to accommodate new construction is a requirement. This will ensure that unplanned burdens on public utilities and services do not occur.

Restrictions can and should be developed aimed at controlling the number and type of residential developments accompanying a master-planned resort facility. Allowing residential development that provides only sufficient worker housing and/or uses a set percentage of the net developable land (excluding critical areas and required buffers), could curtail un-anticipated abuses.

Because new fully-contained communities will contain high-density residential, commercial and industrial development, impacts to the natural environment will be significant. Developments should be sited so that scenic areas and unique natural features are not destroyed or their effect reduced by the presence of adjacent high density development. For other impacts associated with new fully-contained communities, please refer to the environmental analysis section on Urban Growth Areas of this document.

ALTERNATIVES

No Action Alternative - Urban densities outside of city limits are allowed only in designated urban residential areas. In urban residential areas located away from city centers, urban density communities are likely. These areas are likely to have service and facility needs (i.e., sewer, schools, fire and police protection) that cannot be accommodated within the areas themselves. Extending services from existing city centers will be necessary. This will have significant adverse impacts on the services and raise the cost of provision. Because industrial and commercial development is limited in urban residential areas, it

is unlikely that a tax base significant enough to support the community would be established and dependency on neighboring city services would be long-term.

Existing zoning includes planned resort communities and planned unit developments as permitted uses in some areas. However, they fail to accommodate the scale of developments considered in this section. Planned unit developments do allow for higher density developments, but fail to consider adjacent development patterns and could result in spotty, sprawling developments in rural areas. Fully-contained communities currently proposed cannot accommodate industry, commerce, and public services and facilities needed to serve a large, high density development.

Alternative Means to Achieve Plan Objectives - Since new fully-contained communities would require an amendment of the comprehensive plan (urban growth area), it is not necessary to make any provisions for such a community at this time in the plan except as provided for in the section on Urban Growth Areas. The plan could simply recognize that new fully-contained communities may locate in Clallam County when meeting the requirements of the Growth Management Act.

The comprehensive plan could include more specific criteria for the location of master-planned resorts. As described earlier, under Mitigation Factors, the plan could include limits on the residential component of the resort, as well as specific requirements for buffers, landscaping and public service extension.

Environment And Open Space

DISCUSSION OF ISSUES

The Growth Management Act requires counties planning under the Act to designate critical or environmentally sensitive areas and develop regulations aimed at their protection. RCW 36.70A.030, Section 5, defines critical areas to include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. The Act also requires the counties and cities to identify open space corridors within and between Urban Growth Areas and provide them with the authority to acquire such lands through purchase of development rights or other incentives. Included are lands useful for recreation, wildlife habitat, trails, and connection of critical areas. These elements form the basis for Clallam County's policy on environment and open space.

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to develop strategies for the protection of environmentally sensitive areas including but not limited to: geologic hazards, wetlands and hydric soils, critical aquifer recharge areas, floodprone areas, critical wildlife habitat, and open space. The following objectives form the framework for this:

1. Employ public education, stewardship, and public involvement as a preferred means for achieving environmental quality.

2. Develop incentives for compliance with environmental objectives.

3. Develop regulatory means for the achievement of environmental objectives where necessary.

PROPOSED GOALS AND POLICIES

Clallam County has a responsibility to protect citizens' investment in environmental quality. This involves a careful balance of protection of environmental quality, development rights, and private property rights. In addition to the specific goals listed below, education and incentives are an important element of all County goals.

General Goals - For all environmental issues, the County should pursue the most reasonable solution, recognizing that prevention is less expensive than cleaning polluted areas. Potential impact and cost of treatment or remediation should be considered before the County permits land use practices which may potentially damage the environment. The County should adopt the Interim Critical Areas Ordinance and amend it as need to implement watershed or special area studies.

Regional Plans - Clallam County is environmentally diverse and special geographic regions will require the development of locally applicable regional plans consistent with the goals of the Comprehensive Plan. Existing watershed and water resource management policies should be incorporated into the regional plans where consistent. Public involvement is an essential element of the development of regional plans.

Wetlands - Clallam County should work to achieve no net loss of regulated wetlands, specifically with regard to long-term water quality and hydrologic storage. Public acquisition of important wetlands should be pursued. Community facilities should be located outside of wetlands and buffers. Educational, historical, and cultural values of wetlands should be protected.

Groundwater - The surface-groundwater interface should be protected by developing performance standards and regulating activities which impact aquifers, surface waters, and watersheds. Clallam County should encourage water conservation measures for all land uses in order to protect aquifers and should undertake further studies of current groundwater policies.

Habitat - Wildlife corridors and riparian areas should be maintained by employing land use practices which enhance diversity and richness and protect habitat for threatened and endangered species. Clallam County should protect, maintain, and enhance shellfish spawning, rearing and migration habitat and ensure harvestability of fish and shellfish.

Runoff and Erosion - Natural stream corridors, wetlands, buffers, and aquifers should be protected from adverse effects of stormwater runoff. The County should encourage regional solutions to stormwater management to prevent harm to regional natural systems. Stormwater control should be required for all new development and redevelopment.

Floodplains - Flood control should be undertaken in the context of a variety of uses, including public access, while reflecting the natural constraints of floodplains, meander zones, and riparian habitat. Flood control should be developed in the context of basin management and preservation. Low intensity land uses should be encouraged in floodplains and other uses discouraged. There should be no net loss to fish and wildlife habitat from flood control practices.

Hazardous Areas - Land use practices in hazard areas should not cause or exacerbate natural processes which endanger the lives, property, and resources of citizens.

Air, Noise, and Light - Clallam County should promote a high level of air quality and work to minimize light and noise pollution in an economically feasible manner. This may include the development of performance standards for commercial lighting and establishment of appropriate densities in rural areas and urban buffer areas.

Non-point Source Pollution - Water resource planning and waste management should be coordinated across jurisdictional boundaries. The County should recognize and control downstream and cumulative effects of individual practices on water resources.

Solid Waste and Recycling - Clallam County should pursue local solutions to waste and disposal and recycling, including treatment and disposal of biosolids. Opportunities for collecting and disposing of waste should be provided to all citizens of Clallam County.

Open Space and Public Access - Clallam County should identify sites for public access and open spaces for public acquisition through a variety of purchase options. Public access and open spaces should be provided and managed for educational opportunities, recreational needs and resource

sensitivity to human intrusion. Public use strategies should be coordinated on a cross-jurisdictional basis. Open space corridors should be maintained and connected where possible and transportation corridors planned to prevent fragmentation of open space. Management of public open spaces should occur at the minimum level necessary for public safety.

Oil Processing and Transmission - The coastline, coastal water, and upland areas should be protected from problems associated with oil ports and development of oil port areas. Industries with high energy and water pollution components shall not be permitted.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Essentially, there are no significant environmental impacts associated with the proposed comprehensive plan's section on environment and open space other than those previously delinated in the section on capital facilities. Economic burdens resulting from mandatory compliance with some of the regulatory policies are more than off-set by the economic benefit of preventing environmental degradation: Prevention is less expensive than cleaning up pollution later. Property rights are protected (by just compensation) from goals and policies that pursue the preservation of land in its natural state. Incentives are encouraged in the form of purchase of development rights and special tax status to achieve certain environmental goals. These strategies involve voluntary consent of the land owner and do not impose on ownership rights.

General Mitigation Factors - The section on environment and open space provides a variety of suggestions and measures that are to be considered by decision-makers as means for protecting environment and open space values in Clallam County. Where actual mitigation is needed, fully implementing these measures in the form of regulation and mandatory compliance should be pursued.

Because of the nature of the section on environment and open space, the following environmental evaluation will deal with some of the positive effects this section will have on future growth and development in Clallam County.

General - Passage of the proposed comprehensive plan with its section on environment and open space will adopt by reference, as long term county-wide policy, the Clallam County Critical Areas Ordinance. This will provide a comprehensive and internally consistent means for regulating development and land use activities which have the potential for degrading or impacting the environment. Consistent with the ordinance, the section on environment and open space encourages the use of best management practices and current technologies for all environmental issues. This will ensure that all that can be done will be done in the effort for environmental quality and protection.

Non-regulatory measures include prevention, education and incentives for compliance. These elements provide efficient ways of achieving environmental goals. They are generally less costly and reduce the need for regulation and laws that restrict land use activities.

Wetlands - Preserving the net wetland base in Clallam County will have lasting benefits for local communities. Providing for water quality, quantity, habitat and recreation is essential for maintaining the high quality of life enjoyed by Clallam County residents. Education and incentives will help to achieve this goal without requiring regulation. Acquisition of important systems through just compensation will protect essential infrastructure while protecting personal property rights as well.

Groundwater - Recognizing Clallam County's responsibility for groundwater quality, the county assumes a pro-active approach to resolving groundwater quality issues. By implementing measures suggested, groundwater quality is likely to stabilize or even improve in the future. Water quantity will continue to be an issue until further studies are complete and more is known about the storage capacities of underground water supplies.

Habitat - Preservation and restoration of habitat will have a direct and positive effect on the plants and animals who need them for survival. In addition, there will be long-term economic benefits as well. Loss

of fishing seasons and commercial timber to species protection measures have already placed severe economic burdens on various communities in Clallam County. By restoring and providing habitat for endangered or threatened species, loss of additional land through state and federal government initiatives can be reduced or avoided.

Runoff and Erosion - Currently, the only drainage and erosion control regulation for Clallam County is found in the Critical Areas Ordinance. This applies only to areas classified as erosion hazard zones. Because erosion and drainage problems can adversely impact water resources located far from the source (i.e. anywhere within a watershed basin), runoff and erosion control standards should be implemented county-wide. Clallam County is currently developing regulations which are consistent with the Puget Sound Water Quality Management Plan for erosion and storm water control. Once adopted, the resulting document should provide Clallam County with the means for effectively controlling and reducing problems associated with erosion and storm water.

Floodplains - The Clallam County Critical Areas Ordinance contains provisions for the protection of floodplains from incompatible and intensive use. It encourages using floodplains for recreational, agricultural, low density worker housing and open space uses. However even low intensity uses can have significant environmental impacts associated with them. Damage from floods can be extensive. Loss of property, destruction of plants and landscape features, and even loss of life can result from severe flooding. Increased contamination of the river and stream systems that flood waters drain into is also a possibility. In addition, exposed soils and other debris can add to the already silty conditions of a river in flood stage.

Mitigation Factors - The Clallam County Critical Areas Ordinance provides controls on types and designs of facilities allowed in flood prone areas. Many problems associated with flood-borne effluents have already been mitigated. Further mitigation can be achieved through reducing the density of livestock allowed to graze on or near a floodplain. Chemical fertilizer and pesticide use should be reduced or eliminated in areas of particular concern. Restricting fertilizers on golf courses within the flood prone area should be considered. Only low-impact recreational uses should be allowed in floodplains. Trails and public access points should be maintained in order to reduce disruption or devegetation of riparian zones. Public education aimed at awareness and stewardship should be provided at all recreational access areas to help encourage activities that do not adversely impact the resource.

Hazardous Areas - The Clallam County Critical Areas Ordinance provides regulations on geologically hazardous areas. These areas include erosion, landslide, and seismic hazards. Regulations provided by the ordinance will effectively reduce the likelihood of property or personal damage resulting from these hazards.

Air, Noise and Light - By promoting alternate modes of transportation, maintaining and enhancing open space and wildlife corridors and other vegetative buffers, allowing land uses that are compatible with adjacent land uses, and providing innovative lighting strategies, the quality of the county's air, light, and noise level can, at a minimum, be maintained and is more likely to be enhanced as a result of the proposed comprehensive plan.

Non-point Source Pollution - Effective implementation of non-point pollution source control strategies should help maintain and restore water quality in Clallam County. Employing incentive and educational methods will help achieve this goal in the most efficient and least costly ways possible.

Solid Waste and Recycling - Promoting businesses that provide solutions to solid waste problems and utilize recycled waste will help deter the need for new land fills and dump sites. Innovative techniques in managing and handling hazardous wastes will help protect environmental quality in Clallam County. Providing public education and opportunities for disposing of household chemical wastes will have a cumulative and beneficial effect throughout the county.

Open Space and Public Access - Providing public access under the conditions of the section on environment and open space will increase recreational opportunities and help promote Clallam County as a tourist destination, while providing environmental protection. By providing incentives for compliance, access and open space can be achieved without infringing on personal property rights. Maintaining connections between wildlife and open space corridors will help maintain ecosystem health and diversity.

Oil Processing and Transmission - By prohibiting oil port facilities and other industries with a high pollution component, Clallam County will not attract some economic opportunities that would accompany such industries. However, the potential for environmental degradation and the associated costs in terms of clean-up and lost tourism would negate the economic benefit of locating these industries in Clallam County.

ALTERNATIVES

No Action Alternative - By choosing to forego the proposed comprehensive plan, Clallam County would loose legislative authority for the protection of critical and environmentally sensitive areas. Environmental problems would have to be dealt with on a case-by-case basis. The permit process would be slowed and become more costly to both the county and private individuals. Property and individual safety would not be protected from geologic hazards. Soil and water quality would continue to degrade. Loss of critical wildlife habitat would threaten sensitive plants and animals and could encourage the state and federal governments to remove additional land from the commercial forest base for the protection of these species. This would have economic consequences to timber and fisheries industries. Destruction of natural and scenic areas could reduce Clallam County's appeal as a tourist destination and lead to lost revenues due to decreased tourism.

Alternative Means For Achieving Environmental Objectives - Management to limit environmental impacts of growth can occur by various means. Regulation can be used to achieve resource protection, by requiring strict controls on retention and use of sensitive areas and open spaces. Mandatory stormwater system and on-site sewage inspections through a renewable permit system or similar tool could be required to protect surface water. State law currently requires Clallam County to use its regulatory authority to prevent damage to human and environmental health through on-site sewage codes and floodplain management, among others. Clallam County could institute mandatory waste collection and recycling programs, at the expense of the taxpayers (Chapter 36.58 RCW). However, regulation is a viable option only when adequate enforcement capacity exists to prosecute violations. To do this,

additional administrative and prosecutorial staff would be needed to inspect and document operations, and to enforce additional regulations.

Rather than encouraging individual responsibility for managing the environmental effects of growth and development, Clallam County could use its various authorities to establish regional facilities for surface and waste water management, financed by bonds or assessments (Chapter 36.94 RCW). Property taxes can be levied for the purpose of acquiring conservation futures and other rights to real property (Section 84.34.230 RCW).

Clallam County could choose to make no local policies regarding the environment or open space, but instead rely on implementation of existing state and federal law. A myriad of government agencies, with various layers of bureaucracy and rules, would have the responsibility for dictating local land use practices. Generalized policies drawn with a broad brush across the entire state would be implemented, and environmental protection achieved without regard to local, site-specific conditions and community values.

Archeological And Historical Sites

DISCUSSION OF ISSUES

The Washington State Environmental Policy Act requires an environmental impact statement to accompany any legislative action effecting land use policy. Designation and preservation of historic and cultural resources is required under the environmental policy act. It is the policy of Clallam County and this document to recognize and avoid the destruction or degradation of the historic and archeological sites.

The following have been placed on the National Register of Historic Places:

John Hyer Farm

Cape Flattery vicinity, **TATOOSH ISLAND**, Northwest of Cape Flattery [NR 03/16/72]

Dungeness, **DUNGENESS SCHOOL**, 657 Towne Rd. [NR 05/19/88]

Elwha, **ELWHA RIVER BRIDGE,** Old Highway 112 [NR 07/16/82]

Forks vicinity, **WEDDING ROCK PETROGLYPHS,** Northwest of Forks in Olympic National Park [NR 04/03/76]

La Push vicinity, **OZETTE INDIAN VILLAGE ARCHAEOLOGICAL SITE,** North of La Push on Cape Alava [NR 01/11/74]

Port Angeles, **CLALLAM COUNTY COURTHOUSE,** 319 Lincoln St. [NR 09/02/87]

Port Angeles, **MASONIC TEMPLE,** 622 South Lincoln St. [NR 05/11/89]

Port Angeles, **NAVAL LODGE ELKS BUILDING,** 131 E. First St. [NR 05/02/86]

Port Angeles, **PARIS, JOSEPH, HOUSE,** 101 E. Fifth St. [NR 11/05/87]

Port Angeles, **ST. ANDREW'S EPISCOPAL CHURCH,** 206 S. Peabody St. [NR 11/05/87]

Port Angeles, **U.S. POST OFFICE,** West First and Oak St. [NR 09/01/83]

Port Angeles vicinity, **BLUE MOUNTAIN SCHOOL,** Blue Mountain Rd. [11/05/87]

Port Angeles vicinity, **ELWHA RIVER HYDROELECTRIC POWER PLANT,** North end of Lake Aldwell [NR 12/15/88]

Port Angeles vicinity, **EMERY FARMSTEAD,** Emery Rd. [NR 12/16/88]

Port Angeles vicinity, **GLINES CANYON HYDROELECTRIC POWER PLANT,** Glines Canyon [NR 12/15/88]

Port Angeles vicinity, **HUMES RANCH CABIN,** South of Port Angeles on the Elwha River [NR 09/14/77]

Port Angeles vicinity, **ROSEMARY INN,** Southwest of Port Angeles on Barnes Point [NR 07/17/79]

Pysht vicinity, **HOKO RIVER ARCHAEOLOGICAL SITE,** West of Pysht [NR 03/21/78]

Sekiu, **SEKIU SCHOOL,** Rice St. [NR 05/01/91]

Sekiu vicinity, **HOKO RIVER ROCK SHELTER ARCHAEOLOGICAL SITE,** West of Sekiu on Kydaka Point [NR 03/27/80]

Sequim, **DUNGENESS RIVER BRIDGE,** Spans Dungeness River [NR 07/16/82]

Sequim vicinity, **MANIS MASTODON SITE,** South of Sequim [NR 03/21/78]

Sequim vicinity, **McALMOND HOUSE,** North of Sequim on Dungeness Bay [NR 08/09/76]

Sequim vicinity, **U.S. QUARANTINE STATION SURGEON'S RESIDENCE,** 101 Discovery Way, Diamond Point [NR 05/11/89]

Sequim, **SEQUIM OPERA HOUSE,** 119 North Sequim Avenue [NR 05/28/91]

Beaver, **BEAVER SCHOOL,** Highway 101 North, Beaver [NR 11/19/92]

The following are eligible for National Register of Historic Places:

Barnes Point vicinity, **STORM KING RANGER STATION (MORGENROTH CABIN),** South shore of Lake Crescent, southwest of Barnes Point [Det. Elig. 12/28/81]

Cape Alava vicinity, **WHITE ROCK VILLAGE ARCHAEOLOGICAL SITE,** Olympic National Park, 2 miles south of Cape Alava [Det. Elig. 11/17/78]

La Push vicinity, **OLYMPIC NATIONAL PARK ARCHAEOLOGICAL DISTRICT,** Pacific Coast from vicinity of Toleak Point to vicinity of Sand Point [Det. Elig. 11/17/88]

Sequim vicinity, **NEW DUNGENESS LIGHT STATION,** Dungeness Spit [Det. Elig. 05/03/78]

The following have been placed on the Washington State Register of Historic Places:

Cape Johnson vicinity, **ARCHAEOLOGICAL SITE 45-CA-32,** Olympic National Park [SR]

Crescent Bay vicinity, **FORT HAYDEN (TONGUE POINT),** East of Crescent Bay on Tongue Point [SR 02/11/72]

Dungeness Spit vicinity, **NEW DUNGENESS,** Base of Dungeness Spit [SR 05/31/74]

Forks, **COPELAND, ADAM, HOUSE (FIRST FEDERAL SAVINGS & LOAN LOG CABIN),** 215 Calawa Way [SR 03/01/91]

Forks, **SMITH-MANSFIELD HOUSE,** Sixth Avenue N.W. [SR 05/21/82]

Lake Ozette vicinity, **ROOSE, PETER A., HOMESTEAD,** Two miles west of the northern tip of Lake Ozette [SR 11/18 77]

Neah Bay, **QUIMPER'S LANDING AT NEAH BAY,** On Neah Bay near Village Creek [SR 02/11/72]

New Dungeness vicinity, **GRAVEYARD SPIT (TSIMSHIAN),** Southern reach of Dungeness spit, north of New Dungeness [SR 07/30/71]

Port Angeles, **I'E'NIS, CLALLAM INDIAN VILLAGE (HOLLYWOOD BEACH),** Hollywood Beach [SR 02/11/72]

Port Angeles, **PUGET SOUND COOPERATIVE COLONY,** Ennis Creek [SR 05/31/75]

Port Angeles vicinity, **BAGLEY LAKE FARM TUNNEL,** End of Lake Farm Rd. [SR 05/21/82]

Port Angeles vicinity, **EDIZ HOOK LIGHT STATION,** Tip of Ediz Hook [SR 05/20/77]

Sekiu, **SEKIU SCHOOL,** Rice St. [SR 05/21/82]

Sequim, **SEQUIM OPERA HOUSE,** 119 N. Sequim Avenue [SR 03/01/91]

Sequim, **SEQUIM TOWN HALL,** 152 West Cedar St. [SR 05/26/89]

Sequim vicinity, **GIERIN FARMSTEAD,** 219 Port Williams Rd. [SR 11/18/88]

Sequim vicinity, **PORT WILLIAMS,** North of Washington Harbor [SR 02/11/72]

Washington Harbor vicinity, **SUXTCIKWI'IN (WASHINGTON HARBOR INDIAN VILLAGE),** Northern Shore of Washington Harbor [SR 02/11/72]

PLAN OBJECTIVES

It is the intent of the proposed updated comprehensive plan to deter, where possible, any loss or destruction of archeological or historic sites within Clallam County.

PROPOSED GOALS AND POLICIES

Clallam County recognizes locations contained in the state or federal registrars for historic and archeological sites as areas of intrinsic educational and economic value. Clallam County should develop strategies aimed at the preservation and protection of these areas.

SIGNIFICANT IMPACTS

No Action Alternative - Archeological and historic sites are protected under federal law. However this only applies to federally funded projects. Forgoing the comprehensive plan will limit the amount of protection afforded these areas should the comprehensive plan pass.

Incorporation By Reference

Several SEPA documents were written for various interim county growth management policies and other county policies that have significantly contributed to the growth management process. They provide supporting information pertinent to the environmental analysis of the proposed comprehensive plan. They provide greater depth and understanding of the issues and associated impacts of the proposal. These documents are hereby incorporated by reference pursuant to WAC 197-11-635. These documents are:

DNS Clallam County Agricultural Resource Conservation Plan - Provides information pertaining to agricultural resources including; description of the proposal, the effected environment, significant impacts, and alternatives. October 14, 1991.

DNS Adoption of the County-wide Planning Policy - Provides information pertaining to environmental systems likely to be effected by county planning policies. June 29, 1992.

DNS Adoption of the Clallam County Critical Areas Ordinance - Provides information pertaining to critical areas including geologically hazardous areas, wetlands and hydric soils, streams, lakes and river buffer zones, critical wildlife corridors, and aquifer recharge areas and alternatives. November 25, 1991.

DNS Clallam County Forest and Mineral Resources Conservation Plan - Provides information pertaining to forest and mineral resource extraction including; description of the proposal, the effected environment, significant impacts, and alternatives. October 14, 1991.

DNS Adoption of Interim Urban Growth Areas and Comprehensive Land Use Map - Provides information pertaining to urban growth area designation and comprehensive land use map which designates three broad land use categories; urban, rural, and resource lands. August 12, 1993.

FEIS Clallam County Comprehensive Plan (1980) - Provides in-depth analysis of all significant impacts resulting from the comprehensive plan of 1980 and zoning ordinance. Includes significant impacts and mitigation measures.

FEIS Sequim By-pass, SR101 O'Brien Road to Palo Alto Road - Provides information pertaining to the transportation improvement project which involves constructing a by-pass from O'Brien Road to Palo Alto Road for Highway 101. Includes significant impacts and mitigation measures. March, 1993.

Distribution List

City of Port Angeles
321 East 5th Street
Port Angeles, WA 98362

City of Sequim
152 West Cedar Street
Sequim, WA 98382

City of Forks
P.O. Box 1998
Forks, WA 98331

Clallam Conservation District
111 East 3rd Street
Port Angeles, WA 98362

Clallam County PUD Number 1
2431 Highway 101 East
Port Angeles, WA 98362

Northland Cablevision
725 East 1st Street
Port Angeles, WA 98362

Port of Port Angeles
338 West 1st Street
Port Angeles, WA 98362

Clallam Transit System
2417 West 19th
Port Angeles, WA 98362

Clallam County Housing Authority
2603 South Francis Street
Port Angeles, WA 98362

Serenity House
1022 South "C" Street
Port Angeles, WA 98362

Peninsula College
1502 East Lauridsen Blvd.
Port Angeles, WA 98362

Sequim School District #323
503 North Sequim Avenue
Sequim, WA 98382

Port Angeles School District #121
216 East 4th Street
Port Angeles, WA 98362
Crescent School District #313
P.O. Box 2

Joyce, WA 98343

Quillayute Valley School District #402
P.O. Box 60
Forks, WA 98331

Cape Flattery School District
Clallam Bay High School
Clallam Bay, WA 98326

Representative Jim Buck
John L. O'Brien Building
Olympia, WA 98504-0647

Representative Lynn Kessler
Room 439 John L. O'Brien Building
Olympia, WA 98504-0648

Senator Jim Hargrove
P.O. Box 40424
Olympia, WA 98504-0424

Jefferson County
1820 Jefferson Street
Port Townsend, WA 98368

Grays Harbor County
101 West Broadway
Montesano, WA 98563

Mason County
P.O. Box 1850
Shelton, WA 98584

Washington Dept. of Community, Trade, and Economic Development
906 Columbia Street S.W.
Olympia, WA 98504-7600

Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Washington Department of Transportation, District 3
1707 South "C" Street
Port Angeles, WA 98362

Washington Department of Natural Resources
Sepa PO Box 47015
Olympia, WA 98504-7015

Washington Department of Fish and Wildlife
P.O. Box 43155
Olympia, WA 98504-3155

Washington Parks and Recreation Commission
Mail Stop KY-11
Olympia, WA 98504-5711

Olympic Air Pollution Control Authority
909 Sleater -Kinney Road SE #1
Lacey, WA 98503

U.S. Soil Conservation Service
206 South Lincoln Street
Port Angeles, WA 98362

U.S. Fish and Wildlife Service
1638 Barr Road South
Sequim, WA 98382

U.S. Army Corps of Engineers
P.O. Box C3755
Seattle, WA 98124

U.S. Forest Service
P.O. Box 280
Quilcene, WA 98376

United States Coast Guard
Group Port Angeles
Port Angeles, WA 98362

Olympic National Park
600 East Park Street
Port Angeles, WA 98362

Point No Point Treaty Council
7999 NE Salish Lane
Kingston, WA 98346

Jamestown S'Klallam Tribe
1033 Old Blyn Highway
Sequim, WA 98382

Lower Elwha S'Klallam Tribe
River Restoration Coordinator
2851 Lower Elwha Rd
Port Angeles, WA 98362

Makah Tribal Council
P.O. Box 115
Neah Bay, WA 98357

Quillayute Tribal Council
P.O. Box 279
LaPush, WA 98350

Response to Public Comments

Point No Point Treaty Council - August 28, 1994

1. It is impossible to assess the impact of planned residential resorts in new communities in the commercial timber base. At this point in time it is not anticipated that Clallam County would have any proposals for such a facility. Any proposal would have to go through subsequent environmental review and the impacts on adjacent forest lands would be addressed at such time as a site specific development plan would be proposed. In addition, master planned resorts and new communities would require either plan or zoning considerations. Those considerations would include looking at alternative sites for the location of the resort.

2. The Draft Environmental Impact Statement now notes the anadromous stocks at risk as recommended in the testimony.

3. The impacts of potential listings under the Endangered Species Act were considered by the Planning Commission and Board of Commissioners as part of their review of the draft comprehensive plan. All implementation tools will be reviewed upon adoption of the comprehensive plan in order to ensure the goals of the plan, including those dealing with environmental protection, are accomplished.

Friends of the Foothills - September 19, 1994

The issues raised in this letter, although labeled as comments on the Draft EIS, were related to policy issues in the Comprehensive Plan. All the issues raised by Friends of the Foothills have been reviewed by the Planning Commission and Board of Commissioners in developing the plan which will ultimately be adopted.

Washington State Department of Fish and Wildlife - September 15, 1994

1. The Draft EIS will recognize the additional species of wildlife that are being considered for possible federal threatened and endangers listing.

2. The potential impacts of domestic water use on surface water quantity and fish habitat is discussed in the natural resource section.

Clallam County Heritage Advisory Board, August 20, 1994

1. The Draft Environmental Impact Statement has been corrected to include the John Hyer farm.

Port of Port Angeles - July 26, 1994

1. The Final Environmental Impact Statement has been rewritten to address this comment.

2. The Final Environmental Impact Statement has been rewritten to address this comment.

3. Comment noted.

4. The Final Environmental Impact Statement has been rewritten to address this comment.

5. Comment noted.

6. Comment noted.

7. The Final Environmental Impact Statement has been rewritten to address this comment.

8. The Final Environmental Impact Statement has been rewritten to address this comment.

9. The Final Environmental Impact Statement has been rewritten to address this comment.

10. The Final Environmental Impact Statement has been rewritten to address this comment.

11. The Final Environmental Impact Statement has been rewritten to address this comment.

12. The Final Environmental Impact Statement has been rewritten to address this comment.

Barbara Mossman - September 15, 1994

1. The Final Environmental Impact Statement has been rewritten to address this comment.

2. The proposed comprehensive plan clearly establishes as a goal the protection and retention of commercial forest lands.

3. The plan has included more than sufficient lands within the urban growth areas to accommodate the 20 year need for additional urban, including industrial, lands.

4. Whether the wetland or open space is available because of regulation or because of the landowner's desire, they do provide the functions listed in the EIS.

5. Comment noted, although the plan does not anticipate performance standards for industry within industrial areas.

6. Comment noted.

7. The proposed comprehensive plan encourages home based industry in rural areas, provided they do not adversely impact the neighborhood.

8. Comment noted.

9. Clallam County has a clear interest in reviewing the conversion of forest land to other uses, which is clearly specified in the Washington State Forest Practices Act. The County has no authority nor interest in regulating other types of forest practices.

10. Comment noted.

11. The Final Environmental Impact Statement has been rewritten to address this comment.

12. This is a policy in the proposed comprehensive plan, not an analysis of that proposed policy.