

CITY OF THORNE BAY COMPREHENSIVE PLAN

JULY 1999



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PUBLIC HEARING DRAFT

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PART 1
THE COMMUNITY OF THORNE BAY
CHAPTER I
INTRODUCTION

In August 1982, Thorne Bay was incorporated as a second class city. Before this time the community was a logging camp and planning, if any, was done by the parent company, Louisiana Pacific. Since incorporation, several planning documents have been developed, the first being an economic development plan written in 1983, and a comprehensive plan adopted in 1989. Considerable change has occurred since incorporation and the inception of these first plans. This comprehensive plan revision is based on current land use information and community attitude to formulate a guiding document for future development in Thorne Bay.

Purpose

This comprehensive plan is meant to work in conjunction with other city planning documents as a guide for making decisions that will affect the future of Thorne Bay. Established policy set forth in this plan will guide decisions concerning land use, the development and improvement of public facilities, transportation issues, and the capital expenditures they incur. As this is an update of the 1989 comprehensive plan, many goals, policies and information about projects and/or community concerns are new. However, to retain continuity and a fundamental essence of the original document, some text and general aspects of the plan remain the same.

Comprehensive Plan Overview

This comprehensive plan is organized into three parts. Part I, The Community of Thorne Bay, contains an introduction and purpose of the plan which includes a brief explanation of related planning documents. A chapter on background incorporates a location description with recent history. The next chapter has a focus on socioeconomic conditions. Population, housing, and land use and ownership are discussed here. The last chapter of Part I concentrates on the physical factors of the area, such as climate, vegetation, wildlife, and natural resources

Part II is the goals and policies section. Specific Thorne Bay issues such as community facilities, recreation, economy and growth, transportation, and land use are explained and analyzed in detail. Goals and policies for each of these issues are then presented but not prioritized.

Part III, Implementation, describes the various procedures that will put this plan into action. Zoning, subdivision ordinance, related planning documents, and capital improvement planning are employed for this comprehensive plan's implementation.

Related Planning Documents

Chapter 17.04 of the Thorne Bay Municipal Code is entitled Planning and Zoning. This chapter establishes zoning districts that specify what certain uses will or will not occur in a designated area. Development standards ensure consistency throughout the zoning district as well as within the Planning Commission analysis of a project. This zoning ordinance also outlines the procedure for applying for various land use permits, required criteria for approval of a specific land use, and provides a time schedule for expeditious permit reviews. The zoning ordinance is an integral comprehensive plan implementation tool.

Subdivision Ordinance

The Thorne Bay subdivision ordinance contains all platting requirements. These include all elements of subdivision, such as lot size and design, street configuration (width, water, sewer, and drainage locations, public access, etc.), and dedication and vacation of rights of ways.

Thorne Bay Coastal Management Program

The Thorne Bay Coastal Management Program has been in effect since August 31, 1992. A revision was written in 1997. The revised program, approved by the Coastal Policy Council and the federal government, became effective on August 24, 1998. Thorne Bay's corporate limits constitute the boundaries of the Thorne Bay Coastal District. Local coastal development goes through a consistency review at the local, state and federal level. The Thorne Bay coastal management program requires that all coastal development projects requiring local, state, or federal permits within city limits be evaluated for consistency with the policies in the coastal plan. The Mayor has assigned coastal management duties to the Thorne Bay District Coordinator. The Planning and Zoning Commission acts as a "resource body" for implementation of the program. The Thorne Bay Coastal District uses its authority under Title 29 to implement and enforce the coastal management program.

Public Participation

A major part of any planning document is public participation. The City of Thorne Bay comprehensive plan revision was initiated during the summer of 1996 through a series of workshops held in July, August, and September with the Thorne Bay Planning Commission. These work sessions identified issues of community concern and local planning problems. Workshops resumed in July 1997 to develop goals and policies for the community. Two workshops, one in June and July 1998, have discussed a community economic development survey conducted in fall 1997 and to present a first draft of the plan. Planning Commissioner's comments on the first draft were received on October 14, 1998. A second draft incorporating those comments was presented to the Planning Commission at a workshop on October 28, 1998. The Commission discussed the second draft at a regularly scheduled meeting on February 10, 1999, and held another workshop on May 26, 1999. A public hearing is scheduled for June 23, 1999.

CHAPTER 2

BACKGROUND

LOCATION AND DISCRPTION

The City of Thorne Bay is situated on the east side of Prince of Wales Island on Thorne Bay in a temperate rain forest. The community lies 38 miles northwest of Ketchikan, which is the major transportation link in southern Southeast Alaska. Primary access to Thorne Bay is by float plane or boat. Thorne Bay is connected by road to other Prince of Wales Island communities, including Hollis, where the Alaska Marine Highway System provides access to the ferry system. Marine barge service is available on a weekly basis.

Thorne Bay city limits contain approximately 31 square miles. Most of the surrounding land is within the Tongass National Forest and is managed by the United States Forest Service. After existing as a Ketchikan Pulp Company (Louisiana Pacific) logging camp for over twenty years, Thorne Bay became a second-class city in 1982. Because of a 50 year contract for timber harvest between the U.S. Forest Service and Ketchikan Pulp Company that began in 1954, an encumbrance exists upon both developed and undeveloped municipal lands. After considerable negotiations, the federal government did not extend Ketchikan Pulp Company's 50 year timber contract the requested fifteen years past the 2004 contract date, and KPC announced that it would close the Ketchikan pulp mill on March 24, 1997. A re-negotiated 3-year contract now exists between the Forest Service and KPC; the land encumbrance is in effect until December 31, 1999.

Two separate areas of development exist in Thorne Bay; the original Thorne Bay townsite, where most of the population resides, and the South Thorne Bay Subdivision, which is a State of Alaska rural land subdivision platted in 1981. The residents of South Thorne Bay are not served by city utilities. Thorne Bay proper and South Thorne Bay are separated by Thorne Bay itself, and many residents of South Thorne Bay travel to "town" via skiff. Recently, the South Thorne Bay road has been significantly improved allowing for increased vehicular travel to and from the two areas. By way of road, South Thorne Bay is approximately 12 miles from the city core.

RECENT HISTORY

The recent history of Thorne Bay is closely tied to logging and mining activities in the area. There were several copper mines located in the area of the Kasaan Peninsula between 1900 and World War II. The towns, mine sites, tramways, and other structures associated with these mines are potentially significant historic properties and may be eligible to the National Register of Historic Places. During World War I there was a logging camp near the Thorne River bridge where Sitka spruce was cut with spring boards and cross-cut saws and floated down the Thorne River. This spruce was highly valued for its strength-to-weight ratio and was used to make airplane parts for the

mosquito bombers (Ed Clark, interview, 1989, Thorne Bay Coastal Management Program, 1992).

After the war, independent loggers would raft up the river with the tide. When the tide went out the raft would anchor and cables from an A-frame would pull logs to the river where they would float out with the next high tide. Trapper cabins were located along the Thorne River where trappers caught marten, beaver, mink, and otter.

In the early 1900's there was a saltery on the south shore of Thorne Bay. Salmon was cleaned, put in kegs, and sent to Europe. Margaret Bell, author and daughter of the saltery owner was born here. The saltery buildings are no longer present (Thorne Bay Coastal Management Plan, 1992).

In 1954, Wesley Davidson contracted with Ketchikan Pulp Company to log the southside of Thorne Bay. The camp was located on the east side of Davidson Landing, where the city float is located. The camp served 45 people with three bunkhouses, a cookhouse, and an office/storage facility. Some families built shacks which are no longer standing. Logging around the townsite and adjacent area ended in 1960 and the buildings were moved to Traitor's Cove on Revillagigedo Island.

The Thorne Bay area continued to change as the logging industry moved to the present city site in the early 1960's. The Kiel-Peterman Company built the first five miles of road between the present log sorting area and the "Y" on Sandy Beach Road and established a campsite (Swaim and Coleman, text, 1979). They moved out and Ketchikan Pulp Company started a small logging camp in May of 1961. The logging camp that was formerly located at Hollis was moved on ships and floats to Thorne Bay. The camp operated from floats until the infrastructure of the community was in place, allowing for the land settlement during the summer of 1962.

Louisiana Pacific, Ketchikan Division (LPK) became the operator of the camp facilities in 1975. LPK decided to abandon the residential sections of the logging camp and the public utility systems in 1980. The land, owned by the federal government, was transferred to the State of Alaska through the state selection process. Shortly thereafter, the City of Thorne Bay began the process of incorporation as a second class city (August 1982). Land transferred from the state to residents and the municipality through a process which occurred under special State of Alaska legislation (H.B. 811) and the municipal land entitlement rights granted under Alaska statutes.

H.B. 811, enacted May 21, 1982, provided for a preference to occupants of land formerly under a [U.S.F.S. timber](#) contract, when the state offered such land for sale. If the occupant, or his successor, had purchased a permanent improvement from the timber contractor or had built a permanent improvement with the approval of the timber contractor and had also occupied the land for at least 90 days prior to its relinquishment by the contractor, then the occupant received first preference to purchase the land from the state. Land used for non-commercial residential purposes was sold for administrative and survey cost only. Other land was offered at fair market value. The state retained the option to adjust lot boundaries prior to sale.

Shortly after H.B. 811 was enacted it was apparent that the small lot sizes it created would cause land use problems. The majority of lots in the neighborhoods that include Rainy Lane, Wolverine Court, Finney Drive, and Willow Drive, are under 6,000 square feet. Many houses encroach into the 5-foot setbacks. Several homes are situated over lot lines and into road rights-of-way. Streets are narrow with virtually no off-street parking. H.B. 811 has created crowded, uncomfortable living conditions that are unsafe in many locations.

Resolving the many land use problems associated with H.B. 811 means enforcing the provisions of the bill. The city would have to research each lot for specific problems, develop solutions, and be prepared to go to court when necessary. This would be a costly, time-consuming, and complicated project that would be very difficult to track and enforce.

CHAPTER 3

SOCIO-ECONOMIC CONDITIONS

Population

Ketchikan Pulp Company's timber harvest began at Thorne Bay in 1960 with a floating logging camp that eventually moved upland. In the 1960's it became the largest logging camp in the world with a population of over 600 people. Roads were constructed to connect Thorne Bay with other island communities, and Ketchikan Pulp Company's operation began moving north to Coffman Cove, Whale Pass, Naukati, and Labouchere Bay. The U.S. census population figure of 443 for 1970 reflected the shift of KPC employees to other parts of the island. By 1980, Ketchikan Pulp Company decided to terminate portions of its residential accommodations and all utility facilities in the camp. As many residents did not want to move from what had become their permanent homes, KPC encouraged the camp residents to petition the State of Alaska to become a second class city. When the petition failed, KPC shut off electrical power to the lower part of the camp along Rainy Lane. A second petition was filed, and in 1982 the Thorne Bay logging camp became incorporated as the City of Thorne Bay, a second class city with a population of 356. During 1983-84, the Alaska State Legislature passed HB 811, special legislation which granted preferential rights to occupants of the camp to purchase the land under their KPC owned structures from the state for administrative costs only (survey, platting, etc.). Occupants then purchased the housing units from Ketchikan Pulp Company.

In the 1980's, Thorne Bay experienced rapid growth due principally to increased logging on Prince of Wales Island and from the expansion of the U.S. Forest Service Thorne Bay Ranger District offices and construction of Forest Service housing. In the five years from 1981 to 1986, federal government employment jumped from an annual average of 17 jobs to 60. Most of these jobs were U.S. Forest Service jobs established in Thorne Bay. The median age is 31.4 with males representing 53.8% of the population, females comprising 46.2%. Minorities constitute less than 3% of the population in Thorne Bay and the community is largely non-Native.

The 1990 census reveals that demographic characteristics in Thorne Bay still reflect those of a Southeast Alaska logging camp. With the economic uncertainties associated with the recent closure of the pulp mill as well as the potential for new development at Tolstoi Bay, future population trends are difficult to predict.

	POPULATION DATA		
DATE	POPULATION		SOURCE
1960's	Over 600		Ketchikan Pulp Company
1970	443		U.S. Census
1980	320		U.S. Census

1984	393	City Census
1986	475	City Census
1987	500	City Census
1988	525	City Census
1990	581	U.S. Census
1991	564	Alaska Department of Labor
1992	598	Alaska Department of Labor
1993	611	Alaska Department of Labor
1994	619	Alaska Department of Labor
1995	631	Alaska Department of Labor
1996	645	Alaska Department of Labor
1997	627	Alaska Department of Labor
1998	597	Alaska Department of Labor

Housing

In 1990 there were approximately 200 residential housing units in Thorne Bay proper. This includes the Forest Service housing complex and the various Ketchikan Pulp Company owned residences. Also in 1990 there were approximately 30 homes and 100 residents in South Thorne Bay. Since that time, approximately 20 new homes have been built and the population of South Thorne Bay is estimated at 150.

The townsite area contains many privately owned lots, most of which are under 6,000 square feet. Many contain two residential structures. Rental housing is limited. Trailers and mobile homes rent for rates between \$400 and \$750 per month, depending on the size, condition and availability. Privately-owned multi-family housing is limited to one four-plex located on Svend's Drive East. The Forest Service provides a 26-unit complex to house their employees. Ketchikan Pulp Company houses employees in mobile homes, single family residences, and duplexes. Depending on population fluctuations, lack of housing could continue to be a problem in the Thorne Bay area [until] unless more residential land becomes available.

Float Homes

The Alaska State Department of Natural Resources manages a permitting program for float homes in the Thorne Bay Coastal District in accordance with the Prince of Wales Island Area Plan. The Thorne Bay Planning Commission has an opportunity to review and comment on all float home applications. Float homes may only be located in designated areas as outlined in the Prince of Wales Island Area Plan. Currently, there are 8 float homes located within the coastal district. Outside the coastal district, an additional 10 or 12 float homes are moored in small coves located in the mouth of Thorne Bay. The DNR requires the owner of a floating facility to apply for a tidelands lease or permit for any period exceeding fourteen days and includes a \$1,000 bond for the siting of float homes. An upland owner adjacent to the tidelands has first preference rights to use the adjacent tidelands, which extends to access, boat mooring and docking facilities. The Prince of Wales Area Plan has been and continues to be the document

referred to when addressing float home issues. (Jim Anderson, Department of Natural Resources, February 1997).

Land Use/ Land Ownership

The majority of land in the Thorne Bay Coastal District is owned by either the State of Alaska, the U.S. Forest Service, or the City of Thorne Bay. An area near Tolstoi Bay that is being considered for industrial development is owned by the Alaska Mental Health Trust. Most of the land surrounding the district is federally owned as part of the Tongass National Forest. A fifty-year contract that existed between the Forest Service and Ketchikan Pulp Company (KPC) has been canceled as a result of the KPC pulp mill closure in March of 1997. A three year contract for sawlogs has been initiated. KPC still claims an encumbrance on many parcels of land within the city core.

The KPC contract time frame reduction may affect the encumbrance issue sooner than expected, i.e., the encumbered lands could be released to the city at an earlier date, but at this writing the results of the pulp mill closure are unknown. With most of the developable land in the city center under an encumbrance, commercial and light industrial development that would usually be located within the city center has been precluded. The newly formed encumbered lands committee will be working toward resolving the complex land use planning concerns immersed within the encumbered lands issue.

LAND OWNERSHIP

Municipal 6% Federal 5%
Private 7%

Mental Health Trust 28%

CHAPTER 4

PHYSICAL FACTORS

Climate

The climate of Prince of Wales Island is generally described as maritime - cool and moist most of the time with generous precipitation, humidity, and cloud cover. Average summer temperatures at Thorne Bay range from the mid 40's to 70 degrees Fahrenheit, although isolated highs of up to 80 degrees do occur. June and July are the driest months, with the summer season averaging five inches of precipitation per month.

Annual precipitation is approximately 160 inches, most of it occurring in the wet winter months of October through January. The wettest months are October and November, receiving up to eighteen inches of rainfall each month. More than 40 inches of snow can be expected during a typical winter.

Winter winds vary in direction from the north to the northeast as well as the predominate southeast, and gale force winds can be common, with storms lasting for several days. Summer winds tend to be from the southeast and southwest. Topography produces microclimate conditions by trapping wind currents as well as variations in the amount of solar radiation received. Due to its location at 54 degrees north latitude, a considerable variation of daylight occurs between summer and winter.

Vegetation

The temperate rain forest of the Thorne Bay area is dominated by western hemlock and Sitka spruce with a high proportion of western red cedar and some Alaska yellow cedar. Lodgepole pine and red alder are also common. The major plant communities in the area are western hemlock-Sitka spruce forest, muskeg, and tide-influenced meadow. The hemlock-spruce forest consists of an overstory canopy, understory canopy, shrub layer, and ground vegetations. Old growth forest areas have the greatest diversity of plant types and structural character, while young growth forests are more homogeneous in character. Within the forest are areas of riparian vegetation, a complex mix of wetland and upland vegetation occurring along stream channels or ponds. Underbrush consists mainly of huckleberry, salmonberry, blueberry, rusty menziesia, thimbleberry, red elder, buckbrush, and devil's club. Skunk cabbage occurs throughout the area and is an important food for wildlife. For a more complete description of vegetation, please refer to the Thorne Bay Coastal Management Program.

Wildlife

The many diverse habitats in the Thorne Bay area support a varied abundance of wildlife. The Thorne River estuary and surrounding area is especially important as it provides a transition between land, freshwater, and the marine environment. The entire area provides food, spawning ground, or shelter for many species including various crustaceans and small fish; salmon, steelhead, and various trout species; migratory waterfowl; numerous mammals including Sitka black-tailed deer, black bear, martin, and mink; and many species of birds. Marine mammals that can be seen in the area include harbor seals, sea lions, killer whales, and white-sided dolphins. Thorne Bay and the Thorne River are major wintering areas for waterfowl. Clarence Strait to the east is a major migratory route from north to south and a minor migratory route from south to north. There are five eagle sites listed on the Thorne River. Some are nesting sites while others are perches from which the eagles feed upon the abundant fish resources. For a more complete list and description of wildlife in the Thorne Bay area, please refer to the Thorne Bay Coastal Management Program.

NATURAL RESOURCES DEVELOPMENT

Timber Resources

Most timber resources on Prince of Wales Island are part of the Tongass National Forest and are managed by the USDA Forest Service.

The Thorne Bay economy has always been dependent upon timber activity, although it is predicted that within the near future timber harvesting activity will decrease in the Tongass National Forest. Currently, no timber harvest is occurring within the Thorne Bay city limits, with the exception of timber harvest related to road construction. Timber cut outside the city limits is brought to the KPC sort yard for sorting, scaling, and delivery. With the closure of the Ketchikan pulp mill in March 1997, it is expected that sort yard activity will decline, although the sawmill will remain open until the year 2000. Limited old-growth forest within city limits is available to the Forest Service or KPC due to municipal and state land ownership.

In 1994, the residents of Thorne Bay voted to harvest 38.4 acres of timber behind the townsite. Timber receipts from this cut are being used for residential development throughout the city. The logging began on March 17, 1995 and was complete in September of the same year. The city has also harvested timber in preparation for the sale of property in the Deer Creek subdivision, and below the Water Lake watershed.

Potential timber harvest areas within city limits include along the Bypass Road, the area beyond the sewer treatment plant, and possibly Loon Lake in South Thorne Bay. The State of Alaska may harvest two units within the unsubdivided area of the Goose Creek commercial/ industrial subdivision for an approximate total of 250,000 board feet. Another two or three units of 10 acres or less within this subdivision could be harvested for an additional 250,000 - 300,000 board feet of timber.

Mining Resources

The region was once an active mining area with copper, gold, silver, and palladium minerals. The Salt Chuck mine, located in the southwest portion of city limits, was the largest mine in the area but is presently closed. The inactive Haida Mine in South Thorne Bay once produced copper.

Sand and gravel extraction has occurred along the Thorne River near Goose Creek and on Tract C (state owned) in the South Thorne Bay subdivision. The City of Thorne Bay has a special use permit from the Forest Service to extract sand along Boy Scout Road.

Shot rock and gravel are being excavated on three lots in the Goose Creek commercial and industrial subdivision and at the solid waste facility where it is used for cell cover. The city owns a rock pit on Sandy Beach Road adjacent to the main townsite.

Fisheries Resources

Anadromous fish in the Thorne Bay area include chum (dog), pink (humpback), coho (silver), sockeye (red), king (Chinook) salmon; and rainbow (steelhead) trout. These fish are important and valuable for commercial fishing, sport fishing, subsistence use, and charter boat operations, as well as a vital food source for black bear, bald eagles, and other wildlife. Anadromous fish spend part of their life cycle in saltwater and part in freshwater. Salmon lay their eggs in stream gravels. Juvenile fish then hatch from the eggs and emerge from the gravelly stream bed. The amount of time juvenile salmon spend in freshwater depends on the species. Pink and chum salmon immediately start to migrate downstream, while coho juvenile salmon might spend more than two years in freshwater before migrating to the ocean. Juvenile sockeye generally utilize lake habitats for fresh water rearing. Pink and chum salmon are especially dependent on estuaries during their early stages of life. Salmon reach maturity in the open ocean and return to their natal streams to start the cycle again. Steelhead trout (ocean going rainbows) follow the same cycle as coho salmon except they often survive the spawning season, return to the ocean, and complete the cycle again. King salmon appearing in local waters are mainly migratory stocks heading to the large mainland rivers off Behm Canal. King salmon have been pen raised and released in Thorne Bay. Cutthroat trout and Dolly Varden char are also found in the area's freshwater lakes. For a complete description of fisheries resources please refer to the Thorne Bay Coastal Management Program.

Seafood Processing, Commercial Fishing, and Mariculture

No seafood is being processed within Thorne Bay. The Thorne Bay City Council has discussed the potential for seafood processing in the area, although no specific feasibility studies or economic plans have been created. Increased mooring capacity will become essential if and when a seafood processor locates in Thorne Bay.

A shellfish testing lab has been proposed by the Thorne Bay Overall Economic Development Plan. Currently all shellfish testing for paralytic shellfish poisoning (PSP) plankton must be done in Anchorage, which is an expensive, cumbersome, and time consuming operation even when the weather is cooperating. There are approximately ten shellfish growers on Prince of Wales Island that would benefit from a shellfish testing lab in Thorne Bay. Other Southeastern shellfish growers would most likely find it cheaper and easier to test for PSP in Thorne Bay. Development of a PSP lab in Thorne Bay would benefit all shellfish growers by making it cheaper and easier to process the product while diversifying the economy of Thorne Bay.

With its historic dependence on the timber industry, the commercial fishing industry has been slow to develop in Thorne Bay. Until 1989, commercial fishing permits totaled about 10. In 1990, after completion of the harbor facility, commercial fishing permits increased to 33 in the Thorne Bay area, primarily for salmon power troll and hand troll. Salmon fishing in Southeast Alaska is becoming less attractive than it once was, as troll caught kings and coho have lost much of their market share to farmed salmon. As a general rule, farm raised salmon have put a cap on the price that troll caught salmon can command. Trollers can no longer count on increases in ex-vessel price to compensate them in seasons when abundance is poor.

Thorne Bay fishermen are also involved in the local halibut fishery. Recently the one and two day halibut "derbies" have been eliminated by the North Pacific Fishery Management Council. An Individual Fisherman Quota (IFQ) system has been implemented, enabling fishermen with IFQ's to fish for halibut and sablefish almost year round. This system may increase Alaskan prices for halibut as the fish can now be marketed as fresh product.

PART II

GOALS AND POLICIES

COMMUNITY FACILITIES

The City of Thorne Bay has been continually improving community facilities since incorporation. The following is a description of these facilities including public services such as water, sewer, solid waste and energy, as well as government and public safety.

Water Supply System

The original water system was constructed in 1961 by KPC when the Thorne Bay logging camp was established. The original distribution system consisted of 2" galvanized iron pipe installed under the sewer system prior to the installation of prefabricated dwellings and buildings. These homes were then placed over the actual water and sewer systems, and as no proper easements or access points were included in the installation, it made access nearly impossible. The anticipated life of the original system was twenty years. Total replacement of the water system occurred from 1987 to 1989. The new system includes water mains of 8" and 6" PVC pipe, 3/4" polyethylene service lines, and the installation of conventional fire hydrants. During 1994 and 1995, water meters were installed. The water meters monitor how much water is actually being used by customers, as compared to how much water is run through the water system. On an annual basis, the average daily system consumption rate is 75 gallons per minute. During winter months, average daily system consumption goes up to 110 gallons per minute as people run their water to prevent pipes from freezing. In the summer, average daily rates go as low as 55 gallons per minute.

The city's water originates at Water Lake, where water is piped to a 286,000 gallon storage tank. The water is detained for chlorination and for treatment with a polymer that assists in the removal of tannin. The tank also serves as a reserve for fire fighting and emergency situations such as a pump problem or a break in the main line from Water Lake. The supply system and tank are located on Sandy Beach Road, north of the school, and is gravity fed from Water Lake to the east. Maintenance of the system averages 12 to 15 hours per week. The Water Lake watershed is protected by a municipal ordinance to ensure water supply and quality. The city has installed a permanent pump in Deer Creek, the alternate water source for Thorne Bay proper. This water supply system can currently serve the domestic needs of 1,000 people, almost twice the current population.

Water Supply System - South Thorne Bay

A water supply for South Thorne Bay has not yet been developed, although some residents use water from South Lake and North Tolstoi Lake, as well as from roof catchment systems. Other residents haul their own water from the city treated water system, or get water from a pipe from a surface water stream along the road. Individual water rights on streams with small dams connected to piping is another utilized alternative.

A draft feasibility study for water supply to the South Thorne Bay Subdivision has been prepared by the Alaska Department of Environmental Conservation. This study determines the following three viable water sources for the subdivision: 1) Loon Lake and Setter Lake are both potential water sources for a South Thorne Bay water-supply

system, requiring the construction of a new water treatment and storage facility plus distribution piping; 2) hauled or piped treated water from the existing city water treatment facility; and 3) local surface waters developed by individual landowners.

Each of these alternatives have both positive and negative aspects. The City of Thorne Bay is in the process of determining what option would be best for South Thorne Bay.

Wastewater System/Sewer

The City of Thorne Bay's original sewer and wastewater facility was completely replaced in 1996. The city's new wastewater collection system and treatment plant is located at the end of the Deer Creek subdivision. The gravity feed system consists of new ductile iron pipes that run throughout the city and four lift stations that are pumped directly into pressurized main lines. All main lines are then fed into one lift station that carries effluent directly to the wastewater treatment plant. The sewage plant has primary and secondary wastewater treatment. As it is an aerobic system, there are no foul smelling gases to escape. The system also filters out gasoline, benzene, and other chemicals.

Solid Waste

Refuse disposal was a problem during Thorne Bay's formative years as waste disposal was shifted to three separate locations until the solid waste facility came on-line in 1994. When Thorne Bay was a logging camp three waste disposal sites were in use: #1) a wood waste dump site, #2) a dry dump site, locally referred to as the "K-Mart" dump, for dry items such as old furniture, car batteries, transformers, and unwanted junk, and #3) a wet dump site for household garbage. The city began garbage collection in 1983 and disposed of it at the wet dump site until they were moved out by the state and the Forest Service in 1990. The wet dump was then closed and capped. The city began to use the "K-Mart" dump for local garbage disposal until they obtained a twenty acre site near the Goose Creek commercial and industrial subdivision for a community solid waste facility. The "K-Mart" dry dump was closed and capped in 1994 when the city's new solid waste baler, landfill, and household hazardous waste storage facility was complete and on line.

Contamination problems may exist at these three dumpsites. Through the Comprehensive Environment Response Compensation and Liability Act (CERCLA) there is a state administrative order of consent between the Forest Service and Ketchikan Pulp Company to address this concern. A time-critical removal action scheduled work to begin in mid-May 1997. Landfill site #1, the wood waste dump, has been dug up, the contaminants removed, and been capped with layers of impermeable plastic called a geosynthetic cover. The northern side slope has been seeded. The clean-up was complete in October 1997 after the final grading was done. Landfill #2, the K-Mart dump, has also been completed in the same manner as Landfill #1. Landfill #3, the wet dump, is being monitored by taking water quality samples every three weeks until November 15, 1998. Data from these samples will be analyzed and a determination on how to clean-up this dump site will be made. Water quality concerns include PCB's, pH levels, turbidity, organic materials, and heavy metals such as lead. KPC is working with the Forest Service to locate an area for a new wood waste dump.

An investigation into the being undertaken by sx U.S. Forest Service, O

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Thorne River estuary is . (Michelle Parker,

Solid Waste Facility

In 1994 the city compli hazardous waste story Conservation regulatic household refuse are 1,600 pounds apiece. of the landfill called a one foot.. The landfill years apiece, for a to appliances can also t.. appliances are either separated at home or at the solid waste -.E for recycling. The community participates in annual hazardous waste disposal events, handling waste oil, toxic household chemicals, and other hazardous material for the community. The solid waste disposal facility is open six days a week. The Thorne Bay solid waste facility could handle all solid waste disposal for Prince of Wales Island, although the life span of the facility would decrease in direct proportion to the additional refuse volumes. The facility is a vast improvement over the former dumps. Ifill, and household t of Environmental ty. Wood, metal, and proximately 1,200 to ey are put into a part !n buried to a depth of ding life-span of thirty ~tteries, and household pper, brass, and

Electrical Utility

The City of Thorne Bay obtains hydroelectric power from Alaska Power and Telephone, the utility that operates the Black Bear Hydroelectric project and provides electricity to other Prince of Wales Island communities. On August 25, 1998, residents voted to approve a six-mile inter-tie and planned extension of hydroelectric transmission lines to join at the junction of State Highway 30 and the Lake Ellen Road (FDR 2030). These lines were constructed, and are owned and operated by AP&T. Hydroelectric transmission lines extend through a portion of the Goose Creek commercial/industrial subdivision and run adjacent to the subdivision at South Thorne Bay. It is anticipated that AP&T will apply with the Alaska Public Utility Commission to extend service into these areas. The next step would be to extend distribution lines into the Goose Creek commercial/industrial subdivision, and then into South Thorne Bay. Currently the utility serves approximately 273 residential, commercial, and public customers.

Until 1999, the City of Thorne Bay owned and operated the electrical power system. The Thorne Bay Public Utility formerly consisted of three Caterpillar diesel generators: a 425-kw, a 650-kw, and a back-up 325-kw. Depending on the demand load, the city would usually run the 425-kw during normal load or the 650-kw during high consumption periods. This system exceeded the demands of the city with the potential to serve 400 customers. The winter of 1995-96 recorded peak consumption rates of 550-600-kw. During the winter of 1996-97 the highest recorded peak load was 460-kw. This has enabled the utility to run on its 425-kw generator most of the time. The cost of electricity

varied with the price of diesel, although rates are subsidized through the Power Cost Equalization program. The generators are now used as a back-up electrical system.

Residents of South Thorne Bay are presently not served by the Thorne Bay Public Utility and most run their own generator systems for electrical needs. Alaska Power and Telephone is in the engineering and design phase of a tie-line project to connect the Goose Creek commercial/industrial subdivision and South Thorne Bay with the Prince of Wales hydroelectric grid. Tie-line, power poles, and hardware is being installed at Goose Creek, will extend through the South Thorne Bay Subdivision and eventually on to Kasaan.

Most homes in Thorne Bay heat with wood. Oil heat, or a combination of oil and wood, is also used. Propane or LP bottled gas is sometimes used as a supplement to a primary heating source such as wood and is common in small mobile homes and travel trailers. Petro Alaska has a bulk fuel tank farm on the west edge of the townsite. They store approximately 190,000 gallons of diesel fuel # 1 and #2 in seven tanks. Thorne Bay Public Electric Utility has a 4,000-gallon above-ground storage tank for diesel fuel.

Local Government

The City of Thorne Bay Municipal offices are located in the center of the townsite. The Mayor is the Chief Administrative Officer and is a voting member of a seven member City Council. The city staff includes the City Administrator, City Clerk, Public Works employees, Harbormaster, and other office staff. A 107 berth boat harbor provides electricity and water, along with a sewer pump out station for vessels of all sizes. City facilities also include a recreational vehicle dump station, a boat launch ramp, and a floatplane float with parking.

The Planning Commission consists of seven community residents that are appointed by the City Council. The Planning Commission is the platting authority for the city. Conditional use permits, variances, and other land use decisions are made by the commission at a regularly scheduled monthly meeting.

The following six committees also serve the City of Thorne Bay:

- The Health and Safety council has five members. Meeting on the first Tuesday of every month, this council reviews various health and safety issues and makes recommendations to the City Council.
- The Harbor Commission, consisting of five members, meets as needed. Recommendations to resolve harbor issues and/or problems are discussed and presented to the City Council.
- The Overall Economic Development Plan Committee or OEDP meets in June and July of every year to review and update the plan. They also discuss the Capital Improvement Program and develop a list of priorities for the fiscal year. These recommendations are forwarded onto the City Council for approval.
- The recently-created four-person Investment Committee is examining the economic needs of the city in terms of cash flow. This involves analyzing how the city invests its money, and what, if anything, it should do change their investment strategy. The committee will make their recommendations to the City Council.
- The Encumbered Lands Committee consists of 17 members, including facilitators, agency personnel, and company representatives. This committee will exist and make recommendations to the City Council until the encumbered lands issue is resolved.
- Fire Department and Emergency Medical Services Committee consist of the volunteers that manifest these two important services. The committee reports and makes recommendations to the City Council.

U.S. Forest Service

The U.S. Forest Service operates the Tongass National Forest, Thorne Bay Ranger District, which includes an office building, maintenance shops, and housing.

School

The Southeast Island School District completed construction of a new school in 1989. Presently there are 103 students in grades Kindergarten through grade 12, an increase of ten students from the beginning of the 1996-97 school year. A new gymnasium was completed in December 1992. The old school facility has recently been sold to a private party and development plans are unknown.

Communications

Long distance telephone communications are provided by AT&T Alascom, while local and in-state telephone communications are provided by Telephone Utilities of the Northland and Pacific Telecommunications, Inc. Most households have telephone service. Thorne Bay receives the ARCS satellite television programming and cable television is available through Thorne Bay Community TV, Inc. The Island News is a weekly newspaper based in Thorne Bay that serves all of Prince of Wales Island. Mail and other newspapers are delivered daily via floatplane, weather permitting. Radio stations available include KRBD-FM from Ketchikan and KRSA-AM from Petersburg.

PUBLIC SAFETY

Health Care

The City of Thorne Bay provides full physician health care services at the clinic facility located at City Hall. The facility is supplied with a cardiac defibrillator, x-ray machine, and an EKG machine.

Thorne Bay has three state certified EMT I's (Emergency Medical Technicians), one EMT fl, and six ETT's that are always on call. They meet every month for training

sessions and are re-certified through the state every two years. The EMT's offer complete ALS-BLS ambulance service for all areas of Thorne Bay and have access to the clinic.

Law Enforcement/Village Public Safety Officer

The City of Thorne Bay has a Village Public Safety Officer (VPSO) who is qualified for most police duties. His office is located in City Hall and on call 24-hours a day. He is an employee of the Tlingit-Haida Tribal Association on contract to the city. Prince of Wales Island is served by the Alaska State Troopers when local law enforcement is not sufficient. The Alaska State Troopers office is located in Klawock, approximately 36 miles southwest of Thorne Bay.

Fire Department

The City of Thorne Bay Volunteer Fire Department consists of approximately 29 volunteers. They meet for training once a month in one of two fire halls. Their equipment includes two pumper trucks, a 4-wheel drive pick-up truck with a tank mounted on the back, and various types of portable pumps.

The South Thorne Bay Fire Department consists of one year-round volunteer, with membership increasing in the summer months. There is a need for more volunteers on a full-time basis. A garage-type building houses a pick-up truck equipped with a pump, and a van that serves as an ambulance.

Public Safety Building

The City of Thorne Bay is actively requesting proposals for the engineering and design of a public safety building to be constructed on Freeman Drive near City Hall. The proposed structure would house 3 to 4 emergency response vehicles (police car, ambulances, fire trucks), office space for the departments of law, fire, and emergency medical services, an area suitable for meetings and training sessions that would include an efficiency kitchen, a berthing area with restroom facilities and showers, and a laundry room. The building will also house the health clinic.

COMMUNITY FACILITIES AND UTILITIES GOALS AND POLICIES GOALS (not in order of priority)

- Secure funding to promote public services, facilities, and accommodations.
- Pursue the acquisition of land for a community cemetery.
- Provide high quality public services to all residents at the lowest possible rates.

- Provide, maintain, and upgrade an adequate water supply and delivery system to meet existing and future demand.
- Develop an improved water supply system for South Thorne Bay.
- Maintain and improve the quality of all local waters to meet State of Alaska water quality standards.
- Provide quality, efficient, and effective waste water treatment services to all businesses and residents while complying with the Department of Environmental Conservation regulations.
- Require that proponents of projects requiring volumes of treated water in excess of 5% of total city water supply assist the city in analyzing potential impacts upon the water supply system.
- Require that proponents of commercial projects requiring sewer and wastewater treatment services work with the city in analyzing and/or mitigating the potential impacts upon the treatment facilities.
- Continue to encourage and promote recycling and waste reduction.
- Provide Thorne Bay with a reliable, economically sound, and dependable electrical system that meets existing and projected needs.

Provide alternative energy supplies and support energy conservation by encouraging community action in weatherization, winterization, and home improvements.

POLICIES

- Identify and protect future potential watersheds from incompatible uses and activities.
- Protect the Water Lake drinking watershed under Title 9 of the City's Municipal Code by developing stringent watershed protection measures for the area, including prohibitions of any recreational activity within the watershed boundaries.
- Protect the Deer Creek drinking watershed under Title 9 of the City's Municipal Code by developing watershed protection measures that reflect current industrial uses along Deer Creek through modification and mitigating techniques.

- Provide for emergency storage of water and other assistance for fire fighting in South Thorne Bay and the Goose Creek Commercial/Industrial Subdivision, and develop a coordinated fire-fighting plan for these areas.
- Conduct timber operations in a manner that shall not cause the degradation of water quality.

Continue to maintain and upgrade public utilities services commensurate with community growth, and in a way that reflects the potential impacts of community growth on utility infrastructure.

- Maintain the solid waste disposal facility and recycling program in Thorne Bay to meet current and future needs.
- Require the proper installation of storm drains.
- Maintain air, land, and water quality by maintaining Alaska Department of Environmental Conservation solid waste regulations.
- Continue to maintain the existing generators and delivery system.

RECREATION

Recreational opportunities abound throughout Thorne Bay and the surrounding area. Boating, fishing, beachcombing, camping, picnicking, wildlife viewing, hiking, walking, canoeing, kayaking, and hunting are all very popular activities with Thorne Bay residents. Indoor, "in town," and organized recreational activities are somewhat limited, however, the new ball field and school gymnasium provide facilities to meet some of these needs. Hiking and walking trails are needed near residential areas. Mountain biking and cross-country skiing are becoming popular sports along logging roads. Increased pressure from different user groups have put a strain upon close to town recreational resources, specifically the Thorne River. This has created conflicts between user groups, such as hunters, sport fishers, and people viewing wildlife.

Recreational Facilities

The City of Thorne Bay has been steadily improving recreational facilities. The Pearl Nelson Community Park was completed in 1993 through a grant from the Land and Water Conservation Fund. Overlooking Thorne Bay, the park is located in front of City Hall, and is complete with viewing platform, playground equipment, picnic tables, grills, and interpretive signing. Scheduled completion of the Mary Lou Swaim multi-purpose recreational park and Steve Metcalf Ballfield is for September, 1998. Located next to the school, this facility

provides a hard court for tennis and other ball sports including basketball, and a football/soccer field surrounded by a 440 meter running track. The hard ball court can be flooded in winter for ice skating and hockey. A baseball diamond will accommodate games from T-ball to adult hard ball or soft ball. The city has proposed a day-use picnic area near Loon Creek adjacent to the new South Thorne Bay Road to Kasaan. There is also potential for a state park and camping facility at Security Lake.

The Bay Chalet is a community building that has a variety of uses from roller skating and card parties to wedding receptions and religious gatherings. A major renovation of this twenty-year-old community building was completed in the summer of 1998.

The harbor facility has 107 stalls for mooring boats of all kinds, many of which are pleasure craft for sport fishing and other recreation. The harbor includes a boat launching ramp and finger floats. A fish cleaning station is also located within the harbor, along with a sewer pump out station for vessels of all sizes. Electricity and water is also available in the harbor.

As Prince of Wales and the surrounding islands have sustained native populations for at least 10,000 years, a Prince of Wales Island History and Interpretive Center has been proposed by the Thorne Bay Overall Economic Development Plan Committee

This type of interpretive facility in the Thorne Bay area would provide a place where the long historic and geologic history of Prince of Wales could be portrayed. Rooms could be dedicated to the following topics: geologic and glacial history, cultural history, early fur trade and European exploration, mining history, and timber industry history plus community stories. Development of this center would provide destination recreation, community educational opportunities, and local employment.

Thorne River and Estuary

The Thorne River corridor and estuary are popular places for canoeing, kayaking, wildlife viewing, sport fishing, and hunting. There have been recent conflicts between some of these user groups, specifically wildlife viewing, sport fishing, and the hunting of fur-bearing animals, especially with dogs. As Thorne Bay continues to grow, close-totown recreation sites such as the Thorne River will receive increased use from all groups. Even now, increased sport fishing and stream side use is responsible for some bank erosion and the area suffers from an unsightly litter problem.

Public and commercial buildings total approximately 40, including city buildings, KPC office and operation facilities, schools, stores, and a church which serves several congregations. The Bay Chalet serves as a community building, housing many community events and is also used by the Baptist congregation for church services.

RECREATION GOALS AND POLICIES

GOALS

- Provide the residents of Thorne Bay with increased recreational opportunities and facilities.
- Secure funding for a community youth recreation facility and coordinator.
- Resolve conflicts between recreational user groups and continue to investigate and develop strategies to reduce conflicts between recreational user groups, including hunting, fishing, trapping, wildlife viewing, and canoeing and kayaking, especially along the Thorne River corridor.
- Provide public services that support the recreation related needs of visitors and local residents.
- Secure alternative recreation sites to replace traditional recreation areas that have been precluded with residential, commercial, and industrial uses.

Encourage and promote recreational activities and facilities that are related to tourism while taking advantage of opportunities for local economic improvements that result from tourism and non-consumptive uses.

- Encourage non-consumptive recreational resource use.
- Pursue the acquisition of land for a shooting range.

POLICIES

- Continue to develop plans for parks, open space, walking/hiking trails, and a youth recreation facility with a recreation coordinator for year-round activities.
- Protect the aesthetics and natural scenic beauty of recreation areas and recognize their importance to the local economy.
- Promote public services and other public amenities for visitors and Thorne Bay residents.
- Promote enforceable policies which address litter problems in high-use recreational areas.

COMMUNITY GROWTH

The City of Thorne Bay has experienced considerable growth and community development since its formation as a company logging camp in the 1960's. At the same time, very little economic diversification has occurred, with most jobs being timber related. Residents would like to see moderate population growth and economic diversification occur in the area without major impacts on their existing rural lifestyle. Development should be encouraged to occur in areas that have existing infrastructure, such as in and adjacent to the city core. Utilizing areas that have existing utility service or that are capable of being served by extending power lines is generally less expensive to develop. Access must also be considered when determining where new growth shall be located.

COMMUNITY GROWTH GOALS AND POLICIES

GOALS

- Support and direct organized community growth within Thorne Bay.
- Accommodate growth by providing sufficient community services and utilities.
- Maintain the quality of the natural environment by taking natural factors such as slope, soils, topography, and natural hazards into consideration when planning for community and economic development.

POLICIES

- Evaluate development proposals by means of current city land use documents, including the comprehensive plan, zoning and subdivision ordinances, water-shed ordinance, coastal management program, overall economic development plan, and other applicable ordinances.
- Consider population impacts when planning for economic development.
- Encourage a community growth pattern that is consistent with the small town, rural character that makes living in Thorne Bay rewarding and worthwhile.

ECONOMY

Primary employment in the City of Thorne Bay has been associated with the logging industry. The largest employer is the United States Forest Service, with 38 permanent, full-time employees, and 20 full-time seasonal employees. Until the pulp mill closure in March 1997, Ketchikan Pulp Company had been the area's dominant employer with 57

full-time yard, shop, and office employees. Also, an undisclosed and variable number of loggers were either directly employed or contracted with the company. After the pulp mill closed, KPC employment fell to 4 people in the shop and 4 people in the sort yard. Since June 1997, KPC has employed 16 persons associated with sort yard operations and 6 or more in administration. KPC also contracts with local trucking operators, cutters, and road construction crews that could, taken together, employ between 27 and 40 people, depending on the varying stages of timber operations (Tom Hicks, Ketchikan Pulp Company, October, 1998). Currently, Ketchikan Pulp Company has 26 hourly employees in Thorne Bay. Southeast Island School District moved its main office from Ketchikan to Thorne Bay on July 1, 1998. In Thorne Bay, the District has 27 employees, including teachers, aids, administration, and maintenance. The City of Thorne Bay has 9 full-time permanent positions and 2 part-time positions. The city also employs project workers as capital improvement construction dictates.

The City of Thorne Bay lists 104 business on its sales tax rolls, not including rental housing. Over half of these businesses are located within the owner's homes, which is one explanation for the high residential-commercial mix in the city center. The nonresidential businesses include fuel services, groceries and supplies, lodges, laundromat, restaurant, airline offices, fishing supplies and equipment, newspaper office, video store, liquor store, vehicle and tire repair, sawmills, shake and shingle mills, drilling and blasting, recreational vehicle and car rental, boat and vehicle storage, and construction. (City of Thorne Bay, March, 1997)

The economy in the Thorne Bay area has been seasonal due to its reliance on timber harvest which usually occurs approximately eight to nine months of the year. Considering the unpredictability of the logging industry and its seasonal nature, other businesses in Thorne Bay have found it difficult to prosper. When the logging is over for a season, other small business must keep a low overhead and sometimes lay off employees. In the summer months when business is at its peak, small businesses are usually not in a position to take advantage of new opportunities. New businesses are slowly becoming established as financing, opportunities, and markets become available. The city is currently considering commercial business proposals looking to locate along Shoreline Drive. Proposals for the development of an industrial park and deep-water port at Tolstoi Bay are pending. The ten lots in the Goose Creek commercial/industrial subdivision addition have been sold.

The timber industry began to diminish in Thorne Bay in 1995-1996 as the result of a reduction in the allowable timber cutting base. After considerable negotiations, the federal government did not extend Ketchikan Pulp Company's 50-year timber contract the requested fifteen years past the 2004 contract date, and KPC announced that it would close the Ketchikan pulp mill on March 24, 1997. As 67% of the community work force was employed by KPC either directly or indirectly, the decision to close the pulp mill has had a negative affect on the residents of Thorne Bay. Thorne Bay's lack of economic diversification is currently being observed as economic reality, and the community needs jobs to replace those lost as a result of the mill closure.

For the last twelve years, the City of Thorne Bay has been striving to provide opportunities for alternative industries to locate at Tolstoi Bay. The Tolstoi Development Project consists of an industrial park and deep-water port and has the potential to provide the community with 87 new jobs. Because of the mill closure and the immediate need to develop an alternative economy, the project time table has been proceeding at a rapid rate. Jobs that could be created are as follows: 50 jobs for operation and maintenance of an ethanol plant; 8 jobs for sawmill operations; 6 jobs relative to chipping; 6 jobs for kiln drying and planing operations; 4 jobs for warehousing; 3 jobs for barge operations; and 10 jobs relating to cruise ship passengers. Other employment situations could occur as a result of this economic activity, such as service industries, trucking, tug boat and crew operations, and industries that manufacture finished products. See Land Use/Land Ownership section for more information on the Tolstoi Development Project.

For a complete analysis and additional information on economy, please refer to the Thorne Bay Overall Economic Development Plan.

ECONOMY - GOALS AND POLICIES

GOALS

- Develop and maintain a diversified local economy that will support the current population as well as new growth that is compatible with other community goals and objectives.
- Improve, develop, and support opportunities for value-added timber manufacturing and finished products manufacturing to diversify the local industrial economic base.
- Support and encourage the development of a Prince of Wales Island History and Interpretive Center to be located in Thorne Bay.
- Support and encourage the development of a shellfish testing lab to be located in Thorne Bay.

POLICIES

- Update and maintain the Thorne Bay Overall Economic Development Plan.

Continue to provide land for commercial and industrial development, including utility expansion, and road and marine access.

- Support the proposed Tolstoi Bay kiln drying and planing facility, ethanol plant, associated deep-water port, and all appropriate industrial proposals for the area.
- Support and encourage a bank or other financial institution that would provide basic banking services to locate within the City of Thorne Bay.
- Support and encourage established and additional tourist facilities within Thorne Bay including lodges, bed and breakfasts, recreational vehicle parks, equipment sales and rentals, marinas, charter operations, local events, and restaurants.
- Support the establishment of a Prince of Wales Island Tourism Council to promote the community as a tourist destination.

Continue to support the city's growing commercial fishing industry, including the location of a seafood processor.

- Promote economic diversification opportunities that will hire and utilize the existing local work force or former residents before hiring from outside sources.

Support vocational rehabilitation, instructional programs, and training opportunities for residents and former residents of the area.

NATURAL RESOURCE DEVELOPMENT

The City of Thorne Bay and the surrounding areas have evolved by developing the vast quantities of natural resources that make up Prince of Wales Island. The timber, mining, and commercial fishing industries began in the early 1900's and, in varying degrees, continue to thrive and constitute the economic base of the city. The City of Thorne Bay encourages these natural resource industries to develop and prosper. Small timber sales within the city limits create jobs by the extraction and processing the timber. Exploration of minerals as well as sand, gravel, and shot rock removal are also necessary and supported activities in Thorne Bay. The commercial fishing industry continues to grow each year despite the fall in price of salmon and halibut. New fisheries, such as sea urchins and cucumbers offer different opportunities for residents.

GOALS AND POLICIES FOR NATURAL RESOURCE DEVELOPMENT

GOALS

- Continue to maintain and support the natural resource based economy of Thorne Bay.

- Support and encourage city, state, federal, and Mental Health Trust Lands small timber sales within the city limits.
- Encourage and support the exploration of mineral resources in the City of Thorne Bay and throughout Prince of Wales Island.
- Encourage the allowance of timber harvest before, during, and after settlement on all retained state lands that are located within settlement residential, commercial, or general use designations in the Prince of Wales Island Area Plan.

POLICIES

- To the maximum extent possible, assist local timber processors in obtaining raw materials by supporting city, state, federal, and Mental Health Trust timber sales.
- Encourage size-and-species-appropriate timber sales that support local processing and increase jobs per board feet cut.
- Improve, develop, and support opportunities for value-added timber manufacturing and finished products manufacturing to diversify the local economic base.
- Continue to support the city's growing commercial fishing industry, including the location of a seafood processor.

TRANSPORTATION

The community of Thorne Bay relies on air, water, and land transportation. Primary access is by air and water, although the State Marine Highway System and other Prince of Wales Island communities can be reached by road transportation. Improved road access to residential, commercial, and industrial lands is vital to growth in Thorne Bay.

Roads and Streets

Streets and roads in Thorne Bay were built as needed during the logging camp days and were not planned with the foresight of a growing community. Currently, large logging trucks, regular vehicles, parked vehicles, and pedestrians all share roads that are too narrow to accommodate safe traffic flow. There are many dangerous, sharpangled intersections with no or poor visibility. This type of intersection also wastes land and results in inferior lot layout. Road design guidelines that address safety, efficiency, maintenance costs, and future development will avoid these and further transportation problems.

Most single family residences were built without surveys and some are actually located in right-of-ways. In addition to and because of these encroachment problems, roads have been built to varying widths.

Currently there are no paved streets in Thorne Bay. Dust from these gravel roads, especially in dry periods, is a health and safety concern. Road paving will improve both health and safety as well as lowering maintenance costs. See section below on municipal road paving.

Parking remains a problem throughout the city. Congested parking areas include the harbor and at J.C.'s, where Taquan Air and the U.S. Post Office are located. To alleviate parking problems, new development is obligated to meet local off-street parking stipulations. Section 17.04.041 of the Thorne Bay zoning ordinance addresses offstreet parking requirements.

By road access, South Thorne Bay is approximately 12 miles from the city core. The road is an improved gravel road that is subject to a high degree of maintenance. Potholes and the "washboard effect" are a constant maintenance problem due to high rainfall and heavy use. This road also provides access to the Goose Creek Commercial/Industrial Subdivision, approximately 6 miles from the city core. Approximately three-fourths of the platted roads in the South Thorne Bay Subdivision are open and maintained.

Outside the city core, grading unpaved roads becomes a problem when trying to maintain bridge crossings. Many times graders inadvertently push gravel and other road materials into an embankment along bridges, which ultimately becomes deposited in streams by maintenance crews and road traffic. Introduction of gravel into catalogued anadromous creeks is in violation of AS 16.05.870 and AS 16.10.010. Gravel on wooden-planked bridges also results in the deterioration of the bridge surface and potholes. Extreme care should be taken by graders on bridge approach aprons to ensure that road grading material does not accumulate where it can inadvertently enter the stream. New bridge construction should include the use of bull rails or other structures that prevent gravel from entering streams. Similar structures should be retrofitted on existing bridges wherever feasible.

The Thorne Bay Subdivision Ordinance has adopted construction standards for new roads. New roads need to be constructed to meet or exceed these standards for compaction, surfacing, and culverting. The City of Thorne Bay maintains all 31.9 miles of roads within its city limits, including the recently constructed road to the City of Kasaan and Tolstoi Bay. The city also maintains the access roads to and within the Goose Creek commercial and industrial subdivision. The maintenance of present roads and future roads is very expensive; residents should be aware that the expense of maintaining community roads is a significant portion of the municipal budget.

The Thorne Bay Capital Improvement Program lists several transportation projects as priorities, many in the form of upgrades and improvements. Listed below is a description of these transportation priorities.. Within these descriptions is an explanation of site specific transportation issues.

- South Thorne Bay Subdivision Road Upgrades - The South Thorne Bay residential subdivision is the most rapid growing section of the city. Approximately five miles of platted subdivision roads were opened by the city in 1984 to provide access to a portion of subdivision lots. Funding constraints did not allow the opening of all platted roads, nor was proper culverting, drainage ditching, widening, or surfacing complete. Narrow road widths and blind corners create hazardous driving conditions and prohibits snow removal and emergency vehicle access. In 1995, the city completed the engineering and design for Ron's Road and Harbor Road, the first phase of the subdivision road upgrading. These roads were chosen because they access the subdivision from the main road (South Thorne Bay Road) down to the emergency service building and public dock at Davidson Landing. The city is requesting an appropriation from the State of Alaska to upgrade these roads, including the reconstruction of the road beds, ditching, culverting, widening, and resurfacing.
- Sandy Beach Road Improvement Project - Two sections of the road are in particularly poor condition, from Shoreline Drive to the Forest Service, and from the Forest Service up the road approximately 30 feet. Currently, a 19% slope exists along Sandy Beach Road which is a main thoroughfare in Thorne Bay. This steep grade coupled with a lack of visibility when entering the road from side streets creates a significant safety hazard. The City of Thorne Bay is requesting that the reducing the easement to allow structures to be within private lands, culverting, State of Alaska appropriate funds to reconstruct Sandy Beach Road from the State Highway to Freeman Drive. Reconstruction would include reducing the road grade, moving the road bed towards the Forest Service administrative site thereby ditching, and resurfacing.
- Municipal Road Paving - Roads in Thorne Bay are constructed from shot rock mixed with dirt. These gravel roads incur high maintenance costs, as substantial work is required to keep the roads in driveable condition, free from snow, and clear of water runoff from adjacent lands. Dust is also a problem, especially in dry weather. Dust and dirt from unpaved roads becomes thick enough at times to cause severe health problems for residents. Road paving would reduce overall street maintenance costs, eliminate the annual dirt and dust problem while increasing air quality, and channel and collect storm water runoff. A storm water drainage and collection system would control contamination from non-point pollution sources and increase water quality in the Thorne Bay. The city has requested that the State of Alaska appropriate funds to assist the city with road paving engineering and design within the Thorne Bay townsite. This would include sidewalks, curbs, gutters, storm drains, utility cutouts, and paving specifications.
- Deer Creek Bridge Crossing and Access Road Phase I - The City of Thorne Bay owns large tracts of land near the main townsite that could be accessed for the development of residential and commercial subdivision. Adjacent to existing utilities and relatively flat, this land could be accessed by an additional Deer Creek bridge crossing. The City of Thorne Bay is requesting that the State of Alaska appropriate

funds to construct a log stringer bridge across Deer Creek to access city owned property for community development. Reconstruction of the existing bridge is also a priority as it accesses the Deer Creek Subdivision and the sewage treatment plant. A residential land disposal could be developed by the State of Alaska in the area just beyond the sewage treatment plant. An analysis of this state-owned area and the access to it would be required before reconstruction or an upgrade of the existing bridge could occur.

Bypass Subdivision Access Road, Phase I, Engineering and Design - In 1990 the City of Thorne Bay completed the Bypass Road project which intersects municipal lands appropriate for residential and commercial subdivisions. Due to a Forest Service easement, access to subdivided lots may not front on the Bypass Road. The city is requesting the State of Alaska to fund a portion of costs to develop engineering and design plans for two ¼mile access roads that include plans for ditching, culverting, alignment, slope, and surfacing.

GOALS AND POLICIES FOR ROAD AND STREET TRANSPORTATION

GOALS

- Maintain and improve the local land transportation system so that it is safe, efficient, and economical while meeting the transportation needs of the residents of Thorne Bay.
- Develop a traffic flow plan for the city to include flow patterns, maintenance, standards, and parking requirements.
- Continue to determine the need for and the location of additional rights-of-ways for future roads, streets, pedestrian walkways, and bicycle-paths.
- Minimize through traffic in residential areas.
- Develop a maintenance plan that will prevent gravel and other road material from collecting on bridges and entering streams.

POLICIES

- Promote and secure funding for transportation projects as listed in the Thorne Bay Capital Improvement Program for Fiscal Years 1997-1998.
- All transportation improvements shall be designed, constructed, and maintained with an emphasis on user safety, accessibility, convenience, and future traffic flows

without compromising site attributes such as historic landmarks, drainage ways, or other factors that may be associated with these improvements.

- Promote the resurfacing of roads to acceptable standards.
- Require that all new roads meet local road standards and design streets to intersect at right angles.
- Discourage on-street parking and obligate new development to meet local off-street parking requirements.
- Continue to work with the U.S. Forest Service and the Alaska Department of Transportation on road construction, maintenance, and safety improvements within the Thorne Bay transportation system.
- Provide for safe and efficient pedestrian movement throughout the city with special emphasis on school areas, congested areas, and areas of limited access.

Encourage the provision of pedestrian-ways and bicycle-paths in future and existing right-of-ways.

- Continue to support the Island-wide improvement of the road system.

BOAT HARBOR, MARINE, AND AIR SERVICE

Marine Access and Boat Harbor

The State of Alaska Marine Highway System operates a ferry dock at Hollis, approximately 60 road miles away. Ferry service for Prince of Wales has never been sufficient and tends to be scheduled at inconvenient times. The City of Thorne Bay is a participating member of the newly formed Inter-Island Ferry Authority, established to give communities on the Island a larger voice in state marine transportation system operations between Hollis and Ketchikan. A commercial development at Tolstoi Bay may bring mainline ferry access to Prince of Wales Island, which would improve travel opportunities for all residents of Prince of Wales Island. Marine barge service to Thorne Bay occurs on a weekly schedule from Seattle via Ketchikan.

The City of Thorne Bay completed Phase I of the harbor expansion in 1989. This included the construction of a small boat harbor facility with 107 boat stalls, gangway, and ramp. Phase II was completed in 1990 and included installation of a boat launch ramp, floatplane float, and floatplane parking facility. The new harbor was filled to capacity not long after completion. A boat grid, Phase III of the expansion project, was constructed in September 1997. Phase IV of the harbor expansion is for engineering and design to increase the mooring facilities and add a stationary platform lift. An increasing number of yachts visit Thorne Bay each year, some of them are forced to anchor out in the bay due to lack of stalls. A capital improvement priority, the city has requested the State of Alaska to help fund Phase IV of the harbor expansion. A sewer

pump out facility was added in 1996. The harbor also includes a fish cleaning station used extensively by local residents and visitors alike.

Air Service

There are between six and ten scheduled flights daily between Thorne Bay and Ketchikan. Two commuter airlines serve Thorne Bay via floatplane. Ketchikan continues to be the main transportation hub for Prince of Wales Island, providing both airline and ferry connections to points north and south. The only land based runway on Prince of Wales Island is near Klawock, approximately 33 road miles away. The harbor has a float plane base that will accommodate six float planes.

An emergency landing strip near the City of Thorne Bay is a capital improvement priority. A feasibility study that would include siting of the landing strip has been requested from the State of Alaska. During winter months, the road to the wheel based airport in Klawock can be dangerous and at times impassable. An airstrip on the east side of the island would make air travel available at night, while providing an option for planes from Ketchikan, Wrangell, and Klawock during inclement weather or other emergencies.

BOAT HARBOR, MARINE, AND AIR SERVICE

GOALS AND POLICIES

GOALS

- Provide and improve marine and air transportation for the residents and visitors of Thorne Bay.
- Provide a modern harbor facility that allows for increased usage.
- Promote increased ferry service from Hollis to Ketchikan and pro-active participation in the Prince of Wales Inter-Island Ferry Authority.

POLICIES

- Promote the development of a mainline ferry terminal at Tolstoi Bay.
- Promote the improvement of marine freight access at Thorne Bay and Tolstoi Bay.
- Promote the development of a land based airstrip at Thorne Bay.

- Support improvement of the boat docking facility at Davidson Landing in South Thorne Bay.
- Promote the development of a float plane docking facility at Davidson Landing in South Thorne Bay and at Tolstoi Bay.
- Support Phase IV of the harbor expansion.
- Develop and maintain a waste oil disposal facility within the harbor.
- Develop float plane air and landing paths to promote safety in the harbor.

LAND USE/ LAND OWNERSHIP

Property in Thorne Bay is gradually being opened up for residential, commercial, and industrial expansion. Undeveloped areas near the city core need to be opened for growth. The type and degree of community expansion, both upland and waterfront, need to be determined in order to expect organized development and change.

Existing Land Use

The majority of land within the Thorne Bay city limits is owned by either the State of Alaska, U.S. Forest Service, or the City of Thorne Bay. An area near Tolstoi Bay that is being considered for industrial development is owned by the Alaska Mental Health Trust. Privately owned land occurs primarily within the city core, South Thorne Bay Subdivision, and within the Goose Creek commercial/industrial subdivision. Most of the land surrounding city limits is federally owned as part of the Tongass National Forest. The city core of Thorne Bay contains a mix of residential and commercial uses without a central commercial area. Many residences have a commercial use within their home. Commercial development is spread throughout the community, including South Thorne Bay. Most commercial development exists along Shoreline Drive. These include a grocery store at the north end by the mouth of Deer Creek, a liquor store and a restaurant across from the harbor, and other commercial ventures including gas stations and retail outlets to the intersection of Sandy Beach Road. City Hall is located in the center of town, and residences of all types and densities occur throughout the city.

Because of a fifty year contract that existed between the U. S. Forest Service and Ketchikan Pulp Company, KPC claims an encumbrance on many parcels of land within Thorne Bay proper. With most of the developable land in the city under this encumbrance, commercial and light-industrial development that would normally be located within the city center has been precluded. As a result of the KPC pulp mill closure in March, 1997, the fifty year contract has been reduced to three years and will terminate on December 31, 1999. This contract time frame reduction may result in the

encumbered lands being released at an earlier date, although nothing is certain at this writing. The encumbrance issue is very complex and will involve negotiations between KPC, the U.S. Forest Service, and the City of Thorne Bay. The newly formed encumbered lands committee will be working toward resolving a multitude of land use planning concerns, including the future use of these lands.

Significant environmental impacts on these encumbered lands may have occurred as a result of logging activities. Further review, investigation, and analysis of these areas will be necessary. Following that, considerable environmental cleanup of these sites is anticipated. Depending on the proposed future land use, different levels of cleanup may be required. A former industrial site that is proposed to remain an industrial site will not require the amount of cleanup as that for a proposed residential site. The City of Thorne Bay will not assume management of encumbered lands until environmental clearance has been given by state and federal authorities.

Encumbered Lands Committee Recommendations

After three meetings, the Encumbered Lands Committee has made the following recommendations to the City Council:

1. That preferential sale (right of first refusal) at appraised fair market value be offered to existing occupants of encumbered land residences (excluding Burkeyville), based on their continuous occupancy as of December 1, 1998.
2. That the City Council direct city staff to survey, zone, subdivide, and offer preferential sale (first right of refusal) at fair market value of encumbered nonresidential lands to the following business occupying city encumbered lands on December 1, 1998: Boyer Alaska Barge, Petro Alaska, and Thorne Bay Community TV.
3. That the City Council direct city staff to begin the zoning and subdivision process for encumbered lands.
4. That all Ketchikan Pulp Company bunkhouse area above-ground structures be removed from city owned property.

Site Characterization of Encumbered Lands

Ketchikan Pulp Company (KPC) will shut down logging operations at its Thorne Bay facility at the turn of the century. As part of this closure process, KPC is conducting a site characterization of the Thorne Bay shop area, sort yard, and bunkhouses. The goal of the investigation is to characterize soil conditions to assess whether historic activities have impacted soil quality at these locations. Groundwater will also be assessed. This site characterization will be coordinated with the Alaska Department of Environmental Conservation, the U.S. Forest Service, the City of Thorne Bay, and will include public participation. When the site characterization is complete, a clean-up action plan will be developed, if necessary.

South Thorne Bay Subdivision

In 1981, the State of Alaska platted the South Thorne Bay Subdivision containing 285 lots ranging in size from 2.5 acres to 5 acres. Most of the lots are privately owned, and

development is starting to increase as road improvements continue. The lack of utilities such as electricity and water has limited development somewhat. However, many people have decided to build in the subdivision because the residential land is available, and developable residential land within the city core can be hard to find. The primary marine access area in South Thorne Bay is at Davidson Landing, a public facility with boat dock, launch, and emergency services building. The city is in the process of acquiring the tidelands 550 feet seaward of the city owned uplands for operation and upgrade of the dock facility. As these improvements progress in South Thorne Bay, continued growth and development is also expected.

Goose Creek Commercial and Industrial Subdivision

The Department of Natural Resources created and sold seventeen commercial/industrial lots in the Goose Creek area in 1994. Phase II of the project subdivided 75 acres adjacent to the existing subdivision into ten lots. Nine of these lots range from 5 to 10 acres in size, with one 20-acre lot that accommodates a secondary wood processing facility. All ten lots were sold by public auction during the fall of 1997. The subdivision now totals 27 commercial/industrial lots.

Deer Creek Residential Subdivision

This subdivision, located across Deer Creek at the end of Shoreline Drive, was created in 1994. One commercial and fourteen residential lots were sold at public auction. Thorne Bay Boat Works is located on the commercial lot. Half of the residential lots have been developed. Most of the remaining lots pose significant development difficulty and expense due to steep hillside locations.

Tract B Subdivision

This City of Thorne Bay subdivision created eight residential lots that were sold at public auction. Currently three homes have been built and work is progressing slowly on the remaining lots.

Tolstoi Development Project

The City of Thorne Bay is proposing to develop a deep-water port and industrial park facility at Tolstoi Bay in the Thorne Bay Coastal District. The Tolstoi Development Project has been evolving for over twelve years, and is timely considering the recent loss of employment in the Thorne Bay community. A deep water port would benefit all of Prince of Wales Island by providing possible main line Alaska Marine Highway access, cruise ship access, barge access, and docking facilities. If feasible, the industrial park could contain an ethanol production plant, a regional dry kiln and planing facility, plus other related manufacturing and warehousing facilities. A dry kiln and planing facility could benefit and complement already existing small saw mills and employ additional Prince of Wales Island residents. An ethanol plant could provide

additional employment opportunities, manufacture a marketable product from wood waste, and produce steam and heat for the dry kiln. Road access has been completed to the project area, although an access road from the South Thorne Bay Road and bridge will need to be constructed, along with other public facilities. Currently, the land is owned by the Alaska Mental Health Trust and the associated tidelands are owned by the State of Alaska. The Alaska Mental Health Trust Authority has authorized the Trust Land Office to proceed with negotiations with the city for the sale of Trust Land needed for this project. Acquiring tidelands will occur after the uplands have been purchased or leased. The following five phases of the project are:

Phase 1 - Industrial Site Analysis and Environmental Assessment - a complete industrial site analysis will be done that includes the assessment of the site, survey, appraisal, environmental assessment, and the purchase of approximately 125 acres of Alaska Mental Health Trust Land within the coastal district at Tolstoi Bay. Environmental assessment will identify watersheds, streams, and critical habitat areas. Development standards will be created to mitigate storm water run-off, non-point pollution sources, and erosion control.

Phase 2 - Feasibility Study - This feasibility study will include analysis of various industrial and commercial uses such as manufacturing and warehousing. Market analysis will be done for ethanol, kiln dried and planed lumber, and other products. Also included will be an investigation of expected economic and social benefits, identification of investors for construction and operation of the industrial park, and an estimate of capital and operating costs for each part of the industrial park.

Phase 3 - Development Plan and Preliminary Engineering Design and Surveys - A commercial and public land use plan will be completed including preliminary engineering and design for public utilities, access roads within the park, and design, survey, and platting of industrial lots and port. All applicable permitting and certifications for construction of the project are included in this phase of the project.

Phase 4 - Final Engineering and Design - The final design and engineering of all public portions of the industrial park and port facilities.

Phase 5 - Construction - The actual construction of the public portions of the project including access roads, utilities, and port improvements.

Funding for this project is pending under the Rural Business Enterprise Grants program. The Tolstoi Development Project has the full support of the City of Thorne Bay, Southeast Conference, and the Alaska U.S. Congressional delegation.

Bypass Road Residential Subdivision

The City of Thorne Bay is working toward developing a master plan for a large, undeveloped tract of city-owned land commonly known as the Bypass Road Lands.

When complete, this subdivision will provide for primarily residential lots, with some commercial and public uses. As this property is located outside of the city core, utility infrastructure will need to be developed, as well as all aspects of a major subdivision. Primary funding for this project has come from receipts of a timber sale which was approved by public vote on the premise that the funds be used initially, "for development of residential lands for sale to the public."

A site analysis of the Bypass Road Lands was completed in November 1997. A boundary survey was completed showing bisecting roads and rights-of-ways. A plat was prepared showing the area and identifying contiguous tracts of land. The site analysis concluded that these lands are relatively free of critical habitats and archeological restraints that would limit development. The largest deterrents to road building and residential development will be the steepness of the terrain, rock outcroppings, and lack of water quality streams. (Thorne Bay Bypass Road Lands. Site Analysis. Templin Land Surveying, Whale Pass, Alaska, November 1997)

Potential State of Alaska Residential Subdivision

A residential land disposal could be developed by the State of Alaska in the area just beyond the sewage treatment plant. Preliminary discussions to affect a timber sale in conjunction with a residential land disposal have occurred between the city and the State of Alaska. Access roads for the harvest area could be used for subdivision right-of-ways.

Waterfront Development

Waterfront and coastal development within the townsite area can be categorized as follows:

- Water-dependent industrial, including the Ketchikan Pulp Company sort yard, dock, and shop area.
- Water-dependent community facilities, including the municipal harbor, dock, grid, harbormaster office, staging, and parking areas.
- Water-dependent commercial uses, including marine vendors, marine fuel and related sales, general marine access, and water-based air carriers.
- Residential.
- Recreation, buffers/vacant land, public access.

Vacant waterfront property needs to be inventoried and reserved for future waterdependent/water related uses. Waterfront area land now encumbered by KPC, especially the shop area, needs to be reassessed for future use. Recent thought is that this area should become more commercial/light industrial in nature than its current heavy industrial use. The city would like to keep the heavy industrial uses at Tolstoi Bay and Goose Creek and retain the valuable in-town waterfront area for commercial and light industrial uses that are more compatible with the growing surrounding residential area. There are no residential lands available around the Goose Creek commercial and industrial subdivision or near the proposed Tolstoi Bay industrial development.

Public Access Easements

Public access easements are platted along the Thorne Bay waterfront in dimensions that vary from 10 feet to 50 feet. Ten foot public beach access easements occur mostly along the waterfront in the older sections of Thorne Bay and along the Deer Creek corridor, although the distances vary. 10 to 50 feet wide public access easements are located along the Shoreline Drive waterfront and the South Thorne Bay subdivision. Public access to the waterfront occurs at varying intervals between lots in the South Thorne Bay subdivision, and some also serving as utility easements. Plat maps should be checked for accuracy in regard to public access easements.

LAND USE GOALS AND POLICIES

GOALS

- Encourage and support community development that includes buffers and/or open space between conflicting or differing land uses, different residential densities, and developments and thoroughfares.
- Direct organized community development and growth to occur near areas in the existing townsite where existing roads, utilities, and services are available.
- When applicable, encourage and support discussions with the U.S. Forest Service, Ketchikan Pulp Company and the City of Thorne Bay to resolve the land encumbrance issue.
- Protect public access to the waterfront.
- Support waterfront developments that improve tourism opportunities.
- Retain waterfront property for multiple use, including industrial, commercial, and recreational uses that include public access and viewsheds.
- Encourage active use of valuable commercial lands.
- Accommodate floating facilities when legal upland access exists.
- Encourage waterfront access for staging areas and private barge use.
- Encourage the vacation of public access easements in waterfront development and industrial zones.

POLICIES

- Maintain and regularly update the comprehensive plan and land use ordinances.
- Support Ketchikan Pulp Company's clean-up plan on encumbered lands that include the shop area, sort yard, and bunkhouses, if necessary.
- Develop a land use plan that includes newly acquired encumbered lands when the time is appropriate.
- Consider long-term lease for commercial development as opposed to direct sale of commercial properties to avoid speculative purchase, especially on and near the waterfront.

SUMMARY - POTENTIAL GROWTH AND DEVELOPMENT AREAS

Introduction

This section has been included because Thorne Bay is in a very transitory position, mainly because of the pulp mill closure that resulted in the sudden loss of a secure economic base. This has changed the very nature of the area. The housing shortage and the demand for developable residential has decreased. The importance of economic diversity has increased. The need for improved community facilities, including transportation, recreation, and utilities grows steadily.

Many current issues, goals, and policies have been presented in this plan. The following are several different growth and development patterns that could be employed in the future. After the encumbered lands plan is complete, the City of Thorne Bay may find the need to develop a land management plan or program as a complement to this comprehensive plan.

Industrial Growth

As previously outlined in this plan, industrial growth should be directed towards Tolstoi Bay and the Goose Creek commercial/industrial subdivision. Guiding industrial development out of town will open up land currently occupied by industrial uses, such as the KPC shop area and sort yard. Removing industrial type uses from the city core lessens truck traffic, dust, congestion, and noise pollution from residential and light commercial areas.

Commercial Development

As the reliance on the timber industry lessens, economic diversification in the form of additional commercial growth and development will increase. Residents that want to stay in the area deserve the opportunity to expand their own commercial ventures, as well as begin anew. Also, the city needs to make commercial space available for services, that are currently lacking, such as a banking facility. The KPC shop area could be considered for commercial zoning. Also, the Shoreline Drive area could continue to develop commercially.

Residential Development

Although the need for residential lands has decreased since the pulp mill closure, it has not disappeared. At one time it was thought that the Bypass Road should be developed immediately. The magnitude of the project plus the expense of developing utilities, especially a water system, has compelled the city to consider smaller, closer to town residential land offerings. The state land beyond the sewer treatment plant would

provide a sufficient amount of residential land at a lesser expense to the city and potential buyers. Once a master plan is created for the Bypass Road lands, a phased development could be initiated.

PART III

IMPLEMENTATION

INTRODUCTION

Implementation procedures convert the goals and policies outlined in this plan into specific and oftentimes legally binding regulations, controls, and requirements. Implementation tools range from legal controls to cooperation between public and private agencies. The effectiveness of the decisions made about land use relationships hinges on the usefulness of the plan as a development guide to those officials who are making day-to-day development decisions.

Several types of planning techniques can be utilized for this plan's implementation. These include:

- zoning
- conditional and special use permitting
- subdivision controls
- capital improvement planning
- other specific, related planning documents

ZONING

The relationship between a comprehensive plan and a zoning ordinance and map is fundamental to community planning. The comprehensive plan, text and map provide basic recommendations about long term land use for the general community. Zoning is a method of official land use control, adopted by the city council as a zoning ordinance. Zoning decisions are based on the comprehensive plan. While a comprehensive plan is general and refers to generalized map areas, a zoning ordinance is very specific in terms of uses and refers to legally defined and described parcels. The comprehensive plan reflects community discussion and provides rationale and direction whereas a zoning ordinance is very specific, and divides the city into different types of land uses: residential, commercial, and industrial. The location of public facilities is also provided for within certain zones. In Thorne Bay, a mixture of these uses has historically been allowed.

One way to achieve effective plan implementation is to translate the goals and policies in the adopted comprehensive plan to controlling factors in zoning decisions. Another way zoning can become an effective tool is to fully involve the community in the decision making process. It is essential to maintain the interest and involvement of the community in land use decision making in order to insure the continued effectiveness of this process.

During the life of this comprehensive plan, the process of adopting, using, and revising the zoning ordinance can further refine the goals and policies of the plan.

CONDITIONAL USE PERMITS

Conditional use permits are included in zoning regulations as a way to allow consideration of individual land uses. They allow for flexibility in the zoning title by providing for uses that may be suitable in certain locations and not others. These uses are expressly permitted conditional uses in the zone, clarified by a section labeled conditional use permits for each zone. Conditional use permits allow inclusion of uses that should not be permitted in every part of the zone, but are reasonable in some areas of the zone with restrictions and conditions that are designed to fit the particular problem that the use may present. The granting of conditional use permits should, in general, conform to the comprehensive plan. These types of permits would establish the conditions imposed by the city on the use of properties for certain activities and should reflect the plan goals and policies. In some cases, granting a conditional use permit would allow activities which violate a comprehensive plan policy and aggravate a problem identified in the plan. A conditional use permit may be denied if it adversely affects the implementation of the comprehensive plan.

SUBDIVISION

The subdivision ordinance is used to control and regulate the platting of land into lots, blocks, and streets. Regulations have been established for lot arrangement and size, road systems, adequate drainage, utilities, open space, and correlation with adjoining subdivisions as well as with other land uses. A legal description of the lot or lots is provided when the subdivision plat is recorded. Rights-of-way for utilities and streets are dedicated to the city, and recorded on the subdivision plat. While some of these requirements may seem unnecessary when viewed from the perspective of individual property owners, uniform standards are important elements of the overall plan to protect the environment while permitting growth. Once the decision is made to subdivide the land, subdivision regulations provide reasonable assurance for the orderly development of the land and provide an additional vehicle to implement many of the goals and policies of the comprehensive plan.

CAPITAL IMPROVEMENT PROGRAMS

Capital Improvement Programs (CIP) refer to major expenditures of public or semipublic funds for the improvement or extension of roads, sewers, power lines, parks, etc., projected over several years. Based on the plan's elements, the capital improvement program addresses the financial resources for implementation over a practical intermediate planning period, generally six years. Based on best estimates of available revenue from various resources and real costs for acquisition and development of the needed facilities, the CIP becomes a prime tool for gauging the community's commitment to and capacity for implementing the general desires and needs indicated in the comprehensive plan. Such a program has the following advantages: it focuses attention on community goals, needs and capabilities; and it enhances opportunities for participation in state and federal grant-in-aid programs. It also provides for the most efficient use of public funds, a means of establishing community priorities, and a means of coordinating with related programs of other levels of government.

Capital improvement programming involves the following steps:

1. Preparing a preliminary six year capital improvement program based on the comprehensive plan. This is done by establishing need priorities for the range of proposed projects, estimating costs of projects, estimating various sources of revenue, and establishing a six year schedule.
2. Reviewing the priority schedule and financial estimates with interested agencies, groups and the general public.
3. Consideration and adoption of the program by the appropriate agencies.
4. Annual review and revision of the program to keep it current and meaningful.

OTHER SPECIFIC RELATED PLANNING DOCUMENTS

Transportation

The development of a transportation plan that includes traffic flow, maintenance, building standards, and parking requirements is a transportation policy within this plan. This document will be a valuable planning tool that will work integrally with this comprehensive plan and the capital improvement program.

Encumbered Lands

This complex issue has necessitated the formation of an encumbered lands committee. The committee has been holding public meetings and workshops to decide a number of land use issues. The City Council will eventually decide what recommendations will be approved and included as a plan.

PLAN AMENDMENTS AND REVIEW

This document is intended to guide land use decisions and change in Thorne Bay. The discussions and policies it contains pertain to issues imminent in the next few years, as well as long-term change. At some point, however, this plan may cease to be a useful aid. It is possible that some unanticipated major event will occur which will require modification or amendment of this plan. Plan amendments are a legitimate and acceptable response to change in the community. However, plan amendments should not be used as a means of circumventing the general intent and purpose of this comprehensive plan, satisfying short range needs, or relieving individual problems. An amendment should only be considered where a change or addition would substantially improve and strengthen the usefulness of the entire plan.

One of the objectives sought in developing a comprehensive plan is predictability. Property owners and investors need to know what to expect in terms of development trends and possibilities. This is particularly important to public agencies who are responsible for the development of long range capital improvement programs. Certainty, however, does not mean that once a plan has been adopted, it is meant to stagnate. Policies, values, and technology all change and these changes create conditions where plan amendments are necessary. Amendments should be considered in the same context as the original plan: how the costs and benefits will be borne by the whole community.

The Planning Commission should review this comprehensive plan annually and decide if it is still a viable document. The Commission may decide this plan has outlived its usefulness sooner than expected, or that with modification it would have a longer life. This plan is not absolute: it can and should be changed and revised so that it continues to meet the needs of this community.

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