

INVENTORY INFORMATION: CITY OF DEPOE BAY

AMENDED MARCH, 1982 – Ordinance No. 85

AMENDED SEPTEMBER, 1991 – Ordinance No. 256

AMENDED MARCH, 2007 – Ordinance No. 278  
To Include 2004 Depoe Bay Local Wetlands and Riparian Inventory  
(by reference)

CITIZEN INVOLVEMENT: Goal 1 requires that citizens be involved in all phases of the planning process. A separate document details the citizen involvement program as implemented in Depoe Bay. A copy of the adopted and approved Citizen Involvement Program for the city is a part of that document.

The Planning Commission has served as the Committee for Citizen Involvement.

PLANNING PROCESS: The City of Depoe Bay contracted with the Mutual Aid Planning Service (MAPS) for assistance in the preparation of their Comprehensive Plan. MAPS is a planning agency associated with Lincoln County which is engaged in preparing plans for all but one of the incorporated cities of the county, as well as the Lincoln County Plan. It is felt that greater coordination and consistency is possible through such an approach.

Depoe Bay has no planner nor city manager, so the use of some sort of consulting service was considered necessary by the city.

To insure that the requirements of Goal 1 were met, and to devise a plan which is responsive to the wishes of the citizens of Depoe Bay, the MAPS planners assigned to the city have worked closely at every step of the process with the Planning Commission and interested citizens. For instance, a special meeting of the Chamber of Commerce was held to enable their members to discuss economic considerations with Dr. Ed Whitelaw, whose firm Economic Consultants Oregon, Ltd., prepared the economic element for the county and cities within it. Upon completion of the Draft Comprehensive Plan(s), the widest possible input will be solicited from all affected parties prior to submission of a plan to the Council for its consideration. Town meetings and a published plan and land use map will be used.

AGRICULTURAL LANDS: There are no significant agricultural lands within the City of Depoe Bay and its proposed urban growth boundary. Those areas not already devoted to urban uses are "forested" rather than farmed. The city is not, therefore, required to take an exception to the agricultural goal.

#### DEPOE BAY FOREST LANDS INVENTORY:

##### The Resources

Approximately 400 acres of the eastern fringe of the Depoe Bay planning area are currently used as commercial forest lands. These lands consist of three parcels owned by the Longview Fibre Company. The northern parcel (67 acres) is outside the city limits, but within the preliminary urban growth boundary, the middle (159 acres) and southern (180 acres) parcels are within both the city limits and the U.G.B.

The U.S. Forest Service Pacific Northwest Forest and Range Experiment Station's 1946 Douglas Fir potential productivity study classified all western Oregon forest lands on the basis of five site classes, with site 1 land being the most productive and site V being the least productive. The majority of the forest lands within the Depoe Bay planning area have been identified as site III lands, which means that they are capable of producing at least 121 cubic feet of wood fiber per acre per year. This is a productive capacity considered adequate for

commercial forest use; through modern intensive management practices considerably higher yields are likely.

In addition to having a suitable productive capacity, the Longview Fibre Company has indicated that they feel these lands are suitable for sustained timber management (considering such factors as accessibility, size of parcel, ease of cutting and replanting, etc). These lands currently support a stocking of 20 year old timber which the company plans to harvest and subsequently replant in 35 to 40 years.

### Factors Influencing Policy Designation of Forest Lands

The intent of a statewide planning Goal 4 is to conserve forest lands for forest uses. It states that "lands suitable for forest uses shall be retained for the production of wood fibre and other forest uses." Under Goal 14 (Urbanization), lands within existing city limits can be considered urbanizable lands. Lands within the Urban Growth Boundary for which a need can be demonstrated (including forest lands) can also be properly considered urbanizable lands. The forest lands within the Depoe Bay planning area can, then, be properly designated either as forest lands (which would restrict these areas to forest uses) or as urbanizable lands.

Portions of the Longview Fibre's lands are unsuited for urban development due to steep slopes. Much of the Longview Fibre property and especially those portions south and east of the harbor are suited for urban uses but unavailable at this time due to the company's decision to retain the lands in forest production. The city has zoned all of the Longview Fibre property that lies within the city limits for Timber Conservation. The city's adopted Timber Conservation zone is designed to protect and retain commercial forest lands located within the city limits until such time as they may become available and needed for urban uses. (Longview Fibre has suggested that, subject to a favorable trade for productive forest lands elsewhere, the company would relinquish control of these properties, thus allowing urbanization.)

Forest lands within the city limits other than those owned and managed by Longview Fibre have been zoned for urban uses.

OPEN SPACES, SCENIC AND HISTORIC AREAS, NATURAL RESOURCES: Statewide Planning Goal 5 requires that each governmental jurisdiction inventory the following resources:

- a. Land needed or desirable for open space;
- b. Mineral and aggregate resources;
- c. Energy sources;
- d. Fish and wildlife areas and habitat;
- e. Ecologically and scientifically significant natural resources;
- f. Outstanding scenic views and sites;
- g. Water areas, wetlands, watersheds and groundwater resources;
- h. Wilderness areas;
- i. Historic areas, sites, structures and objects;
- j. Cultural areas;
- k. Potential and approved Oregon recreation trails;

- I. Potential and approved federal wild and scenic waterways and state scenic waterways.
- a. Land needed or desirable for open space: Water areas appropriately constitute the most important visual open space for residents and visitors to Depoe Bay. Visual access to this space is provided by extensive Oregon State Park holdings and by Highway 101, including the highway bridge. The dish-shaped lands surrounding the historic inner harbor provide by their slope many commercial and residential views.

Land suitable for development and retention as terrestrial open space will be discussed, in part, under the recreation inventory.

The commercial timber lands which lie to the east of Depoe Bay (and to the north and south of the present town center) also provide immense areas of open space. By designating the commercial timber lands which lie within the city and its urban growth boundary as suitable for timber production rather than residential development, this open space will be managed to preserve open space values.

- b. Mineral and aggregate resources: There are no known commercially important mineral deposits within the proposed Depoe bay Urban Growth Boundary.

Minor sources of aggregate occur within the general area. The State of Oregon owns a quarry site of quite limited potential near the community of Miroco. It is located just south of the Ben Jones Bridge on the Otter Crest Loop highway between that highway and highway 101. While the quarry is outside the proposed Depoe Bay Urban Growth Boundary, quarrying operations of any substantial nature would impact the residents of Miroco. Once the Ben Jones Bride is repaired and capable of safely supporting heavy trucks, the site might be most suitable for aggregate stockpiling.

There is one known abandoned quarry within the city limits of Depoe Bay. It is not considered to be of outstanding commercial potential and would not be allowed to operate within the city unless a finding that no suitable alter native sites outside the urbanized areas were available.

- c. Energy Sources: Though located in areas where high winds are expected, no private, state or federal agencies concerned with the identification and development of energy resources has indicated that the Depoe Bay area contains commercially important, developable energy resources.
- d. Fish and Wildlife Areas and Habitats: Since Depoe Bay has an estuary, classified as "Shallow Draft Development," significant habitats which exist in conjunction with the estuary and ocean shoreland areas will be treated under these goal topics.

As with other coastal Oregon communities surrounded by forest lands, wildlife is present at the interface of residential and rural lands with a supreme disregard

for politically established lines such as city limits and urban growth boundaries. Residents of Depoe Bay known of no unique, site-specific habitats that would require specific protective policies (such as Eagle or Spotted Owl nests), and the appropriate State Agency inventories list no areas of special significance within the Depoe Bay UGB area.

- e. Ecologically and Scientifically Significant Natural Areas, Including Desert Areas: There are no significant areas in Depoe Bay. The Nature Conservancy has conducted an extensive inventory of natural areas remaining in the State of Oregon. Within Lincoln County they list a number, including “Shell Cove” (south end of Depoe Bay, just north South Point), about which they report “spectacular example of exposed outer coast with rocky inter-tidal zone.” Also listed is “Boiler Bay,” owned by Oregon State Parks, “Submerged algae and surfgrass beds, protected rocky inter-tidal zone. Used for research.”

The Shell Cove suite is within the Coastal Shorelands Boundary as identified on the Comprehensive Plan Map and city’s zoning map and is subject to plan requirements for Goal 17. It will not be addressed through the Goal 5 requirements for significant natural areas.

- f. Outstanding Scenic Views and Sites: A difficulty in inventorying outstanding areas results from the fact that the whole Depoe Bay area is considered “outstanding” visually. The setting of Depoe Bay; the inner harbor and the shoreline; when viewed from a distant perspective, is an outstanding site. The problem becomes one of the identifying those areas within the area from which the visual resources of the area can be enjoyed.

In general, lands owned by the Oregon State Park System, coupled with the state highway and local and county roads provide adequate visual access. In addition, certain commercial establishments within the city have been built to capitalize on the views which comprise a major economic resource for the property owners and citizens of the area.

Several agencies have designated areas within the Depoe Bay planning area as having scenic qualities of one kind or another. The Oregon Coastal Conservation and Development Commission (OCC & DC) in their study Visual Resource Analysis of the Oregon Coastal Zone categorized the coastal areas with respect to the opportunity they presented for coastal experience by a viewer. OCC & DC also offered land use suggestions for the different categories identified. Within the Depoe Bay planning area, the area (1) from the north end of the planning area to Boiler Bay State Park, including a narrow section east of Highway 101; (2) the area from North Point to South Point including the bay and area around and behind the bay on the hillsides; and (3) the area from the north tip of Whale Cove to the south end of the planning area including the headland area east of Highway 01, are all described as having “potential for exceptional coastal experience.” OCC & DC suggested these areas have “landscapes which are of statewide and/or national concern from the point of view of experiential quality.” They suggest carefully considering the

value and meaning of these areas to the public-at-large against proposed land uses. OCC & DC suggests that these areas are prime for public acquisition and preservation.

In addition, OCC & DC identified areas of “obvious and strong coastal association” where suggested uses are those with strong relationship to the ocean and coastal processes such as lighthouses, visitor centers, etc., or temporary uses such as tent camping and peak season temporary commercial uses.

Areas identified as “less obvious coastal association” have suggested land uses which directly relate to the coastal environment, but include commercial and residential uses, marinas, harbors, export industries, etc. Filling or diking should be discouraged.

The State of Oregon Highway Department has designated the stretch of U.S. 101 south of the north side of Whale Cove as a scenic area under the Scenic Areas Act. This act sets limitations on signs which can be located along the highway within this area.

Within the Depoe Bay planning area, there are two state parks, one city park (deeded to the city by the state which includes building), and one county park that offer scenic views and serve as public accesses to those views. These include Boiler Bay State Park, Depoe Bay City Park, Rocky Creek State Park, and Depoe County Park and boat landing on Depoe Bay.

The City of Depoe Bay has designated a privately owned parcel in the South Point area and the seawall and M-P zoned lot near the channel entrance as provided exceptional aesthetic views (see map).

Though South Point has historically been the southern end of residential development in the Depoe Bay area, with the sale and development of the Maling Estate into the Little Whale Cove development, and with additional developmental pressures expected at the southern end of Depoe Bay UGB area, the visual character of the area approaching Cape Foulweather from the City of Depoe Bay is in danger of changing. The highway now seems to create a forested corridor terminating in the sheer bluffs of Cape Foulweather. This forested corridor is considered to be a scenic resource of the area and its preservation is considered important to some residents in the area.

Policies relating to preservation, access and acquisition of outstanding scenic views and sites are contained in the plan.

- g. Water Areas, Wetlands, Watersheds and Groundwater Resources: The ocean and estuary water areas are treated elsewhere in the inventory. Depoe Bay has no designated wetlands.

#### Water Resources

## Surface Water

Surface water consists of lakes, rivers and streams and their associated watersheds. Portions of three small watersheds are located within the Depoe Bay planning area. They are from north to south: North Depoe Bay Creek, South Depoe Bay Creek, and Rocky Creek.

The city currently derives the major portion of its domestic water supply from a storage site on North Depoe Bay Creek, whose watershed occurs in an area of commercial forest land within the city limits. The community of Miroco within the Depoe Bay planning area currently diverts water from Rocky Creek for domestic purposes. South Depoe Bay Creek has been identified by the State Water Resources Board as having a potential storage dam site located within the planning area. Ownership of all three watersheds is held by the Longview Fibre Company and is planned for timber production through the next 30 years or more. (The city, however, is concerned for the impact any future development may have on the watershed.)

## Ground Water

In terms of ground water characteristics, the Depoe Bay planning area can be divided into three major segments: the Astoria Formation (including the "sandstone of Whale Cove"), the Depoe Bay and Cape Foulweather Basalts, and limited area of marine terrace.

The units included in the Astoria Formation group consist primarily of fine to coarse-grained massive sandstone and generally thin bedded siltstone. The tight texture of the fine-grained rock particles in these formations precludes any but minor infiltration of precipitation and storage of groundwater. The overall groundwater potential for these units, in terms of both quantity and quality, is poor.

The Depoe Bay and Cape Foulweather formations are comprised of fine to medium-grained basalts that form the headlands that have more successfully resisted the erosional forces of wind and water than have the adjacent softer rocks. Production of groundwater from these basalts is related to jointing, fracturing, inter-flow zones and faulting. As such, these formations have a poor groundwater potential overall. A well tapping porous area containing abundant water would be a matter of chance. Wells in these formations have had very low specific capacities (gallons per minute yield per foot of drawdown). The water, however, is of excellent quality, as there is little mineralization present.

The most limited formation in the Depoe Bay planning area, the marine terrace, also offers the best groundwater potential. These terraces consist of semi-consolidated fine-grained sand, silt, clay and occasional pebble lenses. The deposits are, for the most part, porous and permeable and, where sufficiently thick and saturated, are capable of relatively high yields of good quality

groundwater. The city currently obtains a portion of its domestic water supply from two wells tapping the marine terrace formation on the Maling Estate property. Because of their limited area distribution in the Depoe Bay planning area, well yields from these deposits will likely be of only local importance.

Soil types and watersheds in the Depoe Bay area are mapped as a part of this inventory.

h. Wilderness Areas

There are no wilderness areas within the proposed Depoe Bay Urban Growth Boundary.

i. Historic Areas, Sites, Structures and Objects

There are a number of historic sites and/or areas within the Depoe Bay planning area. A list of sites follows. Policies concerning their preservation appear in the plan. The list was derived from a number of sources, including OCC & DC, the State Parks Division and citizens of Depoe Bay.

1. Depoe Bay Inner Harbor: Depoe Bay is probably the most sheltered harbor on the coast of Oregon. It is a small cove in the shoreline of central Lincoln County that has an area of about four acres. It joins the ocean by a narrow channel of 60 or 70 feet in width. North Depoe Bay Creek and South Depoe Bay Creek enter the harbor. A state highway bridge crosses its mouth entrance. Depoe Bay is the former Indian allotment property of Depot Charley, or Charles Depoe, a member of the "Joshua" or Jashute Indian tribe from the mouth of the Rogue River in Curry County. Charles Depoe was removed to the Siletz reservation in 1856 and resided for many years at the mouth of Depot Slough, the shipping point of goods from Yaquina Bay to the Siletz Agency headquarters. He thus received the name of "Depoe Charley." In 1892, after allotment agreements at Siletz, he received as his land the small harbor on the coast that yet bears his name. He was an informant for linguists and ethnologists at the turn of the century. His son, Robert Depoe, attended the Carlisle Indian School in Carlisle, Pennsylvania.

Depoe Bay was for many years the home of Bertha M. Bower, noted western novelist whose work Chip of the Flying U was one of about forty novels that she wrote during her career. One novel, Toilers of the Sea, is set at this place. The drowning of her son led to the establishment of the annual Fleet of Flowers which commemorates those who have lost their lives at sea.

2. Highway 101 Bridge which spans the entrance to the inner harbor of Depoe Bay should be maintained by the state as an historic structure.



3. Other Historic Sites: Citizens of Depoe Bay discussed and identified other areas and some buildings which have historic interest or connotation. These were:
  - A. Whale Cove: an area of outstanding scenic attraction, it was also used by smugglers.
  - B. The Old Depoe Bay School: currently the city hall, this building may be in sufficient disrepair to make restoration and preservation economically impractical.
  - C. The Old Community Hall.
4. Archaeological Sites: All of the Depoe Bay planning area falls within the “high density” archaeological site density classification shown in the 1976 Lincoln County Statewide Inventory Historical Sites and Buildings, published by the Oregon State Historic Preservation Office, Parks and Recreation Branch, Department of Transportation. In addition, the state archaeologist has said that areas as far as five miles up stream on all streams and rivers emptying into the ocean are archaeologically sensitive areas. Exact sites are not pinpointed for fear of destruction by relic hunters.

j. Cultural Areas:

The Statewide Goal defines Cultural Area as: ... “an area characterized by evidence of an ethnic, religious or social group with distinctive traits, beliefs and social forms.”

Depoe Bay has no such distinctive groups within its planning area.

k. Potential and Approved Oregon Recreational Trails:

Both the Oregon Coast Trail (hiking) and the Oregon Coast Bicycle Trail are slated to pass through Depoe Bay. The Bicycle Trail is designed to follow the route of Highway 101 for the whole length of the planning area. The hiking trail is recommended to cross the highway from the west side to the east side approximately ¼ mile north of Boiler Bay. From there, the proposed route would take the trail east of the highway, some distance into the wooded hills. It would drop down through town to meet the north end of the Highway 101 bridge, cross the bridge and continue on the highway to the city hall, then go east again and through Longview property and other forest land until reaching the Otter Crest Scenic Highway.

This trail is a proposed border-to-border hiking trail that would mainly follow Oregon beaches, with segments designated to skirt sections of the coast where foot travel along the shoreline is not possible or safe. The northern portions of the trail have been constructed in Clatsop and Tillamook Counties and within three state parks further south, and have been officially adopted by the

Department of Transportation. The remaining trail locations, including those in Lincoln County, are still tentative but have been approved in principle by the State Recreation Trails Advisory Council. The acquisition of rights-of-way and construction and signing is proceeding from north to south along the coast, so work should begin soon in Lincoln County.

1. Potential and approved federal wild and scenic waterways and state scenic waterways do not exist within the planning area.

#### AIR, WATER AND LAND RESOURCES QUALITY:

The quality of the environment in Depoe Bay is generally excellent. The prevailing westerly winds and the absence of major air pollution sources results in excellent air quality. Depoe Bay does not foresee future development of a nature or intensity sufficient to appreciably degrade air quality.

Solid waste disposal for the City of Depoe Bay is provided by the North Lincoln Sanitary Service through an exclusive franchise agreement. Solid waste transfer stations are being planned, and all solid waste will eventually be transported to the Benton County landfill site at Coffin Butte. The transfer station will accommodate both commercial and private citizen disposal needs. Projected sites for transfer stations in the Depoe Bay vicinity would include the existing landfill site at Agate Beach and a location on Schooner Creek southeast of Lincoln City.

Water quality is an important consideration to the city, since the majority of its water comes from two streams which originate on commercial timber property immediately to the east of the city. These sources are augmented by wells which make a concern for groundwater contamination pertinent also.

Depoe Bay does not have a comprehensive surface water drain program; this results in runoff infiltrating the sewer system to an undesirable extent. In general, however, the sewer system which serves all improved property in the planning area results in adequate water quality protection.

The city expects to comply with all applicable state and federal standards in this area. Plan policies address this issue, both generally and specifically.

#### Noise Pollution

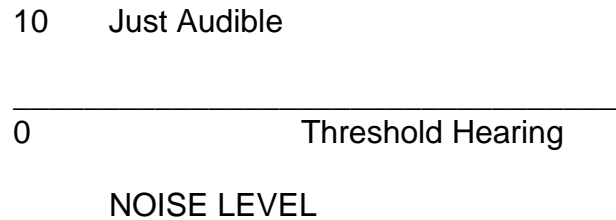
There are two primary sources of noise pollution found within the Depoe Bay area. Noise generated from automotive traffic and primarily impacting the Highway 101 corridor is largely unavoidable. The City of Depoe Bay will depend on the Oregon State Police and Lincoln County Sheriff's Department to enforce motor vehicle noise emission standards. Noise generated by the ocean surf, although not defined locally, can be substantial. A noise impact report (dBH Acoustics, Inc. 9-81) prepared in conjunction with a request to establish a heliport on an ocean front in the Newport area found the ambient noise level in the vicinity of the site average 65 decibels. The future below defines various noise generating activities by decibel rating. (State of Oregon Noise Pollution Report, D.E.Q., 1980).

The D.E.Q. has defined noise for two different situations. During the day, 7 AM to 10 PM, noise is generally any sounds that disturb normal speech. Tests have shown this to be sounds above 60 decibels. During the night, 10 PM to 7 AM, noise is any sounds that disturb sleep. Tests have shown this to be sounds above 45 decibels.

	140	Carrier Deck Jet Operation	Painfully Loud
	130		
	120	Jet Takeoff (200 feet) Discotheque	Maximum Vocal Effort
	110	Riveting Machine	
	100	Garbage Truck	
	90	Heavy Truck (50 feet)	Hearing Damage (8 hrs)
	80	Alarm Clock	Annoying
	70	Freeway Traffic (50 feet)	
60 decibels interferes with conversation	60		Loud Conversa- tion (4 ft.)
	50	Light Auto Traffic (100 ft.)	Normal Conversation (12 ft.)
45 decibels interferes with sleep	40		
	30	Soft Whisper (15 ft.)	
	20	Broadcasting Studio	

These levels are useful for two reasons. First, they are reasonable limits. Subjected to more than these levels over a period of time, a person will suffer a temporary or permanent hearing loss, as well as some of the other signs of exposure to noise pollution-fatigue, weight loss, frustration, etc. Secondly,

the levels make it easy for the citizens to tell when the limits are being exceeded. (See graph.)



AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS:

Depoe Bay is in an area subject to natural disasters and hazards. These are principally slides, flooding (both ocean and stream), and shoreline erosion.

The Mutual Aid Planning Service contracted with RNKR Associates for the completion of a study of coastal hazards in Lincoln County. It is site-specific in nature. The information resulting from the study, supplemented to a small degree by information from other sources, gives Depoe Bay an unusually detailed analysis of the nature and extent of the hazards to life and property to be found within the planning area.

Maps and text of this hazard study become a part of this inventory. Policies concerning building in flood plains, on steep slopes subject to sliding, and relating to setbacks from ocean front areas are contained in the plan.

Depoe Bay has begun to participate in the National Flood Insurance Program.

GEOLOGIC HAZARDS:

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Structural Geology:

The headlands of Depoe Bay are made of basaltic rocks known as Cape Foulweather Basalt. This basalt was formed as lava flowed from underwater vents when Cape Foulweather was formed, between 15 and 30 million years ago. This hard basalt lies upon a sandstone rock formation called the Sandstone of Whale Cove. This rock formation is 200 to 300 feet thick and contains features which indicate that it was formed by the compaction and cementing of sediments deposited in shallow water sometimes before the Cape Fowlweather basalt was formed.

On the surface, overlying the sandstone, marine terrace materials are observed. The marine terraces represent ancient beaches which have been elevated to 50 feet or more above sea level. The age of the marine terrace deposits has not been definitely established, but their elevated positions indicate that they may be 2 to 3 million years old.

Further inland, a sandstone called the Astoria Formation is evident. This rock, which is about 20 million years old, is 2,000 feet thick and slopes seaward. On top of this sandstone lies a basaltic rock formation labeled Depoe Bay Basalt. This hard basalt is older than the basalt headlands of the Cape Foulweather Basalt.

The rock formations found in the Depoe Bay area have numerous fault systems. A fault is a fracture of the surface rocks in the crust of the earth. The fracture is due to unequal stresses placed upon the surficial rocks. Faulting occurs when the bedrock suddenly slips along fracture lines. This sudden slippage causes tremors in the earth which we feel as earthquakes. Despite the many fault lines in the area which indicate rock movement, there are no known active faults exposed along the Oregon coast. Buried faults have produced a few minor earthquakes, however. Seven earthquakes have been observed in Lincoln County in the last 70 years, mostly in the Newport area. No damage to property was reported from any of the seven recorded earthquakes. We can reasonably assume this trend to continue, and any earthquakes felt will probably be insignificant.

### Landslides

Earthquakes could create a hazardous situation, however, areas with steep slopes and saturated soils could be turned into landslide area by earthquakes. Landslides occur when the forces acting upon the soil become greater than the forces holding the soil in place. This can happen in a number of ways: erosion can undermine and oversteepen a slope, weathering can decrease soil strength, removal of the vegetation can reduce soil strength, and human alteration of a slope may cause the downward forces to prevail. Landslides can occur when a steep slope has a heavy burden placed on the top of the slope, or if the bottom of the slope is excavated for a road or for homes.

Old landslides are especially prone to renewed mass movement of the hillside. Construction of buildings and roads can reactivate old landslides on slopes of ten (10%) percent to thirty five (35%) percent. The State Department of Geology and Mineral Industries has identified new and old landslide areas. Development of these unstable slopes should occur only after adequate geologic and engineering studies are completed for each home site.

### Tsunamis (Tidal Waves):

Tsunamis are large shock waves (generated by earthquakes) which travel at up to 600 miles per hour across the ocean. These sea waves are not noticeable in an open ocean, but they can become large waves as they near the coastline. Tsunami waves as high as 100 feet have been observed worldwide, but a wave of 14 feet is the highest wave of record for the Oregon coast. A tsunami wave may reach higher areas, however, if it is superimposed upon a high tide and a high storm surge (may be as high as 28 feet of effective height).

The Environmental Science Services Administration of the U.S. Department of Commerce gives the following ten safety rules for coastal residents regarding tsunamis:

1. All earthquakes do not cause tsunamis, but many do. When you hear that an earthquake has occurred, stand by for a tsunami emergency.
2. An earthquake in your area is a natural tsunami warning. Do not stay in low-lying coastal areas after a local earthquake.
3. A tsunami is not a single wave, but a series of waves. Stay out of danger areas until an "all clear" is issued by competent authority.

4. Approaching tsunamis are sometimes heralded by a noticeable rise or fall of coastal water. This is nature's tsunami warning and should be heeded.
5. A small tsunami at one beach can be a giant a few miles away. Don't let the modest size of one make you lose respect for all.
6. The National Tsunami Warning Center does not issue false alarms. When a warning is issued, a tsunami exists.
7. All tsunamis, like hurricanes, are potentially dangerous, even though they may not damage every coastline they strike.
8. Never go down to the beach to watch for a tsunami. When you can see the wave you are too close to escape it.
9. Sooner or later, tsunamis visit every coastline in the Pacific. Warnings apply to you if you live in any Pacific coastal area.
10. During a tsunami emergency, give your local emergency organizations your fullest cooperation.

#### Coastal Erosion:

Depoe Bay is in an area characterized as having non-critical erosion of basalt headlands. These headlands, comprised of Cape Foulweather basalt, are retreating at the rate of about 0.1 to 0.3 feet per year. This rate of erosion presents no serious hazards to the people of Depoe Bay. A potential hazard exists from erosion to other types of rock in Depoe Bay, however,

The marine terrace material, which lies on top of the basalt and the sandstone found in the area, is easily eroded by wind and waves. The weak marine terrace material has been estimated to be eroding at the rate of several feet per year. This rate of erosion may cause some problems in areas where the marine terrace material is located.

Erosion also occurs in the Sandstone of Whale Cove formation. Erosion rates of 0.5 to 2.0 feet per year have been estimated for this rock. This erosion causes the caves which residents see along the shoreline. These caves in the sandstone could cause hazardous conditions if erosion is occurring at a rapid rate. The area needs to be studied to determine if these caves are eroding at a rate which will be hazardous to Depoe Bay residents.

#### RECREATION NEEDS:

Depoe Bay attracts both permanent residents and numerous visitors because of the recreational opportunities which exist in the area. The economy of the area is significantly dependent upon maintenance of existing recreational opportunities, provided by both the public and private sector. Open space, recreational trails, scenic views and waysides have been dealt with in another section.

Four public parks exist within the designated urban growth boundaries of Depoe Bay. These are:

1. The Depoe Bay County Park and Boat Launch Ramp. This facility is situated on the south edge of the inner harbor. The park provides picnic and restroom facilities. The boat launch ramp provides ocean access for privately owned, trailer transported boats. It is a busy facility during the summer months.
2. Boiler Bay State Wayside consists of 32.79 acres. This is a day use area providing restroom and picnicking facilities. The scenic views of rocky headlands, surf, and at extreme low tides the remains of a ship's boiler deposited as a result of a shipwreck make this a popular tourist stopping point.
3. Depoe Bay city Park consists of 3.35 acres at the seawall in the city. The facility provides views of the spectacular channel into the inner bay and access to the basaltic inter-tidal area to either side of the channel. The day use area provides important tourist and resident recreational opportunities. Its central location has important economic benefits for the town's tourist oriented businesses.
4. Rocky Creek State Wayside is the largest of the four parks, with 58.43 acres. Located at the extreme southern end of the urban growth area, it is dominated by Cape Foulweather to the south and bordered by ocean shoreline and Whale Cove on the west and north.

Because tourism/recreation is such an important element of the economic life of the community, privately provided recreational opportunities are available in significant numbers and are generally encouraged by the residents of the city. A private recreational vehicle campground has been recently completed. Eight motels are located within the urban growth boundaries. Many of these provide visual and some physical access to the ocean. There are three charter sport fishing businesses operating out of Depoe Bay.

The city's subdivision ordinance requires that open space/park facilities be provided as elements of any future planned unit developments. The Comprehensive Plan's policies on recreation speak to the development of future recreational opportunities for citizens. A community hall and a city owned ex-school building provide places for community events of a recreational nature.

Responses from Depoe Bay citizens to questions concerning recreational opportunities and needs are presented below (Community Attitude Survey, City of Depoe Bay, O.S.U. Extension Service 1976).

Although the survey indicated a need for improved recreational facilities and opportunities, several community needs including street development and improvement, drainage control, police and library services were considered as higher priorities for public funding.

Community Attitude Survey:

In the community attitude survey compiled by the city, eleven questions dealt with Parks and Recreation. The responses were:

[[[see chart, page 16]]]

Do you feel Depoe Bay needs a city park?	42 yes	38 no
Do you feel the community needs more recreational opportunities for youth?	68 yes	11 no
Are you, as a resident, willing to pay your fair share for needed community improvements:	73 yes	4 no

Under “changes needed,” of 14 categories, “more family recreation facilities and youth activities” received the second highest number of votes (following “fix streets”).

### SENIOR CITIZENS’ RECREATION NEEDS SURVEY

A special study was accomplished in 1977 to determine the recreational needs of senior citizens in Lincoln County. Included here are portions of the study. The complete study is available at the County Planning Department.

#### Significance of the Study:

An inventory to collect supply data of recreation areas and facilities was conducted for Lincoln County, and an Outdoor Recreation Activity Survey of people 65 and older in Lincoln County was done. The state average of people 65 and older as mentioned earlier was approximately 11.1 percent of the total population. Within Lincoln County this particular age group makes up 16.3 percent of the population. Therefore, the possibility exists that the needs of this particular age group within Lincoln County may differ greatly from the state average of people 65 years and older. Since the SCORP data was accurate at the statewide level only, a separate study such as this appeared justifiable for a specific group which may differ from the norm. The information from this study should be of great value to the recreation planners in Lincoln County when needs and desires are determined of their older population. It will also be a useful tool for SCORP in updated their facility inventory in Lincoln County.

#### Summary, Conclusions, and Recommendations:

The purpose of this study was to inventory outdoor recreation areas and facilities in Lincoln County so current recreation opportunities were known. A further purpose was to compare the outdoor recreation activities of people 65 and older in the state as reported by the SCORP report. The comparison of people 65 years of age and older in Lincoln County was also made to the total population of Lincoln County.

Many new recreation facilities and areas were found since the 1976 supply inventory by SCORP. Also, some significant differences in outdoor recreation activities between people 65 and older in Lincoln County were found compared to those activities of the 65 and older



populations in the state. Significant differences also occurred between Lincoln County's total population and those 65 and older in Lincoln County.

Other data from the survey of Lincoln County's 65 and older age group indicated that the average person 65 years of age or older has lived in Oregon for 21 years or more. One-half of this population lives with another person (in most cases their spouse) while slightly less than half the population lives alone. The majority of people 65 and older have completed a high school education. The average income tends to be less than \$5,000 annually. Most people rely on their social security. The majority of those surveyed were women, and they appear to be satisfied with the recreational activities available to them.

### Conclusions:

People 65 and older in Lincoln County have a tendency to do more fishing, motor-boating, camping, hiking, picnicking, outdoor games, pleasure walking and "other" activities than the average person 65 and older in this state.

The total population in Lincoln County tends to do more fishing, motor-boating and picnicking than those 65 and older in the county. People 65 and older in the county tend to do more pleasure walking and "other" activities than the total population in Lincoln County.

There was no difference between those 65 and older and the total population for the remaining activities on the activity list.

### Policies Derived From Study:

1. Park and recreation agencies and Lincoln County should begin serious planning for this rapidly-growing population.
2. Lincoln County shall plan with those 65 and older in developing recreation programs for that population.
3. Lincoln County shall consider the relationship of recreation to transportation in planning with those 65 and older.
4. The county shall endeavor to diversity recreational activities with the county. (see activity list below).

### Activity List:

1. Camping
2. Picnicking
3. Pool swimming
4. Non-pool swimming
  - Beach swimming
  - Scuba diving
5. Fishing

- Clamming
  - Crabbing
- 6. Sightseeing
- 7. Motor-boating
  - Motor-boating
  - Aqua biking
- 8. Float-boating
  - Float-boating
  - Sailing
- 9. Water-skiing
- 10. Walking for pleasure
- 11. Hiking
  - Backpacking
  - Hiking
  - Mountain Climbing
  - Rock Climbing
- 12. Hunting
  - Hunting
  - Trapping
- 13. Outdoor Games
  - Archery
  - Badminton
  - Football
  - Riflery
  - Roller-skating
  - Rugby
  - Skate-boarding
- 14. Bicycling
- 15. Golfing
- 16. Tennis
- 17. Horseback Riding
- 18. Downhill Skiing
- 19. Cross-country Skiing
  - Cross-country skiing
  - Snow-shoeing
- 20. Snow Activities
  - Snow play
  - Tobogganing
  - Ice-skating
- 21. Off-Road Vehicles
  - Motorcycling
  - Snow-mobiling
  - Car racing
- 22. Others
  - Beachcombing
  - Bird watching
  - Crafts
  - Fossil hunting

- Flying
- Fruit picking
- Gardening
- Gliding
- Gold panning
- Hang gliding
- Jogging/running
- Kite flying
- Mushroom gathering
- Photography
- Rockhounding
- Scouting
- Sky diving

Proposed State Recreation Trails:

The Oregon State Parks Branch, Department of Transportation (DOT) is in the process of developing a statewide system of recreation trails, including hiking, horse, and bicycle paths.

All State Trail Systems Within Lincoln County are Proposals at This Time:

The two trails currently being planned in the county are:

1. Oregon Coast Trail (hiking) - The northern portions of this trail constructed in Clatsop and Tillamook Counties have been officially adopted by the D.O.T. The remaining trail locations, including those in Lincoln County, are still tentative, but have been approved in principle by the State Trails Advisory Council. Official acceptance by the D.O.T. will occur after construction.
2. Oregon Coast Bicycle Route - Public hearings have been held on the coast on this proposed route. The final draft of the proposed route will soon be submitted to the State Trails Advisory Council and Bicycle Committee, in addition to local government agencies, for review and comment. Approval will then be requested from D.O.T., as the trail is located on public highway right-of-way.

The Bikecentennial Route is an unofficial "official" trail. Though not officially adopted by D.O.T., this route is supported by them.

Other proposed state trails in Lincoln County are: The Coast Range Trail (horse and hiking); Dallas-to-the-Coast Trail (hiking); Corvallis-to-the-Coast Trail (hiking); and a locally proposed Bay-to-Bay Trail (hiking).

Recreation trails provide an avenue for a variety of recreational activities and interests. They also provide alternative transportation routes for those interested in getting away from automobiles and the limitations they impose.

The attraction of most recreation trails depends upon the aesthetic qualities of the surrounding area (i.e., panoramic view, trees, rivers, ocean, etc.). If extensive development

occurs in areas chosen for trails because of “natural” or “wild” characteristics, the value of the area for recreation may decrease, since the “natural” trail setting is altered.

Management of the areas around recreation trails is mainly the job of zoning measures and perhaps acquisition of scenic easements. Some protection to the area around trails may be offered by exclusion from the urban growth boundary.

Economic Inventory:

Depoe Bay, in corporation with the county, contracted with Economic Consultants Oregon, Ltd., for the purpose of better understanding the economic forces which will be at work in the area and in the city for the next twenty years. The consultant’s report, a part of this inventory, dealt with both economic and population growth projections.

Rapid economic growth is projected for the City of Depoe Bay as well as for the whole of the north coastal county area.

From data contained in the ECO report, the following skeletal table is derived:

	<u>1977</u>	<u>2000</u>
County Employment	13,250	34,000
Depoe Bay (covered employed)	172	568
Rate of Growth for 22-Year Period (Average Compound Annual)		4.5%
Share of County Employment (Lincoln City-Depoe Bay sub-region)	3,410 26%	10,780 32%
Square Feet of Commercial Floor Space (Depoe Bay)	100,481	402,705

It is projected that 68% of the total increased requirements in commercial floor space can be attributed to tourist and recreationally oriented commercial demand.

In Table 35, we present our only forecast of non-farm covered employment in Depoe Bay. With so few employees overall and with no employees in wood and lumber, Depoe Bay’s high and low forecasts converge to one forecast. We prepared this forecast by applying Depoe Bay’s share of employment in Lincoln County (which we calculated using Table 26) to the high forecast for the county’s employment in Table 18. According to our analysis, total non-farm covered employment in Depoe Bay will increase from 165 in 1975-1976 to 568 in the year 2000, reflecting an average annual compound growth rate of about 5.1%

[[[table 35 inserted here]]]

In Table 36, we present our forecasts of demand for industrial land in Depoe Bay based on employee-per-acre ratios of ten and fifteen. Since we would obtain no estimates of industrial land in Depoe Bay (not surprisingly), we could not estimate current employee-per-acre ratios in the city.

In Table 37, we present our forecasts of demand for commercial land in Depoe Bay based on employee-per-acre ratios of twenty and 150. If we divide Depoe Bay's non-farm covered commercial employment in 1975-1976 (i.e., 128 employees in retail trade and services) by our estimate of the 29 commercial acres Depoe Bay had in 1977\*, then we obtain a ratio of roughly four employees per acre, which we suspect is far too low. If twenty employees per acre is more accurate (as we think it is), and if the forecast in Table 35 applies, then by the year 2000 commercial uses in Depoe Bay will demand a total of 23 acres. This obviously makes no sense for a growing city to demand less land in the future than it now demands unless it increases its employee-per-acre ratios substantially. While Depoe Bay may increase its labor-land ratios in the future, the explanation lies in the inaccuracy of the data. When these are improved, one likely will find Depoe Bay's demand for commercial land increasing slightly less than proportional to commercial employment.

TABLE 36: FORECASTS OF DEMAND FOR INDUSTRIAL LAND  
IN DEPOE BAY: 1980-2000

FORECASTS**	1980	1985	1990	1995	2000
10 Employees / acre	4	5	6	7	7
15 Employees / acre	2	3	4	5	5

\* Obtained from the Lincoln County Assessor

\*\* ECO derived the forecasts of demand for industrial land by applying the two employee-per-acre ratios (see test) to the forecasts of employment in manufacturing, transportation, communication and utilities, and wholesale trade in Table 35.

TABLE 37: FORECASTS OF DEMAND FOR COMMERCIAL LAND  
IN DEPOE BAY: 1980 - 2000

FORECASTS*	1980	1985	1990	1995	2000
20 Employees / acre	8	11	15	19	23
150 Employees / acre	1	1	2	2	3

\* ECO derived the forecasts of demand for commercial land by applying the two employee-per-acre ratios (see test) to the forecasts of employment in retail trade, finance, insurance, and real estate, and (private) services in Table 35.

From information supplied to us by Lincoln County's Assessor we estimate Depoe Bay had about 100,481 square feet of commercial floor space in 1977. Dividing floor space by number of covered commercial employees in 1975-1976 (i.e., 128), we obtain 785 square feet of floor space per employee, which is too high for the same reasons given for Lincoln City's ratio of 598. If we assume this ratio remains constant during the 1976-2000 period, then applying it to the forecast of commercial employment in Table 35 yields a demand for floor space in Depoe Bay in the year 2000 of about 350,000 square feet. (For vacant, buildable lands, see Housing Inventory.)

#### Notes From Depoe Bay Workshop, May 4<sup>th</sup>

The Planning Commission, City Council, and members of the local Chamber of Commerce were invited to a planning workshop to discuss the economic element of the Comprehensive Plan.

The summary recommendation of the meeting was "To encourage additional tourist commercial development (no heavy industry) to the degree that supporting services are available." By supporting services, low income housing for an unskilled labor force is a current problem. So is adequate parking. So is the capacity of streets to handle additional traffic, should development cluster off 101 with the need for traffic circulation within the town.

Considerable time was spent discussing a wide range of planning issues. It quickly became apparent that most of the other goals impinge on decisions about commercial development.

The jammed nature of the inner harbor was discussed. Whether to allow an activity such as a restaurant on a waterfront tract was discussed, along with the general issue of water-dependent, water-related. In any event, the majority of the access points to the inner harbor are already committed to water-dependent uses; only one property represents a choice to be made.

Multi-family housing, and where I might suitably be located, occupied part of the evening's discussion. Recognition of the need for more low income housing was clear. Properties suitable for such a designation, whether it be multi-family or mobile homes, need to be agreed to.

A service center for non-tourist-oriented activities, such as the post office, bank, a grocery store, etc., is probably developing to the north of town. This happened because the post office had to move and selected a site opposite the bank, north of the central business district. It is unfortunate that the highway bisects the start of such a center, but it is likely that with two structures already built, designating another area entirely is unrealistic.

#### Community Consensus on Economic Development for the City:

1. Growth desired and expected in
  - a. Population
  - b. Housing demand

- c. Construction
2. Increased demand for services
    - a. food
    - b. Service station
    - c. Government services (fire, utilities, post office, city government)
  3. It is expected that the greatest economic growth sector in Depoe Bay will be tourism as reflected in greater economic activity in
    - a. Tourist shops
    - b. Restaurants
    - c. Motels
    - d. Fishing
      - 1) Commercial charter
      - 2) Individuals
      - 3) Processing
  4. The residents of the city seem not to want any light or heavy industry except water-related or water-dependent.
  5. Constraints on growth
    - a. Physical limits to the inner harbor
    - b. Parking for tourists in the downtown area
    - c. Low cost housing for service employees
    - d. Ability to provide water and sewer and streets as rapidly as demand develops
  6. Strategies to encourage growth beyond that which would occur under a laissez-faire situation. The Planning Commission has talked about using the Comprehensive Plan to alleviate certain constraints toward the end of accommodating growth in the housing and economic sectors, such as:
    - a. Creation of municipal parking in the near downtown area
    - b. Reserving space that might otherwise be used for residential uses for water-dependent and related uses
    - c. Creating unusual favorable opportunities for multiple unit and other low-cost housing.

Housing:

Richard L. Ragatz Associates, Inc., consultants in housing and community planning, have prepared a housing study for Lincoln County. Consisting of five books, it reflects housing conditions based on data from a variety of sources. The principal source is a comprehensive housing survey conducted by direct mail. All residents and non-resident home owners were surveyed. The response rate was sufficient to insure statistically valid results.

The records of the Assessor's Office were also used extensively. Certain information has been extracted which relates only to Depoe Bay. It is designed to be in a form which is more readily available to the potential users than is the complete study.

Richard L. Ragatz and Associates have suggested policies and programs which are or may be available to Depoe Bay and which address the acknowledged housing limitations of the city. There is clearly a shortage of "affordable" housing in both the rental and sales categories. Plan policies and the proposed land use map address these concerns.

In addition, the vacant and buildable lands have been inventoried and incorporated as a part of Urban Land Needs.

Depoe Bay Housing Inventory:

A survey of housing conditions conducted by Richard L. Ragatz Associates, Inc., for Lincoln County and most of the cities within it resulted in a wealth of information concerning housing in Depoe Bay.

Physical Condition Data for Depoe Bay Housing:

Using comprehensive housing condition data from the Assessor's Office, actual housing conditions were inventoried, with the following results:

twenty employees per acre is more accurate (as we think it is), and if the forecast in Table 35 applies, then by the year 2000 commercial uses in Depoe Bay will demand a total of 23 acres. This obviously makes no sense for a growing city to demand less land in the future than it now demands unless it increases its employee-per-acre ratios substantially. While Depoe Bay may increase its labor-land ratios in the future, the explanation lies in the inaccuracy of the data. When these are improved, one likely will find Depoe Bay's demand for commercial land increasing slightly less than proportional to commercial employment.

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City	Total Conventional Units	Sub-Standard	Major	Minor	Standard	% Standard
Depoe Bay	317	55	26	28	208	65.6
Depoe Bay Mobile Homes	75	17	0	0	58	77.3
Depoe Bay All Units	392	72	54	0	266	67.9

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Units listed under the column labeled "substandard" are not judged capable of rehabilitation.



Depoe Bay has the fifth highest percentage of standard housing of cities in the county. The table below gives more detailed information about the location of substandard housing within the city.

TABLE 141: SUMMARY OF PHYSICAL CONDITION DATA FROM LINCOLN COUNTY ASSESSOR'S OFFICE FOR CONVENTIONAL HOUSING

Urban Area	Total Conditional Units	Substandard	Rehabitable			Percentage Standard
			Major	Minor	Standard	
Depoe Bay	317	55	26	28	208	65.6
Lincoln City	3,355	25	172	2,796	2,796	83.3
Newport	2,494	135	361	1,792	1,792	71.9
Siletz	90	3	9	60	60	66.7
Toledo	1,243	83	237	809	809	65.1
Waldport	802	31	111	602	602	75.1
Six Areas	8,301	332	594	1,108	6,267	75.5

Anticipated economic growth in the county could help raise the relatively low income levels, and thereby increase housing demand. A potential result in this would be more households being able to purchase adequate housing on the private market, and less need for subsidized housing.

In this regard, however, a note of caution must be sounded. As the economy continues to shift from a manufacturing base, to one based more on services and retail trade, two unfortunate by-products could result. Average income levels might not increase as much as expected. This is especially true since a large proportion of these jobs may not provide year-round employment. Perhaps more importantly, as the Lincoln County economy becomes more dependent on the structural problem of high off-season unemployment could continue to be an unwanted permanent fixture of the county's economy.

The Ragatz Study surveyed actual and preferred residence by housing type, with the following results for Depoe Bay:

	Single Family	Duplex	Apartment	Condominium	Mobile Homes
Actual	66.7%	3.3%	10%	0	18.3%
Preferred	83.3%	1.7%	3.3%	1.7%	8.3%

(Does not total 100% - "other" housing types constitute remainder.)

Rising housing costs can be expected to continue to limit housing options for the foreseeable future. Thus, while single-family home ownership remains the dominant housing preference,

it is more likely that mobile home ownership and multi-family construction of rental units will constitute the major growth area of the housing market. Construction permit activity in the State of Oregon from 1970-1978 confirms this assumption; permits for single-family homes constituted 48% of the activity, 32% for multi-family, and 20% for mobile homes. (Source: Land Use Standards, page 39)

Residents of Depoe Bay have demonstrated through survey responses and workshop consensus a recognition of the need for the development of housing affordable to those employed or expected to be employed in Depoe Bay.

The above factors suggest a future housing mix which de-emphasizes conventional single-family construction and encourages multi-family construction and the use of mobile homes to provide for affordable housing. In projecting housing needs to the year 2000, therefore, the following mix has been utilized.

<u>Single Family</u>	<u>Duplex</u>	<u>Apartment</u>	<u>Mobile Homes</u>
50%	10%	20%	20%

Population projections for Depoe Bay as presented in the Lincoln County Comprehensive Plan Inventory Economic Element indicate a projected residential population of 1859 by the year 2000.

Population Projections: Depoe Bay

	<u>1980</u>	<u>%</u>	<u>1985</u>	<u>%</u>	<u>1990</u>	<u>%</u>	<u>1995</u>	<u>%</u>	<u>2000</u>	<u>%</u>
High Projections	653	1.9	1011	2.3	1343	2.5	1608	2.5	1859	2.5
Low Projections	634	1.9	872	2.3	1035	2.7	1159	2.5	1258	2.5

For planning purposes the high figures will be used. Citizens of Depoe Bay wish to plan for the provision of adequate housing and public facilities in an orderly and foresighted manner. While the timetable for the provision of such services can be slowed down, the city does not wish to be caught short and have to play "catch up," particularly where major capital investments are involved.

The rationale for these figures, as well as additional demographic data is included in the Economic Associates, Oregon, Ltd., report. (See Lincoln County Comprehensive Plan Inventory, Economic element.)

Average household size is currently 1.18 persons based on the 1980 population of 723 and total number of dwelling units of 611. Assuming that the proportion of residential and seasonal dwellings remains the same, a total of 1,571 dwelling units will be needed by the year 2000 requiring the additional 960 new dwelling units to satisfy the needs of the anticipated population.

Allowing a 2% vacancy rate for single-family and mobile homes and a 6% vacancy rate for duplexes and apartments, the actual projected need for the year 2000 by housing type will be as follows:

<u>Single Family</u>	<u>Duplex</u>	<u>Apartment</u>	<u>Mobile Homes</u>
(480 + 10)	(96 + 6)	(192 + 12)	(192 + 4)
490 d.u.	102 d.u.	204 d.u.	196 d.u.

Population:

Population growth for the City of Depoe Bay has generally followed the trend of growth pattern of Lincoln County as a whole (figure 1). The annual percent change, though, both plus and minus, has exceeded the percentage of growth experienced by the county. Population estimates taken from the Portland State University Center for Population Research and Census, published in January, 1988, were used to document the changes over the last ten years (Table 1). The average population growth was approximately 2.8% over the ten year period, with 1981-1982 showing the greatest increase (5.36%) and 1986-1987 showing the lowest (-1.81).

Table 1. Population (1978-1988)

<u>1978</u> 655	<u>1979</u> 690	<u>1980*</u> 723	<u>1981</u> 745	<u>1982</u> 785	<u>1983</u> 785
<u>1984</u> 800	<u>1985</u> 825	<u>1986</u> 810	<u>1987</u> 835	<u>1988</u> 865	<u>78-88</u> 200
<u>Percent Change</u>					
<u>78-79</u> 5.34	<u>79-80</u> 4.78	<u>80-81</u> 3.04	<u>81-82</u> 5.36	<u>82-83</u> 0	<u>83-84</u> 1.91
<u>84-85</u> 3.12	<u>85-86</u> -1.81	<u>86-87</u> 3.08	<u>87-88</u> 3.56	<u>78-88</u> 32.08	<u>Average</u> 2.8

\*1980 is based on U.S. Census data, while all other years are estimates from the Center for Population Research.

In the original plan and inventory, population projections used for planning purposes were based on the average growth rate from earlier, more vigorous growth periods. This resulted in the following projections (Table 2). While these figures are not in line with the actual rate, they afforded the opportunity to plan for the public services necessary to meet the needs if growth rates had continued high.

Table 2. Original Population Projection (1980)

<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
653	1011	1343	1608	1859

It is the intent of the City to be prepared for a high rate of growth, even if the actual increases do not meet expected levels. The data used for the original Inventory were in error, and given that no additional studies have been made available to Lincoln County to establish a more current analysis, the following projections for planning purposes will be used (Table 3). These projections assume that except for the '85-'86 decline, the City will experience growth similar to that shown since recovering from the recession in the early eighties, approximately 3.5%.

Table 3. Revised Population Projections (1988)

<u>1988</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>
865	926	1100	1307	1552

Although the projections originally utilized for housing requirements resulted in excess lands being designated for housing or commercial uses, the Lincoln County area as a whole has exhibited an increasing population trend. In order to allow for accelerated growth of the area, the City will assume that the ultimate population in the area will become closer to the original, higher projection. Until such time as better population and housing figures become available from Lincoln County, the U.S. Census of 1990, or other verifiable source, the City will utilize original housing and commercial requirements as listed in the 1982 Inventory. [[insert survey]]

Public Facilities and Services

The Statewide Planning Goal for Public Facilities and Services states: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served. A provision for key facilities shall be included in each plan. To meet current and long-range needs, a provision for solid waste disposal sites, including sites for inert waste, shall be included in each plan.

Urban Facilities and Services refers to key facilities and to appropriate types and levels of at least the following: Police protection; fire protection; sanitary facilities; storm drainage facilities; planning, zoning and subdivision control; health services; recreation facilities and services; energy and communication services; and community governmental services.

A Timely, Orderly and Efficient Arrangement refers to a system or plan that coordinates the type, location and delivery of public facilities and services in a manner that best supports the existing and proposed land uses.

Contained in the Guidelines for accomplishing the Goal are these important considerations: Plans providing for public facilities and services should be coordinated with plans for designation of urban boundaries, urbanizable land, rural uses and for the transition of rural land to urban uses; Public facilities and services in urban areas should be provided at levels appropriate and necessary for urban uses; Public facilities and services in urbanizable areas

should be provided for at levels necessary and suitable for existing uses; a public facility or service should not be provided in an urbanizable area unless there is provision for the coordinated development of all other urban facilities and services appropriate to that area.

In analyzing the Goal and Guideline for Public Facilities and Services and in considering how best to achieve the Goal, two steps are fundamental and necessary. An inventory of existing facilities and service and facilities must be made. Later steps in the formulation of the comprehensive element on Public Facilities and Services would include: An assessment of City and Special District capabilities and financial requirements in providing desired types and levels of service and facilities; a plan for capital improvements and budgeting that will establish priorities, identify revenues, and determine timing in the provision of needed services and facilities within the planning area.

### References

Barrett and Associates. Depoe Bay Sanitary District, "Sewerage System Master Plan" 11-71

Bureau of Municipal Research and Service, U. of O. "Organization for Water Supply, Sewerage and Solid Waste in Lincoln County" 9-72

H.G.E. , INC., "Comprehensive Water, Sewerage, and Solid Waste Management Plan for Lincoln County" 2-74

Bartle Wells Associates, "Financing Plan, Comprehensive Sewerage and Water Plan for Lincoln County" 4-75

Westech Engineering, "Engineering Report on the Depoe Bay Water System" 3-74

Lincoln County School District, "Comprehensive Building Plan, as amended 1980"

### DEPOE BAY WATER DISTRICT

#### Wastewater Treatment

The Depoe Bay Sanitary District, formed in 1971 has been in operation since 1975. Some inflow, during heavy rainstorms, and infiltration of groundwater has been observed and as sources are located, corrections are being made. The District is managed by a five member governing body, elected by the people. Rates, rules and regulations were established at the time the system became operational. Engineering estimations have allowed in the design of the system, capacity expected to satisfy population requirements through 1990. Currently the District on a contract basis treats sewage from the Gleneden Beach Sanitary District. The design flow capacity of the Depoe Bay wastewater treatment facility is 800,000 gallons per day. Hydraulic overload occurs at 1,600,000 gallons per day. Peak flows currently being experienced (1980-1981) range from 500,000 to 550,000 gallons per day. Flows being generated from the Gleneden Beach Sanitary District amount to approximately 60% of the total flow. The cost of future improvements to the treatment facility required as a result of area growth will be negotiated between the City of Depoe Bay and the Gleneden Sanitary District, again according to the contract.

## Water

The Depoe Bay Water District began operation with the purchase of its water system from the Depoe Bay Development Company in 1964. The Depoe Bay Water District water treatment facility, completed in 1979, and as currently designed, is capable of treating over 20,000,000 gallons of water per month. Peak demand months, ordinarily occur in July and August where in August of 1980, 6,320,000 of water was pumped and treated. Assuming the growth of resident population and seasonal tourist demand continues in equal proportion and the per capita daily demand remains the same, peak demand for the month of August, 2000, would be approximately 16,250,000 gallons, well within the capacity of the treatment facility. The supply of raw water, while currently sufficient remains as an issue that the Water District must consider. The District, in conjunction with the proposal to provide treated water to the Miroco Water District, hopes to utilize its water rights on Rocky Creek, the stream currently supplying water to Miroco. This added supply is key to meeting peak water demands in the typically dry late summer and early fall months.

## Oregon State Police - Lincoln County Sheriff

Police protection for persons residing in the Depoe Bay area is available through the Lincoln County Sheriff and the Oregon State Police. Each agency operates a patrol on a 24 hour basis throughout Lincoln County. Both agencies serve to keep the peace and in response to highway safety, accident investigation and control, civil and domestic disturbance, general law enforcement and disasters. These agencies have responsibility for County side service, (Oregon State Police chiefly on state highways), and due to limited shift coverage cannot provide necessarily quick response to calls for assistance in the Depoe Bay area.

## Depoe Bay Rural Fire Protection District

The Depoe Bay rural Fire Protection District extends both north and south of Depoe Bay and stations equipment at three different locations. The district's #1 station is located in the City. The District enjoys a good fire rating. The District not only responds to fire calls, but to even a larger extent emergency situations requiring ambulance, extrication and rescue. Serving the District as principal dispatch is the U.S. Coast Guard Station in Depoe Bay. Equipment is stationed at Gleneden Beach #2 and Otter Rock, #3. The District is bounded on the north by the Siletz River and the Taft-Nelscott-Delake Fire Protection District and on the south by Spencer Creek and the Newport Rural Fire Protection District.

## Streets - City of Depoe Bay/Oregon Department of Transportation

The City of Depoe Bay has the responsibility of street maintenance and repair on all City streets with the exception of Highway 101 which falls under the jurisdiction of the Dept. of Transportation - Highway Division. Citizen concern as expressed in the Community Opinion Poll of 1976 runs high in the area of local street maintenance. In addition to this concern, the Depoe Bay Harbor Bridge on Highway 101 has been given a poor bill of health and remedy to its deterioration is a high priority for the community.

## Drainage

The City of Depoe Bay has the responsibility in providing for storm water drainage on all streets but Highway 101. Currently there does not appear to be a consistent approach to the handling of storm water drainage. Potential problems exist where heavy runoff flows over

manhole covers of the sanitary sewer. Considerable inflow to the sanitary sewer may be traced to this source.

### Health Services

Citizens of Depoe Bay must travel either north or south to obtain health services at the present time. Community hospitals serve Lincoln City, Newport and Toledo. The Lincoln County Health Department sponsors clinics for women with infant children, well babies and immunization in Lincoln City, Newport, Toledo, Siletz and Waldport on a regular basis. City residents expressed favorable interest in the Community Opinion Poll of 1976 on the question of locating a medical practice in Depoe Bay.

### Recreation

Four parks are located in the immediate Depoe Bay area. To the south of Whale Cove is Rocky Creek Park featuring picnic facilities and toilets. In Depoe Bay are the City park at the sea-wall with gift shop and public toilets and the park at the harbor operated by Lincoln County with picnic facilities and boat launching ramp. Just to the north of the City is the Boiler Bay park featuring picnic facilities and public toilets.

### Solid Waste Disposal

Solid Waste disposal for the City of Depoe Bay will continue to be handled on a franchise basis by North Lincoln Sanitary Service. All solid waste will eventually be transported to the Benton County Landfill at Coffin Butte. Transfer stations will be constructed in Lincoln County within the next two years as local landfills will no longer be permitted. The transfer station will accommodate both commercial and private citizen disposal needs. Projected sites for transfer stations in the Depoe Bay vicinity will be Agate Beach at the existing landfill site and a site on Schooner Creek southeast of Lincoln City.

### Energy and Communications

The City of Depoe Bay is served with electrical power by the Central Lincoln Peoples Utility District. The P.U.D. is a preferred Bonneville Power Administration customer. (Projected supply through the year 2000 has not been determined as yet for the Lincoln County area and will be furnished when available.) Telephone communications are provided through PTI Communications of Oregon, Lebanon, Oregon, a subsidiary of Pacific Telecom, Inc., Vancouver, Washington. Television cable services are supplied by Summit Cablevision, P.O. Box 367, Depoe Bay, Oregon.

## TRANSPORTATION

Under this Section, it is necessary to inventory all modes of transportation including:

- Mass Transit
- Air
- Water
- Pipeline
- Rail
- Highway
- Bicycle

Pedestrian

Mass Transit

Greyhound Bus Lines schedules three buses running north and three running south, within each 24 hour period. Service northbound runs through Lincoln City, McMinnville and Portland. Southbound buses continue down the coast highway to California.

Senior Citizen Transportation

None.

Air

Air Oregon serves Lincoln County daily with flights from Newport to Portland. Private aircraft can be accommodated at the Newport Airport, slightly more than 15 miles to the south. The Siletz Bay Airport is nearest to Depoe Bay. It was funded by a joint private (Salishan) and public (County, Port and State) effort. The facilities located immediately south of Salishan Golf Course and consists of north 10 degrees 39'-60' X 3000' paved runway does not have lighting or instrumentation.

Water

An occasional boat passing along the Oregon Coast will put into the inner harbor of Depoe Bay for fuel, stores and crew rest. Such stops are unscheduled and are not made by vessels serving the public. Many short trips by private and commercial fishing boats originate and terminate at the port. Again, they do not represent scheduled transportation.

Pipeline

A Northwest Natural Gas owned pipeline provides natural gas to residential and commercial users in Depoe Bay.

Rail

There is no railroad line in Depoe Bay. The nearest railhead in Toledo and does not. Realistically, serve the area in either passenger or freight terms.

Highway

U.S. Highway 101 runs in a north/south direction for the full length of the Oregon Coast. The nearest east/west highways originate in Newport (highway 20 and north of Lincoln City (Highway 18). For most of its length of Depoe Bay, Highway 101 is four lanes wide. There is heavy commercial development on the east side of the highway. Parking is allowed on both sides of the highway.

During the height of the tourist season, congestion in the central business district is a major problem. The creation of additional parking spaces off Highway 101 is a high priority with the City. Parking regulations designed to encourage persons going out on commercial fishing trips to use off-street parking are also being considered.

As it relates to streets, Depoe Bay needs to engage in transportation planning. The only paved streets in the City are Collins Avenue and Bay Blvd. The City does not have an



adequate budget for street maintenance and improvement. Development east of the inner harbor will soon render Bay Boulevard inadequate to handle the resulting traffic. Major improvements to Bay Boulevard will be costly due to inadequate rights-of-way and steep terrain.

Realistically, most existing streets in Depoe Bay will remain unpaved.

### Bicycle

The State of Oregon has made provision for bicycle lanes in Highway 101. Marked lanes on the shoulder of the highway exist for bicycles where the highway is two lanes wide on the approach to Depoe Bay from both north and south. Where the highway widens to four lanes, no such bicycle lanes exist.

There are no provisions for bicycle lanes on city streets.

### Pedestrian

The only provision for pedestrian traffic is on both sides of Highway 101 from the south end of the highway bridge north to the north end of the central business district. There is a pedestrian underpass at the north end of the bridge. As with street maintenance and improvement, the City does not currently have the resources to address the problem of additional sidewalks. Traffic on secondary streets is sufficiently light to make walking relatively safe, even in the absence of sidewalks.

Crossing Highway 101 at any place other than the underpass is hazardous. Tourists, especially, will park on the west side of the highway to look at the ocean view, then cross four lanes to reach the commercial sector. Though there are marked crosswalks, individuals tend to cross the highway at random points, creating substantial hazards.

### ENERGY

See Lincoln County Comprehensive Plan Inventory Energy element.

### URBAN LAND NEEDS

#### Buildable Lands

One of the requirements set forth by the State of Oregon Land Conservation and Development Commission as part of Goal 10 Housing is that each community must inventory its "buildable lands," i.e., lands which are (or will be) available for development of new residential land uses.

A buildable land inventory has been conducted for six of the urban areas in Lincoln county by the Mutual Aid Planning Service. A first step in this process was to locate all parcels within the urban areas which currently are vacant. Results of this survey are shown in Appendix G and are summarized in Table III-9. The data is provided for six urban areas according to parcel size and zoning designations.

It is known that not all vacant land is "buildable land" due to a variety of reasons, e.g., steepness of slope, being in public ownership, geological hazards, not being serviced or serviceable (due to excessive costs) by public facilities and/or utilities, etc. The next step,

therefore, involved determining how much of the vacant land actually is usable, i.e. buildable. Results of both the vacant land and buildable land inventories have been mapped by the Mutual Aid Planning Service and are available from that agency.

“Building lands” have been placed into four different constraint-type categories, including:

1. No Constraints: Slope less than 15 percent; not in a flood plain or area of geological hazard; private owned; and water and sewer in close proximity or on-site.
2. Minor Constraints: Not currently serviced by sewer and/or water, but possible suitable for septic tanks or future community provided sewer and water; otherwise same criteria as for “No Constraints”.
3. Site Constraints: Slope between 15 and 25 percent; and/or not serviced by sewer and water; otherwise same criteria as for “No Constraints”.
4. Major Constraints: Slope over 25 percent; in a floodplain; no possibility of being serviced by sewer and water; in an timber company (or public agency, [edit]).

As noted, Appendix G and Table III-9 (Vacant Lands) and Appendix H and Table III-10 (buildable lands) break down this information according to parcel size and zoning designation.

A final step to be accomplished by the individual communities in Lincoln County as they complete their own Housing Elements is to determine how many new housing units can be built within their urban areas assuming present conditions. In other words, how many units can be developed on the buildable land which is in single family zones, multi-family zones, etc.

If the number of units which can be developed is less than what population projections call for in terms of new households, some changes must occur in order to comply with Goal 10. Either the urban growth area must be expanded or preferably, administrative changes must occur to allow and encourage higher density housing on appropriate and available lands. Some guidance for these actions is provided in chapter V.

Acres of “Buildable Land,” by Degree of Building Constraint and Urban Area,  
Lincoln County, 1978\_\_\_\_\_

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Acres of Buildable Land by Building Constraint

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Urban Area	No Constraints	Minor Constraints	Lights Constraints	Major Constraints
Depoe Bay	74.3	221.5	299.4	608.2
Lincoln City	547.0	1,428.1	573.4	1,224.2
Newport	320.3	615.6	151.0	491.8
Siletz	146.8	64.9	0	0

Toledo	171.2	194.4	35.6	279.3
Waldport	147.8	302.1	204.2	78.8

Source: Lincoln County Mutual Aid Planning Service, Richard L. Ragatz, Associates, 1978, pages 23-25.

POPULATION PROJECTS: CITY OF DEPOE BAY

	<u>1980</u>		<u>1985</u>		<u>1990</u>		<u>1995</u>		<u>2000</u>	
	Number	%	Number	%	Number	%	Number	%	Number	%
<u>High Projections</u>	653	1.9	1011	2.3	1343	2.5	1608	2.5	1859	2.5
<u>Low Projections</u>	643	1.9	872	2.3	1035	2.7	1159	2.5	1258	2.5

For planning purposes the high figures will be used. Citizens of Depoe Bay wish to plan for the provision of adequate housing and public facilities in an orderly and foresighted manner. While the timetable for the provision of such services can be slowed down, the City does not wish to be caught short and have to play "catch-up", particularly where major capital investments are involved.

The rationale for these figures, as well as additional demographic data is included in Economic Associates, Oregon, Ltd. Report. (See Lincoln County Comprehensive Plan Inventory, Economic element.)

DEPOE BAY VACANT AND BUILDABLE LANDS INVENTORY

The City of Depoe Bay has completed its inventory of vacant and buildable lands. The total land area available for residential development within the Urban Growth Area is 231.93 acres. This inventory has excluded those lands within the city limits designated for forest uses and has applied a factor of .6 in those parcels affected by steep slopes, to reflect the actual yield.

The following table summarizes vacant, buildable, residential land by zone.

<u>Zone</u>	<u>-5000</u>	<u>5000+</u>	<u>7500+</u>	<u>20,000+</u>	<u>1Ac+</u>	<u>2 Ac+</u>	<u>5Ac+</u>	<u>10 Ac+</u>	<u>20Ac+</u>	<u>40Ac+</u>	<u>Totals</u>
R-1	1.5Ac	4Ac	4.68Ac	1.5Ac	3Ac			10Ac		40Ac	64.68
R-2	1.5Ac	5Ac	.5Ac	2. Ac	2Ac	4Ac	15Ac	10Ac		40Ac	80.
R-3	.41Ac	1Ac	.75Ac	1. Ac							3.16
R-4	2.5Ac	7Ac	.34Ac		2Ac		5Ac	10Ac	20Ac		46.84

R-5	.75Ac	.5 Ac	4Ac	2Ac	10Ac	20Ac	37.25
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TOTALS 5.91Ac 17Ac 7.02Ac 5.0Ac 11Ac 6Ac 20Ac 40Ac 40Ac 80Ac **231.93Ac**

R-4/PD 125 single family dwelling units yet to be developed on 5,000 + sq. ft. lots.  
20 condominium units yet to be developed.

Totals - Vacant, available land zoned for needed housing types.

	Amount Needed	Amount Available
Conventional Single Family (R-1)	56 Acres	64.68 Acres +125. d.u.'s in PD
Duplexes (R-2)	12 Acres	80. Acres
Multi Family (R-4, 5)	11 Acres	84.09 Acres +120 d.u.'s in PD
Mobile Homes (R-3)	22 Acres	3.19 Acres

Double wide mobile homes are an outright use in the R-2, R-4 and R-5 zones. Single wide mobile homes are an outright use in the R-3 zone.

Much of the total, available land remains in large, unplatted parcels, thus, reductions in the land area available for development will occur as platting and street dedication are accomplished. Using the standard of 33% (as suggested in Land Use Standards Workbook) to accommodate street rights-of-way; 231.93 acres - 76.5 acres, or 155 acres will be available for future development.

The total land area available within the Depoe Bay Urban Growth Boundary planned and zoned for commercial and industrial uses is summarized below:

	<u>Needed</u>	<u>Zoned and Available</u>
Commercial (Usable floor space)	350,000 sq. ft.	465,000 sq. ft. (21.3 acres available)
Industrial	4 Acres	10 Acres

### ESTUARINE RESOURCES

Depoe Bay has been classified in the Oregon Estuarine Classification System as a "Shallow Draft Development Estuary". The three general estuary classification are "Natural, Conservation and Development". While an overall classification in an urban estuary may connote that water dependent and water related commercial and industrial development on

adjacent lands shall have the highest priority, it does not imply that ecological values are to be ignored or lightly destroyed.

The inner harbor of Depoe Bay is approximately 80% developed. The shoreline is modified except where North and South Depoe Bay Creeks enter the bay. A dam with a fish ladder occurs where South Depoe Bay Creek enters the harbor and there is a small run of anadromous fish which uses the river. Cormorants and gulls are seen in the immediate area. The basaltic channel from the ocean to the inner harbor is a nesting site for Pigeon Guillemots and, perhaps gulls.

No biologic inventory of the estuary waters has been conducted by the Oregon Department of fish and Wildlife. Following is a list of the commercial/industrial activity contiguous to the water:

- a. Six charter fishing business
- b. Coast Guard Station
- c. County Park and boat launch ramp
- d. Machine shop

The one shoreline area of the inner bay suitable for development lies immediately to the north of the mouth of South Depoe Bay Creek. The inter-tidal area is composed of mixed aggregate.

Depoe Bay has extensive coastal shorelands. They are of two types: Ocean shorelands and estuarine shorelands. Shorelands are defined as "those areas immediately adjacent to the ocean, all estuaries and associated wetlands, and all coastal lakes." There are no coastal lakes within the Depoe Bay Urban Growth Boundary. Little Whale Cove may be considered a wetland; it is periodically directly affected by the hydraulic action of ocean waves. With this exception, Depoe Bay needs to identify ocean and estuarine shorelands.

The shoreland boundary needs to include, at least:

- a. Lands which limit, control, or are directly affected by the hydraulic action of the coastal water body, including floodways;
- b. Adjacent areas of geologic instability;
- c. Natural or man-made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;
- d. Areas of significant shoreland and wetland biological habitats.
- e. Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, and areas having characteristics suitable for aquaculture;
- f. Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal water areas; and
- g. Coastal headlands.

### Ocean Shorelands

By this term we exclude the channel and inner harbor (estuary) and deal with lands adjacent to the ocean itself. A mapped line - an ocean shoreland boundary - has been drawn to include the seven points above. Areas of geologic instability have been carefully inventoried by RNKR Associates in a study performed by contract with the Mutual Aid Planning Service. Both maps and text are a part of this inventory document.

Areas of exceptional aesthetic or scenic quality have been inventoried under Goal #5.

Uncommitted ocean shorelands are designated in the plan as suitable for residential uses.

Coastal headlands have been identified and inventoried in the report on "Visual Resource Analysis of the Oregon Coastal Zone, OCCDC, 1974." Both North Point and South Point are considered headlands. Extensive residential development has occurred in both of these areas. Thus, there are no significant natural values remaining. Residential development will continue.

The rocky intertidal zone along the Depoe Bay ocean front is considered to be significant shoreland habitat. This habitat occurs along most of the ocean shoreland and is especially significant in the Shell Cove area. Since this habitat is oceanward of mean high tide, it is not subject to the City's zoning requirements. The natural values of these areas are adequately protected by the Division of State Lands Fill and Removal Program (ORS 541). There are no other significant shoreland and wetland biological habitats in Depoe Bay.

Policies concerning the retention of the ocean shoreland vegetation important for bank stabilization are contained in the Plan.

The ocean shoreland in the Depoe Bay planning area is not, by its nature, suitable for water dependent and water related uses, as defined in the Goals.

#### Estuarine Shoreland:

By this term we include the channel and the inner harbor to the head of tidal influence on North and South Depoe Bay Creeks. A line is drawn and mapped to define the extent of the shoreland boundary around the estuary.

Approximately 80% of the inner harbor has an altered shoreline. Only the channel, the mouth of North Depoe Bay Creek and limited areas near the boat launch ramp to the north of the dam at the mouth of South Depoe Bay Creek are directly affected by the hydraulic action of the water.

The RNKR hazards report maps the extent of flood areas and identifies areas of adjacent to the channel and inner harbor are contained in the Plan.

#### Dredged Material Disposal Sites

The inner harbor of Depoe Bay is periodically dredged by the Army corps of Engineers in order to maintain sufficient channel and harbor depth to accommodate the commercial and sports fishing industry. A small pipeline dredge is employed and the spoils are deposited to the westers of the Pacific. The Corps in communication with the City has indicated that this is a successful and necessary manner of disposal which allows for routine maintenance without

environmental degradation. As there are no suitable sites for upland disposal and the current practices is both economic and necessary, the City favors continued off-shore disposal of dredged material thus eliminating the need to identify upland disposal sites.

#### Significant Fish and Wildlife Habitat

There are no significant shoreland or wetland biological habitats found within the Depoe Bay shorelands boundary.

#### Riparian Vegetation

Riparian vegetation occurs along ocean and estuarine shorelands from the point of higher high water landward. The City through implementation standards of the coastal shorelands overlay zone will control the removal and restoration of riparian vegetations. Riparian vegetation found along the upper stream courses of North and south Depoe Bay Creeks although not included with the City's shoreland boundary will be protected in the same manner by adding the riparian vegetation standards contained in the Coastal Shorelands Overlay Zone to the City's Zoning Ordinance, Article 13, Development Guidelines.

#### Mitigation Sites

Within the inner Depoe Bay harbor, intertidal areas are extremely limited and are found only in Management Units 3 and 4. Dredging and filling activities are prohibited in Management Unit 3. Any dredging or filling that would occur in the intertidal areas within Management Unit 4 would be minimal, allowing, it is assumed, the Division of State Lands to waive the mitigation requirement. As a consequence no sites for mitigation are being proposed.

#### Water-Dependent, Water-Related Land Use

Lands especially suited for water dependent and water related uses occur only in the area surrounding the inner harbor of Depoe Bay. With the exception of three small parcels located north and east of Management Unit 3, which includes the Depoe Bay Community Hall site, and one parcel at the extreme southeast corner of the estuary adjacent to the Corps of Engineers South Depoe Bay Creek dam, all properties having direct access to the estuary are protected for water dependent and related uses through the implementing standards of the Depoe Bay Zoning Ordinance and Estuarine Plan. The parcels north and east of Management Unit 3 that are not protected for future water dependent or related uses are considerable elevated above the estuary. No alterations will be allowed which would impair the free flow of tidal waters in Management Unit 3. The City has determined that the community hall should remain in public use, reducing further the suitability of the two parcels flanking the hall to provide for water dependent or related uses. The single parcel having access to the harbor at the southeast corner as mentioned above is committed, along with the adjoining several parcels to the north, to a residential development.

#### Beaches and Dunes:

There are no areas of beaches and dunes located within the Depoe Bay planning area.

#### Ocean Resources:

See Lincoln County Comprehensive Plan Inventory. \_\_\_\_\_

