NATURAL FEATURES

Introduction:

Various sections of Newport's Comprehensive Plan have anticipated a demand for additional land to accommodate growth. Sometimes that growth encroaches into areas that are environmentally sensitive or geologically hazardous. Unfortunately, not all developers or other users of the land are aware that several environmental factors exist restricting the development potential of much of the land in the Newport area. Many areas have limitations for development, so special care must be taken prior to and during construction. If care is not taken in those areas, major financial and property losses and possible loss of life may occur.

The prevention of loss of property and/or life is a goal unto itself and should be a major consideration when identifying environmental constraints. But there are also properties that are the site of significant natural features. To protect those features, care must also be taken in nearby development.

This section of the plan will discuss the various environmental issues that face the City of Newport. Where possible, sensitive or hazardous lands will be identified and policies will be developed to protect them. Where not known, procedures must be established to identify and protect these areas.

Geology:

The underlying geology of an area dictates the land forms created by erosive forces. Wind and rain sculpt the land into hills and valleys, wave action builds beaches, streams and rivers flatten mountains, and the earth's internal forces push the land upward to start the process over again.

People, too, shape the land to serve their needs. Houses and shopping centers are built, roads are cut, land is cleared, all to facilitate the needs and desires of a greater number of people. But how do all these forces interact and how do we avoid situations that are in conflict? To answer these questions, we must first examine the underlying geology and then identify inherent problems created because of that geology.

The Newport area is predominantly composed of five geologic units: the Nye mudstone, the Astoria formation, the Yaquina formation, the Cape Foulweather basalt, and the Quaternary marine deposits. A bulletin describing the characteristics of the five units and mapping the general location of each is the Environmental Geology of Lincoln

County, Oregon, prepared by the State of Oregon Department of Geology and Mineral Industries.[1] The map of the Newport area also shows a geologic cross section that bisects the heart of Newport.

The Environmental Geology bulletin contains an appendix that summarizes planning concerns in the Newport area:

"Coastal erosion and landslides are extensive from Otter Rock southward to Yaquina Head. Here the abundance of landslides is due to the steep seaward dip of the underlying bedrock. Problems are especially apparent where highway fills have been placed across canyons or small valleys. Repairs are required annually in these areas. Sliding extends east of the highway, and in some areas the power lines require frequent repair and realignment.

"There are large landslides on both the north and south sides of Yaquina Head. The landslide on the south side has made several buildings unusable. In Agate Beach, subsurface drainage is restricted and a public sewerage system is necessary before additional developments are made.

"In the vicinity of Jumpoff Joe [sic] in Newport, the sea coast has retreated as much as several hundred feet since the turn of the century. A number of homes have been destroyed or badly damaged in recent years [the 1940's] as a result of landslides in this area. Before any additional shoreline areas are developed, the stability of the slope should be studied by soil engineers and geologists. Often an apparently stable slope can be reactivated by the addition of houses and streets.

"From Nye Beach southward to Yaquina Bay the shoreline is being eroded by storm waves. People considering building structures on these cliffs should be aware that the cliffs are eroding back about one foot per year, and erosion could be much more severe if landslides occur. The practice of placing embankments over steep vegetated slopes is extremely hazardous because the vegetation will decompose to produce a slip plain at the interface between the embankment and the original ground.

"East of the shoreline in Newport from about Nye Beach south to the bay, the marine terraces are overlain by loose dune sand. These sands are stabilized where covered by vegetation; however, where the vegetation has been removed or none has grown, the sand is exposed to erosion or transport by wind. Frequently during high winds, the sand can be observed drifting across streets and into properties adjacent to the street.

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[1] State of Oregon Department of Geology and Mineral Industries, Bulletin 81: Environmental Geology of Lincoln County, Oregon, 1973.

"Just east of Newport, in the vicinity of McClean [sic] Point, much of the slope has been affected by landslides. Development in this area should proceed with great caution. The making of steep cuts, removal of toe support, the additional weight of embankments on the upper slopes, and the addition of moisture from the developments, including subsurface sewage disposal, all add to the instability of the slope. Serious problems can arise, especially following periods of extremely heavy rainfall. Developments in this area could suffer serious slope problems unless the slopes and embankments are properly constructed and a public sewerage system is installed.

"The area south of Yaquina Bay from Highway 101 eastward as far south as Henderson Creek is subject to a seasonal high water table. Before development reaches a greater density, a public sewerage system should be installed. A high water table creates problems for foundations of structures, and in some areas the water will stand at the surface after a heavy rainfall."[2]

The geologic and climatic environment of Newport is attended by a variety of natural hazards that have the potential for creating serious problems involving property. On the other hand, an understanding of these conditions and a sensible approach to coping with them in the planning stages of development can eliminate much of the grief that might otherwise occur.

In order for planning and development to go forward in such a way as to lessen the damage brought on by these conditions, the data and suggestions in this section are introduced as policies for the City of Newport. Local sites shall be evaluated by qualified geologists in order to protect the individual land owners, investors, and developers from problem areas in Newport that are subject to geologic hazards. The geologists shall also make suggestions as to how these problems can be avoided or corrected.

Areas Subject to Geologic Hazards

Marine Terraces

A significant portion of Newport is situated on a marine terrace. These elevated platforms, representing former strand- lines of the sea, extend the full length of the city, interrupted only by headlands and the Yaquina Bay. The terrace materials consist of weakly cemented sand, silt, and pebbly sand overlain in many areas by old, fairly stable dunes. Bedrock beneath the terrace and dune sediments tilts seaward and is exposed in sea cliffs in some places.

[2] Ibid, pgs. 168-169.

"The margins of these terrace areas adjacent to the ocean are attractive places to build, and many small beach cottages, permanent homes, condominiums, and motels occupy these locations. Unfortunately, the sea cliffs at the terrace margins are slowly but continually receding. Wave erosion during storms and high tides undermines the cliffs, while rain, wind, and frost loosen the upper portions; as a result, masses of terrace material slip seaward at unpredictable rates and in unexpected places.

"In general, marine terrace margins can be expected to retreat from 6 inches to 1 foot per year; however, in certain areas, recession can average more than 10 feet per year. In some locations, erosion may not be evident for a decade and then 10 or 15 feet of the cliff may drop off in a single season. Occasionally, very large areas involving a number of acres of land may slide seaward, such as in the JumpOff [sic] Joe area of Newport.

"Excessive slippage along terrace margins is due to the sliding of weakened, water-saturated bedrock along its seawardtilted bedding planes. Of course, the overlying terrace sediments move with it. Particularly vulnerable to bedding-plane failure is the Nye Mudstone. This type of movement may have vertical and horizontal components of only 2 feet to as much as 50 feet. At first the surface of the slide block is not disrupted, but it is generally back-tilted, or rotated down, on the landward side. Water often accumulates in a sag pond at the back of the slide.

"The surface of these slump areas may range from 50 to 100 feet wide and from 200 to 1,000 feet long. To the untrained eye, such apparently level areas of ocean frontage might appear to be desirable building sites. Unfortunately, however, these areas are extremely unstable since the ground surface must adjust to constant wave erosion at the toe of the slide. In a short time, the entire slump block can be eroded away. During the limited life of the slump block, home owners will be plagued with continual problems of settlement, such as cracks in walls, jammed doors and windows, and water- and sewer-line difficulties."[3]

Old Dune Areas

In certain areas, such as South Beach and Nye Beach, large old sand dunes have developed a thick soil profile and have remained stable for many years. "However, the need for easily excavated fill material and the preparation of ground for building sites has led to the removal of the stabilizing soil layer and has exposed loose sand. If these exposed areas are not immediately stabilized, the wind will soon erode basins and troughs, causing the sand to migrate to adjacent housing areas where it can cover driveways, sidewalks, streets, and lawns."[4]

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[3] Ibid, p. 127.
[4] Ibid, p. 132.

Sandspits and Active Dunes

"Sandspits and their active dunes are of recent origin and should be regarded as relatively temporary features. Some parts of the spits and dunes are built up quickly by water and wind and destroyed by the same agents a few years later. Their instability results from the interplay of numerous environmental factors, including ocean currents, size and number of storms, volume of stream sediment entering the ocean, and variations in tides and wind patterns."[5]

Sandspits and active dunes are found mostly at the mouth of Yaquina Bay and in South Beach. "Preservation of vegetation on the dunes south of Yaquina Bay is recommended since excavation into loose sand could initiate further dune migration....It is essential that the foredune be preserved. Construction in this dune area could be hazardous."[6]

Hillside Development Areas

"Nearly all aspects of hillside land development combine to create slope instability unless the entire construction project is properly engineered. It should be emphasized that slope failure may occur 5 [sic] to 10 [sic] years after the start of the development, by which time the developer may have divested himself of interest and responsibility.

"Development of hillside properties[7] has a considerable adverse effect on slope stability. Whenever material is excavated from a side hill, it results in a steeper than natural slope. Material excavated from the cut is usually placed immediately downslope to provide a nearly horizontal area for a yard or garden. Both operations create instability by oversteepening and adding weight to the slope.

"Most hillside housing developments progress gradually....By the time the development is complete, nearly half of the ground surface is covered by buildings, streets, driveways, and sidewalks, preventing normal infiltration of precipitation. Not only will the total rainfall be concentrated in small areas, but additional water will build up from septic-tank drainage, roof drains, and lawn sprinkling, causing possible oversaturation of downslope soils and eventual slope failure involving large sections of the total hillside area."[8]

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[5] Ibid, p. 132.
[6] Ibid, p. 132.

[7] Properties with a slope greater than 12%.

[8] State of Oregon, Bulletin 81: Environmental Geology of Lincoln County, Oregon, p. 135.

Inland Mountainous Areas

"Construction inland from the coast...usually involves steep topography along the valleys of the major rivers and smaller streams. (Flood-plain development and its associated hazards are discussed under 'Flood-prone Areas,' below.) Since the early days of settlement...these valleys have provided the best access inland from the ocean. As a result, farms, small towns, roads, and highways have followed them. Logging roads have penetrated far into the mountainous areas along the steep walls of the smaller tributary streams, and some of these roads have come into permanent use.

"The valleys were excavated by streams to great depth during the ice ages of the Pleistocene when sea levels were considerably lowered. Melting of the ice during interglacial episodes caused a rise in sea level and gradual drowning and silting up of the lower reaches of the valleys. Meandering streams now impinge on the steep walls, removing support of the weathered rock and soil mantle, causing new landslides and renewed movement of old slide masses. Man-made cuts for road construction, basement excavations, and other purposes have the same effect on the potentially unstable soil and rock."[9]

Summary

The Newport area has many places that are subject to geologic hazards. As the city grows, those areas are being encroached upon more and more. Another conflict is that those areas with the worst geologic problems are also the areas most desirable for development and, therefore, command the highest prices.

The different geologic units pose different problems that cannot be summarized in a general section of any report. Consequently, it is necessary to generally identify hazardous areas and require site specific studies prior to development. All possible geologic hazards should be explored and satisfactory solutions determined prior to any construction. If correction will be uneconomical, the project should be abandoned. To ignore a geologic hazard is to invite disaster.

Earthquakes:

"Earthquakes are products of deep-seated faulting and subsequent release of large amounts of energy. Vibrations radiating from the fracture are felt or recorded at the Earth's surface as earthquakes. In some places, such as the San Andreas Fault in California, the fault producing the earthquake can be mapped at the surface, but usually the fault is buried

[9] Ibid, p. 135.

(concealed) and cannot be observed at the surface. In Lincoln County, faults are numerous in the bedrock units. Snavely and others (1972 a, b, c) indicate a complex system of northwest- and northeast-trending normal faults, some of which have large vertical displacements. The age of faulting is not well established, but the youngest bedrock unit involved is late Miocene (15 m.y. [million years]). No faulting is present in the marine terrace deposits of late Pliocene to early Pleistocene, indicating that fault movement is at least older than 0.5 m.y. Although faulting is extensive in the County, no master earthquake-producing fault system is indicated.

"Earthquake summaries by Berg and Baker (1963) and Couch and Lowell (1971) provide historical earthquake data for Lincoln County. The data indicate that the recorded seismic history extends back only some 70 years to the late 1800's....During this period, seven earthquakes were reported: four at Newport with intensity ratings (Modified Mercalli) of IV; one at Waldport, intensity rating IV; one at Seal Rock, intensity rating III; and one at Alsea, intensity rating III..."[10] (See Table 1 on page 34.)

"These studies also indicate that distant earthquakes, such as in the Gorda Basin off the southwest Oregon coast, could produce intensities of between VI and VII. Ground motion during earthquakes, from nearby earthquake epicenters as well as distant earthquakes, can affect not only buildings, bridges, and similar structures but also areas of potential land subsidence and landslides. Granular soils, especially thick sections of loose, saturated sand and gravel, will consolidate and subside as a result of shaking ground motion. Because subsidence is usually uneven, buildings on such ground may be tipped or destroyed. In regions of moderate to high relief with unstable slopes and saturated ground conditions (such as most of Lincoln County during winter and spring months), earthquake vibrations could start massive slope failure. In addition, fluid response in saturated lowlands soils could result in liquefaction as downslope flow, even on gentle slopes."[11]

[10] Ibid, p. 124.

[11] Ibid, p. 125.

Table 1
City of Newport

Year	Date	Location	Intensity	Remarks
1897	Jan. 26	Newport	IV	
1902	June 14	Newport	IV	
1916	Jan. 14	Newport	IV	
1928	Sept. 4	Newport	IV	Felt for radius of 10 miles
1940	May 25	Waldport	IV	Felt at Toledo and Depoe Bay; small objects moved at Waldport.
1941	Oct. 19	Seal Rock	III	
1957	Mar. 22	Alsea	III	

Flood-prone Areas:

"Stream flooding: Flooding of the coastal lowlands in Lincoln County is an annual menace, occurring several times in some years. Major floods causing extensive damage have occurred at least ten times since 1921, generally in December or January, but some have been as early as November 20 or as late as March 31. The interval between major floods has been from 1 year to as long as 15 years, with the average just over 5 years.

"Floods are always associated with periods of heavy rainfall, especially after the ground has been soaked to near capacity or after the ground has been deeply frozen. Snow melt can add considerably to the flood intensity. Near the mouths of streams, flooding can be markedly increased by high tides resulting from strong onshore winds during severe winter storms.

"Destructive flooding by streams occurred in Lincoln County during the winters of 1921, 1931, 1964-65, and 1972. Summarized briefly here, the high water inundated the flood plains of all the major streams. Houses, barns, and livestock were lost; bridges, sections of railroad, and boat docks were swept away; logs and debris from inland were carried out to sea and lodged on distant beaches; residential and business areas of some communities were under water, as were also some resorts; highways throughout the County were blocked by floodwaters and landslides. During the 1964-65 floods, the entire County was isolated.

"Control of flooding in Lincoln County by construction of flood-control dams appears to be extremely unlikely due to the configuration of the stream valleys relative to the cost and effectiveness of a reservoir. Levees and dikes can offer some protection from floods in the lower reaches of the streams where the tidal effect is pronounced.

"The severity of floods in Lincoln County and Newport together with the infeasibility [sic] of adequate flood control structures points out that flood control measures must be in the form of flood-plain zoning regulations."[12]

The outline of flood-prone areas on the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA) should be adequate for determining flood prone areas. "Flood-plain zoning and strict construction criteria are imperative if the annual flood loss is to be reduced....It is essential that local government, the land developer, real estate agent, builder, and prospective lot-buyer become aware of areas of potential flooding before committing themselves to developing the property."[13]

"Ocean Flooding: Ocean flooding is unpredictable and can occur any time of the year. Its causes include storms at sea, strong westerly winds, tidal forces, and large unusual waves. Large unusual waves, although of short duration, can be very destructive. They include tsunamis caused by earthquakes on the sea floor and additive waves created when the crests of several in-phase waves are superimposed and reach the shore simultaneously.

"In the past 33 years [1940-1973], wind and high tides have twice caused excessive flood damage along Oregon's coast. A third destructive wave was a tsunami resulting from the Alaska 'Good Friday' earthquake of 1964; smaller seismic waves have occurred since that time. Although there is no accurate method of predicting the frequency and magnitude of ocean flooding, the occurrence of three damaging floods in 33 years suggests an average of about once every 10 years. Similar waves in the future will probably be even more destructive because of the greatly increased construction of residences, motels, and

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12 Ibid, p. 125.

13 Ibid, 140.

condominiums at or just above the normal high-tide line. The presence of logs above normal high-tide level is clear evidence of the elevations the sea can reach."[14]

Again, the Flood Insurance Rate Maps have determined from past experience the maximum wave elevations for velocity flooding (V Zones) and areas of shallow marine flooding (AO Zones). The siting of future structures should be based on these maps.

Ocean Shorelands:

This section summarizes inventory information about the shorelands adjacent to the Pacific Ocean. Policy statements follow the inventory information. Identification of the shorelands boundary was based upon the consideration of several characteristics of the land. Resources and hazard areas within the ocean-related portion of the shorelands boundary are mapped on the Ocean Shorelands Map on page 50 (that map can be used by property owners and developers to help determine the level of review required before issuance of development permits). These include:

1.) Beaches, as identified in the Oregon Beach Law.

2.) Dunes, as identified in the 1980 Newport Comprehensive Plan by RNKR Associates.[15]

3.) Younger, stabilized dunes and open sand and wet interdunes as identified in the Soil Conservation Service (SCS) study Beaches and Dunes of the Oregon Coast (for areas not identified in the RNKR study).[16]

4.) Areas of 100-year coastal flood with wave action as identified on the Flood Insurance Rate Maps.

5.) Shoreland protection measures as mapped by RNKR Associates.[17]

6.) Significant shoreland and wetland biological habitat identified by Dr. D.W. Thomas and the U.S. Fish and Wildlife Service.[18]

7.) Coastal headlands.

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14 Ibid, p. 141.

15 RNKR Associates, Environmental Hazard Inventory: Coastal Lincoln County, Oregon, 1979.

16 U.S. Soil Conservation Service, Beaches and Dunes of the Oregon Coast, 1975.

17 RNKR Associates, Environmental Hazard Inventory: Coastal Lincoln County, Oregon, 1979.

18 D.W. Thomas, Significant Shoreland and Wetland Biological Habitats and Riparian Vegetation, 1981.

8.) Areas necessary for water-dependent and water-related uses, specifically recreational uses and navigation facilities.

9.) Landslide areas as identified by RNKR Associates in 1979 (map numbers 13:25 through 16:25).

10.) Features of exceptional scenic quality.

11.) Riparian vegetation along streams is included within significant wildlife habitat areas.

12.) The conditionally stable dunes landward of the foredune.

13.) The older, stabilized dunes of the South Beach dune sheet.

14.) The deflation plain east of the foredune and the stabilized dunes.

Beaches and Dunes

Ocean Beaches

Formations: There are four stretches of ocean beach within the Newport urban growth boundary (UGB):

1.) Beverly Beach: The area from Yaquina Head to north of Schooner Creek.

2.) Agate Beach: The area from Yaquina Head south to Jump-Off Joe Rock.

3.) Nye Beach: The area from Jump-Off Joe Rock south to the north jetty.

4.) South Beach: The area south of the south jetty to the southern urban growth boundary.

The sand of the Newport beaches is similar to other Oregon beaches. Sea cliff erosion and marine deposition or erosion are the major factors affecting the supply of sand on the beach. The stability and movement of sand on the beach varies seasonally. The sand is generally eroded from beaches during winter storms. Gentler waves in summer deposit sand on the beach.

This on-and-off shore movement of sand is in addition to the transport of sand along the beach (littoral drift). There appears to be a seasonal reversal in the direction of sand transport along the beach. Waves from the south-west accompany the prevailing winds in the winter months and wind and waves from the northwest predominate during the summer. Sand movement appears to be essentially in balance when averaged over several years. This condition is known as "zero net littoral drift."

The impact of this zero net littoral drift and the extension of the jetties at the entrance to Yaquina Bay has been accretion of sand adjacent to the north and south jetties. The accumulation of sand by the jetties has resulted in some further erosion at greater distances from the jetty. The accumulation of sand on either side of the jetties at the mouth of Yaquina Bay led to dune formation when much of that sand blew inland.

Recreational Uses: The recreational values of the beaches have long been recognized by Oregonians. These beaches are important resources that have long held an attraction for residents and visitors. As the name implies, many agates have been found at Agate Beach. Agate Beach, Nye Beach, and South Beach have razor clams. The beaches, especially during the summer, are populated with beachcombers, surfers, sailboarders, runners, kite fliers, and many other recreation enthusiasts.

Oregon Beach Law: The 1967 Legislature passed the Oregon Beach Law (ORS 390.605-390.700) to codify the public's right to use the dry sand areas of the beaches. The Shoreland Boundary Line was established by that legislation to resolve the question of ownership and the right of the public to use the dry sand areas of the Oregon beaches. In the landmark court case of State Ex Rel Thronton v. Hay, the Oregon Supreme Court said that the state had effectively proven the public's right to use the land seaward of the shoreland boundary line even though the ownership may rest with a private land owner. (It should be noted that the wet sand areas are property of the state as determined by the 1899 Oregon legislature except where sold before 1947.)

The area between the mean high water and the vegetation line is an area where the public's right is paramount but where private ownership is recognized. The state legislature grappled with the question of erosion and the receding nature of the coast line in creating this in between area and in 1969 exempted these lands from taxation.

The Oregon Beach Law also regulates improvements, motor vehicle and aircraft use, pipelines, cable or conduit crossings, and removal of natural products on the ocean shore (ORS 390.635- 390.725). Implementation requirements of the Land Conservation and Development Commission's Beaches and Dunes Goal further restricted permits for beach front protective structures to where development existed before January 1, 1977. Pursuant to this requirement, the Oregon Transportation Commission adopted new Beach Improvement Standards on March 28, 1978.

In addition to the above law, Goal 18/"Beaches and Dunes" limits the issuance of permits for beach front protective structures to those areas where development existed on

January 1, 1977. Development means houses, commercial and industrial buildings, and vacant subdivision lots that are physically improved through the construction of streets and the provision of utilities to the lot. Also included are areas where an exception to (2) of the implementation requirements of Goal 18 has been approved.

Dune Areas

The material underlying much of the area within the Newport UGB is sand. Most of this is marine terrace deposits, although these are sometimes difficult to distinguish from older sandstone bedrock or older stabilized dunes. Once the old town area of the city between Nye Beach and the bayfront had dunes, but the area is now largely developed and little remains of these dunes.

All of these areas have sandy soils of either the Netarts, Warrenton, or Yaquina series wherever the soil profile has begun to develop. These series have been mapped by the SCS, and the maps are on file at the Newport Planning Department. It is important to protect these lands from erosion that would create open sand area.

There is a small area with active hummock dunes between Yaquina Bay State Park and the north jetty that is not shown separately on the Ocean Shorelands map because it lies seaward of the beach zone line. The most significant dune area is in South Beach, which is discussed below.

South Beach Dune Complex

The information about dune forms summarized below is drawn from the Beaches and Dunes Handbook for the Oregon Coast[19] and the report and mapping of RNKR Associates in Environmental Hazard Inventory: Coastal Lincoln County, Oregon.[20] These are the most recent sources of information concerning the South Beach dunes.

The South Beach dune complex is the largest dune area in Newport. It was built up from the sand supply on the accretion beach next to the south jetty. RNKR Associates described several types of dune landforms within this South Beach dune sheet, which is the only dune complex identified within the Newport UGB. These dunes are shown on Sheet 4 of the Ocean Shorelands Map (beginning on page 50). The dune complex is located primarily within South Beach State Park, although it extends a short way north and south of the park.

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19 U.S. Soil Conservation Service, Beaches and Dunes of the Oregon Coast, 1975.

20 RNKR Associates, Environmental Hazard Inventory: Coastal Lincoln County, Oregon, 1979.

The four dune landforms identified in this area are:

1.) Active foredunes: a ridge of sand adjacent to the swash zone of the beach extending south from the mouth of Yaquina Bay.

2.) Conditionally stable dunes: present on the landward side of the active foredunes.

3.) Older stabilized dunes: present in approximately the center of South Beach State Park.

4.) Deflation plain: present on the landward side of the other dune types.

Each of these dune types has different resource values, hazards, and development limitations.

The active foredune collects sand blown from the open beach. The foredune develops where European beach grass causes wind-blown sand to accumulate in a long ridge. These dunes need protection if they are to remain effective barriers to wind erosion and ocean storms. Foredunes are dynamic landforms subject to substantial growth in height and width on accretion beaches, and are vulnerable to rapid removal on eroding beaches. Therefore, buildings are not appropriate on active foredunes.

The conditionally stable dunes landward of the foredune have developed a denser vegetative cover, including more plant species. Although no longer subjected to wind erosion like foredunes, conditionally stable dunes have not had time for significant soil development. Conditionally stable dunes may be appropriate for development with special precautions in places that are not subject to hazards such as ocean flooding.

The older, stabilized dunes of the South Beach dune sheet exhibit soil development and tree cover. Since this dune area is entirely within a state park, no development is anticipated.

To the east of the foredune and the stabilized dunes is an extensive deflation plain. A deflation plain is created when the wind removes dry sand particles from areas landward of the foredune. The summer water table limits the depth of sand removal because groundwater moisture binds the sand together. Standing water is common during the winter when the water table is higher. Some deflation plains are subject to ocean flooding.

All of South Beach is known to have a groundwater aquifer, these dunes deposits are generally thin, and they cannot (as in other places on the Oregon coast) be relied on to supply large volumes of ground water. The dune sands rarely exceed 15 feet in thickness (except in a small area of South Beach) and are deposited directly on marine terrace material. The dune aquifer is not subject to significant development pressures because much of the aquifer is within South Beach State Park. Areas outside the park slated for development are or will be served by municipal water and sewer systems.

The primary value of the South Beach dune complex is recreational. Two deflation plain wetlands south of the old jetty railroad and open sand areas have been identified as significant habitat, as discussed below. The parcel of land between South Beach State Park and Yaquina Bay has been identified as being suited for tourist commercial uses subject to compliance with zoning regulations.

In addition to the dune forms in the South Beach Dune Complex described above, the following additional dune landforms are located within the Newport UGB:

1.) Open sand dunes areas, in the absence of vegetation, operate only in response to sand supply and wind. Open dune sand areas are defined as wind-drifted sand in the form of dunes and ridges which are essentially devoid of vegetation.

Active open dune sand areas are highly dynamic and may advance onto forest land, pasture land, crop land, roads, railroads, lakes, and stream channels, thereby endangering residential, commercial, and industrial property. Yet, at the same time, many open sand dunes have tremendous aesthetic and recreational importance.

2.) Interdunes include a broad range of geomorphic landforms varying from wet open dune sand forms to wet areas in recent and older stabilized dunes.

In general, broad areas that are both stable and wet were mapped as wet interdune, and the stabilized area was shown as being secondary. This arrangement points out the major unit to be managed. Most wet interdunes are principally wildlife habitat areas. However, many areas mapped as wet interdunes are old deflation plains or reexposed coastal terraces. A primary development limitation is the inability of some wet interdune areas to accommodate subsurface sewage disposal.

3.) Younger stabilized dunes are youthful, cross-bedded, windstable dune landforms that have weakly-developed sandy soils with little or no development of cemented nodules, lenses, or horizons. Vegetation on these dunes ranges from native grasses, European beachgrass, and shrubs such as scotch broom and tree lupine to woody species. The dominant tree is shore pine, but Sitka spruce, western hemlock, Douglas Fir, western red cedar, Oregon crabapple, and red alder also occur.

The younger stabilized dunes are differentiated from older stabilized dunes by differences in soil profile characteristics and the predominance of shore pine and other woody species. Texture and cementation are the primary criteria use for differentiation, although organic matter, depth, and distribution are also considered.

The younger stabilized dune mapping unit includes the stabilized dunes and transition forests. These areas contain many species of birds, mammals, amphibians, and reptiles. Occasional snags serve as nesting areas for a variety of birds.

Younger stabilized dunes offer opportunities for the placement of man-made facilities. Established vegetation provides shelter from the wind and a location from which to venture out into the open sand. However, on-site investigation is needed because building sites may be limited by slope, depth of water table, and horizontal and vertical permeability if septic- tanks are used. Some septic drain field failures have been reported in areas mapped as younger stabilized dunes. Surface or subsurface drainage that significantly reduces soil moisture in stable areas might result in the killing of low shrubs and should be avoided. Excavation and vegetation removal in stabilized dune areas needs to be well managed to prevent exposure of open sand to wind erosion and subsequent blow-outs.

Shoreland Hazards

Ocean Flooding

Ocean flooding is the inundation of lowland areas along the coast by salt water due to tidal action, storm surge, or tsunamis (seismic sea waves). Landforms in Newport subject to ocean flooding include beaches, the bases of sea cliffs, marshes and low-lying interdune areas. All areas shown on the Flood Insurance Rate Map in Zone V and areas below the 10 foot elevation south of and adjacent to the south jetty are considered to be areas subject to ocean flooding.

The National Flood Insurance Program (FIA) requires that all living areas or residences built or rebuilt within the floodplain be built so that the lowest habitable floor is at least one foot above the base flood level. In addition, buildings, foundations, and other structures must be built so that flood problems are not worsened in other areas. The City of Newport flood plain management regulations for coastal high hazard zones have been recognized as appropriate by FEMA.[21]

Shoreline Protection Measures

Ocean wave undercutting and consequent sea cliff erosion has been identified as a major source of beach sand. The following description of landslide areas also notes the role of ocean wave action. In an effort to protect property from cliff retreat, sand movement, and ocean flooding, several shoreline protection features have been built.

RNKR Associates mapped riprap armor along the shoreline in order to inventory these features. These are shown on the Ocean Shorelands map beginning on page 50. Control of shoreline protection features by local authorities is needed to prevent unexpected changes in beach equilibrium or aggravated erosion of adjacent lands. RNKR suggested several questions to be answered in the review of new shoreline protection structures which have been incorporated into ordinances controlling development along the shoreland.

In addition to city policies and regulations, beach areas within the vegetation line established by ORS 390 are under the jurisdiction of the Oregon State Parks and the Division of State Lands. A permit is required from those agencies prior to the construction of any beach front protective structures.

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[21] Federal Emergency Management Agency, letter to the City of Newport, 1987.

Landslide and Coastal Erosion Areas

Landslide and Coastal Erosion areas were mapped within the Newport urban growth boundary in the 2004 document titled Evaluation of Coastal Erosion Hazard Zones Along Dune and Bluff Backed Shorelines In Lincoln County, Oregon: Cascade Head to Seal Rock, by the Oregon Department of Geology and Mineral Industries (OFR O-04-09). The document and maps are included here by reference. The report describes several types of mass movement (mud flow, slump, soil creep, and debris avalanche) and defines the mapped landslide areas:

Prehistoric Mass Movements: Generally speaking, these are very large landslide and slide blocks that predate historical observations on the Oregon coast (about 150 years) and are deeply eroded with no evidence of recent slide activity.

Potentially Active Mass Movements: These are areas of mass movements that are currently stable (no bowed trees or cracked soil and pavement) but with evidence of recurrent movement in the last 150 years. Unlike the prehistoric slides, these features are generally not extensively eroded and have well-preserved topography indicative of recent movement. Many show no evidence of movement since 1939 or 1967 aerial photography but are probably more likely to have movements than the prehistoric slide areas.

Active Mass Movements: These areas have evidence such as bowed trees and cracked soil or pavement that indicate ongoing down slope movement of large masses of soil or rock.

Quaternary Landslides: Quaternary landslides were mapped by Snavely and others (1976 and 1996). These landslides are shown in inland portions of the City and were not investigated in the 2004 DOGAMI report.

Landslide Terrain: Areas identified as landslide terrain were interpreted by Schlicker and others (1973) from aerial photos and reconnaissance-level fieldwork. The terrain may be landslide or just rolling topography similar to that produced by landslide processes and needs to be field checked.

Bluff and Dune-Backed Shoreline Hazard Areas: Coastal bluff and dune-backed shoreline areas characterized by existing, active erosion processes and three zones of potential future erosion (high, moderate, and low) that respectively depict decreasing risk of becoming active in the future as modeled in the DOGAMI report. The respective hazard zones are more particularly described as follows:

> *Active Erosion Hazard Zones* – For dune-backed shorelines, the active hazard zone encompasses the active beach to the top of the first vegetated foredune, and includes those areas subject to large morphological changes adjacent to the mouths of bays due to inlet migration. On bluff-backed shorelines the active hazard zone

includes actively eroding coastal bluff escarpments and active or potentially active coastal landslides.

High Risk Erosion Hazard Zones – For dune backed shorelines, the high risk scenario is based on a large storm wave event (wave heights 47.6 ft high) occurring over the cycle of an above average high tide, coincident with a 3.3 ft storm surge. For bluff-backed shoreline areas, the high risk zone portrays bluff retreat that would occur if only gradual erosion at a relatively low mean rate were to occur over a 60-year period after the slope reaches and maintains its ideal angle of repose(for talus of the bluff material).

Moderate Risk Erosion Hazard Zones – For dune-backed shorelines, the moderate risk scenario is based on an extremely severe storm event (waves 52.5 ft high) coupled with a long term rise in sea level of 1.31 ft. For bluff-backed shoreline areas, the moderate risk zone portrays an average amount of bluff retreat that would occur from the combined processes of block failures, retreat to an angle of repose, and erosion for 60 to 100 years.

Low Risk Erosion Hazard Zones – For dune-backed shorelines, the low risk scenario is similar to the moderate risk approach but incorporates a 3.3 ft vertical lowering of the coast as a result of a Cascadia subduction zone earthquake. For bluff-backed shoreline areas, the low risk zone illustrates a worst case for bluff retreat in 60-100 years considering maximum bluff slope failure, erosion back to an ideal angle of repose, and gradual bluff retreat for 100 years.

Shoreland Resources

Significant Habitats

Significant material regarding shoreland and wetland biological habitats and riparian vegetation along the ocean shoreline in Lincoln County were compiled by Dr. D.W. Thomas in September 1981.[22] Recent aerial photographs and additional information from the Nature Conservancy, Oregon Department of Fish and Wildlife (ODFW), the U.S. Army Corps of Engineers, OCC&DC, and the U.S. Fish and Wildlife Service National Wetlands Inventory were obtained during that study. In July 1983, the City of Newport, in coordination with Lincoln County and the Oregon Department of Fish and Wildlife, reexamined the Thomas Study in the South Beach dune complex. The Ocean Shorelands Map (beginning on page 50) was amended to include only those areas considered by ODFW to be significant shoreland and wetland biological habitat (see the description of South Beach's significant habitat areas on the next page).

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[22] D.W. Thomas, Significant Shoreland and Wetland Biological Habitat and Riparian Vegetation, 1981.

The City of Newport also amended the Ocean Shoreland map to exclude the Yaquina Estuary north and south jetties and existing jetty access roads as significant habitat.

The following significant shoreland and wetland biological habitats on Newport's ocean shorelands have been noted and are shown on the Ocean Shorelands map (beginning on page 50):

> Grant Creek west of Highway 101.

> An unnamed drainage east and west of Highway 101 just to the north of the Newport Municipal Airport property and south of South Beach State Park.

> South Beach dune complex.

> The cliffs and offshore rocks at Yaquina Head.

Coastal Headlands

There are two headlands within the Newport urban growth boundary, and one is the well-known Jump-Off Joe Rock. A prominent headland in the last century, only skeletal remains are left, and it is now a minor promontory of the marine terrace upon which most of the City of Newport is located. It has been subject to rapid and substantial marine erosion and seacliff retreat. (See the History and the Parks and Recreation sections of this plan.)

The remaining and more prominent coastal headland is Yaquina Head. This headland is formed by the Cape Foulweather basalt. The surficial extent of this geologic unit was mapped in 1973 by Schlicker.[23] The seaward exposure of this unit is included within the shorelands boundary as a major visual resource of the Newport area. Walker, Havens, and Reickson's Visual Resources Analysis of the Oregon Coastal Zone identified Yaquina Head as an area with potential for an exceptional coastal experience. Congress designated about 100 acres of the Head as an Outstanding Natural Area (ONA) on March 5, 1979, in Section 119 of Public Law 96-199. The act also provided for wind energy research within the ONA. The boundary of the Yaquina Head ONA established by this act is shown on the Ocean Shorelands map.

Once the site of a privately-owned commercial quarry, the primary developed land uses on this headland now are the Yaquina Head Lighthouse and a few residences.

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[23] State of Oregon, Bulletin 81: Environmental Geology of Lincoln County, Oregon, 1973.

Recreation Associated with the Pacific Ocean

Yaquina Head, city and state parks, and several public rights-of-way to the ocean beaches provide for recreational opportunities along the ocean shorelands. The designation of the beaches as a special recreational area by the State of Oregon and the acquisition and development of Agate Beach, South Beach, and Yaquina Bay State parks encompass all of the area that is especially suited for recreation along the ocean shorelands within the Newport UGB. Public access to the beach outside of state parks occurs over public rights-of-way or specially acquired parcels. Major public access points are noted on the Ocean Shorelands map and the Inventory Of Oregon Coastal Beach Access Sites, published by Benkendorf and Associates,[24] hereby included within this plan by reference.

Navigation Facilities

Navigation facilities are important uses in the ocean shorelands area. Navigation facilities currently consist of the jetties at the mouth of Yaquina Bay, the Yaquina Bay Lighthouse, and the Yaquina Head Lighthouse.

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GOALS/POLICIES
NATURAL FEATURES

Goal 1: To protect life and property, to reduce costs to the public, and to minimize damage to the natural resources of the coastal zone that might result from inappropriate development in environmentally hazardous areas.

Policy 1: In areas of known hazards, the City of Newport shall require a site evaluation of the potential dangers posed by environmental hazards prior to city review and approval of a proposed development. It shall be the applicant's burden to show that construction in an environmentally hazardous area is feasible and safe. Site investigations in geologic hazardous areas shall be prepared by a registered geologist or engineer.

Policy 2: The city shall maintain and, where necessary, update ordinances that control development in an environmentally hazardous area.

Policy 3: Where hazardous areas are not specifically identified but a potential hazard may exist, the City should establish procedures within its land use regulations to require a site-specific analysis tool, such as a geologic report.

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[24] Benkendorf and Associates, Inventory of Oregon Coastal Beach Access Sites, 1989.

Policy 4: The city shall continue its participation in the Flood Insurance Program administered by the Federal Emergency Management Agency.

Policy 5: Development within the Ocean Shorelands Boundary, as identified on the Ocean Shorelands Map, shall comply with development criteria established within the Zoning Ordinance, except to the extent development is permitted in accordance with the variance procedures of the Zoning Ordinance. The city shall, from time to time, evaluate those regulations to assure compliance with city goals.

Policy 6: Nonstructural solutions to problems of erosion or flooding shall be preferred to structural solutions. Where flood and erosion control structures are shown to be necessary, they shall be designed to minimize adverse impacts on water currents, erosion, and accretion patterns.

Policy 7: Engineering solutions or other measures to provide appropriate safeguards shall be required prior to issuance of building permits in identified hazardous areas if required by a geological report.

Goal 2: To protect and, where practical, enhance identified environmentally sensitive areas.

Policy 1: Identified environmentally sensitive areas shall be mapped on the Ocean Shorelands Map.

Policy 2: Residential development and commercial and industrial buildings shall be prohibited on active foredunes, conditionally stable foredunes that are subject to ocean undercutting or wave overtopping, and beaches and deflation plains that are subject to ocean flooding. Other development in these areas shall be permitted only if the findings required in Policy 8, below, are met and it is demonstrated that the proposed development:

> Is adequately protected from any geologic hazards, wind erosion, undercutting, ocean flooding and storm waves; and

> Is designed to minimize adverse environmental effects.

Policy 3: Foredunes shall not be breached by non-natural causes except in an emergency and shall be restored after the emergency by the party causing the breach.

Policy 4: The city shall cooperate with federal and state agencies, private

individuals, and others in the determination of natural areas.

Policy 5: The city will complete the Goal 5 process for wetlands identified on the U.S. Fish and Wildlife Service Wetland Inventory maps by the next regularly scheduled periodic review.

Policy 6: The criteria for review of all shore and beach front protective structures shall provide that:

> Visual impacts are minimized;

> Necessary access to the beach is maintained;

> Negative impacts on adjacent property are minimized; and

> Long-term or recurring costs to the public are avoided.

Policy 7: Significant shoreland and wetland biological habitats and coastal headlands shall be protected. Uses in these areas shall be consistent with the protection of natural values.

Policy 8: Development in beach and dune areas other than older, stabilized dunes shall only be permitted if the following issues are examined and appropriate findings are made:

> The type of use proposed and the adverse effects it might have on the site and adjacent areas;

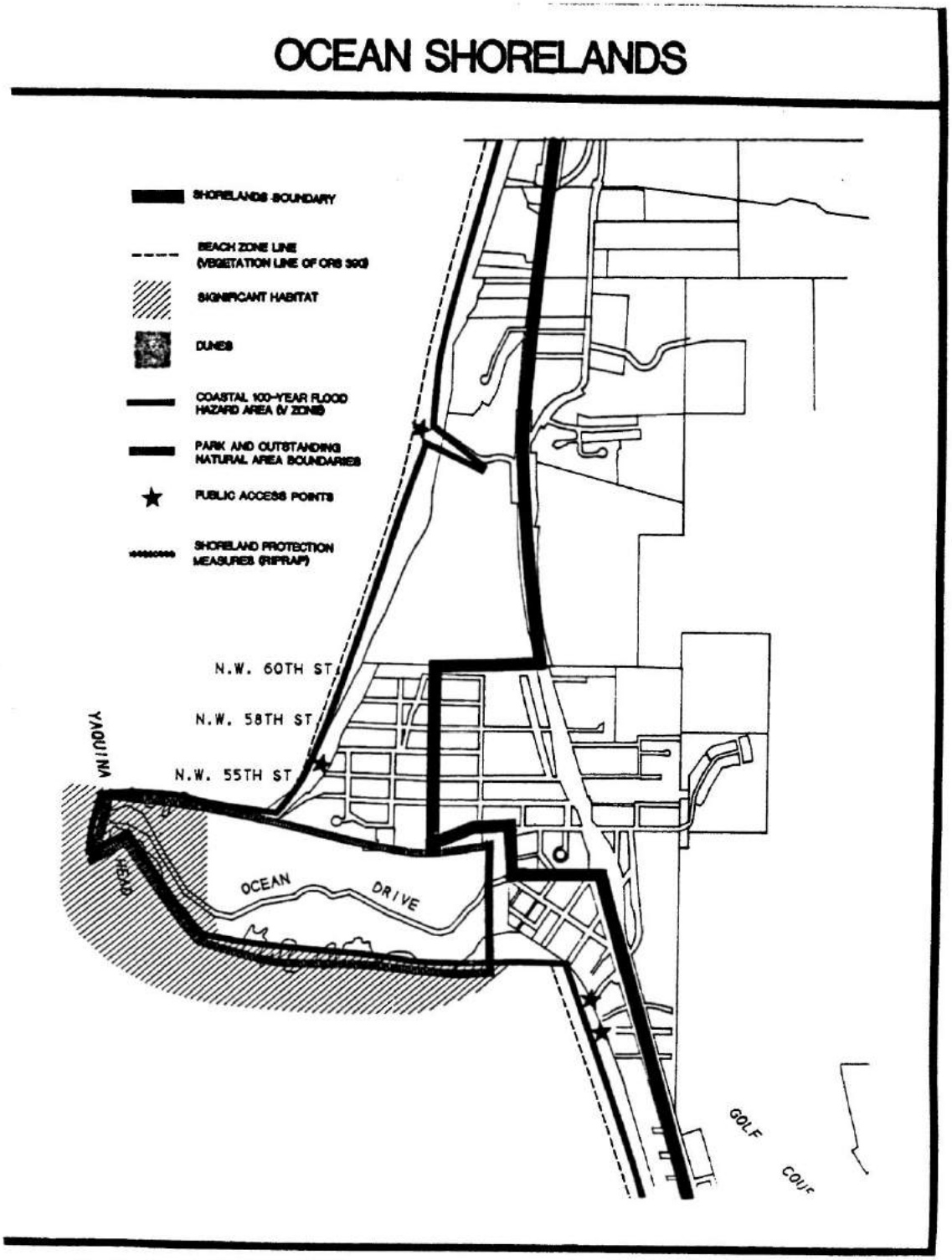
> Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation;

> Methods for protecting the surrounding area from any adverse effects of the development; and

> Hazards to life, public and private property, and the natural environment that may be caused by the proposed use.

Policy 9: Excavations and fill shall be limited to those minimal areas where alteration is necessary to accommodate allowed development. Cleared areas, where vegetation is removed during construction, shall be revegetated or landscaped to prevent surface erosion and sedimentation of near shore ocean waters.

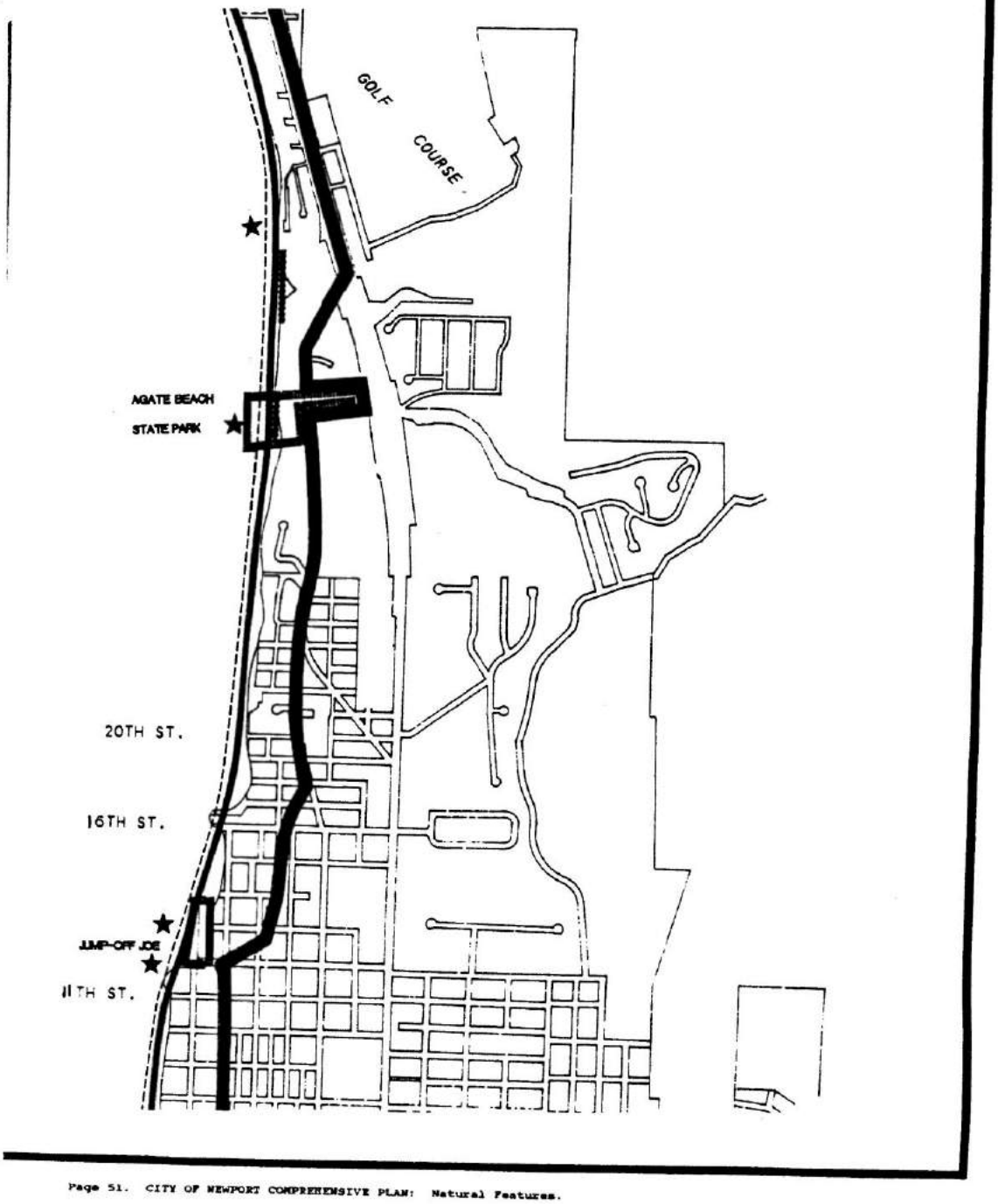
OCEAN SHORELANDS



Page 50. CITY OF NEWPORT COMPREHENSIVE PLAN: Natural Features.

Page 50. CITY OF NEWPORT COMPREHENSIVE PLAN: Natural Features.

OCEAN SHORELANDS



Page 51. CITY OF NEWPORT COMPREHENSIVE PLAN: Natural Features.

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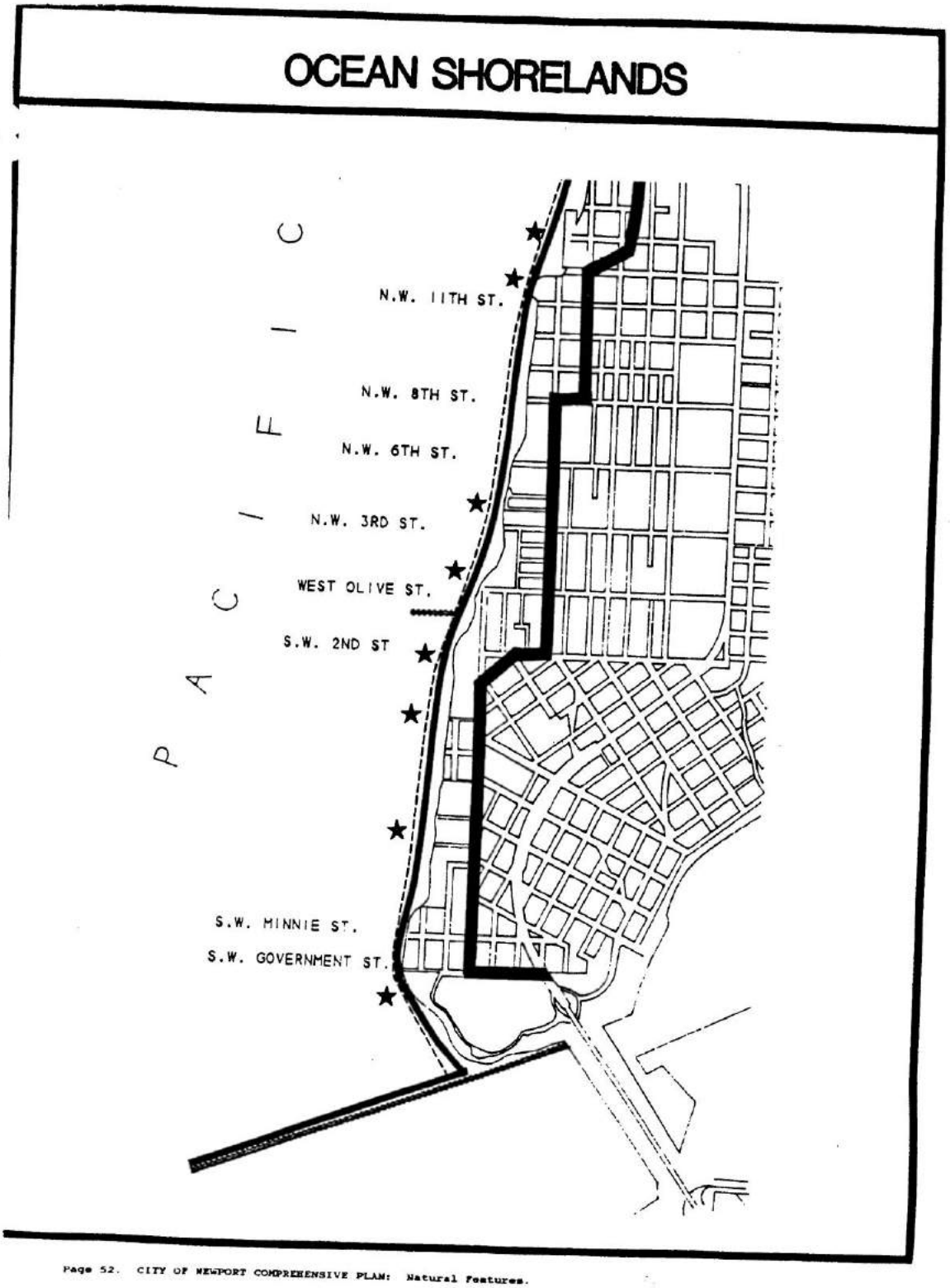

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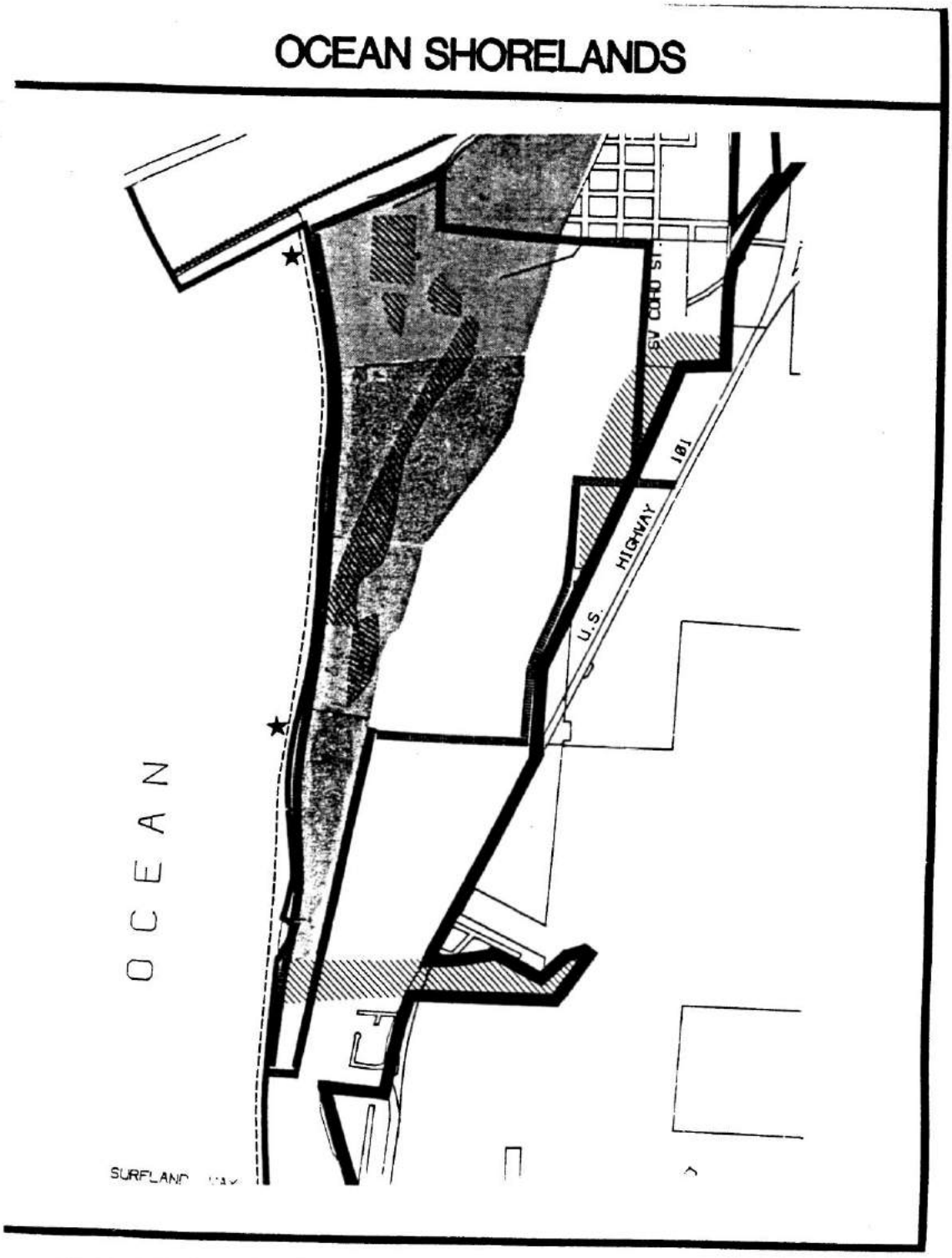

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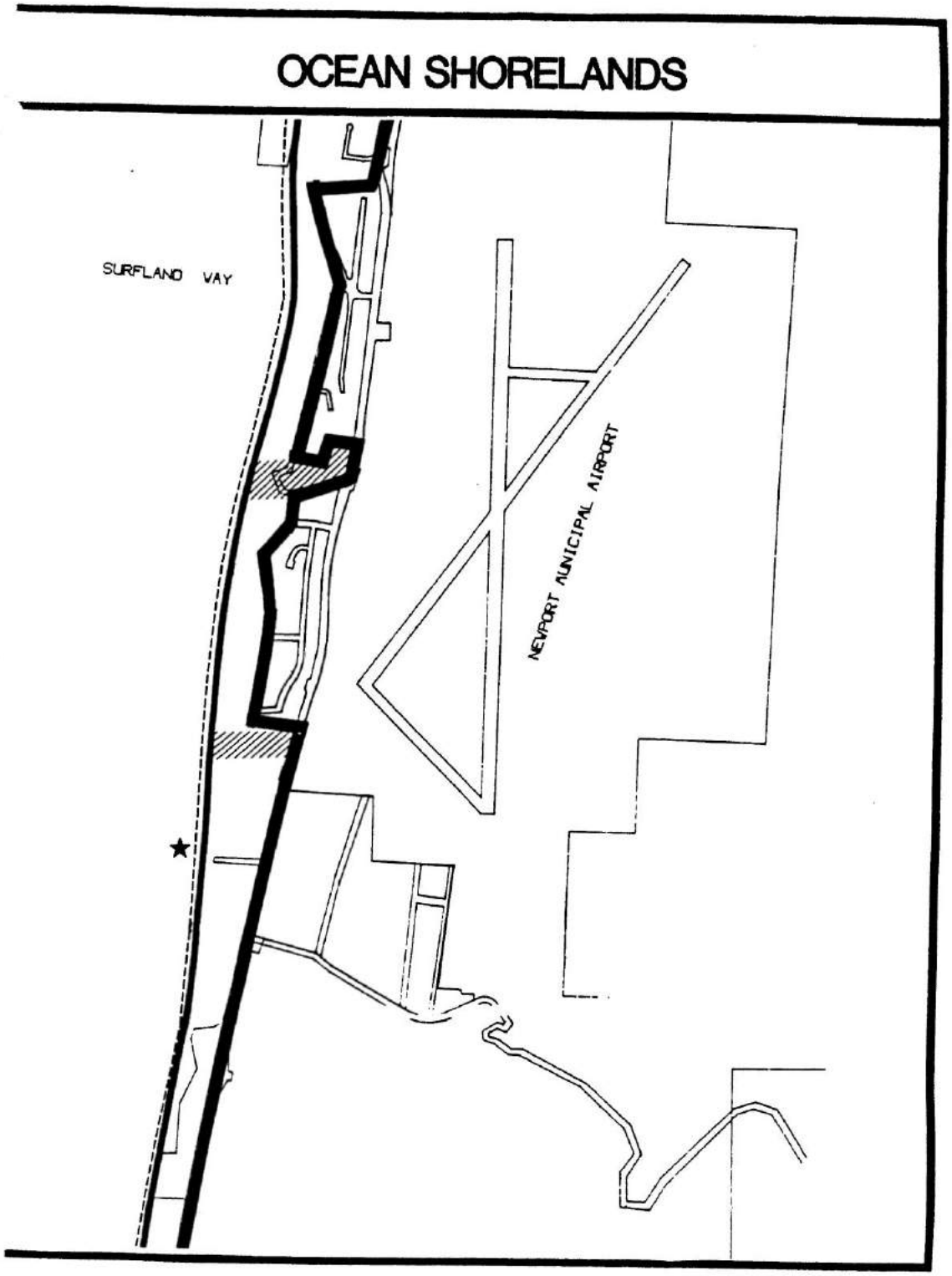

Page 54. CITY OF NEWPORT COMPREHENSIVE PLAN: Natural Features.

Page 54. CITY OF NEWPORT COMPREHENSIVE PLAN: Natural Features.

FOREST LANDS

Introduction:

Forest lands comprise more than 90% (572,000 acres) of the total area of Lincoln County. They are the source of raw materials for the county's leading industry: timber and forest products. Forest lands provide the watersheds necessary for municipal water supplies and for recreation, and they are the principal habitat for big game and spawning and nursery areas for anadromous fish. Consequently, forest lands are a valuable aesthetic, economic, and recreational resource. Within the city's urban growth boundary (UGB), however, commercial forestry is neither visible nor desired.

Economic Importance:

The relevance of these holdings to the economic well being and livability of Lincoln County is evident. Forests are a renewable, productive resource of importance not only to the county, but to the state and nation as well. Because of its various interests, the Newport area faces a major challenge in balancing the competing needs for commercial forest uses, outdoor recreation, environmental protection, and urban uses. To this end, Newport has two major tasks in the Comprehensive Plan: First, there must be an identification of those lands that are forest lands; and, second, there must be a determination of the ultimate disposition of those lands during the next 20 years.

Forest Lands Identified:

The criteria for identifying Newport's forest lands are the following:

> Lands composed of existing and potential forest lands that are suitable for commercial forest uses.

> Other forested lands needed for watershed protection, wildlife and fisheries habitat, and recreation.

> Lands where extreme conditions of climate, soil, and topography require the maintenance of vegetative cover irrespectively of use.

> Other forested lands in urban and agricultural areas that provide urban buffers, windbreaks, wildlife and fisheries

habitat, livestock habitat, scenic corridors, and recreational use.

This task can be further broken down by identifying those forest lands that are commercial and those that are "other" forest lands where the production of trees is not the primary importance (e.g., open space, watershed protection, habitat, recreation, erosion protection, view, aesthetics, etc.).

With these criteria in mind, the City of Newport has identified the following potential commercial forest lands within the UGB:

1.) 80 acres just east of the Jefferies Creek City Park (owned by the Beaver State Land Company).

2.) 75 acres between Highway 20 and the Bay Road (owned by Dr. Wallace High).

3.) 95 acres north of the Newport Municipal Airport (owned Double D Enterprises).

4.) 66± acres north of the airport (owned by the City of Newport).

5.) 500± acres south of Thiel Creek Road (owned by Double D Enterprises).

(Other forest lands within the UGB are identified and discussed in the Environment, Parks and Recreation, and Yaquina Bay Estuary sections of this plan.)

Summary and Conclusions:

The city has determined that all of the above parcels and a number of smaller ones that are privately owned and wooded are either committed to urban development or are needed for urban uses; therefore, because of size, location, proximity to existing or planned public facilities and services, or topography, they are not suitable for commercial forestry uses.

1.) Due to location, size, and adjacent conflicting uses, suitable lands are not available for commercial forestry within the City of Newport's urban growth boundary.

2.) There are some forest lands within the urban growth boundary that provide aesthetic scenic and environmental qualities.

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GOALS/POLICIES/IMPLEMENTATION MEASURES
FOREST LANDS

Goal: To conserve where appropriate those forest lands possessing significant aesthetic, scenic and environmental qualities and providing for the conversion of other forested acreage to urban uses.

Policy 1: The City of Newport will encourage retaining existing trees and woodlands consistent with the needs of urban development.

Policy 2: The city will promote the conservation of existing forest lands having high value aesthetic, scenic, and environmental qualities.

Policy 3: Forest lands within city, county, state, and federal parks shall be managed.

Policy 4: The inclusion of additional commercial forest lands within the UGB shall occur only upon a finding that the land is needed for urban development.

Policy 5: Forested lands in the UGB but outside Newport city limits which may be currently suitable for commercial forest uses may be used for those purposes regardless of current zoning when done in accordance with applicable forest management practices and regulations.

Policy 6: Forest lands within the city limits may be used for forestry purposes; however, conflicts with urban uses shall be minimized and preference given to properly developed urban uses in instances of adverse affects on such urban uses.

Implementation Measure 1: The city will develop and adopt appropriate management regulations for woodlands with the city limits.

Implementation Measure 2: The city will, as a part of reviewing any land use decision before the Planning Commission or City Council, make recommendations for the retention of valued woodlands.

Implementation Measure 3: The city will review and study the advisability of mandatory regulations governing vegetative cover, both natural and restored, on development projects prior to the next regularly scheduled periodic review.

Implementation Measure 4: Appropriate Zoning Ordinance regulations shall be investigated and considered to promote the conservation of high value recreational and scenic woodlands prior to the next regularly scheduled periodic review.

AGRICULTURE

Introduction:

Commercial agriculture plays only a minor role in the economy of Lincoln County and is essentially non-existent within the City of Newport's urban growth boundary (UGB) except for nurseries and some limited acreage providing firewood and incidental timber income.

Agriculture county-wide has seen significant decreases in acreage from 30 years ago. Also, while the 1980 Comprehensive Plan recognized declines in sales as well, since that time livestock has held roughly steady, while income from small woodland products, nurseries, and greenhouses has tripled. Only specialty crops have seen a significant decline since the early 1980's (see Table 1 on page 60).

The primary non-forest commercial agricultural activity in Lincoln County is found in nurseries, greenhouses, and specialty horticulture, some of which takes place in the Newport area. There is also occasional logging and thinning of wooded parcels within the city for firewood, but none on a sustaining commercial level.

No specific information is available on agricultural production by county area or by city.

Summary:

The City of Newport has no commercial agricultural land within the urban growth boundary. Thus, no need exists for addressing the statewide goal for protection for such lands.

Table 1
Lincoln County
Estimated Gross Agricultural Income
(in thousands of dollars)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
CROPS:										
Small Woodland Products	0	1,500	0	0	0	1,500	1,350	1,560	2,350	4,430
Nursery and Greenhouse	0	700	0	0	0	1,000	1,080	1,900	2,000	2,500
Specialty and Other Crops	1,129	197	1,884	2,475	2,826	160	180	170	182	350
LIVESTOCK:										
Cattle and Calves	690	1,139	1,163	1,229	980	1,003	900	926	1,111	923
Sheep and Lambs	30	123	124	89	92	161	225	148	246	222
Dairy Products	315	255	309	312	380	350	495	420	385	276
Miscellaneous	104	158	176	180	188	234	225	165	142	146
TOTAL:	**2,268**	**4,072**	**3,656**	**4,285**	**4,466**	**4,408**	**4,455**	**5,289**	**6,416**	**8,847**

Source: Lincoln County Extension Office.

WATER QUALITY

Introduction:

Water is an important resource in need of management. Various sections of the City of Newport's Comprehensive Plan deal with different aspects of water quality.[1] One aspect of that management program is to maintain water quality.

Sensitive Aquifers:

The only area that is not covered in other sections of this plan is that of sensitive aquifers. The State Department of Environmental Quality (DEQ) has prepared a map that shows sensitive aquifers in the Newport area, two of which are in the Newport urban growth boundary (UGB). Both are in areas on either side of Yaquina Bay. The area north of Yaquina Bay appears to be about the width of the city from the bay to Big Creek. The one in South Beach appears to again be the width of the city from the bay to the south end of South Beach State Park. It is impossible to determine exact boundaries due to the scale of the map.

The city does not draw water from that aquifer for meeting domestic, commercial, or industrial water demands. Although aquifers are important, the one within Newport proper is not as critical as others that do supply water needs. Policies directed toward this aquifer should be more for maintaining a certain level of quantity and quality.

Lincoln County administers subsurface permits for septic tanks in the Newport city limits, while the state is the primary enforcement agency for contaminants that occur because of urban development. The city must rely on those agencies to provide the expertise on the limited issue of the aquifer quality. The city will, however, cooperate with the county and state in their planning and enforcement activities.

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[1] The Yaquina Bay Estuary section addresses the management of estuarine resources.

GOALS/POLICIES
WATER QUALITY

Goal: To maintain a level of water quality that is consistent with state and federal regulations.

Policy 1: The Department of Environmental Quality has identified major water table areas with sensitive aquifers within the Newport urban growth boundary. A program to regulate these areas has not yet been developed by the DEQ. Once a program is developed, the city will comply with DEQ to carry out this program.

Policy 2: Any development will be required to leave some amount of permeable surface as required by the Zoning Ordinance.

AIR QUALITY

National Ambient Air Quality Standards (NAAQS) have been adopted by federal and state governments to protect the public health and welfare from the known adverse effects of air pollution. The federal government has set primary standards which define levels of air quality that protect the public health. Secondary ambient air quality standards define levels judged by the federal government as necessary to protect the public welfare. Oregon's control strategies have been directed to meet the more stringent secondary air quality standards.[1]

The pollutants for which standards have been established are common ones that have been shown to be harmful. These standards are exhibited in Table 1.

Table 1
National Ambient Air Standards

		Federal Standards	
		Primary	Secondary
Pollutant	Averaging Time	(Health)	(Welfare)
Total Suspended Particulate	Annual Geometric Mean	75µg/m^3	60µg/m^3
	24 Hours	260µg/m^3	150µg/m^3
PM10	Annual Arithmetic Mean	50µg/m^3	50µg/m^3
	24 Hours	150ug/m^3	150µg/m^3
Ozone	1 Hour	0.12 ppm	0.12 ppm
Carbon Monoxide	8 Hours	9.0 ppm	9.0 ppm
Sulfur Dioxide	Annual Arithmetic Mean	0.03 ppm	-
	24 Hours	0.14 ppm	-
	3 Hours	-	0.5 ppm
Nitrogen Dioxide	Annual Arithmetic Mean	0.053 ppm	0.053 ppm
Lead	Calendar Quarter	1.5µg/m^3	1.5µg/m^3

Notes: µg/m^3 = Micrograms of pollutant per cubic meter of air
ppm = parts per million

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[1] State of Oregon Department of Environmental Quality, 1987 Oregon Air Quality Annual Report, 1988.

The Department of Environmental Quality (DEQ) is the state agency responsible for monitoring air quality in Oregon. This department sees that urban areas meet air quality standards and that air quality in the rest of the state does not deteriorate.

The DEQ works with local governments in five airsheds to reduce pollutants to acceptable levels. For areas with identified air quality problems, DEQ has established extensive monitoring and sampling stations. For other areas, monitoring and sampling is done periodically, usually in response to a specific complaint.

The Newport area is within the Willamette Valley Region. The DEQ has not identified Newport as being within a problem area. The meteorology of the area assures a good mixing of the air. In addition, the Newport area does not have significant point sources of pollutants. Therefore, the air quality of Newport is quite good.

However, non-point sources of pollutants do exist here. The major sources are vehicles, road dust, open fires (including wildfires), and wood stoves. If acute problems from these sources do arise, they can be dealt with on a case-by-case basis.

Conclusion:

Air quality in the Newport area is good. No major point sources of pollutants are within the Newport UGB. Non-point sources are few and can be handled on a case-by-case basis.

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GOALS/POLICIES
AIR QUALITY

Goal: To protect the air quality of the Newport area while maintaining a climate conducive to economic growth.

Policy 1: The City of Newport will comply with state and federal agencies, especially the Department of Environmental Quality and the Environmental Protection Agency, to assure a continued high level of air quality.

NOISE

Introduction:

When unwanted sounds intrude into our environment, "noise" exists. Most Americans accept some level of noise as a tolerable nuisance--part of our modern, technological way of life. Noise, however, can be more than a nuisance; it can, according to studies conducted by the U.S. Environmental Protection Agency (EPA), degrade the livability of a community and damage the physical and mental health of a person.

Noise as a Physical Phenomenon:

The loudness, or magnitude of sound, is commonly measured in decibels (dB). For human beings, the audible spectrum ranges from 0 to 140 dB. An illustration of this scale is provided in Table 1.

Table 1
Loudness Range of Common Sounds[1]
(Measured at Source or Indicated Distance)

Sound Source	dB	Typical Response
	150	
Sonic Boom	140	Painfully Loud
	130	
Jet Takeoff (200 ft.)	120	Limits of Amplified Speech
Auto Horn (3 ft.)	110	Maximum Vocal Effort
Shout (0.5 ft.)	100	Very Annoying
Heavy Truck (50 Ft.)	90	Annoying
Pneumatic Drill (50 ft.)	80	Telephone Use Difficult
Freeway Traffic (50 ft.)	70	
Air Conditioning Unit (20 ft.)	60	
Living Room	50	Quiet
Library	40	
Soft Whisper	30	Very Quiet
	20	
Leaves Rustling	10	Just Audible
	5	Threshold of Hearing

[1] Council on Environmental Quality, The First Annual Report, Washington D.C., 1970.

Other noise sources include industrial and construction activities and normal human activity. The time and duration of these noise generators are variable depending on the type of activity.

In City Noise:

The Newport area contains relatively few chronic noise problems. Traffic related noises account for a majority of the sources within the city, most of which occurs in commercial areas, thus minimizing the conflicts with sensitive areas such as schools or residential areas.

Airports, also, can be serious sources of noise; this is particularly true where an airport serves jet aircraft. The Newport Municipal Airport is principally a general aviation facility, although jet planes occasionally use it. However, there does exist a potential for more jet traffic, according to the Airport Master Plan [2]. Too, the U.S. Coast Guard has plans to build a helicopter base on airport property. Newport's Airport Master Plan contains a detailed analysis of noise and its affects on the surrounding area. Year 2008 noise contours have been determined, and it appears that the 55 Ldn (day-night average sound level) falls within an area that is not noise sensitive.

Noise Restriction: [3]

In exercising its general powers to protect the health, safety, and welfare of its citizens, the City may address noise problems in a variety of ways, including under the general power of the City to regulate nuisances and through the land use approval process. The City currently has an ordinance to regulate noise nuisances under the general power of the City to regulate for nuisances. This ordinance may be amended by the City Council as needed. The City also currently addresses noise nuisance issues in the land use process. For example, the Newport Zoning Ordinance conditional use permit approval criteria and the extension, expansion, or enlargement of nonconforming uses criteria both consider the impact of nuisances such as noise that may be generated by the proposed conditional use or the nonconforming use.

Conclusions:

Newport has relatively few noise pollution problems. The few acute problems that do arise can be handled as nuisances and dealt with on a complaint basis. If warranted, the police may use the DEQ to determine if a state or federal law has been violated. If it has, it is the responsibility of the DEQ to enforce.

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2 FORESITE Group, Airport Master Plan, 1991.
3 Section amended by Ordinance No. 1883 (March 21, 2005).

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GOALS/POLICIES
NOISE QUALITY

Goal: To cooperate with the state and federal agencies responsible for noise regulation.

Policy 1: The City of Newport recognizes that noise can cause problems, thereby affecting the livability of the city. The city will cooperate and comply with state and federal agencies responsible for the enforcement of state and national regulations regarding noise.

Policy 2: The City may consider noise issues as appropriate in the land use process by including noise nuisance issues within land use approval criteria. [4]

4 Policy 2 Amended by Ordinance No, 1883 (March 21, 2005).

ENERGY CONSERVATION

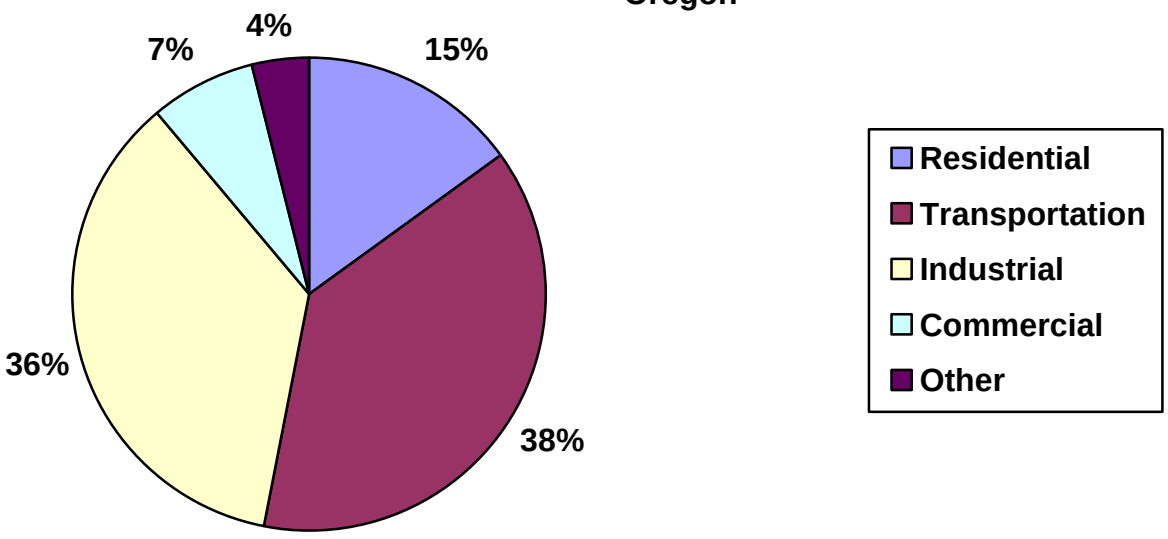
Introduction:

Newport is an energy consumer rather than a producer. Specific data on all energy types is not available for the Newport area, so this section will rely on the State of Oregon's Department of Energy (ODOE) for such information. Consequently, the following discussion represents an overview and analysis of the State of Oregon Third Biennial Energy Plan as it applies to the Newport area.

Energy Consumption:

Figure 1 depicts the amount of energy used in 1987 by the various energy users. The graph is for the state as a whole.

Figure 1
1987 Energy by User
Oregon



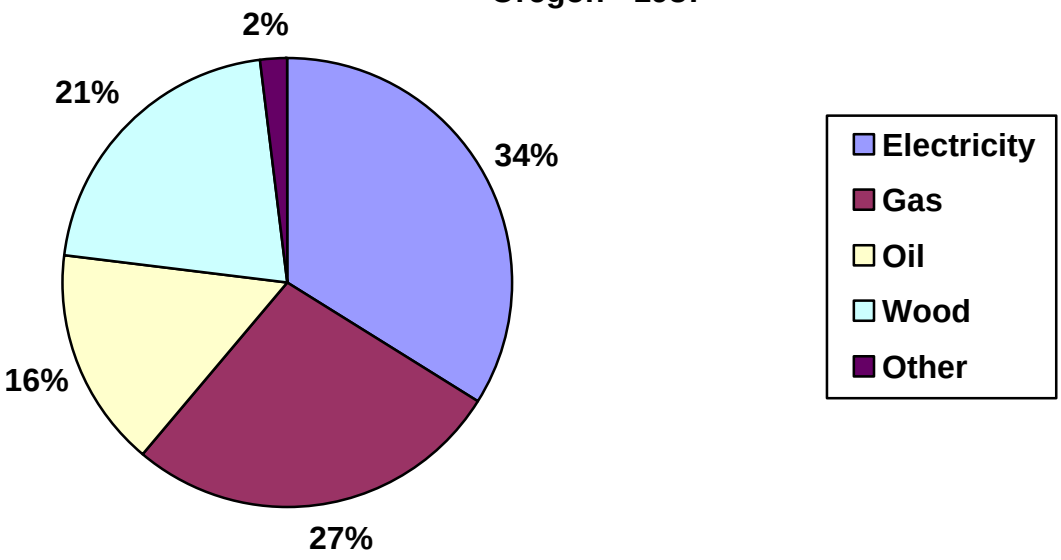
Newport's graph is undoubtedly different, however, in that there is not the industrial development present as in the rest of the state. The percentage of industrial energy consumption is lower, then, while the percentage of the other energy is most likely higher. The exact amount is unknown.

Residential:

The Oregon Department of Energy estimates that our households spent about $850 million on electricity, natural gas, and heating oil in 1987; this averages to about $800.00 per household. About 40% was spent to run household appliances, another 40% went to home heating, and the remaining 20% was used to heat water. In addition, space heating was supplemented significantly by wood (no estimate of the dollar amount of wood used was available).

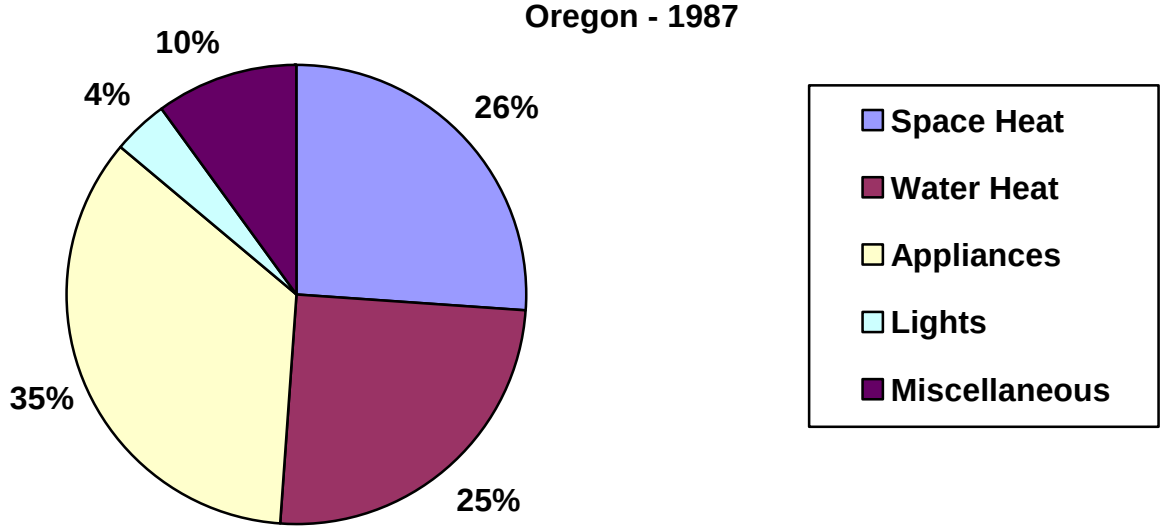
Home heating is the largest single use of energy for most households since most homes have electric, gas, or oil heating systems. One-third of all households also use wood stoves as a primary or back-up heat source. Figure 2 compares the amount of usable heat (the amount it takes to heat the household) each energy source provided.

Figure 2
Home Space Heating Use by Source
Oregon - 1987



Virtually all homes use electricity. The 1987 residential electric bill was nearly $700 million for the State of Oregon. Figure 3 on the next page displays how the total is split among space heat, water heat, and appliances. The miscellaneous group includes up to 50 small household appliances (stereos, blenders, water bed heaters, toasters, etc.).

Figure 3
Residential Electricity Use
Oregon - 1987



Transportation:

This is the largest energy user (it accounted for 38% of total energy consumed in 1987). With few exceptions, transportation relies wholly on oil products. Nearly two-thirds of its energy comes from gasoline. Fifty-three percent of the gasoline was sold to fuel household vehicles--cars, light trucks, and vans. Another 15% was used for travel by tourists, businesses, and governments. Ships, railroads, and aircraft used about 18%, and the trucking industry used 14%.

Commercial:

Energy mainly provides comfort and convenience to customers, employees, students, patients, and other building occupants; thus, energy to light, heat, cool, and ventilate buildings represents more than two-thirds of the energy used by this sector. Cooking in restaurants and refrigeration in grocery stores are the other major energy uses. Electricity accounts for nearly 60% of commercial energy use, while most of the rest is oil and gas. On page 71, Table 1 lists the major segments.

Manufacturing:

Industries use energy mainly to turn raw or unfinished materials into final products. In Oregon, the major consumers are the lumber, paper, primary metals, good, chemicals, and electronics industries. The Newport area has no industry of any significant size in any of those categories.

Table 1
Commercial Statistics: 1986

Activity	Percent of Electricity Use	Percent of Fuel Use
Grocery	12	1
Restaurants	13	19
Lodging	5	5
Retail	12	3
Office	7	2
Health	7	3
Hospitals	5	11
Schools	8	26
Government	5	7
Other	26	23
Total	100	100

Conservation:

Because Newport is a consumer rather than a producer of energy, efficiency is Newport's main energy conservation potential. For residences, weatherization provides the largest energy savings. The Uniform Building Code (UBC) currently requires extensive insulation and other energy saving construction for new homes. According to the ODOE, about 14% of the housing stock in the state is "fully weatherized" and about 12% is "unweatherized." In between is the 74% that is partially weatherized. ODOE estimates that one-third of the conservation potential from weatherization has been attained.

Conservation opportunities for commercial buildings varies depending on the type of business. For most, more efficient lighting is the single greatest way to save energy. Grocery stores, however, can save considerable amounts of energy by switching from open to closed cooler and frozen food cases. Restaurants can best conserve in their manner of cooking, water heating, and refrigeration.

Transportation can profit from more efficient vehicles and by reducing the amount of travel. Industrial uses can also benefit by the use of more efficient machinery, especially electric motors.

Conclusions:

Newport is an energy consumer, with the two largest users being residences and transportation. Because we are an energy importer, conservation is the best approach to energy savings.

GOALS/POLICIES
ENERGY CONSERVATION

Goal: To conserve energy.

Policy 1: The City of Newport shall encourage energy conservation through strict enforcement of Uniform Building Code energy efficiency standards.

Policy 2: The city shall cooperate with energy utilities in their energy conservation programs.

Policy 3: The city will encourage the use of forms of transportation (e.g., bicycles and mass transit) that are more energy efficient.

Policy 4: The city will encourage neighborhood commercial areas in order to conserve energy.

Policy 5: The city shall encourage the location of high density residential areas near high capacity transportation corridors in order to achieve greater energy efficiency.

SOLID WASTE

Background:

The City of Newport acquired its present sanitary landfill site in 1964-65. Located just north of Newport's urban growth boundary (UGB), the site covers an area of 53 acres. The operation of the landfill is contracted by the Lincoln County Solid Waste Consortium.

In 1971, the legislature amended ORS 451 by adding 451.555, which allowed county service districts to be formed for the purpose of comprehensive planning of public facilities. Lincoln County, the City of Newport, and four other cities formed a solid waste advisory committee in that year. The committee worked with a consultant, U.M.A. Nortec, Inc., and finished preparing a solid waste management plan for Lincoln County in June of 1974; this was part of a comprehensive water, sewerage, and solid waste management plan. In December of 1974, the plan was essentially approved by the State Department of Environmental Quality (DEQ) with certain conditions. The Lincoln County Board of Commissioners then ordered the plan adopted with modifications in April of 1975.

In 1976, the voters of Lincoln County approved a bond measure to fund the adopted plan. The plan called for a refuse processing facility to be located at the existing City of Newport landfill. It was to have a grinding facility, air classification system, and--at some future date--a conveyor belt driven magnetic separator. The combustible fraction was to be sold to Georgia Pacific for boiler fuel, and non-recoverable or non-recyclable materials were to be buried in the landfill. A new site was also to be located for future landfill purposes. This plan, however, was never implemented.

The Environmental Quality Commission ordered the closure of the three main landfill sites in Lincoln County in 1978, and, in January of 1979, the County Commissioners decided to hire a new consulting firm to perform a new study for a landfill site only. R.A. Wright Engineering completed this study,[1] and they also prepared a Preliminary Design and Operational Plan for the finally selected site at Moolack Creek. This site covered approximately 100 acres and was estimated at that time to be sufficient through 1990. The Lincoln County Solid Waste Consortium is currently considering alternatives for solid waste disposal once the facility is full and closed. It appears that trucking the waste to a site that can accept the refuse is the best alternative. The city has and will continue to work closely with Lincoln County to assure adequate and environmentally acceptable disposal of solid waste.

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[1] R.A. Wright Engineering, Solid Waste Landfill Site Search, Phase I, for Lincoln County, 1979.

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GOALS/POLICIES
SOLID WASTE

Goal 1: To provide for the solid waste disposal for the City of Newport in an efficient and environmentally sensitive manner.

Policy 1: Lincoln County shall take the lead role in the provision of solid waste disposal. The City of Newport will coordinate on solid waste disposal by continuing to have representation at the Solid Waste Consortium or its successor.

Policy 2: The city shall be in compliance with state and federal solid waste regulations.

Policy 3: The city shall encourage recycling.

WETLANDS

Senate Bill 3:

On July 26, 1989, Governor Neil Goldschmidt signed into law Senate Bill 3, a major piece of legislation that strengthened Oregon's wetlands management program. Although significant legislation, it did not create a major new program. Rather, Senate Bill 3 sought to improve wetland management through changes to existing planning and regulatory statutes.

The Legislative Assembly established clear policy for the state regarding wetland resources. The findings and policy in Senate Bill 3 described the functions and values of wetlands, as well as articulating Oregon's approach to regulation, protection, and development. The new law also established a uniform definition of "wetland" for planning and regulatory purposes. The measure furthermore provided a new definition of "mitigation," which emphasized efforts to avoid adverse influences and reduce unavoidable impacts before resorting to compensation.

This law requires that the Division of State Lands (DSL) conduct and maintain an inventory of the state's wetlands. The inventory is to be distributed to all city and county planning agencies and will be used by local governments to notify DSL of activities to be conducted in inventoried wetlands.

The statute also gives local governments the option to develop conservation plans. The plans focus on wetland resources in a specific geographic area, providing an opportunity for management decisions to be made in a broader context than is possible through the existing site-by-site permitting process. Wetland conservation plans will contain a detailed inventory and assessment of wetlands in the plan area, designating wetland areas for protection, conservation, or development. Plans must provide for full replacement through mitigation of any planned wetland losses. Approval of a wetland conservation plan will result the in expedited review of permits for removal and fill in wetland areas designated for development in the plan. In limited cases, it can result in reauthorization of fill and removal without individual permit review by DSL.

Senate Bill 3 also made Oregon law consistent with Federal regulations. Federal law charges the U.S. Army Corp of Engineers and the Environmental Protection Agency (EPA) with the wetland regulatory programs. Other federal agencies (e.g., the U.S. Department of Fish and Wildlife and the U.S. Soil Conservation Service) also provide significant input into wetland regulation.

Inventory:

The City of Newport and the U.S. Department of Fish and Wildlife have mapped wetlands within the city's urban growth boundary (UGB). The city's delineations are on the Ocean Shorelands Map (beginning on page 50) incorporated in this section. These maps indicate, although they do not specifically state, that the following areas are wetlands:

> Portions of the South Beach dune complex.

> An unnamed drainage east and west of Highway 101 just to the north of the Newport Municipal Airport property and south of the South Beach State Park.

> Grant Creek west of Highway 101.

> Moore Creek west of Highway 101.

> The Thiel Creek drainage basin within the Newport UGB.

In addition to the city's designated sites, the U.S. Department of Fish and Wildlife has identified the sites on the map entitled "National Wetlands Inventory, Newport North."

The city, state, and federal governments have designated and mapped wetland boundaries within the Newport urban growth boundary; however, the scale of those maps makes it difficult to determine exact wetland boundaries. State and Federal wetland regulations, though, require that all wetlands be identified and exact boundaries established. This can be done by a site-by-site analysis as development is proposed or by an area-wide analysis in advance of any development.

The city received a grant from the State Department of Land Conservation and Development (DLCD) for the preparation of a wetland conservation plan (WCP) for the South Beach area from the northern boundary of the airport to approximately S.E. 35th Street.[1] Scientific Resources, Inc. (SRI), was hired to delineate wetland boundaries and classify those wetlands by functional value. Once completed, the city will have a detailed inventory and classification scheme for the South Beach area. The plan will then be considered for inclusion in whole or in part into Newport's Comprehensive Plan. Goals and policies to implement the wetland conservation plan will also be considered at that time. Completion is scheduled for early 1991.

As for the rest of the city's urban growth boundary, the more general maps from the U.S. Department of Fish and Wildlife, the Division of State Lands, and the city will have to be used until a more detailed inventory can be performed. Proposals for development that may be within wetland boundaries will then need to obtain separate determinations of permit requirements. The city can assist property developers and regulatory agencies by serving as a liaison between the developer and those agencies.

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[1] Scientific Resources, Inc., Wetlands Conservation Plan for South Beach, Oregon, 1990 (DRAFT).

In the meantime, city staff will study the general wetland areas more closely before the next periodic review and prepare a more detailed inventory as time and money permits. Once again, assistance from state and federal agencies will be needed in making final determinations.

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GOALS/POLICIES
WETLANDS

Goal 1: To identify and regulate identified wetlands consistent with state and federal laws.

Policy 1: The city will coordinate with state and federal agencies in the delineation and regulation of wetlands.

Policy 2: The city shall, until more detailed information is developed, use the South Beach wetland study, the National Wetland Inventory, and other official sources for the identification of wetlands. That information shall be used to guide property owners in the development of their property.

Implementation Measure 1: The city shall complete the wetland study for South Beach. The study may be the basis for a wetland conservation plan consistent with state law.

Implementation Measure 2: The city will conduct a complete inventory of wetlands within the UGB prior to the next Periodic Review, subject to budgetary and time restraints.

AGGREGATE AND MINERAL RESOURCES[1]

Introduction:

There are no known mineral and aggregate Goal 5 resources within the City of Newport's urban growth boundary (UGB); however, a mineral and aggregate resource site does exist immediately outside the current UGB and city limits. That site, known as the Iron Mountain Rock Quarry, has been identified as a significant Goal 5 resource in the Lincoln County Comprehensive Plan.

Mineral and Aggregate Resources:

Even though the actual resource is outside the city's UGB, the quarry is close enough that a Goal 5 analysis must be performed. A complete set of findings and conclusions is attached as Appendix "A," and, by reference, is incorporated herein.

The basic conclusion of the analysis--based on economic, social, environmental, and energy consequences--is that the consequences of conflicts between the quarry and nearby uses are primarily economic and social. Surrounding land uses do not threaten the rock resource itself, but complaints about quarry activities can severely constrain or prohibit the use of the resource. The inability to use the resource for highway maintenance and construction projects increases the cost of these projects. Transportation is the key component in the price of aggregate. Forced reliance on sites more distant from Newport will dramatically increase the cost of construction on the central coast.

Once the analysis has been done, the Goal 5 rule (OAR 660-16-010) provides: "Based on the determination of the economic, social, environmental, and energy consequences, a jurisdiction must develop a program to achieve the Goal."

The rule allows three methods for implementing a program to achieve the goal of resource protection. The first method requires preserving the resource site regardless of the effect on conflicting uses. The second method involves protecting the resource to a desired extent but allowing identified conflicting uses in a limited fashion. The third method is to allow the conflicting uses fully, regardless of any adverse effects on the resource. This last choice is permissible only if (1) conflicting uses are found to be more valuable than the resource and (2) there is no ability to mitigate the adverse consequences of conflicts between the resource and uses in the impact area.

[1] Section added by Ordinance No. 1691 (11-15-93).

The requirements to implement a decision to limit conflicting uses are found in OAR 660-16-010(3). The Comprehensive Plan and land use regulations must specify what uses and activities will be prohibited, what uses are allowed fully, and what uses are conditionally allowed. The implementation program, including development regulations, must include clear and objective standards.

Conclusion:

In light of the above, the City of Newport recognizes that the Iron Mountain Rock Quarry is a significant Goal 5 mineral and aggregate resource. However, the property within the current UGB is important for the provision of adequate housing. It is therefore necessary to allow conflicting uses on the adjacent property subject to use limitations and design criteria.

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GOALS/POLICIES
AGGREGATE AND MINERAL RESOURCES

Goal: To protect the Iron Mountain Quarry and allow conflicting uses, subject to the limitations and development criteria contained in the City of Newport Zoning Ordinance.

Policy 1: The city shall create an Iron Mountain Impact Area, or IMIA (see Figure 1 on page 80c), where limitations and development criteria shall be introduced. The development criteria shall be established to balance the need to protect the resource site and development rights of property within the impact area, and the criteria shall be both clear and objective.

Policy 2: Any City of Newport urban growth boundary amendment within Lincoln County's Iron Mountain Impact Area shall address this section and Goal 5 of the Statewide Planning Goals. Adequate findings of fact that speak to all the criteria shall be made before any urban growth boundary modification may be made.

Page 80c. CITY OF NEWPORT COMPREHENSIVE PLAN: Aggregate and Mineral Resources.

APPENDIX A
CONTENTS

(The following attachments are hereby, by reference, incorporated herein. They are found in Planning Department File No. 5-CP-92.)

1.0 NATURE OF THE REQUEST

The Oregon Department of Transportation (ODOT) requests that Lincoln County and the City of Newport adopt comprehensive plan amendments for the Iron Mountain Rock Quarry. ODOT requests that the respective comprehensive plans accurately identify Iron Mountain as a significant Goal 5 resource site, and that the county and city adopt a program to protect this resource.

This report presents information to support findings and conclusions to amend the respective comprehensive plans.

2.0 BACKGROUND

2.1 History of Iron Mountain

ODOT surveyed the Iron Mountain site as a material source in 1937 in conjunction with construction of the Coast Highway. The State of Oregon, through ODOT, has owned and operated the site as a noncommercial quarry since 1942. The state and its contractors have used material from Iron Mountain for a variety of public projects, including construction of the old Alsea Bay bridge.

Various users have extracted more than 300,000 cubic yards of material from the site since the state bought it in 1942. Although the amount of material removed in recent years has only averaged between 3,000 and 4,000 cubic yards per year, the site is an extremely important resource because of its public ownership, location, quality of material, and quantity of reserves.

2.2 Purpose of Public Resource Sites

ODOT maintains a network of state-controlled or state-owned material source sites throughout Oregon. The state bought many sites years ago in conjunction with a specific highway project but did not sell them upon completion of a project because of the continuing need for stone and gravel. ODOT needs large amounts of high quality material protected for use in maintenance activities, reconstruction or safety projects, and highway modernization projects.

The 1991 Oregon Highway Plan estimates that nearly 2,000 miles of state highways require modernization and over 1,100 miles of pavement require immediate treatment in order to achieve ODOT's goal of achieving 90 percent fair or better road pavement conditions by the year 2010. Furthermore, many highway bridges are nearing the end of their 50 year expected lifespan and require major rehabilitation or replacement. Meeting the needs of the highway system requires large amounts of high quality material. For example, repaving just one mile of a two-lane highway requires between 4,000 and 5,000 tons of quality aggregate.

State-owned or state-controlled material sources serve two primary functions. First, they are a source of aggregate material for maintenance activities (so the state does not have to purchase rock from suppliers or pay royalties to land owners). Second, state-controlled material sites are prospective sources available to any contractor on major highway projects. ODOT offers these sites to contractors without charging a royalty for the rock. This arrangement helps ensure an economical source of material for rock and fosters more competitive bids for highway contracts. More competitive bids result in more efficient use of taxpayers' money and allows ODOT to maintain and improve more highway miles.

2.3 Lincoln County Comprehensive Plan

The Land Conservation and Development Commission acknowledged the Lincoln County Comprehensive Plan to comply with the Statewide Planning Goals in December 1982. The plan identifies the Iron Mountain site as one of 58 significant Goal 5 mineral and aggregate resource sites. The plan includes an estimate of demand for aggregate material in Lincoln County and concludes that crushed quarry rock is the major source of aggregate. Iron Mountain is one of six major sites identified in the plan as available for crushed rock production. Attachment A.

Iron Mountain is listed in the county plan as a Category 1 site. These sites are found on land zoned for forestry uses and, according to the county plan, are not adversely affected by uses allowed in the zone. The county plan states: "Other uses of forest land which are permitted or reviewed on a conditional basis will not conflict with or preempt the use of the forest quarries." [Comprehensive Plan, Goal 5 inventory, Part III, p. 13]

By designating the Iron Mountain resource as a Category 1 site, the county determined that the site would not be affected by conflicting uses. This designation is consistent with a determination to preserve the resource in accordance with the Goal 5 administrative rule (OAR 660-16-005(1)). If conflicting uses did not threaten the resource, the county's original decision would be sufficient. However, both the county and city have authorized uses that either individually, or cumulatively, may adversely affect the Iron Mountain resource.

Today, Iron Mountain can no longer be classified as a forest quarry, far removed from conflicting uses. It is on the periphery of an urbanizing area. The exiting program to protect the site from conflicting uses through

case-by-case review of applications for conflicting uses on nearby properties is insufficient to protect the resource and does not comply with Goal 5. The goal does not allow resource protection decisions to be deferred to a permit review stage. Local comprehensive plans must clearly identify what conflicting uses will be allowed, prohibited, or conditionally allowed under clear and objective standards.

2.4 Need for Present Action

Iron Mountain and ODOT's ability to obtain materials from this resource is threatened. Urban development is encroaching on the boundary of the site, thus increasing the likelihood of future conflicts between quarrying activities and neighbors of the site. In 1980, ODOT expressed its concerns to the City of Newport about the annexation of land (including state-owned property) adjacent to the Iron Mountain quarry. Attachment B. Although the state's property was not included, land next to the southern boundary of the site was annexed to the city and, in 1990, rezoned to allow high density residential use.

In September 1990, the city proposed annexing and rezoning an additional 15 acres bordering the state-owned quarry site for residential use. In recent years, the city has approved requests for high density residential zoning totaling 36.12 acres adjacent to the Iron Mountain Rock Quarry site. Complete buildout at densities, authorized by the Newport Zoning Ordinance, could result in more than 800 new dwelling units. A large increase in residential densities is likely to result in more complaints about the quarry and threaten ODOT's ability to use the site.

ODOT appealed the city's most recent action to the Oregon Land Use Board of Appeals (LUBA). On June 29, 1992, LUBA remanded the annexation and rezoning decision to the city. In doing so, LUBA sustained ODOT's contention that the city misconstrued the applicable law, made a decision not supported by evidence in record, and violated Goal 5 by not adequately analyzing the impacts nearby residential uses may have on the protected aggregate resource.

Finally, ODOT has objected to Newport's final periodic review order, contending that the city's recent actions approving development near Iron Mountain are inconsistent with the county's plan to protect the resource. ODOT believes the city must consider protection of Iron Mountain during periodic review.

These reasons--previous approval of conflicting uses near the quarry, LUBA's remand of the most recent decision to allow conflicting uses, and the city's periodic review--require further examination of land use plans for the Iron Mountain area. The county and city should adopt comprehensive plan amendments that recognize the site's significance and enact a program to protect the site from conflicting uses.

2.5 Description of Proposed Mining Activities

ODOT will develop Iron Mountain gradually over many years. The site has not been used and is not intended to be used for commercial production. Therefore, use of the site will be intermittent and dependent on ODOT demand for rock. Full use of the estimated five million cubic yards of high-quality aggregate will take place over at least 50 years.

The Iron Mountain development plan calls for mining the resource using hill removal and multiple benching techniques. Seven "lifts," or phases, are planned. Each lift will remove approximately 25 to 30 vertical feet of material. The hill removal technique is planned for the first four lifts; benching will be employed for additional mining below 325 feet elevation. Because of the extremely hard nature of the basalt, quarry operators will occasionally use controlled blasting to prepare the material for excavation.

During the hill removal phase of the operation, each lift will be mined so that material is first extracted from the northern through southeastern portions of the site. A berm will be retained on the western and southwestern portion of the site to screen adjacent land uses from the effects of dust and noise. The western and southern portions of the site will be mined last in each phase of the operation, with the berm retained until the next lower lift is developed. For safety reasons, the berm must be removed and redeveloped when the next lower lift of the mine is excavated. ODOT will require that quarry operators retain all vegetation in all unmined areas to screen the site from view.

Below the 325 foot level, operations will mine using a vertical benching technique. Lifts will be removed to create 12 foot wide benches with nearly vertical slopes. ODOT proposes to backfill the three benches dug into the mountain; reclaimed slopes will be in accordance with Department of Geology and Mineral Industries (DOGAMI)

standards.

Approximately 40,000 cubic yards of soil and 400,000 cubic yards of overburden will be removed during mining. Overburden will be trucked down the mountain to the stockpile site in the southwestern portion of the property. Stockpiles will be seeded and mulched to control erosion and will be contoured to screen properties west of the site from haul road traffic.

ODOT will ensure that the site is reclaimed in accordance with state regulations administered by DOGAMI. The department has filed a reclamation plan with DOGAMI for its approval.

3.0 COMPLIANCE WITH STATEWIDE PLANNING GOAL 5

3.1 Goal 5

Statewide Planning Goal 5 states in part--

> "To conserve open space and protect natural and scenic resources.
>
> "Programs shall be provided that will
>
> (1) insure open space,
> (2) protect scenic and historic areas and natural resources for future generations
> (3) promote healthy and visually attractive environments in harmony with the natural landscape character...
>
> "Where conflicting uses have been identified, the economic, social, environmental, and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal."

In addition to the mandatory language of the Goal, the goal guidelines suggest the following--

> "In conjunction with the inventory of mineral and aggregate resources, sites for removal and processing of such resources should be identified and protected."

3.2 Goal 5 Administrative Rules (OAR Chapter 660, Division 16)

The Goal 5 rule specifies the requirements and procedures local government must follow to comply with Goal 5. Goal compliance involves six basic steps:

1.) Identify a resource's location, quality, and quantity
2.) Determine the resource's significance
3.) Identify the conflicting uses
4.) Analyze the economic, social, environmental, and energy consequences of conflicts
5.) Determine the level of protection for the resource
6.) Implement a program to protect significant resources

3.3 Effect of Goal 5 Compliance

Goal 5 requires local governments to inventory resources and develop programs to protect significant resources. In the case of mineral and aggregate resource sites, the goal requirement to protect resources translates to protecting the site for its eventual use through mining. See Eckis v. Linn County, __Or__ LUBA (LUBA No. 90-132, September 11, 1991).

Planning for mineral and aggregate resources under Goal 5 is explained in Attachment C.

Because development of the aggregate resource is synonymous with protection of the site, identification of an impact area and analysis of conflicting uses must recognize the nature of surface mining activities. Not only is mining at aggregate resource sites adversely affected by surrounding land uses, but mining may affect the use of property near the site.

4.0 REQUIREMENTS OF THE GOAL 5 ADMINISTRATIVE RULE

4.1 Inventory Requirements

The Lincoln County Comprehensive Plan already identifies the Iron Mountain site as a significant Goal 5 resource site. As such, ODOT is not obligated to defend or rejustify the importance of this resource site. The following inventory information augments information in the Lincoln County and Newport comprehensive plans concerning the site's significance.

4.11 Location

The Iron Mountain quarry is located on approximately 49 acres in Section 20, Township 10 South, Range 11 West, Willamette Meridian. The property is also identified as Lincoln County tax lots 600 and 700, Section 20, Township 10 South, Range 11 West. The state also owns tax lot 800, a stockpile site which is an integral part of the Iron Mountain surface mining operation.

Iron Mountain is an intrusive basalt formation. This formation consists of very hard, fine-grained material suitable for many highway uses and is very consistent in its make-up. ODOT conducted tests on the mountain to determine the quality and extent of the resource. See attachments D and E. It believes that the resource most certainly extends underneath adjacent property not owned by the state.

The protected Goal 5 aggregate resource site must include the entire state property and portions of the mountain under ownership by the Boise Cascade Corporation. Protection of this area is critical to ensure that other valuable construction materials are protected for use and that areas necessary for aggregate processing are protected consistent with Goal 5.

ODOT will not mine the entire property. Instead, it will leave a large amount of material in place to buffer operations for surrounding land uses, provided that surrounding land uses are similarly restricted. The development plan proposes mining laterally to the 325 foot contour line on the western and southern flanks of the mountain.

4.12 Quality

Local governments in Oregon rely on three tests to help determine the relative quality of an aggregate resource. The tests are--Resistance to Abrasion (OSHD Test Method 211), Sodium Sulfate Soundness (OSHD Test Method 206), and the Oregon Air Degradation test (OSHD Test Method 208). These tests are the best indicators of quality aggregate for use as road base, asphalt, and concrete. Lesser quality materials are used for fill and embankment.

Samples from the Iron Mountain quarry have been tested by the Central Highway Laboratory in Salem against these and other tests. The test results show that material from the Iron Mountain quarry substantially exceeds these tests and is highly desirable for a wide range of highway construction uses. See Attachment E, pp. 4-5.

The inventory of mineral and aggregate resources in the Lincoln County plan does not refer to specific quality measures. Sites are rated as having poor, marginal, variable, or good quality. Among the 58 sites inventoried in the comprehensive plan, 15 are characterized as having good quality, 8 as having variable quality, 2 as having marginal quality, 19 as having poor quality, and 14 with unknown quality. Iron Mountain's rating in the current plan is variable.

Available information shows that Iron Mountain's quality is excellent. Variability of the resource is minimal. Because similar test data is unavailable for other sites, a comparison of the resource at Iron Mountain with other similar sites in Lincoln County is difficult. However, assuming that the quality ratings in the county comprehensive plan are accurate, Iron Mountain has better quality rock than most other sites in the region.

4.13 Quantity

The Lincoln County Comprehensive Plan identifies the quantity of material at inventoried sites as large, medium, small, and unknown. The plan identifies the Iron Mountain site as a small resource.

Based on field reconnaissance and subsurface exploration, ODOT estimates the total volume of usable rock will be more than 5 million cubic yards. This estimate only takes into account the volume of material that could be economically extracted from state property. Land not owned by the state contains additional reserves of the same rock resource.

4.14 Conclusion

The large reserve of high-quality rock found at Iron Mountain is uncommon in the coastal region of Oregon. Most basalt historically surveyed by ODOT in the coast range is highly weathered and does not meet quality specifications for highway use. The large amount of high-quality rock makes the Iron Mountain site one of the most important sources owned by ODOT.

The location near U.S. Highway 101 makes this source even more valuable since transportation of aggregate to any project in the Newport vicinity is relatively easy. The nearest commercial source to Newport is the Cedar Creek Quarry, over 20 miles from the center of Newport. In contrast, Iron Mountain is a mere 5 miles from the center of Newport.

The Iron Mountain quarry is a significant resource site by virtue of its location, quality, and quantity, and should be retained on the inventory of significant Goal 5 resources in the Lincoln County Comprehensive Plan.

4.2 Conflicting Uses

Identifying conflicting uses to a significant resource site requires two principal steps: (1) designating and justifying an impact area surrounding the resource and (2) determining conflicting uses allowed by the zoning ordinance and identifying conflicts with other significant Goal 5 resources.

4.21 Impact Area

The Goal 5 rule (OAR 660-16-000(2)) requires identification of an impact area surrounding the resource site if different from the resource site itself. The impact area is the area in which identified conflicting uses may adversely affect the resource. Although "impact area" is not defined in either the goals or in the Goal 5 rule, the impact area for a mineral and aggregate resource site must be the area which includes uses that could adversely affect the resource, but also the area including those uses which could be affected by the presence of a significant resource. See Portland Audubon Society v. Clackamas County, 14 Or LUBA 433, 442 (1986).

Noise, dust, odor, and blasting effects may adversely affect surround land uses. Conversely, the complaints expressed by surrounding property owners about these effects, as well as complaints about traffic and the effects to visual quality influence whether, or how, a resource may be mined.

To assess potential impacts surrounding the resource site, ODOT believes that an impact area between 400 and approximately 1,400 feet from the property boundary is an appropriate impact area. See Attachment F. Land west and south of the quarry is committed to or contemplated for residential uses. The impact area here must be larger to reflect the sensitivity of home owners to surface mining. Land east and north of the quarry is undeveloped forest land zoned for forestry use. Few conflicts exist, and few conflicting uses would be allowed in this zone. The impact area on the northern and eastern boundaries of the site can be much smaller than the area on western and southern boundaries.

4.211 Noise

The identified impact area is appropriate to evaluate the consequences attributable to noise for several reasons. First, existing vegetation on the perimeter of the quarry site is dense and can help minimize noise produced by either quarry operations or haul trucks.

Second, most noise-sensitive properties, as defined by the Department of Environmental

Quality (DEQ) regulations (OAR 340-35-015(38)), are located west of the Iron Mountain site. Most of these properties within the impact area are separated by roughly the same distance from mining operations at Iron Mountain as they now are from traffic noise on Highway 101. Any noise from quarry activities is not expected to exceed noise control standards at these properties because of the level of background noise.

Third, ODOT requires, as a condition of any contract with the state, that contractors comply with state environmental regulations.

Noise control regulations are described in Attachment G.

4.212 Dust

The identified impact area is appropriate to evaluate impacts of fugitive dust because of prevailing winds off the Pacific Ocean that will blow dust generated by the operation away from settlements. Furthermore, dense vegetation will be retained to capture fallout on surrounding properties.

4.213 Blasting

The air pressure (noise) and seismic (ground vibration) effects of blasting are not regulated by any Oregon state agency, except when DOGAMI regulates mine activities to protect groundwater or minimize adverse effects to surrounding wells. Based on the proposed mining plan, no blasting will occur any closer than 100 feet to the nearest property line. Contractors using state-controlled quarries are required to use safe blasting techniques and conduct pre-blast inspections to minimize effects to surrounding property. The possible effects of blasting and mitigation techniques are discussed in Attachment H.

4.214 Visual

The existing quarry site is largely invisible to surrounding properties. Neither Iron Mountain nor the surrounding area are identified as a significant Goal 5 visual resource in either the county or city comprehensive plans. The mine development plan calls for continuing the existing practice of mining behind a screen of the existing landform and vegetation.

4.215 Traffic

Traffic is not expected to be a significant conflict or consequence of protecting the Iron Mountain Quarry. ODOT owns and maintains exclusive ownership of the haul road leading to the public road system. Trucks serving the regional landfill located north of Iron Mountain, residents of the area, and the state police office currently use the same road system that serves Iron Mountain. ODOT has committed to share the cost of improvements at the intersection with Highway 101. Improvements may include left and right turn refuges.

4.216 Conclusion

Quarry activities may affect surrounding property. Goal 5, however, requires that significant resource sites be protected from conflicting uses. For aggregate resources, protection from conflicting uses requires analyzing the consequences of allowing uses that will likely result in future complaints or requests for restriction on lawful mining activities. ODOT believes that the appropriate impact area in which to analyze conflicting uses includes all land near the quarry that could be developed with conflicting uses. Special emphasis is placed on land near the site which is either or may be developed in the future, based on current zoning.

4.22 Conflicting Uses

The Goal 5 rule (OAR 660-16-005) requires identification of conflicting uses. A conflicting use is one which, if allowed, could adversely affect a Goal 5 resource site. Identifying conflicting uses is primarily done by examining uses authorized by zoning districts within the impact area. Within the impact area, three zoning districts exist: Public Facilities (P-F) and Timber Conservation (T-C) in Lincoln County's

jurisdiction and High Density Residential (R-4) in the City of Newport's jurisdiction.

4.221 Public Facilities (P-F)

The quarry site and the State of Oregon's property containing material stockpiles (Tax Lot 800) are within the impact area. Typically, ownership of property is not a factor in determining whether conflicting uses to a resource are present. However, in this case, public ownership of property directly associated with surface mining operations means that uses which are not compatible with aggregate operations will not be developed, or will be developed with the full understanding of potential effects on the resource. Clearly, it is not in the interests of the state for ODOT to develop incompatible uses. Therefore, any uses allowed by the Public Facilities zoning district should not be treated as conflicting uses to the aggregate resource.

4.222 Timber Conservation (T-C)

Most of the property surrounding the Iron Mountain quarry is zoned Timber Conservation. The Timber Conservation zone allows 20 permitted and conditional uses. However, new requirements of Goal 4 and the Goal 4 administrative rule (OAR 660, Division 06) will apply to Lincoln County no later than February 1993. As such, the following analysis only considers uses allowed by the Goal 4 rule and their likelihood of representing conflicts to the aggregate resources.

4.2221 Allowed uses not applicable to the analysis. The following uses may be allowed pursuant to the Goal 4 rule but are not appropriately considered in the analysis:

Exploration for mineral and aggregate resources;
Exploration and production of geothermal, gas, and oil;
Solid waste disposal sites ordered established by the Environmental Quality Commission;
Mining and processing of oil, gas, and other subsurface resources;
Mining and processing of mineral and aggregate resources;
Temporary asphalt and concrete batch plants;
Expansion of existing airports;
Public road and highway projects;

Activities involving development of a mineral resource cannot conflict with mineral or aggregate resource protection since the purpose of protecting the resource is for its eventual use through mining.

The Environmental Quality Commission does not have the authority to order establishment of a solid waste disposal site in Lincoln County. Therefore, such a facility is not a conflict.

No airport exists anywhere near Iron Mountain and, therefore, cannot conflict with surface mining. The area's terrain limits serious consideration of a future airport.

No public roads and highways exist on the resource site and cannot adversely affect protection or use of the resource. Road construction projects, in fact, will directly benefit from protection of the Iron Mountain site.

4.2222 Allowed uses that will not conflict with the mineral and aggregate resource:

Forest operations or forest practices;
Temporary onsite auxiliary structures;
Physical alterations to the land auxiliary to forest practices;
Farm use;
Local distribution lines within existing rights-of-way;
Temporary portable facilities for processing of forest products;
Towers and fire stations for forest fire protection;

Widening of roads within existing rights-of-way;
Water intake facilities, canals, and distribution lines for farm use;
Uninhabitable structures accessory to fish and wildlife enhancement;
Permanent facilities for the processing of forest products;
Permanent logging equipment repair and storage;
Log scaling and weigh stations;
Solid waste disposal site;
Communication facilities and transmission towers;
Fire stations for rural fire protection;
Utility facilities for generating 5 megawatts or less of power;
Aids to navigation and aviation;
Firearms training facility;
Cemeteries.

The above uses fail to satisfy the DEQ definition of noise sensitive property and do not have other characteristics that would make them sensitive to quarry operations. These uses, if allowed within the impact area surrounding the Iron Mountain Quarry, would pose no threat to quarry operations or force a significant change in mining activities.

4.2223 Allowed uses that may pose conflicts with surface mining activities, but are unlikely to be sited near the resource site:

Forest management dwellings;
Private hunting and fishing operations without lodging;
Caretaker residences for public parks and fish hatcheries;
Temporary forest labor camps;
Destination resorts;
Water intake, treatment and pumping facilities, and distribution lines;
Reservoirs and water impoundments;
Private seasonal accommodations for fee hunting operations;
New electrical, gas, oil, and geothermal distribution lines;
Private accommodations for fishing occupied on a temporary basis;
Forest management research and experimentation facilities.

The above uses may meet the definition of noise sensitive property or could be adversely affected by mining activities such as blasting and ground vibration (e.g., reservoirs or water, gas, and utility distribution lines). However, they are activities that have specific requirements for their location and, as such, are highly unlikely to be sited at or near Iron Mountain. They will generally be treated as conflicting uses to aggregate development at the site.

4.2224 Allowed uses that may pose a conflict to the mineral and aggregate resource:

Maintenance, repair, or replacement of existing dwellings;
Parks and campgrounds;
Home occupations;
Mobile homes as a temporary dwelling for the term of a hardship;
New non-forest dwellings.

The above-listed uses meet the definition of noise sensitive property in DEQ noise control regulations. OAR 340-35-015(38) defines noise sensitive property as:

> ...real property normally used for sleeping, or normally used as schools, churches, hospitals, or public libraries. Property used in industrial or agricultural activities is not noise sensitive property unless it meets the above criteria in more than an incidental manner.

Nine residences are located within the impact area. All the residences are sited on existing parcels zoned Timber Conservation west of Iron Mountain. The nearest

residence to the quarry is approximately 100 feet west of the ODOT property boundary. All other existing residences are located adjacent to the old Coast Highway (Avery Street). The nearest of these residences is over 1,000 feet from the present quarry site.

The potential for additional homes on T-c zoned parcels west of the quarry is limited since few, if any, vacant parcels exist. It is possible to site a residence on one of the larger forest parcels north and east of Iron Mountain. Regardless of any program to protect Iron Mountain, approval of a residence would be subject to strict regulations of the county zoning ordinance. Although the likelihood of siting a non-forest dwelling in the forest surrounding Iron Mountain is remote, dwellings will be treated as conflicting uses.

Parks or campgrounds are unlikely to be developed at or near Iron Mountain because of the availability of similar sites in the Newport area. Nevertheless, existing zoning does not prohibit such uses, and they should be treated as potential conflicting uses to the aggregate resource.

4.223 High Density Residential (R-4)

All property zoned R-4 within the impact area is vacant; therefore, there are no existing conflicting uses. The identification of conflicting uses must focus on those uses authorized by the R-4 zone.

4.2231 Noise sensitive uses. Most uses allowed in the R-4 zone could fall under the definition of "noise sensitive property" as defined in DEQ noise regulations.

The following uses are authorized by the R-4 zone, could meet the definition of noise sensitive property, and will be treated as conflicting uses:

Residential Uses
Parks
Hospitals and Clinics
Schools
Libraries and Museums
Churches
Clubs and Lodges
Tourist Accommodation Facilities
Child Care Facilities

4.2232 Commercial or truck gardening and nurseries represent potential conflicting uses to a quarry operation to the extent that dust-sensitive crops could be grown. Although the likelihood of such activities becoming established in the impact area is remote, they will be treated as potential conflicting uses.

4.2233 Nothing about the nature of utility facilities indicates that such activities or structures would conflict with nearby quarrying operations. They should not be considered conflicting uses.

4.2234 A golf course is not a conflicting use to a gravel quarry. Courses are often sited near land uses, such as airports, which produce much noise. Furthermore, a regulation 9 hole golf course generally includes at least 65 acres of land. Only 21 acres of land zoned R-4 exists within the Iron Mountain impact area. Golf courses will not be treated as conflicting uses for this analysis.

4.224 Other Goal 5 Resources

Neither the Lincoln County nor the City of Newport comprehensive plans identify the Iron Mountain site or the surrounding proposed impact area as the site of another significant Goal

5 resource. Consideration of other natural resource values is not necessary to enact a protection program for the Iron Mountain site.

4.23 Conclusion

Within the impact area surrounding Iron Mountain, few conflicting uses are found. Uses authorized for the state-owned property zoned Public Facilities (P-F) should not be characterized as conflicting uses.

Existing conflicting uses to the quarry site are limited to nine dwellings within approximately 1/4 mile west of the site. These dwellings represent few conflicts with future quarry operations as they have been established since original development of the quarry and have not significantly threatened the resource. These uses will be examined as conflicting uses, however, so that quarry operations can be modified, if necessary, to minimize conflicts with them.

Other uses allowed by forestry zoning are unlikely to be sited near Iron Mountain. However, to the extent that these uses are noise sensitive or may otherwise be affected by surface mining, they should be treated as conflicting uses to the aggregate resource.

Uses allowed in the City of Newport R-4 zone that meet the DEQ definition of noise sensitive property, or which otherwise may be adversely affected by quarrying activities, shall be considered conflicting uses to the aggregate resource.

4.3 ESEE Analysis

The Goal 5 rule (OAR 660-16-005(2)) requires that if conflicting uses to the resource are identified, the economic, social, environmental, and energy (ESEE) consequences of the conflicts must be determined. "Both the impacts on the resource site and on the conflicting use must be considered in analyzing the ESEE consequences. The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process."

For clarity, the ESEE consequences will be analyzed by examining (a) the effect on use of the aggregate resource if conflicting uses are allowed fully without restriction and (b) the effect on the conflicting uses if development of the aggregate resource is allowed fully without restriction.

4.31 Economic

4.311 Effect on use of the aggregate resource if conflicting uses are allowed fully

The economic consequences of allowing conflicting uses to be established next to the Iron Mountain site are significant. Although urban encroachment upon an aggregate site does not have any measurable effect on the resource itself, extraction of the resource can be severely curtailed or prohibited by complaints from neighbors. Because the intent of aggregate resource protection under Statewide Planning Goal 5 is to allow mining of the resource, protection programs must ensure mining operations are not made completely uneconomical because of neighbor complaints.

Economic consequences of allowing conflicting uses fully can be characterized in at least three ways. First, uses of the resource may be completely prevented. Second, use of the resource may be constrained by costly mitigation measures that would otherwise be unnecessary if conflicting uses were not present. Third, complaints about quarry activities may delay permit decisions at key times during the construction bid process.

Total loss of the resource would have severe economic ramifications. Iron Mountain contains an exceptionally valuable source of material. Based on the estimate of 5 million cubic yards of mineable, high-quality material, the value of the resource is between $35 million and $49 million. This assumes $7.00 to $9.85 per cubic yard of material as the price of pit-run aggregate in the region.

In other terms, Iron Mountain alone contains enough material to pave a significant part of the Oregon Coast Highway. ODOT's Lincoln Beach/Fogarty Creek project used more than

31,000 cubic yards of material for a 1.9 mile reconstruction project. This quantity is less than three percent of the volume Iron Mountain reserve. At this rate of use, Iron Mountain contains enough material to reconstruct approximately 68 miles, or 17 percent, of the coast highway in Oregon. Highway 101 runs 64.7 miles through Lincoln County.

ODOT estimates that the cost of hauling material by a standard 10-yard dump truck to be about $45 per hour. Any increase in haul distance because a more convenient site is unavailable increases the cost of the raw material by $4.50 per yard per hour. Historically, projects on the north coast and the Portland metropolitan area have required hauling aggregate as much as 75 miles to a project site. Such long distance hauling of material dramatically increases the cost of roadbuilding, and it is unnecessary if sufficient sources of material are available where needed.

Even assuming that use of a resource site is not totally precluded, constraints on quarry operations to eliminate conflicts with surrounding property may be costly. Economic use of certain portions of the quarry site could be curtailed, or the operator would have to establish elaborate measures to eliminate conflicts with surrounding properties. Additional measures to reduce conflicts with quarrying activities increases the cost of surface mining. The increased cost of surface mining translates into higher costs for raw materials. Higher raw material costs adversely affect the amount and size of highway projects.

Lack of a clear program to protect and allow the needed development of a resource also has economic consequences. In the permitting process, highway projects may be much more sensitive to delays caused by neighbor opposition than is a commercial quarry. Opposition to surface mining can be equally successful by delaying a decision as obtaining an outright denial.

Highway project managers must balance precise time schedules. Delay in the permit process may cause a manager to select another, less desirable source of material in order to meet other construction deadlines.

However, alternative sources of rock are not always economically viable. For example, based on ODOT calculations, using the next nearest source of quality aggregate (Cedar Creek Quarry) for a project similar to Lincoln Beach in Newport would cost approximately $105,000 more than if material were obtained from Iron Mountain.

Additional costs of material due to delay or use of another source depletes money budgeted for a specific project. Projected budget overruns can force cancellation of a project. If a project is not canceled, another project may be scaled back, delayed, or canceled to overcome higher material costs on another project.

4.312 Effect on conflicting uses if development of the resource is allowed

The need for affordable housing in the City of Newport has driven recent actions to rezone land adjacent to the quarry for high density residential development. The Newport Comprehensive Plan anticipates a need for 800 additional multiple-family dwelling units. The city's buildable lands inventory indicates land zoned to accommodate 2,000 units; however, site constraints--such as steep slopes or wetlands and development of single-family dwellings on property zoned for high density residential--lower the amount of land actually available.

ODOT does not foresee any adverse economic consequences on surrounding property that can be directly attributed to quarry activities at Iron Mountain. ODOT is not aware of any diminished property values surrounding any of its material source sites in the state. The economic consequences to undeveloped property are speculative at this point.

Since ODOT's primary goal is to prevent future conflicts arising between quarry activities at Iron Mountain and surrounding properties, it expects that newly established uses will assume a portion of the obligation to mitigate conflicts. Mitigating surface mining impacts typically involves building design and orientation considerations, sound insulation, and visual and noise screening. The cost of such measures to the developer may influence the economics of a

housing development.

Development of housing on land currently zoned for high density residential will result in more people adjacent to quarry activities and increase the likelihood that ODOT must respond to complaints about accepted and lawful mining practices. High density housing, on the other hand, allows a developer to spread the cost of mitigation built into the project among more units. Compared to low density development, the unit cost of the same mitigation measures will be less for high density development.

4.32 Social

4.321 Effect on use of the aggregate resource if conflicting uses are allowed fully.
The consequences of allowing conflicting uses adjacent to quarry operations are not directly applicable to protection of the rock resource itself. However, the social consequences of development upon surrounding land uses may cause significant modification of quarry operations.

Based upon current zoning near the quarry, more than 450 new residential units could be constructed. This represents the potential for more than 450 complaints about use of the aggregate resource for highway projects.

If conflicting uses are allowed near the site, it is possible that the resource could not be developed because of the inability to meet environmental regulations designed to protect the livability of surrounding property. Requiring measures to protect conflicting land uses from the impacts typically generated by quarry operations could result in additional costs to mine as explained in the discussion of economic consequences.

The inability to use the source or the constraints on its use because of local opposition could have an adverse effect on the quality of the region's highway system. The level of development contemplated for Highway 101 could be scaled back or significantly delayed.

4.322 Effect on conflicting uses if development of the resource is allowed.

The consequences to conflicting uses resulting from development of the quarry resource can be characterized in two ways. First, residents near the quarry may be directly affected by noise, dust, and traffic associated with mining activities. Second, the city may experience indirect effects if the ability to develop high density housing is restricted near the quarry and not accounted for at another location in the community.

Noise from quarry operations could adversely affect individual perceptions about the livability of their property. ODOT anticipates that the distance separating the quarry from existing and potential conflicting uses will mitigate noise impacts. Ensuring that newly established conflicting uses mitigate newly created conflicts will further protect the aggregate resource.

It is nearly impossible to positively determine, in advance, the effects or magnitude of potential noise from quarry activities. This site is not presently being mined on any large scale. The cost of setting up the necessary equipment (loaders, crushers, processing equipment, etc.) to conduct noise tests is prohibitive and is not contemplated by ODOT.

Because the site is not and will not be a permanent, year-round commercial operation, the adverse effects, if any, on surrounding noise sensitive properties should be minimal.

Operations of the quarry will typically only occur when there is a need to supply aggregate materials for a nearly public road project. Larger projects, such as those on Highway 101, are widely publicized with a beginning and ending date identified. When the quarry operates, area residents will have prior knowledge of the duration of any potential noise impacts.

Nevertheless, intermittent use of the quarry could affect surrounding residents. Noise, while measurable, is also based on people's perceptions. If people are accustomed to only occasional activity at the site, they may perceive that periods of very intensive quarry activity

are more disruptive than a steady, predictable level of use. ODOT will take steps so that the effects of any activity at the site will be mitigated.

While it is not certain that any adverse effects will occur, ODOT and its contractors will take measures to avoid conflicts with surrounding properties. The mine development plan calls for retention of an earthen berm on the west and southwest boundaries of the pit. This will create an amphitheater effect to direct sound brought about as part of the operations to the east and southeast, away from sensitive properties. Retention of existing vegetation surrounding mining and processing activities should also help attenuate any noise generated.

Additionally, DEQ regulations require operations to meet quantifiable standards for noise levels. All ODOT contractors must comply with these regulations.

Adverse effects of any blasting activities will be significantly more limited than the effects of noise due to processing activities. The intent of blasting is not to cause loud noises or to cast flyrock onto surrounding property. Instead, it is occasionally employed to loosen deposits for their extraction. How blasting occurs--and the potential impacts resulting from it--depends upon the structure of the rock resource, the geologic composition of surrounding land, and meteorological conditions at the time of blasting. Blasting professionals rigorously monitor the conditions under which safe blasting can occur to avoid injury or damage to property.

Dust impacts are similarly expected to be intermittent and insignificant. Prevailing ocean breezes should direct any fugitive dust away from the most sensitive properties west of the quarry operation. Thick vegetation surrounding the site should capture dust generated by truck traffic, minimizing adverse effects on surrounding properties. Retention of vegetative buffers and watering, oiling, or paving the haul road are expected to further minimize dust. ODOT will also retain the forested hillsides of the site through each phase of the mine's development. Doing so will keep the majority of the quarry screened from view and minimize visual impacts to surrounding properties.

Additional traffic will occur during times of active mining. This will create the potential for noise, dust, and vehicle conflicts. The volume of traffic using the ODOT haul road is difficult to determine in advance, since usage depends on the size of the highway project being constructed. Federal law regulates the noise impacts from construction vehicles. Dust can be mitigated by treatment of haul road and retention of vegetation buffers. Vehicle conflicts should not be significant.

The area already experiences regular truck traffic due to the nearby regional landfill. Additionally, any construction project in the immediate vicinity for which rock from the Iron Mountain quarry is used would affect vehicle movement in a manner typical of major highway construction projects. Safety hazards between quarry truck traffic and surrounding residents is a possibility, although unlikely given the level of traffic management associated with highway construction projects. The potential for conflict can be reduced by maintaining distance between residential development and roadways and by installing fences or barrier vegetation.

4.33 Environmental

4.331 Effect on use of the aggregate resource if conflicting uses are allowed fully

ODOT does not expect that any adverse environmental consequences would result from allowing conflicting uses near the aggregate resource. However, if a new noise sensitive use is sited in such a manner that causes the quarry to violate noise control standards, ODOT will be forced to modify or curtail operations at the quarry. The consequences of such action are discussed above as economic consequences.

4.332 Effect on conflicting uses if development of the resource is allowed

The environmental consequences if development of the aggregate resource were allowed have been discussed above as social consequences. Quarry development has the potential

of adversely affecting air quality (dust and noise) and visual quality of the immediate area. State law requires that mined land be reclaimed for a future beneficial use. Because the effects of mining can be mitigated or corrected, there should not be a significant adverse environmental effect.

4.34 Energy

4.341 Effect on use of the aggregate resource if conflicting uses are allowed fully

The energy consequences of allowing conflicting uses to the extent of precluding use of the resource for a local highway project could be extensive. The distance traveled between an aggregate resource site and a job site is the most critical part in assessing energy consumption.

If material from Iron Mountain is unavailable for projects in the Newport area, energy use to bring rock from other locations could be extensive. For example, contractors trucking aggregate over the coast range from the Willamette Valley will consume much more energy than usage of a local source. Even hauling rock from the nearest major commercial source, the Cedar Creek Quarry, will use much more energy than hauling from Iron Mountain. As discussed above, energy savings translate into economic savings.

ODOT has the authority to require use of state-controlled sources for highway projects. Requiring any contractor to use the Iron Mountain site for Highway 101 projects near Newport is likely in order to save energy and money.

4.342 Effect on conflicting uses if development of the resource is allowed

Allowing the quarry operation at the Iron Mountain site is not expected to influence energy consumption of the conflicting uses. If, however, a developer of high density housing is severely restricted in building in the impact area and must look elsewhere in the community, the effects could be beneficial. High density development is more efficient if constructed near employment opportunities and community services near the Newport commercial core.

4.35 Requirements of other applicable statewide planning goals

4.351 Goal 4 - Forest Lands

The Iron Mountain quarry site is inventoried as forest land in the Lincoln County Comprehensive Plan. Aggregate operations on this site are not expected to conflict with the protection of forest land, forest practices, or other activities necessary and appropriate for management of soil, air, water, fish and wildlife resources, the provision for recreational opportunities, and agricultural uses. Use of the quarry is a transient or temporary land use which should not preclude forest activities on surrounding lands.

Mining and processing of aggregate and mineral resources are permissible uses of forest lands as specified by the Goal 4 administrative rule (OAR 660-06-025 (4)(f)). No aspects of the quarry's development, as envisioned by ODOT, would force a significant change in or significantly increase the cost of accepted forest or farming practices on surrounding lands dedicated for resource use. Similarly, no aspects of proposed operations are expected to significantly increase the fire hazards, the cost of fire suppression, or the risks to fire suppression personnel.

4.352 Goal 6 - Air, Water, and Land Resources Quality

Compliance with Goal 6 does not necessarily require that compliance with applicable environmental quality standards have been met prior to approval. Compliance with the goal can be shown if the proposed use can meet environmental standards via conditions on operations. See Eckis v. Linn County, 19 Or LUBA 15, 34-6, (1990). The nature of this quarry operation is such that any environmental effects will be limited. As discussed in the discussion of ESEE consequences, the effects of dust and noise resulting from quarry operations can be mitigated

by mining and reclamation techniques.

No processing method is contemplated at present. Any crushing equipment used on the site will require permits from DEQ; state contractors are required to obtain and comply with all permits.

To date, mining at Iron Mountain has been exempt from state reclamation requirements by virtue of the limited amount of material removed from the site. ODOT has submitted a reclamation plan to DOGAMI for its approval. DOGAMI's approval of the reclamation plan and operating permit will be based on consistency with local land use requirements.

4.353 Goal 10 - Housing

Protection of the Iron Mountain Quarry site as a significant Goal 5 resource may have consequences for Newport's ability to demonstrate continued compliance with Goal 10. Compliance with Goal 10 requires local governments to provide for needed housing units within urban growth boundaries.

As identified above, development of property immediately adjacent to the Iron Mountain site has been rezoned for high density residential development. This approximately 20 acre tract is potentially valuable land for affordable housing.

Newport's Comprehensive Plan anticipates a need for 800 new multiple family dwelling units before the year 2010. Land currently zoned to allow high density housing could provide for 2,000 additional units; however, the city planning department believes that this number is overly optimistic for several reasons.

First, because the Zoning Ordinance allows single-family dwellings in the high density zoning district (R-4), some available parcels have been developed at significantly less than planned densities.

Second, the inventory of buildable lands does not precisely identify physical development constraints. An unknown portion of the inventory consists of small or irregularly-shaped lots that will not contribute significantly to satisfying the need for high density housing. The inventory of R-4 land also includes steep land generally unsuitable for apartment development. According to the city, those lands that are relatively flat and suitable for apartment development may, upon further investigation, be wetlands.

Third, the availability of sewer and water may further limit the amount of buildable R-4 land.

Because of development constraints, the estimate of land in Newport available for high density residential development may be high. Land on the southern boundary of the ODOT property could be desirable for future apartment development.

Newport may have other options to satisfy demand for affordable housing. Replanning and redirected development in the center of the city could result in more efficient provision of public and private services. Concentrating development in the existing city would also take pressure off land on the urban fringe, including land near Iron Mountain.

4.354 Goal 12 - Transportation

Statewide Planning Goal 12 requires local governments "[t]o provide and encourage a safe, convenient, and economic transportation system." The primary purpose of state ownership of the Iron Mountain quarry site is to ensure the low-cost availability of rock products for highway construction. The site is less than one mile from U.S. Highway 101 and will be used for highway projects near Newport. Protection of the site furthers Goal 12 by assisting economical development of the transportation system.

4.355 Goal 13 - Energy Conservation

Energy conservation benefits depend upon the relationship of aggregate resource to the places the material will be used. Protection and availability of the Iron Mountain site offers ideal opportunities to conserve energy. If the Iron Mountain site were not available, use of other--more distant--sites for projects in the Newport area would result in longer transportation distances and greater energy consumption.

4.356 Goal 14 - Urbanization

Goal 14 requires the orderly and efficient transition from rural to urban land uses. Development of mineral or aggregate resources is not strictly a rural land use; however, quarry activities are more incompatible with urban development than they are with sparsely developed rural areas. The goal requires that changes in urban growth boundaries consider the economic, social, environmental, and energy consequences of the change.

The consequences of urban development near the Iron Mountain site are discussed above. Based on this analysis, the adverse effects of urban development on the quarry could be significant without appropriate mitigation.

5.0 DETERMINATION AND PROGRAM TO ACHIEVE THE GOAL

5.1 Summary of ESEE Analysis

ODOT has clearly documented the significance of the Iron Mountain resource. The site contains at least five million cubic yards of material. The material has been found to meet ODOT specifications for its use in highway projects. The site is one of the most valuable sources owned by the state.

The impact area includes land surrounding the site which may be developed with a conflicting use according to existing zoning. Land already committed to development, or developable under existing zoning, is the major area of impact at this time and requires a larger impact area west of the site. Commercial forest land borders more than half of the state-owned property. Uses allowed by the county forest zone are unlikely to conflict with development of the quarry. The impact area can be smaller. Any future plan or zone change from forestry use to urbanizable land would require a reevaluation of the impact area surrounding Iron Mountain on the southern, eastern, and northern boundaries.

Conflicting uses to the Iron Mountain quarry are mainly those that meet the definition of noise sensitive in the DEQ noise control regulations. Eleven existing residences and the majority of uses allowed in the Newport zone are conflicting uses. Uses allowed by the Lincoln County public facilities zone or forestry zone pose few, if any, conflicts. Other uses, although not provided for by current zoning, could be compatible with quarry activities. Industrial and commercial uses not sensitive to noise or dust could be appropriate near the quarry in the future.

The consequences of conflicts between the quarry and nearby uses are primarily economic and social. Surrounding land uses do not threaten the rock resource itself. Complaints about quarry activities can severely constrain or prohibit ODOT's use of the resource. The inability to use the resource for highway maintenance and construction projects increases the cost of these projects. Transportation is the key component in the price of aggregate. Forced reliance on sites more distant from Newport will dramatically increase the cost of construction on the central coast.

5.2 Program to Achieve the Goal

The Goal 5 rule (OAR 660-16-010) states: "Based on the determination of the economic, social, environmental, and energy consequences, a jurisdiction must develop a program to achieve the Goal."

The rule allows three methods for implementing a program to achieve the goal of resource protection. The first method requires preserving the resource site regardless of the effect on conflicting uses. The second method involves protecting the resource to a desired extent but allowing identified conflicting uses in a limited fashion. The third method is to allow the conflicting uses fully, regardless of any adverse effects on the resource. This last choice is permissible only if conflicting uses are found to be more valuable than the resource and there is no ability to mitigate the adverse consequences of conflicts between the resource and uses in the impact area.

The ESEE analysis shows that development of Iron Mountain may have adverse effects on nearby property. The analysis also shows that urban development of nearby property may have adverse effects on the Iron Mountain resource. Therefore, the most appropriate method to comply with Goal 5 is to protect the resource site with limitations on conflicting uses.

The requirements to implement a decision to limit conflicting uses are found in OAR 660-16-010(3). The comprehensive plan and land use regulations must specify what uses and activities will be prohibited, what uses are allowed fully, and what uses are conditionally allowed. The implementation program, including development regulations, must include clear and objective standards.

The Lincoln County and City of Newport program should include several elements:

1.) The county needs to amend the plan to identify Iron Mountain as a Category 3 site. A category 3 site is a potential site located in probable conflict areas.

2.) The county needs to adopt updated comprehensive plan policies and zoning regulations to ensure protection of significant Goal 5 resources. Model policies and zoning regulations found in attachments I and J. The model policies and land use regulations address the procedure for designating a significant site consistent with Goal 5 and contain suggested substantive development standards.

3.) The county needs to adopt an extraction area and impact area as comprehensive plan and zoning designations. The city concurrently needs to adopt an impact area designation for affected property within it jurisdiction. Both designations are implemented by policies, site specific conditions adopted as part of this Goal 5 decision, and zoning regulations.

5.3 Quarry Development Conditions

1.) The haul road between the quarry and the public road system shall be paved or treated with dust suppression emulsion to control dust.

2.) ODOT shall retain vegetation suitable as a visual screen within a 50 foot setback from property boundaries.

3.) No operation shall commence without approval of all applicable state agency permits.

4.) All overburden stockpiles shall be stabilized from erosion as required by DOGAMI.

5.) All quarry operations and vehicles shall comply with applicable DEQ noise control standards.

6.) Blasting shall be restricted to 9:00 a.m. - 5:00 p.m., Monday through Friday. No blasting shall occur on Saturdays, Sundays, or the following legal holidays: New Year's Day, Memorial Day, July 4, Labor Day, Thanksgiving Day, or Christmas Day.

7.) Notice of blasting events shall be provided in a manner calculated to be received by occupants of noise sensitive property within the impact area at least 48 hours prior to the blasting event.

8.) Berms or screening shall be developed or incorporated into the mining plan for the active mine area as defined by the DOGAMI operating permit. Overburden stockpiles shall be placed so as to screen quarry operations from surrounding properties as best is practicable and shall be stabilized in accordance with the operating permit and reclamation plan approved by DOGAMI.

9.) The entire site shall be developed and reclaimed in a manner that permits uses allowed by the underlying zone.

5.4 Uses in the Impact Area

5.41 The following uses authorized by existing zoning may be allowed within the impact area subject to the underlying zone requirements:

Forest operations or forest practices;

Temporary onsite auxiliary structures;
Physical alterations to the land auxiliary to forest practices;
Farm use;
Local distribution lines within existing rights-of-way;
Temporary portable facilities for processing of forest products;
Towers and fire stations for forest fire protection;
Widening of roads within existing rights-of-way;
Water intake facilities, canals, and distribution lines for farm use;
Water intake, treatment and pumping facilities, and distribution lines;
Reservoirs and water impoundments;
New electrical, gas, oil, and geothermal distribution lines;
Uninhabitable structures accessory to fish and wildlife enhancement;
Permanent facilities for the processing of forest products;
Permanent logging equipment repair and storage;
Log scaling and weigh stations;
Solid waste disposal site;
Communication facilities and transmission towers;
Fire stations for rural fire protection;
Utility facilities for generating 5 megawatts or less of power;
Aids to navigation and aviation;
Firearms training facilities;
Cemeteries;
Commercial or truck gardening and horticultural nurseries;
Future urban uses which are not sensitive or otherwise conflicting with surface mining activities, subject to planning and zoning in accordance with the statewide planning goals.

5.42 The following uses authorized by existing zoning shall be prohibited within the impact area:

County zoning:

Private hunting and fishing operations without lodging;
Caretaker residences for public parks and fish hatcheries;
Parks and campgrounds;
Temporary forest labor camps;
Destination resorts;
Private seasonal accommodations for fee hunting operations;
Private accommodations for fishing occupied on a temporary basis;
Forest management research and experimentation facilities.

City zoning:

Hospitals, sanitariums, or nursing homes;
Schools, libraries, colleges, churches, clubs, lodge halls, and museums;
Motels, hotels, condominium hotels, and time-share projects;
Bed and breakfast facilities;
Boarding, lodging, or rooming houses;
Golf courses;
Recreational vehicle parks;
Hostels.

5.43 The following uses authorized by existing zoning may be allowed, subject to criteria and standards of the underlying zone and the program to protect Iron Mountain:

Child care facilities;
Condominiums;
Dwellings;
Mobile home parks.

5.5 Impact Area Development Standards

Uses listed in subsection 5.43, above, may be allowed in the impact area upon demonstrating that the proposed use satisfies the following criteria and standards:

1.) The proposed use will not directly interfere with or cause an adverse impact on lawfully established and lawfully operating mining activities.

2.) The proposed use will not directly interfere with or threaten to cause the mining operation to violate environmental standards contained in permits issued by state agencies.

3.) The proposed use will not cause the mining operation to violate noise control standards and ambient air quality and emission standards as measured at the proposed use.

4.) The applicant for a use in the impact area shall submit an analysis prepared by an acoustical engineer demonstrating that the applicable DEQ noise control standards are met or can be met by a specified date by the mining activities at Iron Mountain. Noise impact analysis must address activities proposed through the life of the quarry. If noise mitigation measures are necessary to ensure mining activities' continued compliance with noise control standards, such measures shall be a condition of approval. If the applicant for a use in the impact area cannot demonstrate that DEQ noise control standards will be met, the use shall not be approved in the impact area.

5.) As a condition of approval for a new use in the impact area, the permittee shall execute a waiver of remonstrance and restrictive covenant in favor of ODOT. The waiver of remonstrance and restrictive covenant shall specify that owners and tenants of uses within the impact area cannot object to the terms of a permit sought by ODOT or its contractors from the city, county, a state agency, or a federal agency, and may not object to lawful mining activities at Iron Mountain.

6.) Any proposal to change existing comprehensive plan and zone designations within the impact area shall consider whether the impact area and program to protect the resource will continue to protect Iron Mountain.

6.0 NATURE OF THE REQUEST

The City of Newport is considering expanding the urban growth boundary (UGB) into an area that is within the Iron Mountain Impact Area. That area has been already identified as next to and affected by a Statewide Planning Goal 5 resource, the Iron Mountain Quarry. In order for the city to accept the UGB extension, adequate findings of fact that address the Aggregate and Mineral Resources of the Newport Comprehensive Plan and Goal 5 must be made. This report presents information to support findings and conclusions to meet the policy requirement.

The background material, compliance with Statewide Planning Goal 5, inventory requirements, and a definition and method of determining conflicting uses have already been discussed and adopted as part of the Comprehensive Plan. Those materials can be found in the first four sections of this appendix. It is, therefore, not necessary to repeat that information here. However, the identification of conflicting uses, the environmental, social, energy, and economic analysis, and a program to achieve the goal must be done for the current request. The rest of this report will address those issues.

7.0 CONFLICTING USES

The Goal 5 rule (OAR 660-16-005) requires identification of conflicting uses. A conflicting use is one which, if allowed, could adversely affect a Goal 5 resource site. Identifying conflicting uses is primarily done by examining uses authorized by zoning districts within the impact area.

7.21. Light Industrial (I-1)

Sections 6.0 - 9.5 of Appendix "A" added by Ordinance No. 1701 (March 21, 1994).

The proposed zoning on the subject property is I-1/"Light Industrial." All property zoned I-1 within the impact area is vacant, so there are no existing conflicting uses. The identification of conflicting uses must focus on those uses authorized by the I-1 zone.

7.211. Noise sensitive uses. Many uses allowed in the I-1 zone could fall under the definition of "noise sensitive property" as defined in DEQ noise regulations.

The following uses authorized by the I-1 zone could meet the definition of noise sensitive property, will be treated as conflicting uses, and are not allowed:

Agricultural Production--Crops
Veterinary Services
Animal Services (Except Veterinary)
Dog Grooming
Farm Labor and Management Services
Manufacturing of Glass Products Made of Purchased Glass
Manufacturing of Office, Computing, and Accounting Machinery
Manufacturing of Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and clocks
Communication
General Merchandise Stores
Food Stores
Automotive Dealers and Gasoline Service Stations
Apparel and Accessory Stores
Furniture, Home Furnishing, and Equipment
Miscellaneous Retail
Finance, Insurance and Real Estate Offices
Hotels, Rooming Houses, Camps and Other Lodging Places
Personal Services
Business Services
Motion Pictures
Theatrical Producers (Except Motion Pictures), Bands, Orchestras, and Entertainers
Health Services
Legal Services
Educational Services
Social Services
Arboreta, Botanical, and Zoological Gardens
Membership Organizations
Miscellaneous Services
Public Administration
Manufacturing of Food and Kindred Products
Glass and Glassware Pressed or Blown
Residences

7.212. Some uses may or may not be in conflict depending on how they are developed. These uses must be looked at on a case-by-case basis and conditioned to meet the goals of this section and the Goal 5 requirements. Hence the following uses are conditional uses subject to the review and approval standards contained in the Zoning Ordinance:

Manufacturing of Beverages
Miscellaneous Manufacturing Industries
Building Materials, hardware, Garden Supplies, and Mobile Home Dealers
Eating and Drinking Places
Dance Halls, Studios, and Schools
Commercial Sports
Miscellaneous Amusement and Recreation Services
Miscellaneous Services
Tobacco Manufacturing
Manufacturing of Wood Containers
Leather and Leather Products

Manufacturing of Fabricated Metal Products (Except machinery and Transportation Equipment)
Manufacturing of machinery (Except Electrical)
Manufacturing of Electric and Electronic Machinery, Equipment, and Supplies
Manufacturing of Transportation Equipment
Pipe Lines (Except Natural Gas)
Electric, Gas, and Sanitary Services

7.213. Some uses may be allowed in the Impact area and not pose a conflict because they are not sensitive uses. Those uses are hereby permitted and are as follows:

Forest Services
Building Construction--General Contractors and Operative Builders
Construction Other Than Building Contractors--General Contractors
Construction--Special Trade Contractors
Manufacturing of Apparel and Other Finished Products Made from Fabrics and Similar Materials
Manufacturing of Furniture and Fixtures
Printing, Publishing and Allied Industries
Local and Suburban Transit and Interurban Highway Passenger Transportation
Motor Freight Transportation and Warehousing
U.S. Postal Service
Transportation by Air
Transportation Services
Wholesale Trade--Durable Goods
Wholesale Trade--Nondurable Goods
Automotive Repair, Services and Garages
Miscellaneous Repair Services
Bowling Alleys and Billiard and Pool Establishments

7.22. Conclusion

Within the I-1 zone surrounding Iron Mountain, no conflicting uses are currently found. However, the I-1 zone does allow many uses that are conflicting, many that may be conflicting, and many that are not conflicting.

8.1 ESEE ANALYSIS

The Goal 5 rule (OAR 660-16-005(2)) requires that if conflicting uses to the resource are identified, the economic, social, environmental, and energy (ESEE) consequences of the conflicts must be determined. "Both the impacts on the resource site and on the conflicting use must be considered in analyzing the ESEE consequences. The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process."

8.11. Economic

8.111. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.311 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

8.112. Effect on conflicting uses if development of the resource is allowed:

The need for additional industrial land within the City of Newport has driven recent actions to rezone land adjacent to the quarry for light industrial development. The Newport Comprehensive Plan anticipates a need for additional commercial and industrial lands in significant quantities. The area around Iron Mountain is one of the few areas within or outside the city that can accommodate that need.

In addition to the need question, the subject I-1 property within the Iron Mountain Impact Area has been

considered for other zoning designations. The residential and commercial zones allow too many conflicting uses to be appropriate next to the quarry. Other city zoning designations, such as the Water and Public zones, are also not appropriate since the property is not near the water and it is not publicly owned. The only remaining zoning is the industrial zoning.

The city has three industrial zones, I-1, I-2, and I-3. The I-3 zone is heavy industrial and allows uses such as lumber mills and other factories. While this may be appropriate if the quarry were the only consideration, properties to the west and south are within residential districts. In fact, the intent of the I-3 is outlined in the Zoning Ordinance and reads as follows:

> The intent of this zone is to provide for industrial uses that involve production and processing activities generating noise, vibration, dust, and fumes. Typically, this zone requires good access to transportation, large lots, and segregation from other uses due to nuisances.

Because of the proximity of the residential uses and zones, the I-3 zone is not appropriate for the subject property.

The I-2 zone has similar considerations. The intent of the I-2 zone states:

> The intent of this zone is to provide areas suitable for industrial activities, including manufacturing, fabricating, processing, packing, storage, repairing, and wholesaling. This classification should be applied to industrial areas having good access to transportation facilities and not near residential zones.

Again, because of the proximity of the residential uses and zones, the I-2 zone is not appropriate.

The I-1 zone, however, has this as the intent:

> The intent of this zone is to provide for commercial and industrial uses that can be located near residential or commercial zones. Uses that are associated with excessive noise, dust, vibration, or fumes shall be prohibited.

The I-1 zone thus becomes the most appropriate because it may be located near residential zones. Also, because the zone does allow many uses that will not conflict with the quarry, it is the most appropriate next to the quarry. Through the process of elimination, the I-1 zone becomes the most logical for the subject property.

The I-1 zoning also gives the private property owner a use for the property that is compatible with the neighborhood. ODOT is on record that the subject property should not be developed with sensitive uses. Residential and commercial zones do not comply with that criterion. The I-1 is a logical zone to apply to the land so as to serve the duel goal of protecting the quarry and providing the owner with an economical use of the property.

8.12. Social

8.121. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.321 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

8.122. Effect on conflicting uses if development of the resource is allowed:

The consequences to conflicting uses resulting from development of the quarry resource can be characterized in two ways. First, persons working near the quarry may be directly affected by noise, dust, and traffic associated with mining activities. Second, the city may experience indirect effects if the ability to develop industrial uses is restricted near the quarry and not accounted for at another location in the community.

These consequences can be easily mitigated, however, by either limiting the types of uses to those that are not sensitive to the impacts from the quarry operation, by developing property in such a way so that

uses that may be sensitive are sited and built to mitigate negative impacts, or by both. Uses that have been identified as allowed or conditional in this analysis are such uses. Uses that are identified as sensitive should not be allowed under any circumstance. Therefore, the best way to address the potential social consequences is to develop a program to assure that conflicting uses are prohibited or built in such a way as to not be affected by the quarry operation.

8.13. Environmental

8.131. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.331 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

8.132. Effect on conflicting uses if development of the resource is allowed:

The environmental consequences, if development of the aggregate resource were allowed, have been discussed above as social consequences. Quarry development has the potential of adversely affecting air quality (dust and noise) and visual quality of the immediate area. State law requires that mined land be reclaimed for a future beneficial use. Because the effects of mining can be mitigated or corrected, there should not be a significant adverse environmental effect.

8.14. Energy.

8.141. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.341 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

8.142. Effect on conflicting uses if development of the resource is allowed:

Allowing the quarry operation at the Iron Mountain site is not expected to influence energy consumption of the conflicting uses.

8.15. Requirements of other applicable statewide planning goals.

8.151. Goal 4 - Forest Lands:

See section 4.351 of this appendix.

8.152. Goal 6 - Air, Water, and Land Resources Quality:

See section 4.352 of this appendix.

8.153. Goal 9 - Economic Development:

Statewide Planning Goal 9 requires the each city provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens. Comprehensive plans for urban areas must provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies. The city has already determined that the subject property is necessary to meet the industrial land needs consistent with this goal.

8.154. Goal 10 - Housing:

Because the property under consideration does not allow housing, this goal will not be affected by the proposed inclusion into the Iron Mountain Impact Area other than that the I-1 zoning is the most appropriate zoning considering the proximity of residential zoning and uses.

8.155. Goal 12 - Transportation:

See section 4.354 of this appendix.

8.156. Goal 13 - Energy Conservation:

See Section 4.355 of this appendix.

8.157. Goal 14 - Urbanization:

See Section 4.356 of this appendix.

9.0 DETERMINATION AND PROGRAM TO ACHIEVE THE GOAL

9.1 Summary of ESEE Analysis

ODOT has clearly documented the significance of the Iron Mountain resource. The site contains at least five million cubic yards of material. The material has been found to meet ODOT specifications for its use in highway projects. The site is one of the most valuable sources owned by the state.

The consequences of conflicts between the quarry and nearby uses are primarily economic and social. Surrounding land uses do not threaten the rock resource itself. Complaints about quarry activities can severely constrain or prohibit ODOT's use of the resource. The inability to use the resource for highway maintenance and construction projects increases the cost of these projects. Transportation is the key component in the price of aggregate. Forced reliance on sites more distant from Newport will dramatically increase the cost of construction on the central coast.

9.2. Program to Achieve the Goal

The Goal 5 rule (OAR 660-16-010) states: "Based on the determination of the economic, social, environmental, and energy consequences, a jurisdiction must develop a program to achieve the Goal."

The rule allows three methods for implementing a program to achieve the goal of resource protection. The first method requires preserving the resource site regardless of the effect on conflicting uses. The second method involves protecting the resource to a desired extent but allowing identified conflicting uses in a limited fashion. The third method is to allow the conflicting uses fully, regardless of any adverse effects on the resource. This last choice is permissible only if conflicting uses are found to be more valuable than the resource and there is no ability to mitigate the adverse consequences of conflicts between the resource and uses in the impact area.

The ESEE analysis shows that development of Iron Mountain may have adverse effects on nearby property. The analysis also shows that urban development of nearby property may have adverse effects on the Iron Mountain resource. Therefore, the most appropriate method to comply with Goal 5 is to protect the resource site with limitations on conflicting uses.

The requirements to implement a decision to limit conflicting uses are found in OAR 660-16-010(3). The comprehensive plan and land use regulations must specify what uses and activities will be prohibited, what uses are allowed fully, and what uses are conditionally allowed. The implementation program, including development regulations, must include clear and objective standards.

9.3. Uses in the Impact Area that are zoned I-1

9.43. The following uses authorized by the existing I-1 zone shall be prohibited with the impact area:

Agricultural Production--Crops
Veterinary Services
Animal Services (Except Veterinary)
Dog Grooming
Farm Labor and Management Services
Manufacturing of Glass Products Made of Purchased Glass

Manufacturing of Office, Computing, and Accounting Machinery
Manufacturing of Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and clocks
Communication
General Merchandise Stores
Food Stores
Automotive Dealers and Gasoline Service Stations
Apparel and Accessory Stores
Furniture, Home Furnishing, and Equipment
Miscellaneous Retail
Finance, Insurance and Real Estate Offices
Hotels, Rooming Houses, Camps and Other Lodging Places
Personal Services
Business Services
Motion Pictures
Theatrical Producers (Except Motion Pictures), Bands, Orchestras, and Entertainers
Health Services
Legal Services
Educational Services
Social Services
Arboreta, Botanical, and Zoological Gardens
Membership Organizations
Miscellaneous Services
Public Administration
Manufacturing of Food and Kindred Products
Glass and Glassware Pressed or Blown
Residences

9.32. The following uses authorized by the existing I-1 zone may be allowed, subject to criteria and standards of the underlying zone and the issuance of a conditional use permit consistent with the program to protect the Iron Mountain quarry:

Manufacturing of Beverages
Miscellaneous Manufacturing Industries
Building Materials, hardware, Garden Supplies, and Mobile Home Dealers
Eating and Drinking Places
Dance Halls, Studios, and Schools
Commercial Sports
Miscellaneous Amusement and Recreation Services
Miscellaneous Services
Tobacco Manufacturing
Manufacturing of Wood Containers
Leather and Leather Products
Manufacturing of Fabricated Metal Products (Except machinery and Transportation Equipment)
Manufacturing of machinery (Except Electrical)
Manufacturing of Electric and Electronic Machinery, Equipment, and Supplies
Manufacturing of Transportation Equipment
Pipe Lines (Except Natural Gas)
Electric, Gas, and Sanitary Services

9.31. The following uses authorized by existing zoning may allowed within the impact area subject to the underlying zone requirements:
Forest Services
Building Construction--General Contractors and Operative Builders
Construction Other Than Building Contractors--General Contractors
Construction--Special Trade Contractors
Manufacturing of Apparel and Other Finished Products Made from Fabrics and Similar Materials
Manufacturing of Furniture and Fixtures
Printing, Publishing and Allied Industries
Local and Suburban Transit and Interurban Highway Passenger Transportation

Motor Freight Transportation and Warehousing
U.S. Postal Service
Transportation by Air
Transportation Services
Wholesale Trade--Durable Goods
Wholesale Trade--Nondurable Goods
Automotive Repair, Services and Garages
Miscellaneous Repair Services
Bowling Alleys and Billiard and Pool Establishments

9.5. Impact Area Development Standards

Uses listed in subsection 9.43 above, may be allowed in the impact area upon demonstrating that the proposed use satisfies the criteria and standards contained in Sections 2-4-14.025 and 2-5-3 of the Zoning Ordinance.

10.0 NATURE OF THE REQUEST (3)

The City of Newport is considering expanding the urban growth boundary (UGB) into an area that is within the Iron Mountain Impact Area. The properties included within the proposed UGB expansion that are also within the Iron Mountain Impact Area include Lincoln County Assessor's Map # 10-11-20 Tax Lots 200, 300, 301, 400, 500, and 501. Those properties would be designated on the Newport Comprehensive Plan Map as "Industrial". The "Industrial" map designation is implemented by three possible industrial zone classifications: I-1/"Light Industrial, I-2/"Medium Industrial", and I-3/"Heavy Industrial". The proposed UGB expansion includes property to be designated with both I-2 and I-3 zone classifications. In order for the city to accept the UGB expansion, adequate findings of fact that address the Aggregate and Mineral Resources of the Newport Comprehensive Plan and Goal 5 must be made. The I-1/"Light-Industrial" designation has been previously addressed in this appendix and therefore the analysis for I-1 zone property has been completed. This report presents information to support findings and conclusions to meet the policy requirements for I-2 and I-3 zone designations.

The background material, compliance with Statewide Planning Goal 5, inventory requirements, and a definition and method of determining conflicting uses have already been discussed and adopted as part of the Comprehensive Plan. Those materials can be found in the first four sections of this appendix. It is, therefore, not necessary to repeat that information here. However, the identification of conflicting uses, the environmental, social, energy, and economic analysis, and a program to achieve the goal must be done for the current request. The rest of this report will address those issues.

11.0 CONFLICTING USES

The Goal 5 rule (OAR 660-16-005) requires identification of conflicting uses. A conflicting use is one which, if allowed, could adversely affect a Goal 5 resource site. Conflicting uses (as established in Section 4.216) are those uses that will likely result in future complaints or requests for restriction on lawful mining activities. Identifying conflicting uses is primarily done by examining uses authorized by zoning districts within the impact area. Three types of impacts were previously evaluated (in Section 4.322) for the effect on conflicting uses if development of the resource (Iron Mountain) is allowed. To summarize from Section 4.322

- noise impacts may affect surrounding residents even if the noise impact is intermittent;
- effects from blasting will be significantly more limited than the effects of noise due to processing activities; and
- dust impacts are similarly expected to be intermittent and insignificant.

The ESEE analysis reached the conclusion in Section 5.1 (Summary of ESEE Analysis) that "Industrial and commercial uses not sensitive to noise or dust could be appropriate near the quarry in the future."

ODOT has established a set of Quarry Development Conditions in Section 5.3 of Section 5.0 (Implementation and Program to Achieve The Goal) that further limit the potential for impacts on surrounding properties. ODOT, for example, to implement the Goal 5 program, restricts blasting activities to 9:00 a.m. – 5:00 p.m. Monday through Friday and does not blast on a number of holidays. Additionally, as part of the implementation of Goal 5,

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3 Section 10.0 –14.2 of Appendix "A" added by Ordinance No. 1878 (October 18, 2004)

ODOT provides notice to noise sensitive properties at least 48 hours prior to the blasting event.

11.21. Medium Industrial (I-2) and Heavy Industrial (I-3)

Proposed zoning on the subject property is I-2/"Medium Industrial" and I-3/"Heavy Industrial". All property to be zoned I-2 or I-3 within the impact area is vacant or is in an existing residential use, so there are no existing conflicting uses other than the existing residential use. The identification of future conflicting uses must focus on those uses authorized by the I-2 and/or the I-3 zone.

11.211. Noise, dust or blast sensitive uses. Very few uses allowed in the I-2 and/or I-3 zone would fall under the definition of "noise sensitive property" as defined in DEQ noise regulations. Additionally, few uses would generally be considered dust sensitive uses or would be considered blast/ground vibration sensitive uses. As the adopted Goal 5 analysis, prepared by the ODOT and adopted by the City as Appendix A of the Aggregate and Mineral Section of the Comprehensive Plan, concludes that ground/vibration and dust issues are minimal concerns, the main focus is on uses that may be considered noise sensitive properties. Because a conflicting use is one that may object to the continued operation of the Iron Mountain quarry, an easement in favor of the owner and operators of the Iron Mountain Quarry to protect the continued use of the quarry is required by the Newport Zoning Ordinance of the owner/developer of land in the Iron Mountain Impact Area. All uses of the property will therefore be subject to the easement requirements. Additionally, some uses will be prohibited outright while other uses will be allowed upon a showing that the use meets the development criteria and standards 1 through 5 found in Section 5.5 (Impact Area Development Standards).

The following uses authorized by the I-2 and/or I-3 zone could meet the definition of noise sensitive property. These uses will be treated as conflicting uses and will not be allowed:

Hotels, Rooming Houses, Camps and Other Lodging Places
Residences

The following uses authorized by the I-2 and/or I-3 zone could meet the definition of noise sensitive property and will be allowed as authorized (either permitted outright or conditionally by the I-2 and/or I-3 zone) subject to the requirement that the proposed use satisfies the criteria and standards 3 through 5 found in Section 5.5:

Veterinary Services
Animal Services (Except Veterinary)
Dog Grooming
Finance, Insurance and Real Estate Offices
Eating and Drinking Places
Miscellaneous Amusement and Recreation Services
Personal Services
Business Services
Motion Pictures
Educational Services (Correspondence & Vocational Schools)
Social Services (Day Care)
Membership Organizations
Miscellaneous Services
Public Administration

11.212. Some uses may or may not be dust and/or blast sensitive uses depending on how they are developed. As dust and blast impacts have been determined to be negligible, these uses will be allowed in the I-2 and/or I-3 zone (either permitted outright or conditionally as specified in the Zoning Ordinance) subject to standard 5 of Section 5.5.

Flat Glass and Glass and Glassware Pressed or Blown
Manufacturing of Beverages
Chemicals and Allied Products
Pipe Lines (Except Natural Gas)

Electric, Gas, and Sanitary Services
Manufacturing of Glass Products Made of Purchased Glass
Manufacturing of Office, Computing, and Accounting Machinery
Manufacturing of Measuring, Analyzing, and Controlling Instruments;
Photographic, Medical, and Optical Goods; Watches and clocks

11.213. Some uses may be allowed in the Impact area and not pose a conflict because they are not sensitive uses. Those uses are hereby permitted as allowed by the I-2 and/or I-3 zone designation and consist of those uses not mentioned above in Section 11.211 and Section 11.212.

11.22. Conclusion

Within the proposed I-2 zone and I-3 zones surrounding Iron Mountain, no conflicting uses are currently found other than the existing residential use. However, the I-2 and the I-3 zone does allow uses that are conflicting, uses that may be conflicting, and uses that are not conflicting.

12.1 ESEE ANALYSIS

The Goal 5 rule (OAR 660-16-005(2)) requires that if conflicting uses to the resource are identified, the economic, social, environmental, and energy (ESEE) consequences of the conflicts must be determined. "Both the impacts on the resource site and on the conflicting use must be considered in analyzing the ESEE consequences. The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process."

12.11. Economic

12.111. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.311 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

12.112. Effect on conflicting uses if development of the resource is allowed:

The need for additional industrial land within the City of Newport has driven recent actions to rezone land adjacent to the quarry for medium and heavy industrial development. The Newport Comprehensive Plan anticipates a need for additional commercial and industrial lands in significant quantities. The area around Iron Mountain is one of the few areas within or outside the city that can accommodate that need and is the best location to fulfill the need for industrial land as documented by the UGB application material.

The city has three industrial zones, I-1, I-2, and I-3. The I-3 zone is heavy industrial and allows uses such as lumber mills and other factories. The intent of the I-3 is outlined in the Zoning Ordinance and reads as follows:

> The intent of this zone is to provide for industrial uses that involve production and processing activities generating noise, vibration, dust, and fumes. Typically, this zone requires good access to transportation, large lots, and segregation from other uses due to nuisances.

Because of the location near the quarry and away from residential zones, the I-3 zone is appropriate for the subject property.

The I-2 zone has similar considerations. The intent of the I-2 zone states:

> The intent of this zone is to provide areas suitable for industrial activities, including manufacturing, fabricating, processing, packing, storage, repairing, and wholesaling. This classification should be applied to industrial areas having good access to transportation facilities and not near residential zones.

Again, because of the location away from residential zones, the I-2 zone is appropriate.

12.12. Social

12.121. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.321 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

12.122. Effect on conflicting uses if development of the resource is allowed:

The consequences to conflicting uses resulting from development of the quarry resource can be characterized in two ways. First, I-2 and I-3 zone uses near the quarry may be directly affected by noise, dust, and associated with mining activities. However, as noted in Section 4.322, "because the site is not and will not be a permanent year-round commercial operation, the adverse effects, if any, on surrounding noise sensitive properties should be minimal." Noise sensitive property under OAR 340-35-015 (38) is defined as …"real property used for sleeping, or normally used as schools, churches, hospitals, or public libraries." Very few allowed uses in the I-2 or I-3 zones meet this definition. The intent of both the I-2 and I-3 zones is to allow for uses that should be conducted away from residential areas. Therefore, most of the I-2 and I-3 zone uses will not be conflicting uses because of noise sensitivity. Additionally, the blasting and dust impacts from mining operations are expected to be minimal and ODOT will operate the quarry in such a manner as to minimize those impacts.

Second, the city may experience indirect effects if the ability to develop industrial uses is restricted near the quarry and not accounted for at another location in the community.

These consequences can be easily mitigated, however, by either limiting the types of uses to those that are not sensitive to the impacts from the quarry operation, by developing property in such a way so that uses that may be sensitive are sited and built to mitigate negative impacts, and/or by requiring potential conflicting uses to shoulder the consequences of the potential conflicting use choosing to site near the quarry. Uses that have been identified as allowed or conditional in this analysis are such uses. Some uses that are identified as sensitive, such as residences, should not be allowed under any circumstance. Therefore, the best way to address the potential social consequences is to develop a program to assure that conflicting uses are prohibited, built in such a way, and/or agree to shoulder the consequences of locating next to the quarry so that the quarry operation is not affected.

12.13. Environmental

12.131. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.331 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

12.132. Effect on conflicting uses if development of the resource is allowed:

The environmental consequences, if development of the aggregate resource were allowed, have been discussed above as social consequences. Quarry development has the potential of adversely affecting air quality (dust and noise) and visual quality of the immediate area. State law requires that mined land be reclaimed for a future beneficial use. Because the effects of mining can be mitigated or corrected, there should not be a significant adverse environmental effect.

12.14. Energy.

12.141. Effect on use of the aggregate resource if conflicting uses are allowed fully:

Section 4.341 of this appendix adequately addresses this factor. It is incorporated by reference into this section.

12.142. Effect on conflicting uses if development of the resource is allowed:

Allowing the quarry operation at the Iron Mountain site is not expected to influence energy consumption

of the conflicting uses.

12.15. Requirements of other applicable statewide planning goals.

12.151. Goal 4 - Forest Lands:

See section 4.351 of this appendix.

12.152. Goal 6 - Air, Water, and Land Resources Quality:

See section 4.352 of this appendix.

12.153. Goal 9 - Economic Development:

Statewide Planning Goal 9 requires that each city provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens. Comprehensive plans for urban areas must provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies. The city has determined that the subject property is necessary to meet the industrial land needs consistent with this goal.

12.154. Goal 10 - Housing:

Because the property under consideration does not allow housing, this goal will not be affected by the proposed inclusion into the Iron Mountain Impact Area other than that the I-2 and I-3 zoning of the subject property is the most appropriate zoning considering the intent of the I-2 and I-3 zones.

12.155. Goal 12 - Transportation:

See section 4.354 of this appendix.

12.156. Goal 13 - Energy Conservation:

See Section 4.355 of this appendix.

12.157. Goal 14 - Urbanization:

See Section 4.356 of this appendix.

13.0 DETERMINATION AND PROGRAM TO ACHIEVE THE GOAL

13.1 Summary of ESEE Analysis

ODOT has clearly documented the significance of the Iron Mountain resource. The site contains at least five million cubic yards of material. The material has been found to meet ODOT specifications for its use in highway projects. The site is one of the most valuable sources owned by the state.

The consequences of conflicts between the quarry and nearby uses are primarily economic and social. Surrounding land uses do not threaten the rock resource itself. Complaints about quarry activities can severely constrain or prohibit ODOT's use of the resource. The inability to use the resource for highway maintenance and construction projects increases the cost of these projects. Transportation is the key component in the price of aggregate. Forced reliance on sites more distant from Newport will dramatically increase the cost of construction on the central coast.

13.2. Program to Achieve the Goal

The Goal 5 rule (OAR 660-16-010) states: "Based on the determination of the economic, social, environmental, and energy consequences, a jurisdiction must develop a program to achieve the Goal."

The rule allows three methods for implementing a program to achieve the goal of resource protection. The first

method requires preserving the resource site regardless of the effect on conflicting uses. The second method involves protecting the resource to a desired extent but allowing identified conflicting uses in a limited fashion. The third method is to allow the conflicting uses fully, regardless of any adverse effects on the resource. This last choice is permissible only if conflicting uses are found to be more valuable than the resource and there is no ability to mitigate the adverse consequences of conflicts between the resource and uses in the impact area.

The ESEE analysis shows that development of Iron Mountain may have adverse effects on nearby property. The analysis also shows that urban development of nearby property may have adverse effects on the Iron Mountain resource. Therefore, the most appropriate method to comply with Goal 5 is to protect the resource site with limitations on conflicting uses.

The requirements to implement a decision to limit conflicting uses are found in OAR 660-16-010(3). The comprehensive plan and land use regulations must specify what uses and activities will be prohibited, what uses are allowed fully, and what uses are conditionally allowed. The implementation program, including development regulations, must include clear and objective standards.

13.3. Uses in the Impact Area that are zoned I-2 or I-3

13.31. The following uses authorized by the existing I-2 zone shall be prohibited within the impact area:
Hotels, Rooming Houses, Camps and Other Lodging Places
Residences

13.32. The following uses authorized by the I-2 could meet the definition of noise sensitive property and will be allowed as authorized (either permitted outright or conditionally by the I-2 zone) subject to the requirement that the proposed use satisfies the criteria and standards 3 through 5 found in Section 5.5:

Veterinary Services
Animal Services (Except Veterinary)
Dog Grooming
Finance, Insurance and Real Estate Offices
Eating and Drinking Places
Personal Services
Business Services
Motion Pictures
Miscellaneous Amusement and Recreation Services
Correspondence Schools & Vocational Schools
Social Services
Membership Organizations
Miscellaneous Services
Public Administration

13.33. Some uses may or may not be dust and/or blast sensitive uses depending on how they are developed. As dust and blast impacts have been determined to be negligible, these uses will be allowed in the I-2 zone (either permitted outright or conditionally as specified in the Zoning Ordinance) subject to standard 5 of Section 5.5.

Flat Glass and Glass and Glassware Pressed or Blown
Manufacturing of Beverages
Chemicals and Allied Products
Pipe Lines (Except Natural Gas)
Electric, Gas, and Sanitary Services
Manufacturing of Glass Products Made of Purchased Glass
Manufacturing of Office, Computing, and Accounting Machinery
Manufacturing of Measuring, Analyzing, and Controlling Instruments;
Photographic, Medical, and Optical Goods; Watches and Clocks

13.34. The remaining uses (not mentioned in 13.32 and 13.33 above) authorized (either permitted outright or conditionally) by the existing I-2 zoning may allowed within the impact area subject to the underlying zone requirements and upon demonstrating that the proposed use satisfies applicable criteria and standards contained in Section 2-4-14.025 of the Newport Zoning Ordinance.

13.35. The following uses authorized by the existing I-3 zone shall be prohibited within the impact area:

Residences

13.36 The following uses authorized by the I-3 could be noise sensitive property and will be allowed as authorized (either permitted outright or conditionally by the I-3 zone) subject to the requirement that the proposed use satisfies the criteria and standards 3 through 5 found in Section 5.

Veterinary Services
Animal Services (Except Veterinary)
Dog Grooming
Social Services
Public Administration

13.37. Some uses may or may not be dust and/or blast sensitive uses depending on how they are developed. As dust and blast impacts have been determined to be negligible, these uses will be allowed in the I-3 zone (either permitted outright or conditionally as specified in the Zoning Ordinance) subject to standard 5 of Section 5.5.

Flat Glass and Glass and Glassware Pressed or Blown
Manufacturing of Beverages
Chemicals and Allied Products
Pipe Lines (Except Natural Gas)
Electric, Gas, and Sanitary Services
Manufacturing of Glass Products Made of Purchased Glass
Manufacturing of Office, Computing, and Accounting Machinery
Manufacturing of Measuring, Analyzing, and Controlling Instruments;
Photographic, Medical, and Optical Goods; Watches and Clocks

13.38. The remaining uses (not identified in 13.36 and 13.37 above) authorized (either permitted outright or conditionally) by the existing I-3 zoning (see 14.2) may be allowed within the impact area subject to the underlying zone requirements and upon demonstrating that the proposed use satisfies applicable criteria and standards contained in Section 2-4-14.025 of the Newport Zoning Ordinance.

14.0 USES ALLOWED OUTRIGHT AND CONDITIONALLY IN THE I-2 AND I-3 ZONES

14.1 Uses Allowed Outright and Conditionally in the I-2 Zone by Standard Industrial Classification (SIC):

Major Group 01: Agricultural Production—Crops - 013 (Field Crops, Except Cash Grains), 016 (Vegetables & Melons), 017 (Fruits & Tree Nuts), 018 (Horticultural Specialists), 019 (General Crops, Primary Crops)

Major Group 07: Agricultural Services - 071 (Soil Preparation Services), 072(Crop Services), 076 (Farm Labor & Management Services), 078 (Landscape & Horticultural Svcs.), 074 (Veterinary Services), 075 (Animal Services, Except Veterinary), Dog Grooming

Major Group 08: Forestry - 084 (Gathering of Misc. Forest Products, Except Tree Seeds), 085 (Forest Services)

Major Group 14: Mining and Quarrying of Nonmetalic Minerals, Except Fuels - 142 (Crushed & Broken Stone, Including Riprap), 144 (Sand & Gravel), 145 (Clay, Ceramic, & Refractory Minerals), 148 (Nonmetallic Minerals Services, Except Fuels)

Major Group 15: Building Construction--General Contractors and Operative Builders
152 (General Building Contractors, Residential Bldgs), 153 (Operative Builders), 154 (General Building Contractors, Nonresidential Bldgs. & Residential Bldgs)

Major Group 16: Construction Other Than Building Construction --General Contractors
161 (Highway & Street Construction, Except Elevated Highways), 162 (Heavy Construction, Except Highway & Street Construction)

Major Group 17: Construction--Special Trade Contractors - 171 (Plumbing, Heating (Except Electric), & Air Conditioning), 172 (Painting, Paper Hanging, & Decorating), 173 (Electrical Work), 174 (Masonry, Stonework, Tile Setting, & Plastering), 175 (Carpentering & Flooring), 176 (Roofing & Sheet Metal Work), 177(Concrete Work), 178 (Water Well Drilling), 179 (Misc. Special Trade Contractors)

Major Group 20: Manufacturing of Food and Kindred Products - 201 (Meat Products), 202 (Dairy Products), 202 (Canned & Preserved Fruits and Vegetables), 204 (Grain Mill Products), 205 (Bakery Products), 206 (Sugar & Confectionery Products), 207 (Fats & Oils), 208 (Beverages), 209 (Misc. Food Preparation & Kindred Products)

Major Group 21: Tobacco Manufacturing - 211 (Cigarettes), 212 (Cigars), 213 (Tobacco (Chewing & Smoking) & Snuff), 214 (Tobacco Stemming & Drying)

Major Group 22: Textile Mill Products - 221 (Broad Woven Fabric Mills, Cotton), 222 (Broad Woven Fabric Mills, Man-Made Fiber & Silk), 223 (Broad Woven Fabric Mills, Wool (Including Dyeing & Finishing)), 224 (Narrow Fabrics & Other Small wares Mills: Cotton, Wool, Silk, & Man-Made Fiber), 225 (Knitting Mills), 226 (Dyeing & Finishing Textiles, Except Wool Fabrics and Knit Goods), 227 (Floor Covering Mills), 228 (Yard & Thread Mills), 230 (Miscellaneous Textile Goods)

Major Group 23: Manufacturing of Apparel and Other Finished Products Made From Fabrics and Similar Materials - 231 (Mens', Youths', & Boys' Suits, Coats, & Overcoats), 232 (Mens', Youths', & Boys' Furnishings, Work Clothes, & Allied Garments), 233 (Womens', Misses', & Juniors' Outerwear), 234 (Womens', Misses', Childrens' & Infants' Undergarments), 235 (Hats, Caps & Millinery), 236 (Girls', Childrens', & Infants' Outerwear), 237 (Fur Goods), 238 (Misc. Apparel & Accessories), 239 (Misc. Fabricated Textile Products)

Major Group 24: Lumber and Wood Products, Except Furniture - 241 (Logging Camps & Logging Contractors), 242 (Sawmills & Planning Mills), 243 (Millwork, Veneer, Plywood, & Structural Wood Members), 244 (Wood Containers), 245 (Wood Buildings & Mobile Homes), 249 (Miscellaneous Wood Products)

Major Group 25: Manufacturing of Furniture and Fixtures - 251 (Household Furniture), 252 (Office Furniture), 254 (Partitions, Shelving, Lockers, & Office & Store Fixtures), 259 (Misc. Furniture & Fixtures)

Major Group 26: Paper and Allied Products - 261 (Pulp Mills), 262 (Paper Mills, Except Building Paper Mills), 263 (Paperboard Mills), 264 (Converted Paper & Paperboard Products, Except Containers & Boxes), 265 (Paperboard Containers & Boxes)

Major Group 27: Printing, Publishing, and Allied Industries - 271 (Newspapers; Publishing & Printing), 272 (Periodicals; Publishing & Printing), 273 (Books), 274 (Misc. Publishing), 275 (Commercial Printing), 276 (Manifold Business Forms), 277 (Greeting Card Publishing), 278 (Blankbooks, Looseleaf Binders, & Bookbinding & Related Work), 279 (Service Industries For the Printing Trade)

Major Group 28: Chemicals and Allied Products - 281 (Industrial Inorganic Chemicals), 282 (Plastics Materials & Synthetic Resins, Synthetic Rubber, Synthetic & Other Man-Made Fibers, Except Glass), 283 (Drugs), 284 (Soap, Detergents, & Cleaning Preparations, Perfumes, Cosmetics, & Other Toilet Preparations), 285 (Paints, Varnishes, Lacquers, Enamels, & Allied Products), 286 (Industrial Organic Chemicals), 287 (Agricultural Chemicals), 289 (Misc. Chemical Products)

Major Group 29: Petroleum Refining and Related Industries - 291 (Petroleum Refining), 295 (Paving & Roofing Materials), 299 (Misc. Products of Petroleum & Coal)

Major Group 30: Rubber and Miscellaneous Plastics Products - 301 (Tires & Inner Tubes), 302 (Rubber & Plastics Footwear), 303 (Reclaimed Rubber), 304 (Rubber & Plastics Hose & Belting), 306 (Fabricated Rubber Products, NEC), 307 (Misc. Plastics Products)

Major Group 31: Leather and Leather Products - 311 (Leather Tanning & Finishing), 313 (Boot & Shoe Stock

& Findings), 314 (Footwear, Except Rubber), 315 (Leather Gloves & Mittens), 316 (Luggage), 317 (Handbags & Other Personal Leather Goods), 319 (Leather Goods, NEC)

Major Group 32: Stone, Clay, Glass, and Concrete Products - 321 (Flat Glass), 322 (Glass & Glassware Pressed or Blown), 323 (Glass Products, Made of Purchased Glass), 324 (Cement, Hydraulic), 325 (Structural Clay Products), 326 (Pottery & Related Products), 327 (Concrete, Gypsum & Plaster Products), 328 (Cut Stone & Stone Products), 329 (Abrasive, Asbestos & Misc. Nonmetallic Mineral Products)

Major Group 33: Primary Metal Industries - 331 (Blast Furnaces, Steel Works & Rolling & Finishing Mills), 332 (Iron & Steel Foundries), 333 (Primary Smelting & Refining of Non-Ferrous Metals), 334 (Secondary Smelting & Refining of Non-Ferrous Metals), 335 (Rolling, Drawing & Extruding of Non-Ferrous Metals), 336 (Nonferrous Foundries), 339 (Misc. Primary Metal Products)

Major Group 34: Fabricated Metal Products, Except Machinery and Transportation Equipment - 341 (Metal Cans & Shipping Containers), 342 (Cutlery, Hand Tools & General Hardware), 343 (Heating Equipment, Except Electric & Warm Air; & Plumbing Fixtures), 344 (Fabricated Structural Metal Products), 345 (Screw Machine Products, & Bolts, Nuts, Screws, Rivets & Washers), 346 (Metal Forging & Stamping), 347 (Coating, Engraving & Allied Svcs.), 348 (Ordinance & Accessories, Except Vehicles & Guided Missiles), 359 (Misc. Fabricated Metal Products)

Major Group 35: Machinery, Except Electrical - 351 (Engines & Turbines), 352 (Farm & Garden Machinery & Equipment), 353 (Construction, Mining & Materials Handling Machinery & Equipment), 354 (Metalworking Machinery & Equipment), 355 (Special Industry Machinery, Except Metalworking Machinery), 356 (General Industrial Machinery & Equipment), 357 (Office, Computing & Accounting Machinery), 358 (Refrigeration & Service Industry Machinery), 359 (Misc. Machinery, Except Electrical)

Major Group 36: Electrical and Electronic Machinery, Equipment and Supplies - 361 (Electric Transmission & Distribution Equipment), 362 (Electrical Industrial Apparatus), 363 (Household Appliances), 364 (Electrical Lighting & Wiring Equipment), 365 (Radio & Television Receiving Equipment, Except Communication Type), 366 (Communication Equipment), 367 (Electronic Components & Accessories), 369 (Misc. Electrical Machinery, Equipment & Supplies), 371 (Motor Vehicles & Motor Vehicle Equipment)

Major Group 37: Transportation Equipment - 372 (Aircraft & Parts), 373 (Ship & Boat Building & Repairing), 374 (Railroad Equipment),375 (Motorcycles, Bicycles & Parts), 376 (Guided Missiles & Space Vehicles & Parts), 379 (Misc. Transportation Equip.)

Major Group 38: Measuring Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks - 381 (Engineering, Laboratory, Scientific & Research Instruments & Associates Equip.), 382 (Measuring & Controlling Equip.), 383 (Optical Instruments & Lenses), 384 (Surgical, Medical & Dental Instruments & Supplies), 385 (Ophthalmic Goods), 386 (Photographic Equipment & Supplies), 387 (Watches, Clocks, Clockwork Operated Devices & Parts)

Major Group 39: Miscellaneous Manufacturing Industries - 391 (Jewelry, Silverware, & Plated Ware), 393 (Musical Instruments), 394 (Toys & Amusement, Sporting & Athletic Goods), 395 (Pens, Pencils & Other Office & Artists' Materials), 396 (Costume Jewelry, Costume, Novelties, Buttons, & Misc. Notions, Except Precious Metals), 399 (Misc. Manufacturing Industries)

Major Group 40: Railroad Transportation - 401 (Railroads), 404 (Railway Express Service)

Major Group 41: Local and Suburban Transit and Interurban Highway Passenger Transportation - 411 (Local & Suburban Passenger Transportation), 412 (Taxicabs), 414 (Passenger Transportation Charter Service), 415 (School Buses), 417 (Terminal & Service Facilities for Motor Vehicle Passenger Transportation)

Major Group 42: Motor Freight Transportation and Warehousing - 421 (Trucking, Local & Long Distance), 422 (Public Warehousing), 423 (Terminal & Joint Terminal Maintenance Facilities for Motor Freight & Transportation)

Major Group 43: U.S. Postal Service - 431 (U.S. Postal Service)

Major Group 44: Water Transportation – 441 (Deep Sea Foreign Transportation), 442 (Deep Sea Domestic Transportation), 444 (Transportation on Rivers & Canals), 445 (Local Water Transportation), 446 (Services Incidental To Water Transportation)

Major Group 45: Transportation By Air – 451 (Air Transportation, Certified Carriers), 452 (Air Transportation, Noncertified Carriers), 453 (Fixed Facilities & Services Related To Air Transportation)

Major Group 46: Pipe Lines, Except Natural Gas – 461 (Pipe Lines, Except Natural Gas)

Major Group 47: Transportation Services – 471 (Freight Forwarding), 472 (Arrangement of Transportation), 474 (Rental of Railroad Cars), 478 (Misc. Services Incidental To Transportation)

Major Group 48: Communication – 481 (Telephone Communication (Wire or Radio)), 482 (Telegraph Communication (Wire or Radio)), 483 (Radio & Television Broadcasting), 489 (Communication Services, NEC)

Major Group 49: Electric, Gas, and Sanitary Services – 491 (Electric Services), 492 (Gas Production & Distribution), 493 (Combination Electric & Gas & Other Utility Service), 494 (Water Supply), 495 (Sanitary Services), 496 (Steam Supply), 497 (Irrigation Systems)

Major Group 50: Wholesale Trade--Durable Goods – 501 (Motor Vehicles & Automotive Parts & Supplies), 502 (Furniture & Home Furnishing), 503 (Lumber & Other Construction Materials), 504 (Sporting, Recreational, Photographic & Hobby Goods, Toys & Supplies), 505 (Metals & Minerals, Except Petroleum), 506 (Electrical Goods), 507 (Hardware, & Plumbing & Heating Equipment & Supplies), 508 (Machinery, Equipment & Supplies), 509 (Misc. Durable Goods)

Major Group 51: Wholesale Trade--Nondurable Goods – 511(Paper & Paper Products), 512 (Drugs, Drug Proprietaries & Druggists' Sundries), 513 (Apparel, Piece Goods & Notions), 514 (Groceries & Related Products), 515 (Farm-Product Raw Materials), 516 (Chemicals & Allied Products), 517 (Petroleum & Petroleum Products), 518 (Liquor Stores), 519 (Misc. Nondurable Goods)

Major Group 52: Building Materials, Hardware, Garden Supply and Mobile Home Dealers – 521 (Lumber & Other Building Materials Dealers), 523 (Paint, Glass & Wallpaper Stores), 525 (Hardware Stores), 526 (Retail Nurseries, Lawn & Garden Supply Stores), 527 (Mobile Home Dealers)

Major Group 53: General Merchandise Stores – 531 (Department Stores), 533 (Variety Stores), 539 (Misc. General Merchandise Stores)

Major Group 55: Automotive Dealers and Gasoline Service Stations – 551 (Motor Vehicle Dealers (New & Used)), 552 (Motor Vehicle Dealers (Used Only)), 553 (Auto & Home Supply Stores), 554 (Gasoline Service Station), 555 (Boat Dealers), 556 (Recreational & Utility Trailer Dealers), 557 (Motorcycle Dealers), 559 (Automotive Dealers, NEC)

Major Group 56: Apparel and Accessory Stores – 561 (Men's & Boys' Clothing & Furnishing Stores), 562 (Women's Ready-to-Wear Stores), 563 (Women's Accessory & Specialty Stores), 564 (Children's & Infants' Wear Stores), 565 (Family Clothing Stores), 566 (Shoe Stores), 568 (Furriers & Fur Shops), 569 (Misc. Apparel & Accessory Stores)

Major Group 57: Furniture, Home Furnishings, and Equipment Stores – 571 (Furniture, Home Furnishings, & Equipment Stores, Except Appliances), 572 (Household Appliance Stores), 573 (Radio, Television & Music Store)

Major Group 58: Eating and Drinking Places – 581 (Eating & Drinking Places)

Major Group 59: Miscellaneous Retail – 591 (Drug Stores & Proprietary Stores), 592 (Liquor Stores), 593 (Used Merchandise Stores), 594 (Misc. Shopping Goods Stores), 596 (Non-store Retailers), 598 (Fuel & Ice Dealers), 599 (Retail Stores, NEC)

Major Group 60: Banking – 601 (Federal Reserve Bank), 602 (Commercial & Stock Savings Banks), 603 (Mutual Savings Banks), 604 (Trust Companies Not Engaged in Deposit Banking), 605 (Establishments

Performing Functions Closely Related to Banking)

Major Group 61: Credit Agencies Other Than Banks – 611 (Rediscount & Financing Institutions for Credit Agencies Other Than Banks), 612 (Savings & Loan Associations), 613 (Agricultural Credit Institutions), 614 (Personal Credit Institutions), 615 (Business Credit Institutions), 616 (Mortgage Bankers & Brokers)

Major Group 62: Security and Commodity Brokers, Dealers, Exchanges, and Services – 621 (Security Brokers, Dealers, & Flotation Companies), 622 (Commodity Contracts Brokers & Dealers), 623 (Security & Commodity Exchanges), 628 (Services Allied With the Exchange of Securities or Commodities)

Major Group 63: Insurance – 631 (Life Insurance), 632 (Accident & Health Insurance & Medical Service Plans), 633 (Fire, Marine & Casualty Insurance), 635 (Surety Insurance), 636 (Title Insurance), 637 (Pension, Health & Welfare Funds), 639 (Insurance Carriers, NEC)

Major Group 64: Insurance Agents, Brokers, and Service – 641 (Insurance Agents, Brokers & Service)

Major Group 65: Real Estate – 651 (Real Estate Operators (Except Developers) & Lessors), 653 (Real Estate Agents & Managers), 654 (Title Abstract Offices), 655 (Subdividers & Developers)

Major Group 66: Combinations of Real Estate, Insurance, Loans, Law Offices – 661 (Combinations of Real Estate, Insurance, Loans, Law Offices)

Major Group 67: Holding and Other Investment Offices – 671 (Holding Offices), 672 (Investment Offices), 673 (Trusts), 679 (Miscellaneous Investment)

Major Group 70: Hotels, Rooming Houses, Camps and Other Lodging Places – 701 (Hotels, Motels & Tourist Courts), 702 (Bed & Breakfast Inns), 703 (Camps & Trailer Parks), 704- (Organization Hotels & Lodging Houses, on Membership Basis)

Major Group 72: Personal Services – 721 (Laundry, Cleaning & Garment Services, 721 (Coinop Self-Service Laundry), 722 (Photographic Studios, Portrait), 723 (Beauty Shops), 724 (Barber Shops), 726 (Funeral Service & Crematories), 729 (Misc. Personal Services)

Major Group 73: Business Services – 731 (Advertising), 732 (Consumer Credit Reporting Agencies, Mercantile Reporting Agencies & Adjustment & Collection Agencies), 733 (Mailing, Reproduction Commercial Art & Photography & Stenographic Services), 734 (Services to Dwelling & Other Buildings), 735 (News Syndicates), 736 (Personnel Supply Services), 737 (Computer & Data Processing Svcs.), 739 (Misc. Business Services)

Major Group 75: Automotive Repair, Services and Garages – 751 (Automotive Rental & Leasing, Without Drivers), 752 (Automobile Parking), 753 (Automotive Repair Shops), 754 (Automotive Services, Except Repair)

Major Group 76: Miscellaneous Repair Services – 762 (Electrical Repair Shops), 763 (Watch, Clock & Jewelry Repair), 764 (Reupholstery & Furniture Repair), 769 (Misc. Repair Shops & Related Services)

Major Group 78: Motion Pictures – 781 (Motion Picture Production & Allied Services), 782 (Motion Picture Distribution & Allied Services), 7832 (Motion Picture Theaters, Except Drive-in), 7833 (Drive-in Motion Picture Theaters)

Major Group 79: Amusement and Recreation Services, Except Motion Pictures – 7932 (Billiard & Pool Establishments), 7933 (Bowling Alleys), 794 (Commercial Sports), 799 (Misc. Amusement & Recreation Services)

Major Group 82: Educational Services – 824 (Correspondence Schools & Vocational Schools)

Major Group 83: Social Services – 835 (Day Care Services)

Major Group 86: Membership Organizations – 861 (Business Associations), 862 (Professional Membership Organizations), 863 (Labor Unions & Similar Labor Organizations), 864 (Civic, Social, & Fraternal Associations), 865 (Political Organizations)

Major Group 88: Private Households – 881 (Private Households (Residences))

Major Group 89: Miscellaneous Services – 891 (Engineering, Architectural & Surveying Services), 892 (Noncommercial Educational, Scientific & Research Organizations), 893 (Accounting, Auditing & Bookkeeping Services), 899 (Services, NEC)

Major Group 91: Executive, Legislative, and General Government, Except Finance – 911 (Executive Offices), 912 (Legislative Bodies), 913 (Executive & Legislative Offices Combined), 919 (General Government, NEC)

Major Group 92: Justice, Public Order, and Safety – 921 (Courts), 922 (Public Order & Safety)

Major Group 97: National Security and International Affairs – 971 (National Security), 972 (International Affairs)

14.2 Uses Allowed Outright and Conditionally in the I-3 Zone by Standard Industrial Classification (SIC):

Major Group 01: Agricultural Production—Crops - 013 (Field Crops, Except Cash Grains), 016 (Vegetables & Melons), 017 (Fruits & Tree Nuts), 018 (Horticultural Specialists), 019 (General Crops, Primary Crops)

Major Group 07: Agricultural Services - 071 (Soil Preparation Services), 072(Crop Services), 076 (Farm Labor & Management Services), 078 (Landscape & Horticultural Svcs.), 074 (Veterinary Services), 075 (Animal Services, Except Veterinary), (Dog Grooming)

Major Group 08: Forestry - 084 (Gathering of Misc. Forest Products, Except Tree Seeds), 085 (Forest Services)

Major Group 14: Mining and Quarrying of Nonmetalic Minerals, Except Fuels - 142 (Crushed & Broken Stone, Including Riprap), 144 (Sand & Gravel), 145 (Clay, Ceramic, & Refractory Minerals), 148 (Nonmetallic Minerals Services, Except Fuels)

Major Group 15: Building Construction--General Contractors and Operative Builders - 152 (General Building Contractors, Residential Bldgs), 153 (Operative Builders), 154 (General Building Contractors, Nonresidential Bldgs. & Residential Bldgs)

Major Group 16: Construction Other Than Building Construction--General Contractors - 161 (Highway & Street Construction, Except Elevated Highways), 162 (Heavy Construction, Except Highway & Street Construction)

Major Group 17: Construction--Special Trade Contractors - 171 (Plumbing, Heating (Except Electric), & Air Conditioning), 172 (Painting, Paper Hanging, & Decorating), 173 (Electrical Work), 174 (Masonry, Stonework, Tile Setting, & Plastering), 175 (Carpentering & Flooring), 176 (Roofing & Sheet Metal Work), 177(Concrete Work), 178 (Water Well Drilling), 179 (Misc. Special Trade Contractors)

Major Group 20: Manufacturing of Food and Kindred Products - 201 (Meat Products), 202 (Dairy Products), 202 (Canned & Preserved Fruits and Vegetables), 204 (Grain Mill Products), 205 (Bakery Products), 206 (Sugar & Confectionery Products), 207 (Fats & Oils), 208 (Beverages), 209 (Misc. Food Preparation & Kindred Products)

Major Group 21: Tobacco Manufacturing - 211 (Cigarettes), 212 (Cigars), 213 (Tobacco (Chewing & Smoking) & Snuff), 214 (Tobacco Stemming & Drying)

Major Group 22: Textile Mill Products - 221 (Broad Woven Fabric Mills, Cotton), 222 (Broad Woven Fabric Mills, Man-Made Fiber & Silk), 223 (Broad Woven Fabric Mills, Wool (Including Dyeing & Finishing)), 224

(Narrow Fabrics & Other Small wares Mills: Cotton, Wool, Silk, & Man-Made Fiber), 225 (Knitting Mills), 226 (Dyeing & Finishing Textiles, Except Wool Fabrics and Knit Goods), 227 (Floor Covering Mills), 228 (Yard & Thread Mills), 230 (Miscellaneous Textile Goods)

Major Group 23: Manufacturing of Apparel and Other Finished Products Made From Fabrics and Similar Materials - 231 (Men's, Youths', & Boys' Suits, Coats, & Overcoats), 232 (Men's, Youths', & Boys' Furnishings, Work Clothes, & Allied Garments), 233 (Women's, Misses', & Juniors' Outerwear), 234 (Women's, Misses', Children's & Infants' Undergarments), 235 (Hats, Caps & Millinery), 236 (Girls', Children's, & Infants' Outerwear), 237 (Fur Goods), 238 (Misc. Apparel & Accessories), 239 (Misc. Fabricated Textile Products)

Major Group 24: Lumber and Wood Products, Except Furniture - 241 (Logging Camps & Logging Contractors), 242 (Sawmills & Planning Mills), 243 (Millwork, Veneer, Plywood, & Structural Wood Members), 244 (Wood Containers), 245 (Wood Buildings & Mobile Homes), 249 (Miscellaneous Wood Products)

Major Group 25: Manufacturing of Furniture and Fixtures - 251 (Household Furniture), 252 (Office Furniture), 254 (Partitions, Shelving, Lockers, & Office & Store Fixtures), 259 (Misc. Furniture & Fixtures)

Major Group 26: Paper and Allied Products - 261 (Pulp Mills), 262 (Paper Mills, Except Building Paper Mills), 263 (Paperboard Mills), 264 (Converted Paper & Paperboard Products, Except Containers & Boxes), 265 (Paperboard Containers & Boxes)

Major Group 27: Printing, Publishing, and Allied Industries - 271 (Newspapers; Publishing & Printing), 272 (Periodicals; Publishing & Printing), 273 (Books), 274 (Misc. Publishing), 275 (Commercial Printing), 276 (Manifold Business Forms), 277 (Greeting Card Publishing), 278 (Blankbooks, Looseleaf Binders, & Bookbinding & Related Work), 279 (Service Industries For the Printing Trade)

Major Group 28: Chemicals and Allied Products - 281 (Industrial Inorganic Chemicals), 282 (Plastics Materials & Synthetic Resins, Synthetic Rubber, Synthetic & Other Man-Made Fibers, Except Glass), 283 (Drugs), 284 (Soap, Detergents, & Cleaning Preparations, Perfumes, Cosmetics, & Other Toilet Preparations), 285 (Paints, Varnishes, Lacquers, Enamels, & Allied Products), 286 (Industrial Organic Chemicals), 287 (Agricultural Chemicals), 289 (Misc. Chemical Products)

Major Group 29: Petroleum Refining and Related Industries - 291 (Petroleum Refining), 295 (Paving & Roofing Materials), 299 (Misc. Products of Petroleum & Coal)

Major Group 30: Rubber and Miscellaneous Plastics Products - 301 (Tires & Inner Tubes), 302 (Rubber & Plastics Footwear), 303 (Reclaimed Rubber), 304 (Rubber & Plastics Hose & Belting), 306 (Fabricated Rubber Products, NEC), 307 (Misc. Plastics Products)

Major Group 31: Leather and Leather Products - 311 (Leather Tanning & Finishing), 313 (Boot & Shoe Stock & Findings), 314 (Footwear, Except Rubber), 315 (Leather Gloves & Mittens), 316 (Luggage), 317 (Handbags & Other Personal Leather Goods), 319 (Leather Goods, NEC)

Major Group 32: Stone, Clay, Glass, and Concrete Products - 321 (Flat Glass), 322 (Glass & Glassware Pressed or Blown), 323 (Glass Products, Made of Purchased Glass), 324 (Cement, Hydraulic), 325 (Structural Clay Products), 326 (Pottery & Related Products), 327 (Concrete, Gypsum & Plaster Products), 328 (Cut Stone & Stone Products), 329 (Abrasive, Asbestos & Misc. Nonmetallic Mineral Products)

Major Group 33: Primary Metal Industries - 331 (Blast Furnaces, Steel Works & Rolling & Finishing Mills), 332 (Iron & Steel Foundries), 333 (Primary Smelting & Refining of Non-Ferrous Metals), 334 (Secondary Smelting & Refining of Non-Ferrous Metals), 335 (Rolling, Drawing & Extruding of Non-Ferrous Metals), 336 (Nonferrous Foundries), 339 (Misc. Primary Metal Products)

Major Group 34: Fabricated Metal Products, Except Machinery and Transportation Equipment - 341 (Metal Cans & Shipping Containers), 342 (Cutlery, Hand Tools & General Hardware), 343 (Heating Equipment, Except Electric & Warm Air; & Plumbing Fixtures), 344 (Fabricated Structural Metal Products), 345 (Screw Machine Products, & Bolts, Nuts, Screws, Rivets & Washers), 346 (Metal Forging & Stamping), 347 (Coating, Engraving & Allied Svcs.), 348 (Ordinance & Accessories, Except Vehicles & Guided Missiles), 359 (Misc. Fabricated Metal Products)

Major Group 35: Machinery, Except Electrical - 351 (Engines & Turbines), 352 (Farm & Garden Machinery & Equipment), 353 (Construction, Mining & Materials Handling Machinery & Equipment), 354 (Metalworking Machinery & Equipment), 355 (Special Industry Machinery, Except Metalworking Machinery), 356 (General Industrial Machinery & Equipment), 357 (Office, Computing & Accounting Machinery), 358 (Refrigeration & Service Industry Machinery), 359 (Misc. Machinery, Except Electrical)

Major Group 36: Electrical and Electronic Machinery, Equipment and Supplies - 361 (Electric Transmission & Distribution Equipment), 362 (Electrical Industrial Apparatus), 363 (Household Appliances), 364 (Electrical Lighting & Wiring Equipment), 365 (Radio & Television Receiving Equipment, Except Communication Type), 366 (Communication Equipment), 367 (Electronic Components & Accessories), 369 (Misc. Electrical Machinery, Equipment & Supplies), 371 (Motor Vehicles & Motor Vehicle Equipment)

Major Group 37: Transportation Equipment - 372 (Aircraft & Parts), 373 (Ship & Boat Building & Repairing), 374 (Railroad Equipment),375 (Motorcycles, Bicycles & Parts), 376 (Guided Missiles & Space Vehicles & Parts), 379 (Misc. Transportation Equip.)

Major Group 38: Measuring Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks - 381 (Engineering, Laboratory, Scientific & Research Instruments & Associates Equip.), 382 (Measuring & Controlling Equip.), 383 (Optical Instruments & Lenses), 384 (Surgical, Medical & Dental Instruments & Supplies), 385 (Ophthalmic Goods), 386 (Photographic Equipment & Supplies), 387 (Watches, Clocks, Clockwork Operated Devices & Parts)

Major Group 39: Miscellaneous Manufacturing Industries - 391 (Jewelry, Silverware, & Plated Ware), 393 (Musical Instruments), 394 (Toys & Amusement, Sporting & Athletic Goods), 395 (Pens, Pencils & Other Office & Artists' Materials), 396 (Costume Jewelry, Costume, Novelties, Buttons, & Misc. Notions, Except Precious Metals), 399 (Misc. Manufacturing Industries)

Major Group 40: Railroad Transportation - 401 (Railroads), 404 (Railway Express Service)

Major Group 41: Local and Suburban Transit and Interurban Highway Passenger Transportation - 411 (Local & Suburban Passenger Transportation), 412 (Taxicabs), 414 (Passenger Transportation Charter Service), 415 (School Buses), 417 (Terminal & Service Facilities for Motor Vehicle Passenger Transportation)

Major Group 42: Motor Freight Transportation and Warehousing - 421 (Trucking, Local & Long Distance), 422 (Public Warehousing), 423 (Terminal & Joint Terminal Maintenance Facilities for Motor Freight & Transportation)

Major Group 43: U.S. Postal Service - 431 (U.S. Postal Service)

Major Group 44: Water Transportation – 441 (Deep Sea Foreign Transportation), 442 (Deep Sea Domestic Transportation), 444 (Transportation on Rivers & Canals), 445 (Local Water Transportation), 446 (Services Incidental To Water Transportation)

Major Group 45: Transportation By Air – 451 (Air Transportation, Certified Carriers), 452 (Air Transportation, Noncertified Carriers), 453 (Fixed Facilities & Services Related To Air Transportation)

Major Group 46: Pipe Lines, Except Natural Gas – 461 (Pipe Lines, Except Natural Gas)

Major Group 47: Transportation Services – 471 (Freight Forwarding), 472 (Arrangement of Transportation), 474 (Rental of Railroad Cars), 478 (Misc. Services Incidental To Transportation)

Major Group 48: Communication – 481 (Telephone Communication (Wire or Radio)), 482 (Telegraph Communication (Wire or Radio)), 483 (Radio & Television Broadcasting),
489 (Communication Services, NEC)

Major Group 49: Electric, Gas, and Sanitary Services – 491 (Electric Services), 492 (Gas Production & Distribution), 493 (Combination Electric & Gas & Other Utility Service), 494 (Water Supply), 495 (Sanitary Services), 496 (Steam Supply), 497 (Irrigation Systems)

Major Group 50: Wholesale Trade--Durable Goods – 501 (Motor Vehicles & Automotive Parts & Supplies), 502 (Furniture & Home Furnishing), 503 (Lumber & Other Construction Materials), 504 (Sporting, Recreational, Photographic & Hobby Goods, Toys & Supplies), 505 (Metals & Minerals, Except Petroleum), 506 (Electrical Goods), 507 (Hardware, & Plumbing & Heating Equipment & Supplies), 508 (Machinery, Equipment & Supplies), 509 (Misc. Durable Goods)

Major Group 51: Wholesale Trade--Nondurable Goods – 511 (Paper & Paper Products), 512 (Drugs, Drug Proprietaries & Druggists' Sundries), 513 (Apparel, Piece Goods & Notions), 514 (Groceries & Related Products), 515 (Farm-Product Raw Materials), 516 (Chemicals & Allied Products), 517 (Petroleum & Petroleum Products), 518 (Liquor Stores), 519 (Misc. Nondurable Goods)

Major Group 52: Building Materials, Hardware, Garden Supply and Mobile Home Dealers
521 (Lumber & Other Building Materials Dealers), 523 (Paint, Glass & Wallpaper Stores), 525 (Hardware Stores), 526 (Retail Nurseries, Lawn & Garden Supply Stores), 527 (Mobile Home Dealers)

Major Group 53: General Merchandise Stores – 531 (Department Stores), 533 (Variety Stores), 539 (Misc. General Merchandise Stores)

Major Group 55: Automotive Dealers and Gasoline Service Stations – 551 (Motor Vehicle Dealers (New & Used)), 552 (Motor Vehicle Dealers (Used Only)), 553 (Auto & Home Supply Stores), 554 (Gasoline Service Station), 555 (Boat Dealers), 556 (Recreational & Utility Trailer Dealers), 557 (Motorcycle Dealers), 559 (Automotive Dealers, NEC)

Major Group 59: Miscellaneous Retail – 598 (Fuel & Ice Dealers), 599 (Retail Stores, NEC)

Major Group 75: Automotive Repair, Services and Garages – 752 (Automobile Parking)

Major Group 83: Social Services – 835 (Day Care Services)

Major Group 88: Private Households - 881 (Private Households (Residences))

Major Group 91: Executive, Legislative, and General Government, Except Finance – 911 (Executive Offices), 912 (Legislative Bodies), 913 (Executive & Legislative Offices Combined), 919 (General Government, NEC)

Major Group 92: Justice, Public Order, and Safety – 921 (Courts), 922 (Public Order & Safety)

Major Group 97: National Security and International Affairs – 971 (National Security), 972 (International Affairs)