CITY OF BANDON

COMPREHENSIVE PLAN

TABLE OF CONTENTS

SECTION I: PLAN POLICIES 4

CITIZEN INVOLVEMENT 5
LAND USE 9
OPEN SPACE, SCENIC, HISTORIC AREAS ANDNATURAL RESOURCES 10
SCENIC RESOURCES 10
HISTORICAL AND ARCHAEOLOGICAL PRESERVATION 12
NATURAL RESOURCES - WETLANDS 14
NATURAL RESOURCES - VIEWSHEDS □ □ □ □ □ □ □ 16
AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS 19
ENVIRONMENTAL QUALITY OF LIFE 20
RECREATION 23
URBANIZATION 33
SPECIAL AREAS – POLICIES 34
RIPARIAN VEGETATION 34
ANNEXATION POLICIES 34
COASTAL RESOURCES 39
BEACHES AND DUNES. 39
DEVELOPMENT ON FOREDUNES. 39
OCEAN BEACHES. 39
ESTUARINE BEACHES. 39
BEACH AND DUNE EROSION. 39
BANDON'S UNIQUE COASTA1 RESOURCES 39
THE JETTY. 39
ESTUARINE RESOURCES, STATEWIDE PLANNING GOAL 16 40
COASTAL SHORELANDS, STATEWIDE PLANNING GOAL 17 40
BEACHES AND DUNES, STATEWIDE PLANNING GOAL 18 40
ESTUARY CLASSIFICATION , POLICY A. 41
NATURAL ESTUARINE MANAGEMENT UNITS, POLICY B. 41
CONSERVATION ESTUARINE MANAGEMENT UNITS, POLICY C. 41
DEVELOPMENT ESTUARINE MANAGEMENT UNITS , POLICY D. 41
RESOURCE CAPABILITY; CONSISTENCY AND IMPACT ASSESSMENT: POLICY E. 42
ESTUARINE FILL AND REMOVAL, POLICY F. 42
ESTUARINE FILL AND REMOVAL, POLICY G. 43
ESTUARINE MITIGATION REQUIREMENTS POLICY H. 43
SOLUTIONS TO EROSION AND FLOODING PROBLEMS POLICY I. 43
PROLIFERATION OF SINGLE-PURPOSE DOCKS AND PIERS POLICY J. 44
AUTHORITY OF OTHER AGENCIES POLICY K. 44
PROTECTION OF SITES ESPECIALLY SUITED TO WATER-DEPENDENT) USES–POLICY L. 45
PROTECTION OF MAJOR MARSHES AND SIGNIFICANT WILDLIFE HABITATS IN COASTAL SHORELANDS POLICY M. 46
DREDGED MATERIAL DISPOSAL (DMD) SITES POLICY N. 46
INTERTIDAL DREDGED MATERIAL DISPOSAL POLICY O. 46
LIMITING DREDGE AND FILL AS ESTUARINE RESTORATION POLICY P. 46
FLOW-LANE DISPOSAL OF DREDGED MATERIAL IN DEVELOPMENT MANAGEMENT UNITS POLICY R. 47
REDEVELOPMENT OF WATERFRONT AREAS POLICY S. 47
PUBLIC ACCESS POLICY T. 47
(RESERVED) POLICY U. 47

OCEAN RESOURCES 50

II. INVENTORIES 51

CHAPTER 1: HISTORICAL BACKGROUND 52
CHAPTER 2: THE PLANNING PROCESS 55
LCDC EXTENSIONS AND PLAN EVALUATION 56
PERIODIC REVIEW 56
PLAN IMPLEMENTATION 57
CHAPTER 3: LAND USE 59
LAND USE CLASSIFICATIONS 68
LAND USE BY AREA 73
PHYSICAL CHARACTERISTICS 85
CHAPTER 4: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS 92
FLOODING OF LOW LYING AREAS 92
THE WIND 92
STEEP SLOPES 92
CHAPTER 5: INFRASTRUCTURE 94
PUBLIC FACILITIES 94
PUBLIC SERVICES 96
NON-CITY PUBLIC FACILITIES AND SERVICES 98
CHAPTER 6: ENERGY CONSERVATION 99
ELECTRICITY ,.....99
CONSERVATION 99
ALTERNATIVE ENERGY SOURCES 100
CHAPTER 7: SOCIO-ECONOMIC ANALYSIS 101
CHARACTERISTICS 101
IMPLICATIONS FOR PLANNING PURPOSES 110
POPULATION PROJECTIONS 112
ECONOMIC CHARACTERISTICS 114
CHAPTER 8: URBANIZATION 123
TABLE OF CONTENTS 123
BASIS FOR ALTERNATIVE PROJECTIONS 126
USE OF POPULATION PROJECTIONS 127
POPULATION GROWTH IN THE URBAN GROWTH AREA 130
TOTAL POPULATION GROWTH -CITY AND URBAN GROWTH AREA 130
COORDINATION OF URBAN GROWTH AREA PROJECTED GROWTH WITH COOS COUNTY PLAN 130
PROJECTED HOUSING AND LAND NEEDS 131
BUILDABLE LANDS REPORT 137
PROPOSED BANDON URBAN GROWTH AREA `.....142
SUMMARY 145
FINDINGS 145
CHAPTER 9: NATURAL RESOURCES 158
OPEN SPACE 158
ECOLOGICALLY AND SCIENTIFICALLY SIGNIFICANT NATURAL AREAS 158
FISH AND WILDLIFE HABITATS 159
WATERSHEDS AND GROUNDWATER 159
II. GROUND WATER PROGRAMS OR INVESTIGATIONS 160
INVENTORY OF POINT SOURCES 161
WILDLIFE AND SCENIC WATERWAYS 162
AIR, LAND AND WATER QUALITY 162
CHAPTER 10: COASTAL RESOURCES 163
THE SOUTH JETTY AND THE BLUFF 165
CHAPTER 11: OCEAN RESOURCES 167
INTRODUCTION 167
MARINE MAMMALS 168
MARINE BIRDS 168
GEOLOQY 169
CONTINENTAL SHELF 169
OCEAN CURRENTS 169
OCEAN FLOODING 170
CHAPTER 12: SCENIC RESOURCES 173
GEOGRAPHIC VIEWSHEDS 173
RANKING OF SIGNIFICANT VIEW SITES 175

METHODS FOR CONSERVING VIEWSHEDS AND ACCESS TO VIEWSHEDS 176
CHAPTER 13: ESTUARY MANAGEMENT 185
IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY 189
CHAPTER 14: ESTUARY MANAGEMENT 193
ESTUARY MANAGEMENT SECTION PART 2 193
SECTION 1. CUMULATIVE EFFECTS OF DEVELOPMENT. 194
CHAPTER 15: INVENTORY OF COASTAL RESOURCES 204
CHAPTER 13 : AMENDMENTS 253
PROCEDURE: 253
APPENDICES 254
APPENDIX A: DEFINITIONS 254
APPENDIX B ESTUARINE WILDLIFE 267
APPENDIX C 271
COASTAL RESOURCES RESEARCH MATERIAL 271

Ordinance 1501 June 1,1991

BANDON 2010 COMPREHENSIVE PLAN

INTRODUCTION

The Bandon 2010 Comprehensive Plan is illustrated by the Comprehensive Plan Map, which is incorporated as part of this plan. The various areas appearing on the map represent the land use classifications which have been developed for residential, commercial, industrial, and public and environmental areas.

The narrative text of this portion of the Comprehensive Plan is contained in four sections. The first section deals with the policies formulated by citizens of Bandon. The second section describes and explains the purpose and suitable application of each land use classification contained in the plan. The third section pertains to the estuary, outlines the city's plans for the continued development of public facilities (i.e., water, sewer, and streets), and the final section analyzes the Comprehensive Plan as it relates to specific geographic areas of Bandon.

The City of Bandon gratefully recognizes the efforts of the citizens and agencies involved in the development of this plan. Special acknowledgment goes to Coos County Planning Dept. and Coos-Curry Council of Governments for their assistance.

The policies presented in this section of the Comprehensive Plan represent a consensus on the direction and character of future development in Bandon and provide direction for land use decision making in the City of Bandon.

Age, gender or physical disability shall not be an adverse consideration in making a land use decision as defined in Oregon Revised Statutes.

INTRODUCTION

In a desire to ensure an effective Citizen Involvement Program (CIP), the City Council appointed an ad hoc Committee to review and evaluate the existing program and make recommendations for improvement. The Committee, working with staff and the public, thoroughly reviewed and evaluated existing policies and City practices in conjunction with the Statewide Planning Goals, and made a number of recommendations that are incorporated into this chapter.

The Planning Process

The Planning Commission is primarily responsible for making land use decisions and recommending amendments to the Comprehensive Plan and land use regulations.

The City Council is responsible for policy decisions relating to the planning process and for adopting amendments recommended by the Planning Commission. In addition, the Council is responsible for overseeing and giving direction to the Committee for Citizen Involvement (CCI) to ensure that the goal of the citizen involvement program is being met.

Citizens are responsible for participation in the planning processes, becoming educated about land use issues, and in assisting the City in its evaluation of the planning processes and the Citizen Involvement Program.

The following sections address the Committee for Citizen Involvement, the components of Statewide Planning Goal 1, and contain policy statements and measures to implement the policies. This Chapter constitutes the Citizen Involvement Program (CIP).

COMMITTEE FOR CITIZEN INVOLVEMENT

Membership

The CCI shall be a Standing Committee and have 7 members. These members shall include a member of the City Council, a member of the Planning Commission, two members selected from the City's Standing Committees, and three at large members from the public. Members will be selected and serve in accordance with the Standing Committee rules.

Responsibilities

1. The CCI, under the direction of the City Council, shall ensure that the Citizen Involvement program is being implemented.

2. The CCI shall make an annual written report to the City Council that assesses the

effectiveness and overall implementation of the Citizen Involvement Program. Copies will be distributed to all Standing Committee members.

3. The CCI shall assist citizens and citizen groups in becoming aware of opportunities provided by the Citizen Involvement Program.

4. The CCI shall make recommendations to the City Council for improving the Citizen Involvement Program if necessary.

5. The CCI shall perform such other duties as directed by the City Council.

Meetings

1. The CCI shall meet at least bi-monthly in an open public meeting, and more often if the Councilor the CCI determines it is necessary.

2. The CCI shall conduct its proceedings in accordance with this chapter and Robert's Rules of Order.

3. The CCI will be staffed by the Planning Director or, in his/her absence, the City Manager.

TWO-WAY COMMUNICATION

Policy: To provide mechanisms which will promote effective two-way communication between citizens and the policy/decision makers.

Implementation Measures:

1. All meetings shall be open to the public as required by State law, and as appropriate to the body.

2. All public meetings shall be scheduled at times which are conducive to citizen participation.

3. Appropriate notice of all public meetings shall be given, including the date and agenda of the meeting. Notice shall be given through advertisements in local newspapers and by posting notices in public places. In no case shall a meeting be noticed less than 24 hours before it is scheduled to occur.

4. The City will maintain City Bulletin Boards in public places that contain meeting agendas and other information.

5. The City will actively promote the City website and the City Manager's Newsletter.

6. The CCI will explore the feasibility of implementing a citywide questionnaire program regarding city issues. They will take into account issues such as time, cost, and overall effectiveness.

7. The City Council will host an annual Town Hall meeting to discuss selected topics of interest to the public .

8. The City will continue to develop outreach programs with service clubs, schools, and other organizations in order to provide planning information and education.

CITIZEN INFLUENCE

Policy To provide citizens an opportunity to be involved in the planning process

Implementation Measures:

1. In addition to topics scheduled for discussion, there shall be an opportunity at meetings of public bodies for the public to provide input for items which do not appear on the meeting's agenda.

2. Staff will hold informal, well-publicized educational workshops on proposed revisions to the Comprehensive Plan, Land Development Regulations and other planning topics that have potential widespread impact prior to the hearing. Workshops will be open to the public for participation and discussion. Questions and concerns will be conveyed to the decisionmaking bodies.

TECHNICAL INFORMATION

Policy To ensure that all documents and information which will assist citizens in effectively participating in the planning process are available to the public in an understandable form subject to the requirements of state and local laws.

Implementation Measures:

1. The City shall place appropriate planning documents on the website in a timely manner.

2. The City will continue to develop and implement a citywide Geographic Information System (GIS) for public use.

3. In cooperation with the Bandon Public Library, the City will ensure that planning and technical documents are available for review and checkout at the library. A list of these documents will be posted on the City website.

4. The City will continue to update planning counter materials, maps, and development pamphlets to reflect regulation and policy changes.

FEEDBACK MECHANISMS

Policy To ensure that the governing bodies will respond to citizens land use planning questions and concerns.

Implementation Measures:

1. The City will continue to implement established mechanisms for responding to questions at Council meetings.

2. All specific written questions from citizens will be responded to in writing in a timely fashion, with an initial response not to exceed 20 calendar days from the date of receipt.

3. The City will provide information for the public detailing how to ask questions of the Council or other decision-making body in order to ensure a response.

4. The rationale used by a governing body for making policy decisions shall be recorded and made available for review by the general public.

FINANCIAL SUPPORT

Policy To ensure that there are adequate resources devoted to the Citizen Involvement Program.

Implementation Measures:

1. The City budget shall contain a Citizen Involvement Program line item. The amount budgeted shall be recommended yearly by the CCI. The Planning Director shall include this recommendation in the Planning Department Budget.

2. City staff will assist the CCI in implementing the Citizen Involvement Program and will provide technical assistance to citizens.

Goal 2: Land Use Planning

It is the City's policy to provide appropriate, well-integrated, non-conflicting and orderly areas to accommodate present and future needs of the community.

General Commercial Activity. To reduce commercial sprawl and to minimize conflicting land uses by focusing commercial development into established General Commercial areas such as Woodland Heights, Post Office, and the Hwy 101 and 42 intersection.

Tourist Commercial Development To minimize potential conflicts between tourist commercial activities and general commercial activities, segregate these two commercial uses. Place tourist commercial uses in areas frequented by tourists, such as Beach Loop Road, and Old Town. Place general commercial uses in areas oriented to year─around residents, e.g. Woodland Heights area. It is important, however, not to exclude commercial development that is used by residents from locating in Old Town.

Marine Commercial Activity. To provide areas appropriate for commercial uses which are benefitted by a waterfront location. These areas will be provided at the discretion of the Bandon Planning Commission after consideration of critical relationships between coastal shorelands and resources of coastal waters; and geologic and hydrologic hazards associated with coastal shore lands.

Public Service. To provide maximum access to all public services in a central location.

Industrial locations. To provide for industrial expansion by enlarging existing industrial areas and by setting aside appropriate additional areas for potential industrial development.

Types of Industrial Development. To provide buffer areas between heavy industrial uses and residential or commercial uses by establishing light industrial areas and, where appropriate, by allowing flexibility of industrial uses, thereby maximizing employment opportunities.

OPEN SPACE, SCENIC, HISTORIC AREAS ANDNATURAL RESOURCES

SCENIC RESOURCES

ORD. 1512, 10-06-2003 Goal 5 Open Spaces Scenic , Historic Areas, And Natural Resources

COMPREHENSIVE PLAN POLICIES AND IMPLEMENTATION MEASURES

Policy 1

The City recognizes the importance of dimensional standards in the preservation of scenic resources.
Implementation Measure

1. The City shall periodically review height, setback, and lot coverage requirements in the affected viewshed areas to ensure maintenance of scenic resources.

Policy 2

The City shall encourage the appropriate clustering of development, recognizing that the residents of the City will benefit from the provision of open space and view corridors.

Implementation Measure

1. The City shall periodically review and amend its Planned Unit Development regulations to ensure that the appropriate provision of open space and view corridors shall occur.

Policy 3

The City shall develop and implement a master plan for trails within each viewshed, including mapping and signage

Implementation Measure

1. As part of the Parks Master Plan, the Parks and Recreation Commission shall consider the development and implementation of viewshed trails utilizing existing trails, right-of-way, and such private property easements as may be granted.

Policy 4

The City recognizes the importance of City-owned and managed property to accessible and unobstructed views, and shall maintain these areas for future public use and enjoyment.

Implementation Measures

1. The City shall not vacate rights-of-way or sell City property when it is found that the vacation or sale would have an adverse impact on one or more of the following:
   a. Scenic views or access to views
   b. Wildlife
   c. Wetlands
   d. Storm drainage
   e. Existing or future utilities

2. The City shall only vacate rights-of-way when there is a clear benefit to the City.
3. The City shall utilize the Transportation System Plan as a source of identification of rights-of-way to be vacated.

Policy 5

The City shall coordinate with the Port of Bandon and other affected agencies to ensure that the property between Ferry Creek west to the Fisheries building is developed in an appropriate manner taking into account scenic resource preservation, marine uses, and economic development.

Implementation Measure

1. The City shall periodically review height, setback, and horizontal building separation requirements on the waterfront to determine the adequacy of current regulations and make such changes as may be necessary.

Policy 6

The City shall actively encourage conservation easements over private properties which have walk-by or drive-by ocean or river views.

Implementation Measures

1. The City shall explore financing options for purchase of view properties and/or view easements. This may include the potential for trading City-owned lots for view lots.
2. The City shall provide information and education to property owners regarding the importance of the City's scenic resources.
3. The City shall provide information about potential tax and other incentives derived from conservation easements, and make property owners aware of these benefits. (eg; airspace, landscape, etc.)
4. The City shall support and assist in the formation of a land conservancy by private parties to conserve view areas and open space within the City of Bandon.

Policy 7

The City shall coordinate and cooperate with federal, state, and local agencies in order to maintain access to scenic resources and ensure high quality visual experiences for the public.

Implementation Measures

1. Pursuant to applicable statutes, the City of Bandon shall maintain land use jurisdiction over properties within the City Limits and uniformly apply Bandon's land use regulations to all publicly-owned property.
2. The City shall participate in land use decisions within the City's Urban Growth Boundary (UGB) if there are potential impacts on the City's identified scenic resources.
3. The City shall develop and maintain a jurisdiction map in order to show ownership of all public lands by agency.
4. The City shall supply each public agency with a current copy of the City's land development regulations and any future changes as they occur so that the agencies can comply with all applicable land use regulations.
5. The City shall seek to secure the right of first refusal from public agencies on property located in an identified viewshed.

Special Policies

1. Coquille River Lighthouse: The City shall encourage and assist in the preservation of the Lighthouse. This shall be accomplished through cooperation with appropriate state agencies and groups dedicated to its preservation and promotion.
2. The Coquille Point Wildlife Refuge (Oregon Islands):When property within 100 feet of the Refuge boundary is proposed for development, the applicant shall demonstrate that the proposal will have no adverse impact on the function of the Refuge. This shall be accomplished by supplying detailed plans that include proposed landscaping and vegetation, shielded exterior lighting, and noise minimization. In addition, the applicant shall demonstrate how the proposal enhances an identified scenic resource.
3. Riverside Drive Corridor: Riverside Drive is an important and scenic entrance into Bandon. The City shall coordinate with the County and State to designate Riverside Drive as a scenic byway or part thereof.
4. Vegetation and Gorse Removal: In identified viewsheds, the City shall maintain gorse and vegetation on City-owned property at levels specified in the Bandon Municipal Code, and shall ensure other property owners perform said maintenance as well.

(Adopted on October 6,2003, by Ordinance 1512)

HISTORICAL AND ARCHAEOLOGICAL PRESERVATION

1991 Plan: No Amendment

1. The City shall protect and provide for the historical heritage of the City of Bandon by protecting structures identified in the Historic/Cultural Overlay Zone. The City shall:

   a. protect and rehabilitate the Bandon Lighthouse.

b. encourage the continued operation and improvement of the historical museum and the Bandon Historical Society.

c. encourage the Bandon Historical Society to continue their programs concerning site identification and protection.

2. The City shall provide special protection to historic and archaeological sites identified in the inventory section. This policy shall be implemented by requiring review of all development proposals involving an archaeological or historical site to determine whether the project as proposed would protect the historical and archaeological values of the site. The development proposal, when submitted, shall include a site development plan showing, at a minimum, all areas proposed for excavation, clearing and construction. Within three (3) working days of receipt of the development proposal, the City shall notify the Coquille Tribal Council in writing, together with a copy of the site development plan. The Tribal Council shall have the right to submit a written statement to the local government within ten (10) days of receipt of such notification, stating whether the project as proposed would protect the historical and archaeological values of the site, or, if not, whether the project could be modified by appropriate measure to protect those values. "Appropriate measures" may include, but shall not be limited to, the following:

a. retaining the historic structure in-site or moving it intact to another site; or

b. paving over the site without disturbance of any human remains or cultural objects upon the written consent of the Tribal Council; or

c. clustering development so as to avoid disturbing the site; or-

d. setting the site aside for non-impacting activities, such as storage; or

e. if permitted pursuant to the substantive and procedural requirements of ORS 97.750, contracting with a qualified archaeologist to excavate the site and remove any cultural objects and human remains and re-interring the human remains at the developer's expense.

f. Using civil means to ensure adequate protection of the resources, such as acquisition of easements, public dedications, or transfer of title.

If a previously unknown or unrecorded archaeological site is encountered in the development process, the above measures shall still apply. Land development activities which violate the intent of this policy shall be subject to penalties prescribed in ORS Chapter 97.990 (8) and (9).

Upon receipt of the statement by the Tribal Council, or upon expiration of the Tribal Council's ten-day response period, the City shall conduct an administrative review of the development proposal and shall:

a. approve the development proposal if no adverse impacts have been identified, as long as consistent with other portions of this Plan, or

b. Approve the development proposal subject to appropriate measures agreed upon by the land owner and the Tribal Council, as well as any additional measures

deemed necessary by the City to protect the historical and archaeological values of the site. If the property owner and the Tribal Council cannot agree on the appropriate measures, then the City shall hold a quasi-judicial hearing to resolve the dispute. The hearing shall be a public hearing at which the City shall determine by preponderance of evidence whether the development project may be allowed to proceed, subject to any modifications deemed necessary by the City to protect the historical and archaeological values of the site

Through the "overlay concept" of this policy, unless an Exception has been taken, no uses other than harvesting wild crops, and low-intensity water-dependent recreation shall be allowed unless such uses are consistent with the protection of the historic and archaeological values, or unless appropriate measures have been taken to protect the historic and archaeological values of the site.

This policy recognizes that protection of historical and archaeological sites is not only a community's social responsibility, but is also legally required by Goal #17 and ORS 97.745. It also recognizes that historical and archaeological sites are non-renewable cultural resources.

NATURAL RESOURCES - WETLANDS

ORD. 1512, 10-06-2003

GOALS, POLICIES, AND IMPLEMENTATION MEASURES

GOAL: To protect, maintain, enhance arid restore significant wetlands.

POLICIES

1 Protect, maintain, enhance, and restore the natural functions and values of wetlands including enhancement of water quality, flood protection, fish and wildlife habitat, open space, and natural areas.

2 Enact and enforce standards and ordinances which regulate development, including filling and grading, within delineated significant wetlands.

3 Require activities which use wetlands to be compatible with the preservation of wetland functions and values. These activities include uses such as public and private recreation, surface water management and flood control.

4 Require the review of any development proposal that could impact a wetland with the appropriate local, state, and federal agencies.

5 Allow development density on parcels containing wetlands to be transferred to other portions of the development site when wetlands are permanently dedicated as open space.

6 Allow innovative site and building design, including the clustering of buildings to preserve wetlands.

7. Emphasize protection rather than mitigation of the functions and values of wetlands.

8. Coordinate with local and state agencies and private landowners to develop educational and recreational uses in and around wetlands in conjunction with the Bandon Parks Master Plan.

IMPLEMENTATION MEASURES

1. The City shall adopt wetland regulations which shall be incorporated into Title 17 of the Bandon Municipal Code.

2. The City shall encourage the utilization of wetlands to enhance water quality, recharge groundwater and retain surface runoff.

3. The City shall maintain an inventory of wetlands and their respective natural resource functions and values within Bandon's Urban Growth Boundary.

4. The City shall support community efforts to restore and maintain wetlands and develop educational and recreational activities related to wetlands.

ORD. 1512, 10-06-2003

COMPREHENSIVE PLAN POLICIES AND IMPLEMENTATION MEASURES

Policy 1.

The City recognizes the importance of dimensional standards in the preservation of scenic resources.

Implementation Measure

The City shall periodically review height, setback, and lot coverage requirements in the affected viewshed areas to ensure maintenance of scenic resources.

Policy 2.

The City shall encourage the appropriate clustering of development, recognizing that the residents of the City will benefit from the provision of open space and view corridors.

Implementation Measure

The City shall periodically review and amend its Planned Unit Development regulations to ensure that the appropriate provision of open space and view corridors shall occur.

Policy 3.

The City shall develop and implement a master plan for trails within each viewshed, including mapping and signage

Implementation Measure

As part of the Parks Master Plan, the Parks and Recreation Commission shall consider the development and implementation of viewshed trails utilizing existing trails, right-of-way, and such private property easements as may be granted

Policy 4.

The City recognizes the importance of City-owned and managed property to accessible and unobstructed views, and shall maintain these areas for future public use and enjoyment.

Implementation Measures

1. The City shall not vacate rights-of-way or sell City property when it is found that the vacation or sale would have an adverse impact on one or more of the following:
   a) Scenic views or access to views
   b) Wildlife
   c) Wetlands
   d) Storm drainage
   e) Existing or future utilities

2. The City shall only vacate rights-of-way when there is a clear benefit to the City.

3. The City shall utilize the Transportation System Plan as a source of identification of rights-of-way to be vacated.

Policy 5

The City shall coordinate with the Port of Bandon and other affected agencies to ensure that the property between Ferry Creek west to the Fisheries building is developed in an appropriate manner taking into account scenic resource preservation, marine uses, and economic development.

Implementation Measures

1. The City shall periodically review height, setback, and horizontal building separation requirements on the waterfront to determine the adequacy of current regulations and make such changes as may be necessary.

Policy 6

The City shall actively encourage conservation easements over private properties which have walk-by or drive-by ocean or river views.

Implementation Measures

1. The City shall explore financing options for purchase of view properties and/or view easements. This may include the potential for trading City-owned lots for view lots.

2. The City shall provide information and education to property owners regarding the importance of the City's scenic resources.

3. The City shall provide information about potential tax and other incentives derived from conservation easements, and make property owners aware of these benefits. (eg; airspace, landscape, etc.)

4. The City shall support and assist in the formation of a land conservancy by private parties to conserve view areas and open space within the City of Bandon.

Policy 7

The City shall coordinate and cooperate with federal, state, and local agencies in order to maintain access to scenic resources and ensure high quality visual experiences for the public.

Implementation Measures

1. Pursuant to applicable statutes, the City of Bandon shall maintain land use jurisdiction over properties within the City Limits and uniformly apply Bandon's land use regulations to all publicly-owned property.

2. The City shall participate in land use decisions within the City's Urban Growth Boundary (UGB) if there are potential impacts on the City's identified scenic resources.

3. The City shall develop and maintain a jurisdiction map in order to show ownership of all public lands by agency.

4. The City shall supply each public agency with a current copy of the City's land development regulations and any future changes as they occur so that the agencies can comply with all applicable land use regulations.

5. The City shall seek to secure the right of first refusal from public agencies on property located in an identified viewshed.

AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

1991 Plan not Amended
And Hazards

Goal 7 Areas Subject To Natural Disasters

The City shall continue to promote the protection of life and property from natural disasters and hazards through the following activities:

1. Flooding. To reduce flood hazards by implementing the HUD Flood Plain Insurance Program pursuant to Resolution of the Bandon City Council.

2. Coastal Erosion. To ensure that developments on the Bandon Bluff are not endangered by coastal erosion by requiring a review by the city of all development plans on the Bandon Bluff.

3. Extreme Winds. To reduce damage caused by extreme winds, support mobile home tie down requirements established by the State Building Codes Division.

Resource Conservation and Conflict Resolution.

It is the City of Bandon's policy to protect natural and scenic resources by encouraging the conservation of significant natural areas, open space, non-estuarine water areas, fish/wildlife habitat, and recreation trails. These resources shall be protected to the maximum extent feasible providing no conflicting uses are identified. When conflicting uses are identified, the City shall consider the economic, social, environmental, and energy consequences of the conflicting use and take appropriate action.

The City of Bandon recognizes the Department of Environmental Quality's statutory obligations in regards to pollution control, air and water quality, noise pollution and solid waste control. The City of Bandon supports the department's efforts in establishing and enforcing standards in these matters. Furthermore, the city will not adopt any standards or permit development that are inconsistent with the department's standards.

Environmental Quality and Quality of Life.

It shall be the policy of the City of Bandon to ensure the quality of life in Bandon by balancing the city's economic needs with the enhancement of its environmental quality through the following actions:

1. Outdoor Advertising. Restrict substantial outdoor advertising in non-commercial and non-industrial areas of the city.

2. Air and Water Quality. Ensure that waste discharges to not exceed the carrying capacity of air and water resources, degrade such resources, or threaten their availability by complying and requiring compliance with the appropriate requirements and standards of the Department of Environmental Quality, and the Coos Curry Environmental Protection Program.

3. Air Quality. Preserve air quality by restricting uses which produce undue amounts of objectionable smoke, fumes, or dust.

4. Water Quality. Develop the city's water supply to provide adequate amounts of clean, safe water to meet the city's future needs.

5. Groundwater. Protect the sensitive groundwater area underlying Bandon. The city will coordinate with and support D.E.Q.'s efforts to insure that uses such as underground storage tanks, septic systems and land use practices are done in such a way as to protect this sensitive aquifer.

6. Soil Resources. Protect soils from excessive erosion by ensuring adequate erosion control measures by developers.

7. Sanitation. Continue to develop the city's sewer system to serve all feasible areas of the city and the urban growth area.

8. Solid Waste. Coordinate with Coos County on solid waste management.

9. Noise. Implement measures wherever possible to address incompatible uses and noise problems through zoning and the use of buffer areas.

Water Conservation.

The City will support water conservation as a way to help meet its future water needs.

Pretreatment of Industrial Waste.

Depending on the industry to be served and the quantity of wastewater to be treated, the city may be required to develop a pretreatment program to assure that the industrial waste does not:

a. upset the sewage treatment plant;
b. cause pass-through of toxics; or
c. contaminate sewage.

Air, Water, Noise and Solid Waste-Standards and Cooperation with DEQ/EPA.

The City shall cooperate with the Oregon Department of Environmental Quality and U.S. Environmental Protection Agency, and comply with all applicable State and Federal environmental quality regulations and standards for air and water quality, noise pollution and solid waste control.

Needed Public Facilities and Financing.
The City of Bandon shall maintain adequate needed public facilities for its residents. Financing for needed improvements will use federal and state grants and loans as well as local funds and private funds as available. Where development requires extension or expansion of
public facilities the City shall require the developer to pay for the portion of the costs associated with that development.

DEQ/EPA Coquille River Study.
The City will review the information from the DEQ/EPA study of the Coquille River when it becomes available. If necessary, the City shall amend its plan to comply with the study's requirements.

Wetlands.

1. After Division of State Lands (DSL) provides the City with a copy of the applicable portions of the Statewide Wetlands Inventory, the City shall provide notice to the Division, the applicant and the owner of record within five (5) working days of the acceptance of any complete application of the following that are wholly or partially within areas identified as wetlands on the Statewide Wetlands Inventory:

a. Subdivisions;

b. Building permits for new structures;

c. Other development permits and approvals that allow physical alteration of land involving excavation and grading, including permits for removal or fill, or both, or development in flood plains or floodways;

d. Conditional use permits and variances that involve physical alterations to land or construction of new structures; and

e. Planned unit development approvals.

2. The provisions in (1), above do not apply if a permit from DSL has been issued for the proposed activity.

3. Approval of any activity described in Cl) above shall include one of the following statements:

a. Issuance of a permit under ORS 196.665 and 196.800 to 196.900 by DSL required for the project before any physical alteration takes place within the wetlands;

b. Notice from DSL that no permit is required; or

c. Notice from DSL that no permit is required until specific proposals to remove, fill or alter the wetlands are submitted.

4. If DSL fails to respond to any notice provided under (1) above within 30 days of notice, the City approval may be issued with written notice to the applicant and the owner of record that the proposed action may require state or federal permits.

5. The City may issue local approval for parcels identified as or including wetlands on the Statewide Wetlands Inventory upon providing to the applicant and owner of record a written notice of possible presence of wetlands and providing DSL with a copy of the notification of:

a. Comprehensive plan map or zoning map amendments for specific properties; and

b. Major and minor partitions.

6. Notice of activities authorized within an approved wetland conservation plan shall be provided to DSL within five days following local approval.

7. Failure by the City to provide notice as required will-not invalidate City approval.

Goal 8 Recreational Needs

In order to satisfy the recreation needs of the citizens of Bandon the City shall:

1. continue development of city parks, private recreation facilities, and state and county parks within the city.

2. promote ongoing park development through the City Parks Commission by developing neighborhood parks in all sectors of the city.

3. give special attention to providing recreational opportunities which:

    a. meet recreational needs of ‘persons of limited mobility and finances.

    b. provide a conservation of energy.

    c. minimize environmental deterioration.

    d. are available at nominal costs.

    e. are coordinated with the plans of state, county, and private agencies.

4. consider the continued development of bicycle paths as may be financially feasible.

5. encourage the continued development of the Bandon Airport.

6. encourage the development of the needed recreational facilities identified in the Comprehensive Plan Inventory.

7. enhance the cultural quality of Bandon by encouraging cultural activities and the siting of related business in appropriate locations.

The city will actively promote the health of its economy by encouraging economic development that is compatible with the city's infrastructure, service provision capabilities, environment and the community's high standards for quality of life.

The city supports growth management and the planning of development to protect resources and maximize its economic assets and advantages. Where appropriate, the city also supports amendments to the urban growth boundary to supply needed public facilities for development of key industrial, commercial and residential areas.

It is the policy of the City to enhance the economic well-being of the residents of Bandon by encouraging the expansion and diversification of the city's economy through the following actions:

1. Tourism. Guard the scenic appeal and character of Bandon by the careful development of tourist facilities.

2. Shipping. Increase the maritime commerce of the Port of Bandon by encouraging the deepening of the channel and maintaining the greatest possible depth of the harbor.

3. Increase the sport and commercial fishing potential of the port by strongly encouraging the extension of the jetty.

4. Meet both the need for a major diversification of the economy of Bandon and the need to develop new energy sources by encouraging the construction of power generation facilities in the vicinity of Bandon. If a power facility is to be constructed, studies will be made to document the need as well as the effect on the city. The city will be included in all phases of the planning.

5. Meet the economic needs of Bandon in face of a declining economic base by diversifying the city's economy wherever possible.

6. Maintain a well-balanced social community by encouraging industry that will attract youth.

7. Agriculture. Allow adequate land for urban development within the city limits and within the urban growth boundary so as to alleviate development pressures on agricultural lands outside the urban growth boundary.

8. Forest Products. Provide for the expansion of the forest products industry by setting aside sufficient areas for industrial development in this sector.

Notwithstanding (7) above, lands not needed for urban uses during the planning period may be used for

agriculture, forestry or other non-urban uses.

HOUSING

Goal 10 Housing

It is the policy of the City to:

1. encourage development of adequate housing for residents of Bandon in order to meet their needs and in order to provide security and enjoyment.

2. make available adequate, integrated, reasonably— priced, quality housing, subject to regulations, which would ensure aesthetics and protection of the natural environment.

3. provide housing for low income residents by encouraging the provision of rent or house payment subsidies on a sliding scale according to the ability to pay.

4. provide adequate access to mobile homes, while guarding against land use conflicts in the urban areas, by designating appropriate areas for the location of mobile homes.

5. reduce damage caused by extreme winds, support mobile home tie down requirements established by the State Building Codes Division.

6. ensure quality housing for all residents by continual enforcement and regular updating of the city's building codes.

7. replace housing by the construction of new homes.

8. accommodate the rising housing demand and to maintain a balanced residential pattern by strengthening the zoning ordinance so to encourage the dispersion of multi-family dwellings throughout the community.

Needed housing also means: (a) Housing that includes, but is not limited to, attached and detached single—family housing and multiple family housing for both owner and renter occupancy and manufactured homes; and (b) Government assisted housing.

Needed housing also includes:

a. Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and

b. Manufactured dwellings on individual lots planned and zoned for single—family residential use that are in addition to lots within designated manufactured home subdivisions.

PUBLIC FACILITIES

ORD. 1472, 1-22-2002 Goal 11

POLICIES:

1. To ensure adequate public facilities and services within the City.

2. To consider future annexation while planning and constructing public facilities.

3. To ensure that the cost of infrastructure required to serve new developments is borne by the developer and benefitting properties.
4. To ensure quality infrastructure by requiring that all projects be reviewed and approved by the Public Works Director and, when required, the City Engineer.

IMPLEMENTATION MEASURES:

1. The City shall ensure that all required improvements are made by a developer at the time of development, and in accordance with the City's adopted master plans.

2. The City shall develop a five-year Capital Improvement Program that is reviewed annually by the Planning Commission. The program shall address the following needs to meet future growth and maintain existing facilities and services:

   water facilities
   sanitary sewer facilities
   stormwater drainage system
   City buildings
   street system
   recreational facilities

The program shall specify the location, cost, and funding sources for all proposed improvements and the priority and general timing of those improvements.

3. The City shall periodically update its Master Plans for Water, Sewer, and Storm Drainage as necessary.

4. The City shall develop Annexation policies and procedures which include the future provision of facilities and services for areas in the Urban Growth Boundary.

TRANSPORTATION

Goal 12

The city will coordinate with D.O.T. to identify and achieve the goals and projects identified in the

Department's Six Year Highway improvement Study, Statewide Comprehensive Outdoor Recreation Plan (SCORP), the Highway 101 Access Study, Highway Preservation Study, Highway Transportation Plan, and other programs and studies impacting the transportation systems that are vital to Bandon's future.

It shall be the policy of the City to:

1. encourage a transportation system which will meet the present and future needs of Bandon.

2. improve, maintain and develop the Coquille River estuary in keeping with its designation as a shallow-draft development estuary.

3. encourage continued commercial, certificated regional air service to the region.

4. provide the most efficient traffic circulation through Bandon by the use of traffic/access controls or by the construction of a by—pass if the need arises. The City of Bandon will be an integral part of the planning process for any by—pass. A study will be made to justify the need and an impact analysis will be completed to show the effect on all functional sectors of the City's economy prior to decision.

5. provide adequate pedestrian safety by continued development of sidewalks as may be appropriate.

6. encourage better mass transportation service between Bandon and other cities.

7. protect the Bandon State Airport from encroachment by incompatible uses. The land areas at the runway ends shall not be developed.

8. encourage the establishment of transportation systems and capabilities that will enable the transportation disadvantaged adequate mobility.

9. provide for a mix of transportation options without relying entirely on automotive transportation.

Airport. The City will coordinate its planning and land use activities with Aeronautics Division and will comply with the Federal Standards for Airports.

[The following policy's are listed in the Transportation Plan and were adopted by Ordinance 1450 12-04-2000]

1. The adopted street plan shall be used in right-of-way acquisition in the subdivision and development process.

2. The City shall plan and implement a storm drainage system to allow all streets to be drained and improved.

3. All street improvements, with the exception of open, local access streets, shall comply with the Street Standards specified in Table 1 (Appendix B), Street Standards by Classification" and shall be constructed according to the standards in Appendix B. Existing, open access streets may be rebuilt or improved to existing width, provided the street complies with the minimum pavement and base rock depths. Existing, open local access streets shall not necessarily require sidewalks and bike lanes and may be permitted with drainage ditches.

4. The City shall encourage the use of local improvement districts for improving of existing local access streets.

5. The City will require limited or shared access points along arterials and collectors as is necessary to preserve traffic-carrying capacity.

6. The City will work with the Oregon Department of Transportation on access management along State highways.

7. The City shall establish a street improvement program for the transportation system which:

    a. Is subject to annual review and update (Planning Commission, Planning Department, and the public will be included in the annual process);
    b. Is consistent with the land use policies of the Comprehensive Plan and other facility plans;
    c. Establishes a priority for improvements to the system;
    d. Provides for the needs of all modes within the rights-of-way; and
    e. Considers public economic benefits resulting from transportation improvements.

8. Special attention shall be given to major entryways into Bandon to ensure that they reflect and contribute to a positive and desirable image of the community. This may include requirements for tree planting, special buffer and setback conditions, access limitations, signage, right-of-way acquisition, and efforts to enhance the appearance and capacity of the Highway 101 and 42S corridors. Planning and implementation of gateway treatments will be coordinated with Oregon Department of Transportation.

9. The City shall encourage better public transportation service between Bandon and other cities.

10. Special consideration in the design of the transportation system shall be given to the needs of those people who have limited choice in obtaining private transportation.

11. The City shall ensure adequate pedestrian safety by continued development of sidewalks and alternate routes for pedestrian traffic.

12. Development proposals shall be reviewed to assure the continuity of sidewalks, trails, bicycle facilities, and pedestrian ways with adjoining properties and rights-of-way.

13. The City shall encourage expanded commercial, certified air service to the region.

14. The City shall work with the Port of Bandon and other agencies to improve, maintain, and develop the Coquille River estuary in keeping with its designation as a shallow draft development estuary (Cannot accommodate larger vessels with deeper drafts).

15. The City shall protect the function of existing and planned streets as identified in the Transportation System Plan through the application of appropriate land use regulations, and by other means.

16. The City shall consider the impact of land use actions, including subdivisions and other land decisions, on existing or planned transportation facilities. The City may impose conditions beyond those specified in the TSP which they, or other relevant transportation providers, consider necessary to ensure the use is compatible with the transportation facilities or services. In the case of development which impacts a State highway, the Oregon Department of Transportation will work with the City to determine what additional conditions may be required. Land use changes which result in the generation of 300 or more new vehicle trips per day will be required to provide a traffic impact study. The results of the study will be used by the City and ODOT to determine what traffic mitigation measures will be required.

17. In order to achieve a balance between roadway size and facilitating efficient transportation, the arterial and collector street network shall be designed and maintained at the following levels:

    a. Collectors will operate at a Highway Capacity Manual Level of Service "D" during peak hours;
    b. Arterials (State Highways) will operate at the volume to capacity standards specified in the most recently adopted Oregon Highway Plan.

18. Direct access onto arterials and collectors, within the city, shall be controlled. Access to a state highway is subject to the regulations of the Oregon Department of Transportation and reviewed with the City of Bandon. If regulations conflict, the more restrictive requirements shall apply.

19. The primary function of local access streets is to serve the circulation and access needs of adjacent and abutting properties. Through traffic on these streets shall be discouraged.

20. The City shall plan for, ensure development of, and maintain a local access street system at a service level and scale which:

    a. Recognizes the multi-use functions of neighborhood streets for walking, bicycling, and social interaction, and which preserves the privacy, quiet, and safety of neighborhood living.
    b. Provides for safe access to abutting land.
    c. Allows adequate and safe circulation from residential properties to the major street system and neighborhood activity centers.
    d. In residential areas of 20 or more units, ensures that a secondary access be provided for emergency vehicle access.

21. The City shall consider the potential to establish or maintain access ways, paths, or trails prior to the vacation of any public easement or right-of-way.

22. The City shall work with private and public property owners to preserve right-of-way for planned transportation facilities through voluntary dedications, setbacks, or other means in order to ensure a street network that meets current and future needs.

23. The function of the Bandon State Airport shall be protected through the application of appropriate land use designations to assure that future land uses are compatible with continued operation of the airport.

24. It is City policy to have paved streets. However, engineered gravel streets may be appropriate in previously platted areas where there was no development of streets at the time of subdivision, and where the predominant street development standard is now a gravel street. These areas are identified on the Street Plan Map (Figure 3, p. 19). The following conditions shall apply to opening an undeveloped, platted street to a gravel street standards.

    a. The street is classified as a local access street.
    b. The street is not an extension of a paved street.
    c. It must be an engineered gravel street, including storm drainage.
    d. The minimum width of the street will be 28 feet.
    e. A dead-end street requires a vehicular turnaround.
    f. The street opening requires anti-remonstrance agreements regarding future paving and drainage LID's.

25. Bicycle and pedestrian facilities shall be provided on new arterials and collectors.

Sidewalks shall be provided on most new local streets in accordance with the Street Standards (Table A , Appendix B of the Bandon Transportation System Plan). This shall occur:

a. at the time of construction of new streets
b. as funding is available for street construction

26. Except as permitted in the Transportation System Plan (TSP), new development shall only occur on property abutting streets opened and developed to standards specified in the TSP. A street shall be considered substandard if not developed to TSP standards.

27. Development of property abutting existing, opened substandard streets shall be permitted only if one of the following occurs: (This applies to new development on an undeveloped parcel and to substantial improvements on a parcel with existing development. Substantial improvements shall be defined as improvements which are likely to cause an increase of over 25% in vehicular traffic volumes).

    a. The developer brings the street frontage of the property up to City standards; or
    b. The developer signs an anti-remonstrance agreement regarding the formation of a Local Improvement District for street and drainage improvements for that street. This agreement shall be binding on all future owners of the subject property.

28. The City's policies on costs associated with the initial construction of streets are:

    a. Local access streets are entirely developer/property owner responsibility.
    b. Where a collector street is required by the City, the cost differential between local access street standard and the collector street standard is the City's responsibility.

29. Included in the City's parks and recreation priorities shall be ten percent of parks funding shall be used toward the planning and development of shared path facilities for bicycles and pedestrians, intended primarily as recreational trails. Such facilities shall generally be designed as further refinement of parks plans and the South Bandon Refinement Plan. These facilities shall be designed to generally follow natural features, provide scenic views, and connect points of interest (public lands, parks, pedestrian districts, etc.) or facilities which generally serve the population with limited mobility options (schools, retirement centers, etc.). Examples may be found in the City Park master plan and the South Bandon Refinement Plan.

30. Businesses located along designated bicycle and pedestrian routes may advertise in “bike and pedestrian friendly” promotional materials produced by the City or community groups. Funds from the advertising shall be used to pay for the cost of promotional materials and toward the cost of planning, acquiring land for, and developing, and maintaining bicycle and pedestrian facilities.

31. In reviewing development projects, the City will require bicycle parking facilities for new retail, office, industrial, and multi-family development (4 or more units) which is likely to generate bicycle traffic from customers, employees, or residents. These uses shall be assumed to generate bicycle traffic unless the applicant provides evidence to the satisfaction of the Planning Director. The required number of bicycle parking spaces will be determined on a case-by-case basis, and the Oregon Bicycle and Pedestrian Plan (see Table 4, p.30a), can be used to provide guidance. Bicycle parking spaces shall be provided in a visible location which does not obstruct pedestrian traffic.

32. Parking accessible to persons with disabilities shall be required in compliance with ORS 447.233.

33. The City shall mail notices of land use actions, subdivision and partition applications, applications which affect private access to roads, and other applications which may affect airport noise corridors or operations to the Department of Transportation and other transportation provider. This shall be done to ensure that proposed development or redevelopment is compatible with transportation facilities and services.

34. The City shall coordinate with the Department of Transportation to implement highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Transportation System Plan and Comprehensive Plan.

35. Where off-site road improvements are required as a condition of development, they shall accommodate pedestrian and bicycle travel.

36. All development proposals, Comprehensive Plan amendments, and zone changes shall conform with the adopted Transportation System Plan.

37. It is the policy of the City to plan and implement a network of streets, access ways, and other improvements, including bikeways, sidewalks, and safe street crossings, to promote safe and convenient bicycle and pedestrian circulation within the community.

38. The City shall require streets and access ways to provide direct and convenient access to major activity centers, including commercial centers, employment

centers, schools, and community facilities.

39. The School District will be allowed to continue closing sections of 8th Street which bisects the campus, thereby preventing through traffic during school hours.

40. The inclusion of an improvement project in the TSP does not commit the City or ODOT to allow, construct or participate in funding the specific improvement. Should a project be allowed, the City will work with any relevant developer and, in the case of projects which affect state facilities, with ODOT, to discuss and refine project requirements and details. In addition, inclusion of a project in the TSP cannot be used as mitigation for future land use decisions which may affect the state highways.

URBANIZATION

Goal 14

1. Lands within urban growth boundaries shall be available for urban development concurrent with the provision of key urban facilities and services in accordance with locally adopted development standards.
2. Notwithstanding (1) above, lands not needed for urban uses during the planning period may be used for agriculture, forestry or other non-urban uses.

In order to provide for an orderly and efficient transition from rural to urban land use, the City shall:

1. establish cooperatively with Coos County an Urban Growth Boundary which is based upon the goals and recommendations of this plan. The area enclosed by the Urban Growth Boundary is urbanizable and is expected to change, from rural to urban uses as population increases.

2. establish cooperatively with Coos County a Sphere of Influence which is based upon the goals and recommendations of this plan. The area outside the urban growth boundary is rural and is expected to remain in rural uses. The watershed of Geiger and Ferry Creeks should not experience further development unless it is related to improving the municipal water supply. The area of Bandon State Airport should be developed for compatible uses.

3. require annexation or anti-remonstrance to annexation agreements prior to extension of sewer or water services to areas outside of the City limits but within the Urban Growth Area.

4. study, document and determine the need for any changes in the urban growth boundary or sphere of influence.

Land Use Concerns External to the City. The City of Bandon shall encourage the appropriate development of outlying areas of the City by requesting and assisting Coos County:

1. To prevent commercial strip development of Highway 101 by controlling commercial development outside the city limits.

2. To prevent heavy financial burdens on the city (imposed by the need to reduce health hazards resulting from the over-development of outlying areas):

   a. by allowing only low-density development in such areas until water and sewage facilities can be extended -to them, and

   b. by discouraging the leapfrogging of development over underdeveloped areas.

SPECIAL AREAS – POLICIES

Riparian Vegetation

1. Riparian vegetation surrounding wetlands shown on National Wetlands Inventory Maps is considered to be significant habitat. This habitat shall be protected by leaving the existing vegetation undisturbed to its full width, if possible, but at least to a width of fifty (50) feet measured horizontally from the shoreline. If there is less than fifty (50) feet of vegetation, all of it shall be protected. This shoreline shall be the line of non-aquatic vegetation.

2. Water access, trails/paths, picnicking areas, or other recreational (or educational) uses may be permitted if the activities are part of a master plan for any development, and if they constitute no more than a 20% cumulative reduction in the total vegetation surrounding the creeks within the zoning designation.

ANNEXATION POLICIES

These policies will serve as an overall guide to the City of Bandon regarding considering, accepting, or rejecting requests for annexation of properties within the urban growth boundary (UGB).

1. Annexation Configurations - When considering the specific boundaries of an area to be annexed, the City will add or eliminate property, whenever appropriate, to ensure that the shape of the annexed area conforms to standard blocks, fractional section lines, existing and future street and utility system layouts and plans, natural features, topography, and other considerations, so that the resulting city limits configuration is efficient and sensible.
2. Leveraging the Annexation of Adjacent Properties - When considering a proposed annexation, the City will determine whether there are any adjacent properties which are in the City's best interest to annex at that same time. If so, those additional desirable

properties will be combined with the properties in the annexation request, in a manner and configuration which will maximize the value of the annexation request to leverage the simultaneous or subsequent annexation of those adjacent properties whose owners may not necessarily be in favor of annexation.

3. Creating County Islands - When determining the final configuration of an annexation, and to leverage the annexation of any desired adjacent properties, the City will consider the benefits of creating islands of County property, which can then be annexed at will, either immediately or in the future,
4. Fiscal Impact of Annexations - Prior to annexing an area, the specific fiscal impacts of that annexation shall be determined, to include a measurement of the effects on City tax revenues, utility revenues, cost of providing services, etc. Absent evidence to the contrary for a particular annexation, it is anticipated that the immediate fiscal impact of any annexation will be negative. However, for undeveloped areas, and areas which have development potential, the immediate negative impacts can be expected to be offset by the positive fiscal impacts of future development. The greater the ratio of undeveloped to developed property, the greater the potential for the fiscal impacts to become positive.
5. Development Control Issues - While the fiscal impacts of annexation are important, they will not necessarily be the overriding factor. Consideration must also be given to the overall impact the annexation will have on the community by virtue of its being subjected to City development control, including comprehensive planning, zoning, regulating nonconforming uses and structures, and subdivision regulations. Those benefits may outweigh any projected negative fiscal impacts.
6. Sufficiency of Infrastructure Systems - When considering an annexation, the City will ensure that the existing infrastructure systems can or will meet the needs and demands of the area proposed to be annexed. An analysis of the existing street, water, sewer, storm drain, and other infrastructure systems will be undertaken to determine whether capacity exists to serve the subject area. If not, a determination will be made regarding whether anticipated system development revenues, other funding mechanisms such as a local improvement district (LID), or direct funding from the petitioner or property owners, will be necessary and sufficient to adequately finance the required infrastructure improvements. All utility and infrastructure improvements shall be consistent with the City's adopted master plans.
7. Street Paving - As long as a street paving tax is in effect, which will be immediately imposed on a newly annexed area, the City will pave all existing, unpaved, open streets in that annexed area, as soon as sufficient funds are available from that resource. If no such tax is in effect, the City will determine whether it is appropriate to finance that paving from another City resource, or whether the residents or property owners of the annexed area should be required to pave those streets, as a condition of annexation approval. Prior to the annexation, the City will determine whether reduced street widths, drainage, and sidewalk requirements will be allowed for those existing streets. In no case will the City annex an area containing existing, unpaved, open streets, unless some source for funding the street paving has been identified. Once an area has been annexed, all future streets will be subject to the same street opening and construction standards as would apply to any other area within the City.
8. Timing of Annexations - Unless determined otherwise on an individual case by case basis, it can generally be assumed that annexing property sooner rather than later will minimize the negative impacts and maximize the positive impacts of that annexation.

9. Sewer Connection Requirements - For any existing home, business, or other use within an annexed area at the time of the annexation, which is served by an approved, properly functioning septic or other on-site sewage disposal system, the City will waive any requirements for connecting to the municipal sanitary sewer system, as long as the on-site system continues to function properly. In the event of a failure of the on-site system, any City requirements for connection to the municipal sanitary sewer system will apply, as they would for any other property within the City limits. As a condition of this waiver, the subject property owner will be required to provide documentation to the City regarding the location of the septic or alternative sewage disposal system, and all components thereof. Annually, each property owner shall provide proof to the City that their septic or alternative sewage disposal system is properly operating in conformance with all Department of Environmental Quality (DEQ) requirements. If the City is unsure about whether it is operating properly, the DEQ will be contacted for assistance in making that determination. All costs for providing the proof of proper operation and for inspections shall be the responsibility of the property owner. This waiver applies only to City sewer connection requirements, but does not apply to any DEQ requirements, which the City has no authority to waive.
10. Comprehensive Plan and Zoning - Annexation petitions shall be accompanied by applications for a Comprehensive Plan Amendment and a Zone Change. Those applications will be processed and considered concurrent with consideration of the annexation request, so that the provisions of the City's Comprehensive Plan and zoning regulations will immediately apply to the annexed area upon approval of the annexation.
11. Annexation Ordinance - The City shall adopt Annexation Regulations as part of the Bandon Municipal Code, specifying the specific requirements for preparing, submitting, and processing an application for annexation. Those regulations will reference, and ensure compliance with, these Annexation Policies, as well as State Statutes governing annexations.
12. Annexation Priorities - In an effort to help ensure that future urbanization is timed and coordinated to best meet the needs and resources of the City of Bandon, the priorities for annexing areas within the UGB are as follows(see attached map):

The First Highest Priority area for annexation is the "Donut Hole" area. (This area is bounded on the north by the existing City limits at approximately 13th Street, on the west by the existing City limits east of Beach Loop Drive, on the west by Highway 101, and on the south by the existing City limits north of Seabird Drive. County zoning is Residential in the interior and Commercial along Highway 101.) The City will actively pursue annexation of this entire area as soon as possible. The City will look favorably upon any requests for annexation of properties within this area, provided those properties are combined with other properties in a manner and configuration which will maximize the value of the annexation request to leverage the simultaneous or subsequent annexation of as much other property as possible.

The Second Highest Priority area for annexation is the "East Bandon" area. (This area is bounded on the north by the City limits at approximately 13th Street, on the west by Highway 101, on the east by the extended Harlem Avenue/Harvard Street, and on the south by Vine Street. County zoning is a mix of Residential, Commercial, and Industrial.) The City will look favorably upon any requests for individual annexations within this area, but will not actively pursue annexation, unless a specific benefit to the City can be identified for a particular annexation.

The Third Highest Priority area for annexation is the "Airport" area. (This area generally includes the

Airport properties on the east side of Highway 101, and some properties south of the existing City limits along the west side of Highway 101, between the existing City limits and the Airport. County zoning is primarily industrial.) The City will look favorably upon any requests for individual annexations within this area, but will not actively pursue annexation. Notwithstanding the overall annexation priority of this area, the City may actively promote annexation and the provision of public utilities to any parcels which will facilitate economic or industrial development and job creation.

The Fourth Highest Priority area for annexation is the "Sunset City" area. (This area is bounded on the north by the existing City limits at Polaris Street, on the west by the Pacific Ocean, on the east by a line one block east of Beach Loop Drive, and on the south by a line % block south of Saturn Street. County zoning is primarily Residential.) The City is generally neutral regarding annexation of this area. However, since the development of Sunset City has reached a point where the negative impacts of its annexation could soon outweigh the potential positive impacts, a decision should be made immediately. Therefore, as soon as practical, the City will call for an election of the Sunset City electors. If the results of that election are positive, the City will annex Sunset City. If the results of that election are negative, the City will initiate the procedures for removing Sunset City from the UGB. Prior to eliminating Sunset City, however, the City will consider whether such a reduction in the UGB could be used to offset the addition of another more desirable area into the UGB. (Ordinance #1543: 05/02/05)

OCEAN
Donut Hole
(South Bandon)
East Bandon
UGB
City Limits
Sunset City
City Limits
Airport
Urban Growth Boundary

Beaches and Dunes.
Bandon's western city limits extend to the line 16 feet above sea level which is described as the vegetation line in O.R.S. 390.770.

Development on Foredunes.
Residential, commercial, and industrial development will not occur on active foredunes, conditionally stable foredunes, conditionally stable foredunes which are subject to ocean flooding. Any other proposed development will be of minimal value. Proposed development shall be designed, as much as possible, to minimize adverse environmental effects.

Ocean Beaches.
The City shall protect Bandon's ocean beaches for recreational activities.

Estuarine Beaches.
Bandon's estuarine beaches shall be protected for uses necessary to support water-dependent and water-related activities where appropriate and for conservation activities where appropriate.

Beach and Dune Erosion.
It is the policy of the City of Bandon to regulate land use actions in beach and dune areas in order to minimize erosion and protect coastal resources. In areas identified as "younger stabilized dunes", "open sand", the City shall require a site review prior to development. The review shall, at a minimum, address hazards to life and public/private property, and recommend appropriate precautions that would avoid endangering life or property and minimize erosion of beaches, cliffs, and dune forms. Wherever possible, non-structural temporary and permanent sand stabilization programs shall be used to minimize sand erosion. Structural stabilization or beachfront protection will be allowed only as a last resort and only where allowed by the plan (see inventory of sites qualifying for beachfront protection in the inventories sections of this plan).

The City shall prohibit breaching of the foredune except to replenish sand supply in interdune areas, or on a temporary basis in an emergency, and only if breaching and following restoration is consistent with sound principals of conservation. No structures shall be developed on the foredune.

Bandon's Unique Coasta1 Resources.
To recognize the unique coastal location of the city and provide development areas near the ocean where unique resources can be experienced residentially.

The Jetty.

The City shall:

1. enhance the special character and appeal of the jetty as a unique community on the Oregon

Coast by ensuring that future developments on the jetty will be consistent with its present character.

2. achieve balanced use of the jetty and to enhance its character through controlling residential and commercial development by taking into consideration the -natural resources of the area.

Estuarine Resources, Statewide Planning Goal 16

The City of Bandon shall recognize and protect the unique environmental, economic and social values of the Coquille Estuary and its associated wetlands.

The City shall also strive to protect, maintain and where appropriate, develop or restore the long—term environmental, economic and social values, diversity, and benefits of the Coquille Estuary.

The City of Bandon Comprehensive Plan provides and shall continue to provide for appropriate uses (including preservation) with as much diversity as is consistent with the overall Oregon Estuary Classification (O.A.R. 660-17—000), as well as with the biological, economic, recreational and aesthetic benefits of the estuary.

The Plan protects and shall continue to protect the estuarine ecosystem, including its natural biological productivity, habitat, diversity, unique features and water quality.

Coastal Shorelands, Statewide Planning Goal 17

The City shall strive to conserve, protect and, where appropriate, develop or restore the resources and benefits of the coastal shorelands within its jurisdiction, recognizing their value for the protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources, recreation and aesthetics.

The City shall also manage these coastal shorelands in a way that is compatible with the characteristics on the adjacent estuary.

The City shall also strive to reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat resulting from the use and enjoyment on the Coastal Shorelands of the Coquille Estuary.

The Plan and related implementing actions and permit reviews shall consider the critical relationships between shorelands and estuarine resources, and the geologic hazards associated with shorelands. The City shall, within the limit of its authority, maintain the diverse environmental, economic and social values of coastal shorelands, and maintain estuarine water quality, which shall include minimizing man—induced sedimentation.

Beaches and Dunes, Statewide Planning Goal 18

The City shall strive to conserve; protect, and, where appropriate, develop and restore the resources and

benefits of dune areas within the coastal shorelands of the Coquille Estuary.

The City shall also strive to reduce the hazard to human life and property from natural or man—induced actions associated with these areas.

The Plan and related implementing actions shall provide for diverse and appropriate use of dune areas consistent with their ecological, recreational, aesthetic, water resource and economic values, and consistent with the natural limitations of dunes and their vegetation for development or use. Where dunes provide protection to inland areas from ocean or river flooding, they shall be protected.

ESTUARY CLASSIFICATION , POLICY A.

The City shall officially recognize the Coquille River Estuary as a "Shallow—Draft Development Estuary", consistent with the overall Oregon Estuary Classification. Further, the Plan's allowed uses and activities are, and must remain, consistent with the "shallow-draft development" designation and the estuarine management unit requirements of Goal #16.

This Policy recognizes that the Land Conservation and Development Commission (LCDC) and the Statewide Planning Goals limit the maximum allowable development of Oregon estuaries.

NATURAL ESTUARINE MANAGEMENT UNITS, POLICY B.

In the Coquille River Estuary, areas shall be designated as Natural Estuarine Management Units to assure the protection of significant fish and wildlife habitats, of continued biological productivity within the estuary, and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological, and evolutionary processes. Natural Estuarine Management Units shall include, at a minimum, all major tracts of salt marsh, tideflats, and sea grass and algae beds.

CONSERVATION ESTUARINE MANAGEMENT UNITS, POLICY C.

In the Coquille River estuary, areas shall be designated as Conservation Estuarine Management Units for long-term uses of renewable resources that do not require major alteration of the estuary, except for the purpose of restoration. These areas shall be managed to conserve the natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in the Natural Estuarine Management Units, and recreational or commercial oyster and clam beds not included in the Natural Estuarine Management Units. Areas that are partially altered and adjacent to existing development of moderate intensity which do not possess the resource characteristics of natural or development units shall also be included in this classification.

DEVELOPMENT ESTUARINE MANAGEMENT UNITS , POLICY D.

In the Coquille River estuary, Development Estuarine Management Units shall be designated to provide for navigation and other identified needs for public, commercial, and industrial water-dependent uses, consistent with the level of development of alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, sub-tidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary not included in Natural or Conservation Estuarine Management Units.

In designating uses for these areas, the City shall consider the potential for using upland sites to reduce or limit the commitment of the estuarine surface area for surface uses.

RESOURCE CAPABILITY; CONSISTENCY AND IMPACT ASSESSMENT: POLICY E.

The City concludes that all proposed actions (approved in this Plan) which would alter or potentially alter the integrity or the estuarine ecosystem have been based upon a full consideration of the impacts of the proposed alteration and a demonstration of the public's need and gain which warrant such modification or loss, except for uses and activities which require the resource capability consistency test as a condition within a particular management unit.

For uses and activities requiring the resource capabilities test, a clear presentation of the impacts of the proposed alteration shall be required. The impact assessment shall include:

i. The type and extent of alterations expected;

ii. The type of resource(s) affected;

iii. The expected extent of impacts of the proposed alteration of water quality and other physical characteristics of the estuary, living resources, recreational and aesthetic use, navigation and other existing and potential uses of the estuary; and

iv. The methods which could be employed to avoid or minimize adverse impacts.

ESTUARINE FILL AND REMOVAL, POLICY F.

The City shall support dredge, fill or other reduction or degradation of estuarine values only if such activities are allowed in the respective Management Unit and:

a. If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this goal; and,

b. If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and

c. If no feasible alternative upland locations exist; and

d. If adverse impacts are minimized.

This Policy shall be implemented by the preparation of findings by the City documenting that such proposed actions are consistent with the Comprehensive Plan, and with the criteria listed above.

This Policy recognizes that Goal #16 limits dredge, fill and other estuarine degradation in order to protect the integrity of the estuary.

ESTUARINE FILL AND REMOVAL, POLICY G.

The City shall support as consistent with this Plan (without taking Exceptions to the Statewide Planning Goals) temporary dredge, fill or other structure or alteration to the estuary, to major freshwater marshes, or to shorelands identified as "significant wildlife habitat" when such temporary actions would not otherwise be allowed by the Plan. Such actions shall be limited to alterations in support of uses permitted by Goal #16 and providing that:

1. The short-term damage to the resource is consistent with the resource capabilities of the area; and

2. The area and affected resources can be substantially restored to original condition.

This Policy is based on the recognition that temporary estuarine fill and habitat alterations are frequently legitimate actions when in conjunction with jetty repair and other important economic activities. It is not uncommon for projects to need staging areas and access that require temporary alteration to habitat that is otherwise protected by this Plan.

ESTUARINE MITIGATION REQUIREMENTS POLICY H.

When dredge or fill activities are permitted in intertidal or tidal marsh areas, their effects shall be mitigated by creation, restoration or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained. Designated mitigation sites identified in the Plan shall be protected.

SOLUTIONS TO EROSION AND FLOODING PROBLEMS POLICY I.

The City shall prefer non-structural solutions to problems of erosion and flooding in the Coquille Estuary to structural solutions. Where shown to be necessary and consistent with policy, water and erosion control structures such as jetties, bulkheads, seawalls and similar protective, structures and fill shall be designed to minimize adverse impacts on water currents, erosion and accretion patterns.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Development Estuarine Management Units upon finding that:

1. land use management practices and non-structural solutions are inadequate; and

2. adverse impacts on water currents, erosion and accretion patterns are minimized; and

3. it is consistent with the Development Management Unit objectives of LCDC Goal #16, Estuarine Resources.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Conservation Estuarine Management Units upon finding that:

1. land use management practices and non-structural solutions are inadequate; and
2. adverse impacts on water currents, erosion and accretion patterns are minimized; and

3. riprap is consistent with the resource capabilities of the area and the purposes of maintaining Conservation Management Units.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Natural Estuarine Management Units upon finding that:

1. there is a need to protect from erosion: uses existing as of October 7, 1977, unique natural resources and historic archaeological values, or public facilities;

2. land use management practices and non-structural solutions are inadequate; and

3. it is consistent with the Natural Management Unit as set forth in this Plan and required by Goal #16; and

4. adverse impacts on water currents, erosion and accretion patterns and estuarine organisms and their habitat are minimized.

PROLIFERATION OF SINGLE-PURPOSE DOCKS AND PIERS POLICY J.

The City shall restrict the proliferation of single purpose docks and piers by encouraging community facilities common to several uses and interests. The size shall be limited to that required for the intended use.

This Policy recognizes the requirements of Goal #16 and the environmental benefits of multi-purpose and multi-ownership docks and moorage facilities.

AUTHORITY OF OTHER AGENCIES POLICY K.

The City shall recognize the authority of the following agencies and their programs for managing land and water resources:

1. the non-point discharge water quality program administered by the Department of Environmental Quality under Section 208 of the Federal Water Quality Act as amended in 1972 (PL 92-500); and

2. the Fill and Removal Permit Program administered by the Division of State Lands under ORS 541.605-541.665; and

3. the programs of the State Soil and Water Conservation Commission and local districts.

This Policy recognizes that there are several agencies with authority over coastal waters, and that their management programs should be used rather than developing new or duplicatory management techniques or controls, especially as related to existing programs functioning to maintain water quality and minimize man-induced sedimentation.

PROTECTION OF SITES ESPECIALLY SUITED TO WATER-DEPENDENT) USES–POLICY L.

The City shall manage urban and urbanizable shorelands which are especially suited for water-dependent (ESWD) uses so as to protect these important areas for water-dependent (ESWD) commercial, recreational and industrial uses.

This Policy is implemented through appropriate land use designations in this Plan which provide for water-dependent uses within areas that are "especially suited" for such uses.

This Policy is based upon recognition that ESWD areas are given priority consideration because of their unique attributes, which include:

1. deep water close to shore with supporting land transport facilities suitable for ship and barge facilities;

2. potential for aquaculture;

3. protected areas subject to scour which would require little dredging for use as marinas; and

4. potential for recreational utilization of coastal water or riparian resources.

Unless otherwise allowed through an Exception, the City shall allow new non-water-dependent uses in Management Units which are "especially suited for water-dependent uses" (ESWD) only if it is established prior to permitting such uses that:

1. the proposed use or activity is temporary in nature (such as storage, etc);

2. the proposed use would not preempt the ultimate use of the property for water-dependent development;

3. no immediate and economically viable demand exists to enable use of the site for water-dependent development;

4. the site is committed to long–term water-dependent use or development by the landowner.

This Policy shall be implemented through provisions in ordinance measures that require the above findings made prior to approval of proposed activities.

This Policy, is based on the recognition that sites which are "Especially Suited for Water-dependent uses" must be protected for such, but that temporarily allowing non—preemptory, non—water—dependent uses is not inconsistent with that overriding objective.

PROTECTION OF MAJOR MARSHES AND SIGNIFICANT WILDLIFE HABITATS IN COASTAL SHORELANDS POLICY M.

The City shall protect major marshes and significant wildlife habitat located within the Coquille River Coastal Shorelands Boundary. Uses in these areas shall be consistent with the area's natural values.

This Policy recognizes that special protective consideration must be given to key resources in coastal shorelands over and above the protection afforded such resources elsewhere in this Plan.

DREDGED MATERIAL DISPOSAL (DMD) SITES POLICY N.

The City shall protect identified dredged material disposal sites from new uses and activities which would prevent their ultimate use for dredged material disposal.

This Policy recognizes that sites designated in the Comprehensive Plan reflect the following key environmental considerations required by LCDC Goals:

i. Disposal of dredged material in upland or ocean waters or Via proper use of flow—lane disposal was given general preference in the overall site selection process;

ii. Disposal of dredged material in estuary water is permitted in this Plan only when such disposal is consistent with state and federal law.

iii. Selected DMD sites must be protected from preemptory uses.

INTERTIDAL DREDGED MATERIAL DISPOSAL POLICY O.

The City shall prohibit dredged material disposal in intertidal or tidal marsh areas except where such disposal is part of an approved fill project.

This Policy shall be implemented through operation of the waterway permit process as a response to a "request for comment" from the Division of State Lands.

This strategy recognizes that upland disposal, flow-lane disposal, and ocean disposal are alternatives to intertidal disposal.

LIMITING DREDGE AND FILL AS ESTUARINE RESTORATION POLICY P.

The City shall support estuarine dredge or fill actions as estuarine restoration when appropriate in areas where activities have adversely affected some aspect of the estuarine system and where such restoration would contribute to the objectives of Goal #16.

This Policy recognizes that not all estuarine dredge or fill actions may be considered estuarine restoration pursuant to LCDC Statewide Planning Goals.

FLOW-LANE DISPOSAL OF DREDGED MATERIAL IN DEVELOPMENT MANAGEMENT UNITS POLICY R.

Flow-lane disposal of dredged materials shall be allowed Management Unit #1 in the deep draft navigational channel adjacent to the boat basin provided that such disposal is monitored to assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied.

A copy of the results of monitoring, if required by the permitting agencies, will be sent to the city and may satisfy the above monitoring requirement.

REDEVELOPMENT OF WATERFRONT AREAS POLICY S.

The City shall determine whether there are any existing, developed commercial/industrial waterfront areas which are suitable for redevelopment which are not designated as especially suited for water-dependent uses. Plans shall be prepared for these areas which allow for a mix of water-dependent, water-related, and water oriented nondependent uses and shall provide for public access to the shoreline.

PUBLIC ACCESS POLICY T.

The City in coordination with the Parks and Recreation Division shall develop and implement a program to provide increased public access. Existing public ownerships, rights of way, and similar public easements in coastal shorelands which provide access to or along coastal waters shall be retained or replaced if sold, exchanged or transferred. Rights of way may be vacated to permit redevelopment of shoreland areas provided public access across the affected site is retained.

(RESERVED) POLICY U.

SHORELAND OVERLAY (SO) ZONE

Shorelands Mgt. Units	1	2	3A	3E	4	5	6	7	8	9	10	11	12
Plan Designation	PF	CD	MC	ESWD	PF	UR	OTC	OS	CD	PF	NR	NR	CD
USES –													
Aquaculture	NP	NP	P	P	NP	P	NP	NP	NP	NP	CU	CU	NP
Commercial Uses													
Water-Dependent	NP	NP	P	P	NP	NP	NP	NP	NP	NP	NP	NP	NP
Water-Related	NP	NP	P	CU*	NP	NP	CU	NP	P	NP	NP	NP	NP
Not Dependent or Related	NP	CU	P	NP	NP	NP	CU	NP	P	NP	NP	NP	NP
Water Oriented	NP	CU	P	NP	NP	NP	P	NP	P	NP	NP	NP	NP
Industrial Uses													
Water-Dependent	NPNP	NP	P	P	NP	NP	NP	NP	NP	NP	NP	NP	NP
Water-Related		NP	P	CU*	NP	NP	CU	NP	P	NP	NP	NP	NP
Not Dependent or Related	NP	NP	P	NP	NP	NP	CU	NP	P	NP	NP	NP	NP
Log storage	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Marinas (on-shore Facilities)	NP	NP	NP	P	NP	NP	NP	NP	CU	NP	NP	NP	NP
Recreational Uses													
Water-Dependent	P	CU	P	P	P	P	NP	NP	P	P1	P1	P1	P1
Water-Related	NP	CU	P	CU*	P	P	P	CU	NP	P1	P1	P1	P1
Not Dependent Or Related	NP	CU	P	P	P	P	P	P	NP	P1	P1	P1	P1
Residential	NP	CU	P	NP	NP	P	P	NP	P	NP	NP	NP	CU6
Utilities	P	P	P	CU*	P	CU	P	P	P	P	CU	CU	P
Parks & Sanctuary	P	CU	CU	NP	CU	CU	P	P	CU	P	P	P	CU
Harvest Wld Crops	P	P	NP	NP	NP	P	NP	P	NP	P	P	P	P
Pub Use Structure Including Recreational	P	CU	CU	CU*	P	CU	CU	P	CU	P	CU	CU	CU
Hist Structures, Including Rehab	CU	CU	CU	CU*	NP	CU	CU	NP	NP	CU	CU	CU	CU
Forest Products Propagation and Selective Harvest	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	CU	CU	NP
Grazing	NP	NP	NP	NP	NP	NP	NP	CU	NP	NP	CU	CU	NP

Shorelands Mgt. Units	1	2	3A	3E	4	5	6	7	8	9	10	11	12
Plan Designation	PF	CD	MC	ESWD	PF	UR	OTC	OS	CD	PF	NR	NR	CD
- Activities -													
Dredged Material	NP	NP	NP	NP	NP	NP	NP	NP	CU	NP	CU	NP	NP
Disposal										2, 3, & 5			
Dune Stabilization And restoration													
Active	NP	CU	NP	NP	NP	NP	NP	NP	NP	NP	CU	CU	CU
Passive	NP	P	NP	NP	NP	NP	NP	NP	NP	NP	P	P	P
Fill	NP	NP	P	CU	NP	NP	NP	NP	NP	P	NP	NP	CU
Land Division	NP	P	P	P	NP	P	P	P	P	NP	CU	CU	CU
Mitigation	NP	P	NP	NP	NP	NP	NP	NP	P	NP	P	P	CU
Shoreline Stabilization													
Structural	CU4	CU4	CU4	CU4	CU4	NP	CU4	NP	CU4	CU4	CU4	CU4	CU4
Nonstructural	P	P	P	P	P	P	P	P	P	P	P	P	P

PF - Public Facilities
CD - Controlled Development
MC - Marine Commercial
UR - Urban Residential
OTC - Old Town Commercial
OS - Open Space
I - Industrial
NR - Natural Resources

P - Permitted
CU - Conditional Use
NP - Not Permitted

ENDNOTES

1. Low intensity uses only.
2. In designated site only
3. Dredged Material Disposal (DMD) must include stabilization measures to control run-off and prevent sloughing.
4. Subject to comprehensive plan policy "I".
5. Subject to comprehensive plan policy "N".
6. See Bandon Comprehensive Plan, Part V, Land use Classifications, Public Environmental Areas, Natural Resource Areas.

OCEAN RESOURCES

(Adopted by Ordinance 1472 January 22, 2002)

POLICIES

1. The City shall strive to protect and enhance Ocean Resources.
2. The City recognizes the important influence the ocean has on the economic, social, and environmental characteristics of Bandon, and will cooperate with all jurisdictions to maintain the quality of ocean resources.

IMPLEMENTATION MEASURES

1. Actions which would affect the nearshore ocean shall be based upon a sound understanding of the resources and potential impacts.

2. The City will coordinate with federal, state, and local agencies to ensure that actions avoid or minimize impacts of the nearshore ocean.

BANDON COMPREHENSIVE PLAN
II. INVENTORIES

CHAPTER 1: HISTORICAL BACKGROUND

City of Bandon

2010 Comprehensive Plan

Inventories, Chapter I

HISTORICAL BACKGROUND *

The first mention of the river named after the Coquille Indians (pronounced Ko-quell) was made when Captain Pleasant Armstrong sailed the schooner White wing into the river to seek shelter from a storm. Later this ship supplied William (Billy Buckhorn) Wike, an early resident trader in the area, with whisky, tobacco and other goods to trade with the Indians for hides and furs.

In 1851 three French-Canadian trappers discovered gold at what is now called Whiskey Run. They mined for almost a year before the big gold rush to the southern Oregon beaches began. In 1853, Thompson Lowe took up a donation land claim of one square mile, the first homestead taken on the south side of the Coquille River. The next year, Christopher Long took up another claim of 640 acres on the north side of the river. Hamblock later married Long's daughter.

With the discovery of gold and with more and more people traveling up and down the coast, a ferry was needed at the mouth of the Coquille River. When Coos County was created by proclamation in 1853, one of its first acts was to license John Saunders to operate a toll ferry at the mouth on the river. About the same time John Hamblock put in a trading post and a jetty on the north side of the river, and friction developed between the Indians and the men at the ferry. When the Indians came out at daylight to get their morning meal the white men opened fire, killing fourteen Indians.

*This history was prepared for the most part by George Welch, a long-time Bandon historian, with minor changes made by the Coos-Curry Council of Governments staff. The city is indebted to him for his generous assistance.

The ferry changed hands a number of times: W. H. Averill and John Albertson were the owners in 1886. Later Averill bought out Albertson and sold a half interest to George M. Dyer. Averill and Albertson laid out a townsite and called it Averill. Dyer then sold the townsite to George Bennett a transplanted Irishman from Bandon County of Cork Ireland. Bennett changed the town’s name to Bandon.

In 1890, Bandon had a newspaper, the Bandon Recorder, and a post office. The next year Bandon was incorporated and a board of trustees was set up to take care of the town's business. According to the 1890 census Bandon had a population of 219. Bandon's first sawmill was built by P. H. Rosa about a mile south of town in 1884. That year a one-room schoolhouse was built near the mill and had nine pupils.

Transportation was uncertain in the mid 1880's and lumber sometimes laid on the dock for weeks waiting for a ship to come into the river in search of cargo. Therefore, it was decided that Bandon needed a locally-owned ship to haul lumber out of the Coquille River and bring back needed supplies. A partnership was formed and a set of ways was bui1t south of the present small boat basin. Bandon's first Ship, a two-masted Schooner named the Ralph J. Long, was built here and launched on July 31, 1888. She hauled lumber south and supplies back to the Coquille River for many years.

By 1908 Bandon's population had reached 645, and the port was becoming an important shipping center. The government was spending money to improve the harbor. Tupper Rock was being quarried for jetty material, a lighthouse was being built on Reckleff Rock, and U.S. lifesaving station was in operation. These activities stimulated trade and an increase in population along the river made Bandon an important trading center. More mills were being built along the river and more sailing ships were making Bandon their port of call. Steamships were running on the river making daily trips between Bandon, Coquille and Myrtle Point, with all towns along the river depending on Bandon's port for most of their supplies.

The first major fire to strike Bandon started in a waterfront restaurant on June 11, 1914. It destroyed three blocks of the downtown business district. At the same time four sawmills burned in the Bandon area and none were rebuilt. The Dollar Steamship Company built a large mill on the south bank of the river just east of the Highway 101 bridge. A railroad was built into a huge stand of timber which covered about a hundred square miles and has almost a billion board feet of lumber. A railroad wreck crushed and scalded to death six men, and the resulting lawsuits kept the company from ever sawing any timber. In a short time the Dollar Company withdrew its financial support and the timber was never logged until World War II, when it was taken out by truck.

Unlike the above mills, the Moore Mill and Lumber Company recovered from a major fire. The mi11, first built by George Cody in 1906, burned in 1909, forcing Cody to sell out to Moore Mill Company who rebuilt the mill and moved the railroad and logging camp into a large stand of timber which lasted for almost twenty years. Moore Mill has owned its own ships to haul lumber to the California market. Over the years the company has lost four ships from stranding or ship wreck.

During the Summer of 1892, a new town about three miles up the river from Bandon was built. Adam Pershbaker built a sawmill and shipyard and named the town Prosper.. This mill cut about 25 million board feet of lumber a year and Moore Mill cut about the same. Some lumber was being barged down from the Johnson mill at Coquille. Altogether, enough lumber was being cut to keep five ships hauling out over the Bandon bar.

As the lumber haul out of Bandon grew more lucrative, bigger steel lumber ships crowded out the smaller wooden steam schooners by undercutting prices. These ships in turn were undercut by the big tugs and barges.

After Wor1d War I, people started asking for a coast highway for military protection from naval attack. The present Highway 101 was started about 1920. With the coming of hard surface roads that could be used year-round motor trucks soon took the freight business away from the river boats, and private

automobiles took away the passengers. By 1925, most of the river boats were gone from the river. Fifty years ago, a few miles of railroad would put the logger into large stands of old growth fir that could be dumped into the Coquille River and rafted to the mills. At present time it is not uncommon for logs to be trucked a hundred miles or more to supply the mills.

Bandon has always had a diversified economy. Early-day industries included Ship-building, sawmills, woolen mills, a broom handle factory, a match factory, a brewery, a salmon cannery and a foundry.

Bandon's big fire of September 26, 1936, wiped out almost all of West Bandon, killing nine people and leaving only two or three buildings.

The old first National Bank building that housed the Western World never burned, although the heat broke out all the plate glass windows in the building.

After the fire, the Red Cross came in and set up tents for cooking and sleeping since many Bandon citizens escaped with only the clothes on their backs. One family saved only their milk cow. On the waterfrontt in the west end of town, the old Brewer building never burned. The building used as the city hall just west of the Brewer building did not burn either. This building is now the Robertson Concrete Products building. The Oriental Hall which now houses the Coast Lumber yard also escaped the fire. The International Cedar Company building that now houses Moore Mill's truck shop was also spared. Most of the northeast of town did not burn; Moore Mill also escaped.

Shortly after the fire, a Government Planning agency offered the people of Bandon a model city plan. All the land within the city limits would be turned over to the planning board, streets would be laid out according to the master plan, then city lots would be given to the people who owned lots in the old town. Also, Bandon’s bonded indebtness, which was considerable at time, would be refinanced over a long period of years at very low interest rates. However, the people of Bandon would have nothing to do with the plan. Instead they rebuilt the town without federal aid.

CITY OF BANDON

2010 PLAN INVENTORIES

THE PROCESS FOR

DEVELOPMENT OF THE COMPREHENSIVE PLAN

During the latter half of 1973 and the first six months of 1974, the City of Bandon developed a comprehensive land use plan which farms the basis for the present plan. In the development of the plan, the City of Bandon inventoried physical, cultural and socio-economic conditions of the city, identified planning problems and issues, developed goals and objectives, formulated plan provisions, and developed a land use map to express the goals and plan provisions. The plan was based loosely and the city's 1966 comprehensive plan, which had been sponsored by a federal grant.

During the course of the planning process in 1973 and 1974, the City maintained contracts with key local and state agencies soliciting their input into the planning process. Although there was no formalized agency involvement mechanism such as was subsequently required by the LCDC program, such coordination sis in fact occur throughout the development of the 1974 plan.

The City had extensive citizen involvement in their plan development. In addition to the participation in the planning process by the City Council, Planning Commission, the city was assisted in plan development by a special steering committee which had among its duties the role of facilitating community input into the planning process.

The citizen participation or public participation aspects of the 1973-1974 planning process included such features as open well-publicized meetings, the opportunities for citizens to participate in all phases of the planning process, a steering committee which acted essentially as a committee for citizen involvement, citizen access to the information through the City Hall and the Public Library, and response of the decision-makers to citizen input.

Financial support was provided to insure that citizens and the public had the opportunity to participate in the planning process. Additionally, almost the entire text of the 1974 plan was published in sections in the Western World, Bandon's weekly newspaper. Thus, during the development of the 1974 plan, the key elements of the process required under the LCDC provisions were in fact met in terms of the land-use planning process, agency involvement, particularly in the area of public or citizen involvement.

POST-PLAN

Once the 1990 Comprehensive Land Use Plan was adopted in 1974, the city began revising the implementing ordinances. The subdivision ordinance was reviewed for currency, and the city began to substantially revise the zoning ordinance to conform with the 1990 Plan, which was the issue in Baker vs. Milwaukee (plan/ordinance coordination). The City of Bandon recognized that the zoning ordinance had to be in conformance with the 1990 plan in order for the goals and plan provisions to be effective. Initial work on amending the zoning ordinances began in 1975. During that time, the LCDC established the first 14 goals and began to implement its planning program.

LCDC EXTENSIONS AND PLAN EVALUATION

In late 1975 the LCDC communicated its requirements for plan evaluation and compliance extensions to local jurisdictions. In December 1975, the City of Bandon submitted a request to LCDC for a conditional extension. This conditional extension was granted. The city's request to use the City Council and the City Planning Commission jointly at the Committee for Involvement was given.

Acknowledgement for the plan finally came on 7-15-83 for Goals 1-14 and 18. Goals 16 and 17 were acknowledged on 10-11-84.

PERIODIC REVIEW

Periodic Review began with the Department of Land Conservation and Development's (DLCD) 8-31-88 periodic review notice. After several extensions and delays, many caused by problems surrounding Coquille Point, termination of that process was finally accomplished on 5-13-91.

Agency Involvement

Since the city had been actively involved in the comprehensive planning process prior to the adoption of LCDC's goals and guidelines, the agency involvement process was divided into two parts: Plan development part and plan evaluation and revision part.

Part I: Plan Development

While the city was developing the adopted 1990 Comprehensive Plan, agency involvement and input was solicited. The following agencies specifically were involved in the considerations and deliberations which led to the development and adoption of the 1990 Comprehensive Plan:

Bandon School District #54
Port of Bandon
Southern Coos Hospital District
Coos County Planning Department
Coos-Curry Council of Governments
Oregon State Highway Division/Department of Transportation Army Corps of Engineers

Inter-governmental Relations Division (formerly local Government Relations)
Department of Environmental Quality
Coos-Curry-Douglas Economic Improvement Association
State Health Division
Oregon Wildlife Commission
Department of Housing and Urban Development

PLAN IMPLEMENTATION

Introduction

Planning processes do not proceed immune from external influences. Similarly, completed plans do not exist in an isolated status. The process garners information and input from many sources and many levels from local to federal and occasionally from international levels. Likewise a completed plan must interact with many social components and levels.

Implementation-City of Bandon

A great deal of the Bandon Comprehensive Plan's effectiveness comes from the City's implementing ordinances, i.e., Zoning, and Subdivision. As time passes there may be additional, special ordinances which would serve to give us additional meaning and interpretation to the plan.

City Committees will be involved with implementation, whether these committees deal with streets, water, sewer, or budgets is not significant at this point. Their purpose will lead them into an implementation role and this should be recognized.

The City will work with other offices, agencies, etc., to properly implement the City's plan. Bandon and Coos County will enter into joint management agreement for administering the urban growth area and sphere of influence area. The city and county are already partners in an agreement involving solid waste disposal.

Implementation-Coos County

The County will use its zoning and land development ordinances for administering land use requests in the urban growth area and sphere of influence area. Other agreements, such as the solid waste document will become part of plan implementation.

Implementation-State and Federal

Numerous implementing authorities exist at the State Level. There are environmental quality programs by the Department of Environmental Quality that will be affected by the Plan and will in turn, affect the Plan. Some other state agencies that will be involved are the Department of Economic Development, Water Resources Department, State Marine Board, Department of Transportation, Division of State Lands, and the Department of Commerce. It is recognized that their permit, statutory, regulatory and functional authorities will have important impacts on the Bandon and functional authorities will have impacts on the Bandon Plan. It is also recognized that when they exercise their authority it must be in accordance with the provisions of the Bandon Plan.

Federal offices and agencies have a role and command responsibilities similar to State agencies. Actions and activities must be proposed, reviewed, and carried out in a manner that recognizes and accepts authority of the Bandon Plan as well as the authority of the Federal Agency. However, the City Plan must have the final authority over actions and activities within the city limits.

Summary

The creation, review and implementation of a city comprehensive plan is a multi-faceted process that occurs in association with other local, regional, and state-wide planning. The Bandon Plan recognizes these other agencies, jurisdictions and permit authorities. Similarly, these agencies, etc., recognize the authority of the City of Bandon and the Bandon Plan.

Residential Areas

Areas of Existing Development. The most notable characteristic of residential development in Bandon is its low density. Most of the land in the city has been subdivided into streets, blocks, and lots, but relatively few of the platted streets have been built.

For purposes of analyzing land use and housing conditions, the Bandon area has been divided into twelve study zones. Most of the zones contain large amounts of vacant land and some zones contain little or no residential development due to lack of sewer and water and, to a lessor degree, streets.

As might be expected, areas with heaviest densities are all near schools. Density exceeds six dwelling units per acre in only a few areas, including one area near Franklin Avenue and the High School Athletic field. (sub-zone 4-C). Density approaches four dwelling units per acre in the area around Bandon Heights School (zone 8) and slightly exceeds three dwelling units per acre north of the high school between Oregon and Bandon Avenues (sub zone 4-B). Densities in all other zones are below two dwelling units per acre. The largest undeveloped area lies in the southeastern part of the city, east of Grand Avenue and south of Ferry Creek (zone 11 and part of zone 10). Zone 11 contains a large number of lots under one ownership. The city traded about 40 acres of tax foreclosed lots to a private citizen for 80 acres of land in the Ferry Creek watershed.

Residential “spillover” beyond the city limits has been relatively limited to date. Development has occurred just south of the city limits on both sides of U.S. Highway 101 and along the old Airport Road.

Building trends. The number of residential building permits issued for new homes has risen significantly since the beginning of 1960. Seventeen such permits were issued in the years 1960-1964, for a yearly average of 3.4. The rate more than doubled to 8 per year for 1965-1969, when 40 permits were issued. The overall rate of 5.7 permits per year for the 1960□s has risen by 106% during the 1970□s. From 1970 - 1973, there were 47 building permits issued for new homes - an annual average of 11.75. Permit activity is shown in Table - IV l.

RESIDENTIAL BUILDING PERMIT ACTIVITY FOR BANDON
EXHIBIT "E"
BUILDING PERMITS SINCE 1978 - NEW CONSTRUCTION

CALENDAR YEAR	MOBILE HOMES INDIV. LOTS	STICK BUILT DWELLINGS	TOTAL NEW DWELLINGS	MAJOR OTHERS
1978	18	38	56	
1979	21	36	57	
1980	15	27	42	
1981	11	19	30	
1982	6	13	19	Inn at Face Rock 20 Units (U)
1983	2	5	7	
				Acknowledgment
subtotal	73	138	211	
1984	5	13	18	
1985	7	3	10	
1986	8	9	17	Inn at Face Rock 36 U Shopping Center Driftwood Motel 21 U
1987	1	11	12	Harborview Motel 21U
1988	6	18	24	
1989	5	24	29	Cheese Plant reopens Sunset Motel 28 U Harborview 30 U
thru 7-13-90	21	132	73	Gorman Motel 22 U Lord Bennett's Rest.
Subtotal	53	132	185	since Acknowledgment
TOTAL	126	270	396	

Source: City of Bandon Building Dept.

TABLE IV-2

HOUSING AND INCOME CHARACTERISTICS, 1970
BANDON CCD, COOS COUNTY & OREGON

	Bandon CCD	Coos County	Oregon
Total Dwelling Units	1,433	19,313	735,243
Multi-Family D.U.'s	87	2,525	134,421
Multi-Family D.U.'s as % of Totals D.U.'s	6.1	13.1	18.3
Percent Families with income Below Poverty Level	14.0	8.1	8.6

Source: U. S. Census of Housing: Income and Poverty Data for Racial Groups, 1972.

New home construction has concentrated mainly in the Bandon Heights area, the area between the high school and the park, and the beach loop area. These patterns Suggest that a difference in preference for housing location exists between those seeking ease of access to schools and shopping areas on one hand, and those primarily interested in the view and recreation potential of offered by beach-front locations on the other. Viewed in this context, the West Ocean Drive area becomes a type of transition area, offering reasonable proximity to the beach while being close to schools and the business districts.

It should be noted that about 40% of homes built from 1970-1977 were located in the Beach Loop Area, and that trend is continuing. This pattern supports the contention that increasing numbers of people at or approaching retirement age are moving to Bandon.

Until June of 1977, mobile homes were not permitted uses in Bandon. A mobile home zone has been created arid numerous mobile homes do exist in the city. The mobile home area comprise about 15 blocks and are expected to provide sufficient land for several years. In addition, the UGB amendment included in the city's periodic review includes a large area to the south of the city west of Hwy 101 that will be available for Mobile or Manufactured homes.

Multi-Family Housing

The land use inventory revealed a total of 107 dwelling units in 20 multi-unit structures. Ten of these structures are duplexes three of which are located in zone 1, with the other located in zone 3. The other ten structures are more widely distributed throughout the city. The largest complex, a HUD-sponsored development, has 30 units. In addition, there is one 20-unit, one 12-unit complex, four-plex and three triplexes.

Based on the 1970 data, there is a shortage of multi-family dwelling units in the Bandon area in relation to the supply of such housing in Coos County and Oregon. As seen in Table IV-2, a multi-family dwelling units comprised only of 6.1% of total dwelling units in the Bandon Census County Division (CCD), in 1970, as opposed to 13.1% in Coos County and 18.3% in Oregon. At the same time, 14% of all families in the Bandon CCD were below poverty level, as opposed for only 8.1% for Coos County and 8.6% for Oregon.

Because the cost per unit is generally lower for multi-family housing than for single-family housing, it is reasonable to assume that the relatively high percentage of low-income families in the Bandon area has created a demand for multi-family housing well in excess of the existing supply. While there has been an increase in construction of new multi-family housing since 1970, many more such units will probably be needed to meet existing demand.

Bandon's present zoning ordinance does not designate specific areas for multi-family housing. However, multifamily dwellings are permitted uses in several zones and are conditional uses in many zones.

Commercial Areas

There are three distinct commercial centers in Bandon. The original downtown (Old Town) area parallels the rivet and covers approximately fourteen blocks in an east-west orientation along Second Street (the east part of which is also Highway 101).

The second business district, which has been developing during the last 30 years, is the Woodland Heights area. The district straddles Highway 101 and extends south from the city hall past the south city limits, and approximately eleven blocks.

The third district is at the intersection of Hwy 101 and 42S.

Much of the major new business construction since 1960 has been in the Woodland Heights district. This trend is continuing with a second bank and a bakery having opened. However, there has also been substantial building activity at the Bandon Shopping Center. By contrast, building activity in the old downtown area since 1960 has involved primarily additions and improvements for existing buildings.

These commercial areas differ noticeably with respect to building conditions. Most of the buildings in the Old Town area were built after the 1936 fire, and although they were considered only temporary, most of them remain today. While there has been remodeling in many cases, relatively few new buildings have been constructed downtown. Many of these buildings were renovated through a federal block grant in the early 1980's. By contrast, most of the new buildings in Woodland Heights have been built since 1960 and all of the buildings at the Bandon Shopping Center have been built since 1985.

These areas also differ in character, not only due to building age and appearance, but also due to the mix of business activities found in each area. Larger, high-volume types of businesses tend to locate in Woodland Heights or at the Shopping Center, while the Old Town area contains a greater concentration of smaller more specialized businesses. While all areas contain businesses orientated in serving the daily needs of the city's residents, the Old Town area offers a greater variety of restaurants, gift and antique shops, art galleries and other businesses orientated toward tourist traffic.

Both the Old Town and Woodland Heights have vacant land available for additional development. There are a number of vacant stores in the downtown area which may be usable for small businesses. In both areas there has been a tendency for development to fill in the blocks on either side of the main thoroughfare (Highway 101 in Woodland Heights and Second Street East downtown). This "blocking" trend is preferable to "strip" development in which businesses are strung out over long distances of a town's main street. The blocking trend results in a more compact business area and its continuance should be encouraged.

In addition to the major commercial centers, there are other areas in the city containing or planned for tourist-oriented outlets, such as motels, restaurants, gift, and antique shops. One area is located at the junction of Highway 101 and Seabird Lane, and the other is the Ogden Avenue—Beach Loop Road area extending south along the beach from Eighth Street to Johnson Creek. Commercial development in the highway junction area is relatively compact, but is fairly scattered in the beach area, where there are four motels located in the 800, 1100, 1700, and 3200 blocks respectively. The other businesses on the beach area are located near various motels.

There is considerable vacant land currently zoned for commercial development in both tourist—commercial areas. The vacant areas near the highway junction lie directly east of the existing businesses, and across the two highways to the west and south.

The vacant land in the beach area is in a controlled development which permits tourist—commercial uses. Because of the proximity of the Bandon beach area to Highway 101, and the access afforded by Beach Loop Road and Seabird Lane, additional tourist-commercial development is likely in the future. To ensure

that such development does not detract from the aesthetic qualities of the beach area, careful examination of proposed developments will be necessary by the planning commission.

Industrial Areas

Bandon has six locations where industrial land uses are occurring,

1. Two locations along the waterfront, including Bandon Fisheries and the Moore Mill log yard
2. The Woolen Mill Addition area, associated with the Bandon Cheese Factory
3. The Douglas Pacific Veneer Mill at 11th and Fillmore (Portland Addition area)
4. The Bandon Airport area
5. The Ocean Spray Cranberry Facility

6. The Airport area is viewed as the best site for future Industrial development, provided the majority land owner provides feasible development options. This area is adjacent to Highway 101 and the extension of the City water and sewer services is expected to occur in this planning cycle.

There is no demand for waterfront industrial land in Bandon. The Port of Coos Bay serves as the Industrial Port for this region (Ord.1326, 3-94).

Park and Recreational Facilities

The numerous recreational areas in and around Bandon contribute heavily to the city's popularity with tourists and residents alike. A primary concern in developing Bandon's recreational potential should be to provide for multiple recreational uses while at the same time preserving the area's natural scenic beauty.

Bandon currently has four recreational areas in the city's interior. These include the city park in West Bandon, the athletic field used jointly by the High School and Junior High School, and playgrounds at Ocean Crest and Bandon Heights Elementary Schools. Most of the city's residential areas are within easy walking distance of one of these four locations.

The city park covers over 30 acres, extending past Kensington and Madison Avenues and Ninth St West, and running south to the city limits. This park is at present the only developed city park in Bandon. Development at present includes a building used for community meetings, a bandstand, horseshoe pits, a baseball field, play equipment and picnic facilities (including two covered food preparation areas, and restrooms. Recent additions to the park are the half-pipe for skateboards and a walking path. A large portion of the park area is in natural landscaping. Access is via 11th St, which bisects the park.

Playground facilities at the two grade schools and athletic facilities at the Junior and Senior Nigh School are available for use by the general public during non-school hours on an almost unrestricted basis. The main exceptions to this policy involve the High School football and baseball fields, where outside use is prohibited before and during the school playing seasons in order to help keep these fields in good playing condition.

Facilities available at the grade school playground include the usual types of play equipment (swings,

seesaws, etc.) plus a track at Bandon Heights School (used by the High School and Junior High) and an outdoor basketball court at Ocean Crest School. In addition to the football and baseball fields at the High School-Junior High field, there are also tennis courts.

In the past there has been a significant amount of cooperation between the city and the school district in development of park facilities and activity programs. The High School vocational class in home construction built new restroom facilities at the city park using materials furnished by the city. The city also operates a summer recreational program for children. Cooperative ventures such as these are common in many communities and are particularly desirable from the standpoint of producing needed facilities and programs more efficiently and with less cost and duplication of effort.

In 1972 the Bandon City Council created a parks commission charged with the responsibility of planning for overall park development in the city. The commission may direct actual implementation of projects upon the consent of the Council. Plans include eventual replacement of play equipment in the city park and development of new facilities.

In the southeast portion of the city there is a large undeveloped area with considerable potential for park development. Much of the land is in city or county ownership. Ferry, Creek runs through the area in a fairly steep canyon. The stream gradient is quite low and there is much poorly drained land. Uneven topography and poor drainage limit the area's current attractiveness as a park site. While there is little demand presently for developing this area, retention of public ownership by the city and county should continue. As Bandon grows the city and county ownership of these lands guarantees that land will be available in the future when demand increases and justifies development.

The ocean beach is Bandon's prime recreational asset. Because of numerous recreational opportunities afforded by the beach due to its natural scenic qualities, extensive investments for development should not be essential for maximum public use and enjoyment. Access, parking, interpretive displays, handicapped facilities and restroom facilities represent the main types of development needed along the beach.

At present there are four public beach access points in and adjacent to the city. The first is the South Jetty County Park at the mouth of the Coquille River, with access via Jetty Road. Here, the county has constructed restrooms and a parking area. In addition to being used by persons walking to the beach, the parking area is popular as a viewpoint for the lighthouse and those wishing to view storms from their cars. Fifth and Sixth Streets can also be used to reach the beach in the South Jetty area.

The second public access is the Masonic Viewpoint at the west end of Eleventh Street. This location, which consists of a stairway and a viewpoint for the offshore rocks of the Oregon Islands National Wildlife Refuge, was deeded to the city by the Masons for public enjoyment.

The third public access point is the Face Rock viewpoint just north of Grave Point on Beach Loop. The location is essentially a viewpoint with a beach access, restrooms and parking.

The fourth access point is the city access just north of Seabird Drive. 1.5 acres of parking is available on the east side of Beach Loop Drive for public use with this access site.

In addition to the public access points, Bandon's beaches are available to the public both north and south of Coquille Point. An area comprised of a stretch of beach south of Coquille Point was deeded to the County by the Kronenberg brothers. The state controls the remaining beach property in the city.

There are relatively large state parks on the beaches both north and south of Bandon. Bullards Beach State Park covers 1226 acres extending south to the North Jetty of the Coquille River, with access off Hwy 101 north of Bullards Bridge. This park is one of very few Oregon coastal parks with year—around overnight camping facilities. Beach access is offered by this park and Seven Devils Wayside, located about eight miles north of Bandon. South of the city, Bandon State Park consists of 879 acres of undeveloped beach property with access from Beach Loop Road.

Oregon Coast Hiking and Bike Trail

The Oregon Coast Hiking and Bike Trail has been designated as Hwy.101 or designated alternatives. Within the Corporate Limits of Bandon the trail follows Riverside Drive and the Beach Loop System (see Public Facilities Plan).

Recreational Needs

The existing recreational facilities in the Bandon and the surrounding areas are prescribed in the Comprehensive Plan under Park and Recreational Facilities. Several facilities identified in the Statewide Comprehensive Outdoor Recreation Plan (SCORP) that are either not currently available or are not provided in enough quantity and are needed in the Bandon area include:

1. Jogging or running areas.

2. Municipal Swimming Pool.

3. Covered Tennis Courts

4. Additional saltwater boating facilities and fishing facilities of all types.

The Port of Bandon has constructed a 90-slip commercial boat basin. As a part of the project the Port has developed a parking area near Bandon Fisheries for use by both commercial and recreational fishermen and visitors.

An analysis of needs and preliminary recommendations for Historic Bandon (Old Town) was completed in July, 1981 (Wilson, 1981). In general, the report notes the need for Bandon to “rehabilitate” the Old Town Area to the theme of the waterfront heritage. Several new developments cited in the report, which would improve tourism and recreation opportunities in Old Town, include: a wharf and boardwalk, bike paths and trail, sheltered bay view areas, windbreaks, parking, informational signs, Old Town park,-and similar facades for buildings. Bandon has available Community Development Block Grant funds. to renovate private buildings, repair and construct public facilities, and complete the design work needed to make old town a thriving tourist center. Several of these projects are also in the Urban Renewal Plan for this area.

Another need identified in the Comprehensive Plan is the need for a destination tourist facility. The improvements to Old Town may increase the length of stay of some visitors to Bandon, but they will not provide a convention/resort facility desired by large groups. The lack of a convention/resort facility located in a non-urban setting places the south coast region at a comparative disadvantage with other areas in

attracting destination tourists. There is currently a proposal for a marina and convention complex to be located at Prosper. The City of Bandon supports the proposal as it would fulfill an important identified need and aid in the expansion of the tourism sector of the local economy.

Transportation Services

Intercity bus service is available on a regularly scheduled basis. Rail service (freight) is available in Coos Bay. Commercial air service is available in North Bend. Some water transportation is available at the harbor. South of the city is the Bandon State Airport, which is adequate for small private aircraft.

The Bandon State Airport south of Bandon provides the city an important link to the rest of the state and nation. This could be particularly important in the future when energy costs rise. The airport can link recreationists, tourists, fishermen, etc. to the city and its neighboring communities. Because airport use is expected to increase, it is important that development not restrict future airport use. Therefore, the city desires there be no development of lands that comprise the approach paths and the clear zones of the airfield. Development of the sides of the runway should be airport related and set back in accordance with safety recommendations.

Introduction

The Bandon 1990 comprehensive Plan contains thirteen broad land use classifications. They are listed below, followed by a brief description of each classification.

Residential Areas
1. Urban Residential
2. Mobile Home Residential
3. Planned Residential

Commercial Areas
1. Tourist Commercial
2. General Commercial
3. Marine Commercial

Industrial Areas
1. Light Industrial
2. Heavy Industrial

Public and Environmental Areas
1. Controlled Development Areas
2. Public Facilities
3. Open Space
4. Natural Resource Areas
5. Marine Activity Areas

Residential Areas

Three classifications of predominately residential uses have been developed to implement the goals and objectives of the city. These uses together provide for a mixed pattern of residential development which is intended to meet the future needs of the area while preserving the overall character of the city. These classifications recognize the varying suitabilities within the city for various types of residential development of the city's public facilities.

Urban Residential.
Purpose: This classification is intended to provide areas capable of supporting residential development at reasonable density levels and consistent within the present character of the city. Multi-family dwellings should be dispersed throughout these areas.

Appropriate Areas. The Urban Residential Classification is best suited for areas within the city or within the urban growth boundary. In these areas, the city water and sewer services necessary for

medium or high density development are either presently available or can be provided by extending existing lines without undue expenses. These areas are within reasonable proximity to schools, recreational facilities and commercial centers.

Mobile Home Residential.
Purpose: This classification seeks to provide areas in which mobile homes can be located either on standard sized lots or in mobile home parks without conflicting with other land uses. Growing number of people are expressing interest in buying lots and placing mobile homes on them as a permanent basis.

Appropriate Areas. Availability of water and sewer services, adequate street access, and present development at relatively low densities are major considerations in determining areas suitable for this classification. Areas adjacent to commercial or industrial development are especially appropriate in that mobile homes can be removed from these areas relatively easily to accommodate expanding commercial or industrial development.

Planned Residential.
Purpose: This classification is intended to encourage innovative residential development of large land areas where soil suitability for construction is varied but where urban development is otherwise logical within the planning period. Areas also classified would be viewed as particularly ideal for employment of the Planned Unit Development (PUD) concept. PUD's would permit greater flexibility with respect to lot *size*, densities, uses and other requirements so as to encourage integrated arrangements of single and multi-family housing and open space. However, should the cost of Planned Unit Development prove to be to expensive for developers, innovative subdivision approaches should be encouraged.

Appropriate Areas. Sparsely developed areas having mixed soil suitability are appropriate for this classification. Such areas should be within the city limits or within the urban growth boundary, so as to make the extension of city water and sewerage facilities practical. Any and all development in these areas should be closely coordinated with water, sewer, and road improvements.

Commercial Areas

Three types of commercial areas have been designated to achieve the commercial development objectives. These classifications generally recognize the difference between tourist, general and marine commercial uses and seek to locate these uses so as to maximize their efficiency of operation, ensure compatibility with neighboring uses, and reduce commercial strip development.

Tourist Commercial.
Purpose: This classification is to designate areas for commercial activities which are especially orientated toward tourists and travelers. Examples of such activities include motels, restaurants, gift shops and similar uses.

Appropriate Areas. The Tourist Commercial Classification is best suited for areas near major highways and at points along scenic routes. It is particularly appropriate for areas having existing tourist commercial development, such as the Old Town area.

General Commercial.

Purpose: This classification provides areas suitable for the continuance or expansion of full range commercial activities to meet the overall shopping needs of Bandon's residents and visitors.

Appropriate Areas. Bandon's existing commercial centers and are adjacent to these centers are appropriate for the General Commercial Classification. Availability of public utilities, accessibility to large volumes of traffic, adequate parking, and access for pedestrians are important considerations in making these areas ideal for continued commercial development.

Marine Commercial.
Purpose: This classification is to provide areas suitable for uses which are associated with or benefitted by being near water.

Appropriate Areas. The Marine Commercial area is best suited for areas adjacent to the estuary. Access to water is important, but back-up space is also important. Availability of parking, utilities, dock space and transportation are considerations which should be addressed when designating processing, retail and wholesale activities for the Marine Commercial area. Some areas that are adjacent to water might not be usable for water-related or water—dependent uses because of exposure to rough water conditions, existing development, or inadequate space for development. Those areas are not considered "especially suited for water—dependent development" (ESWD) in the Estuary Management Plan and may be considered for nonwater-dependent/nonwater related uses. Only those areas with good water access and adequate space for future development are designated as "ESWD" in the Plan.

Industrial Areas

The purpose of Industrial Areas is to maximize the economic development potential of the city by ensuring that sufficient industrial land is available for industrial development. In order to maximize this potential as well as reduce conflicts with surrounding uses, a new classification of Light Industrial was developed.

Light Industrial.
Purpose: This classification is intended to provide additional areas suitable for the location of light industrial plants in order to ensure sufficient land will be available for future expansion. Permitted uses are industrial uses which lack the nuisance characteristics (noise, smoke, odor, heavy trucks, etc) frequently associated with heavy industrial uses. The Light Industrial Classification is intended to be applied to particular areas with a considerable degree of flexibility, so that if an area is designated in the Plan for light industrial development but such a development does not occur, other types of uses may be allowed in the area.

Appropriate Areas. Areas having existing light industrial uses of industrial potential are appropriate for this classification, particularly where nearby commercial, residential or recreational areas make heavy industrial uses appropriate due to their nuisance characteristics.

Heavy Industrial.
Purpose: This classification designates amounts of land suitable for all types of industrial uses.

Appropriate Areas. The Heavy Industrial Classification is suitable for areas which industrial uses are presently located, as well as areas having potential for industrial development due to highway or water access, availability of utilities and level terrain. Industrial development in such areas

should have minimal adverse impact on residential, commercial and other uses in terms of nuisance characteristics.

Public and Environmental Areas

The purpose of these five classifications is to identify areas necessary to meet the future needs for public services, to protect amenities, to protect and develop resources, and to protect agriculture outside of the urban growth boundary. These classifications recognize the environmental goals of the city.

Controlled Development Area (CDA).
Purpose: This special classification is intended to recognize the scenic and unique quality of Bandon's ocean front and view areas and to maintain the quality of Bandon's ocean front by carefully controlling the nature and scale of future development in the area. It is intended that a mix of uses would be permitted, including residential, tourist commercial, and recreational. Future development is to be controlled in order to enhance the area's unique qualities.

Appropriate Areas. The CDA includes the south bank of the Coquille River west of the Robertson concrete plant (First and Edison) and from Moore Mill north, the jetty area, and all the ocean beaches within the city limits. The inland boundaries of the CDA are the bluff from Edison Avenue west to Newport Avenue, Newport Avenue from the bluff south to Tupper Creek, (including the portion of the city east of Tupper Creek) and the city limits extending from Tupper Creek to the Pacific Ocean. Some land adjacent to the water might not be usable for water related or water dependent uses. To maintain environmental quality amid a mix of uses, certain unique natural features will be conserved, for example, the south jetty's freshwater lagoon and the associated riparian vegetation.

Public Facilities.
Purpose: This classification designates land used for public facilities such as government offices, schools, hospitals, and transportation facilities.

Appropriate Areas. Areas in which publicly-owned facilities are located as well as future sites for, such facilities are placed in this classification.

Open Space.
Purpose: This classification is intended to provide areas for recreational use, to designate areas which can serve as buffers or transitions between conflicting uses, and to recognize areas which for various other reasons such as soil and slope limitations should best remain open.

Appropriate Areas. This classification is appropriate for existing public parks, school grounds, and other recreational areas such as golf courses. Areas which have potential as buffer zones between conflicting uses such as industrial and residential are also appropriate. Land adjoining streams and areas with soil or slope conditions not suitable for building are appropriate for the Open Space classification because of their aesthetic value or their recreational potential.

Natural Resource Areas.
Purpose: This classification is intended to identify areas which have recreational as well as ecological value.

Appropriate Areas. Bullards Beach State Park and the adjacent dunes area, are appropriate for designation as Natural Resource Areas. The freshwater pond in the south jetty area is particularly deserving of a natural resource consideration by the Planning Commission when development is proposed in the south jetty controlled development area.

Introduction

This section analyzes the Bandon 1990 Comprehensive Plan as it relates to six specific geographic areas of the city. These areas have been delineated in terms of considerations of natural and man-made boundaries and, to the extent possible, common development characteristics. These areas are listed below, followed by a discussion of each area.

1. Bandon Heights
2. Southeast Bandon
3. Downtown-Woodland Heights
4. West Bandon
5 . Jetty-Beach Loop Road
6. South Bandon

Bandon Heights

This area is bounded on the north and east by the city limits, by Riverside Drive and Fillmore Avenue on the west, and by Highway 101 on the south.

Residential Development.
The development of Bandon Heights has been predominantly residential to date. Because of the existing development pattern and the proximity of Bandon Heights School and its adjacent play-ground area, the Plan proposes that the development focus of this area continue as residential (except for certain industrial and commercial areas which will be discussed below). The large area northwest of the junction of Highway 101 and 42—S and the smaller area northeast of the junction are proposed for Urban Residential development. Most of the existing homes in these areas are served by city water and sewers, and lines can be extended relatively easily to serve additional development. A third area designated for Urban Residential development lies between Highway 101 and Riverside Drive at the north city limits and is presently without city water or sewers. As pressure for additional housing increases in future years, and after other residential areas fill in to the south, it is recommended that the city extend water and sewer lines to this area so as to facilitate additional development.

Lower density residential development is proposed for the area on both sides of Spring Creek east of Highway 101 and south of the creek between the highway and Riverside Drive. Although city water service is presently planned for both of these areas, there are no plans for sewer service for either area, thereby reducing the feasibility of Urban Residential development. Lower density residential east of Highway 101 is further encouraged by the proximity of cranberry bogs to the east, which could be adversely affected by high-density residential development. Between the highway and Riverside Drive, the opportunity for “rural” living afforded by large lots, plus proximity of much of the area to Moore Mill both tend to reinforce the lower density residential

land use.

Commercial Development.
Most of the existing commercial development in Bandon Heights is located at the junction of Highways 101 and 42S. Two motels and a shopping center are located north of Highway 42S and east of Highway 101. The plan designates the area bounded by U.S. 101, Highway 42, Division Avenue and the east city limits as Commercial in keeping with the present zoning ordinance. Immediately north of this area, the Plan also designates as Commercial the block bounded by Division Street, First Street North, Highway 101 and North Avenue. Commercial development of these areas takes advantage of the high visibility to travelers on the two highways as well as relative ease of access.

Three half-blocks on the north side of Highway 101 between Fillmore and Michigan Avenues, as well as the block formed by Michigan Avenue, Division Street and the curved portion of Highway 101, are classified by the Plan as General Commercial.

Industrial Development.
At present there is no industrial development in Bandon Heights, although the old Moore Mill property, which is zoned CD-1, is located across Riverside Drive from the area.

Two areas outside the city yet near Bandon Heights are shown on the Plan as Heavy Industrial. They are the Rogge Lumber Mill on Highway 101 at Bullards Bridge and the Erdman Meat Packing Plant on Highway 42-S just east of the city limits. There is some residential development near the packing plant, but future residential development should not be sizable enough to create serious conflicts with either plant. The present residential development occurred after the establishment of the packing plant. Further development and expansion of these two industrial activities is encouraged.

Open Space.
The playground area of the Bandon Heights Elementary School offers some close—by recreational opportunities for residents of Bandon Heights. Located near the school is a cemetery which has potential as “passive” open space, offering a visual contrast to nearby residential development. The Plan proposes that the area along Riverside Drive west of the school and cemetery and running south to Ferry Creek be maintained as open space for the purpose of creating an integrated buffer area between the Moore Mill site and the city’s sewage treatment plant on the west, and residential areas and the school on the east.

The Plan proposes open space corridors along both Spring and Ferry Creeks. The city could possibly coordinate limited development of these corridors, perhaps including construction of hiking trails, benches or related facilities. The main point is to call attention to these natural amenities and make them available for the enjoyment of the general public.

Southeast Bandon

Harlem Avenue, Highway 101, and the south and east city limits form the boundaries of this area, which is bisected by Ferry Creek. The Plan proposes that Southeast Bandon develop primarily as a residential district, with particular emphasis on retention of the area’s present open character to a

large degree.

Residential Development
The Plan proposes that the area north of Ferry Creek and west of June and Michigan Avenues be developed as Urban Residential. This classification is compatible with both existing development and the Bandon Zoning Ordinance. Water and sewer lines presently serve part of the area and could be extended to accommodate additional development.

The area south of Ferry Creek and immediately east of Harlem Avenue is recommended for less dense residential development. This area is presently without water or sewer services. Although nearby water lines could be extended to serve the area with little difficulty, sewer service would not appear highly feasible within the planning period.

The Plan proposes that the extreme southeast corner of the city be designated for Planned Residential development. This is definitely a long—range proposal, with implementation dependent on sufficient development pressure, extension of water and sewer lines, and most likely private acquisition of a large number of city and county—owned parcels. (Public ownership also poses a barrier to private development to much of the Harlem Avenue area discussed above.)

Commercial Development.
The Plan recommends that the blocks between the highway and Third Street East from June Avenue to the city limits be retained for Commercial development as presently zoned. This classification is appropriate for the same reasons cited regarding the Bandon Heights Commercial center, of which this area is actually a part. The Plan designates the block between the highway, Third Street, and Harlem and June Avenues as General Commercial to take advantage of the highway access.

Industrial Development.
The Plan proposes a Light Industrial designation for an area covering roughly two blocks between Michigan Avenue and the city limits directly south of the Commercial district. This area presently contains little development and could accommodate a moderate sized firm with minimum conflict with adjacent uses. It should be noted, however, that this area is presently zoned for residential use and any industrial development should be viewed as a long—range objective, so as to allow the gradual phase—out of existing residential development.

Open Space.
A major portion of Southeast Bandon is proposed for retention as open space. This area includes a wide corridor along Ferry Creek plus another corridor running south from the creek to the city limits in a line with Michigan Avenue.

In addition to the lack of water and sewer lines in this area, steep slopes of from 30% to 50% in these areas drastically lessen their potential as home sites. On the other hand, the presence of the creek and large amounts of publicly-owned land increase the desirability and feasibility of creating a greenway with considerable potential for recreational use.

Downtown Woodland Addition

This area is bounded on the west by Allegheny and Oregon Avenues, on the north by the waterfront and on

the east by Harlem Avenue, and on the south by the city limits. The Plan proposes an integrated pattern of residential, commercial and industrial uses for this area.

Commercial Development.
The Plan retains most of the existing Downtown and Woodland Heights areas for General Commercial development with the exception of Block 41 (except Lot 1) and Lots 6, 7 and 10 of Block 40, which are Residential, and Light Industrial areas needed to buffer conflicting uses surrounding the Heavy Industrial area.

The Plan proposes that the western boundary for commercial development be Allegheny Avenue from the city limits north to Fourth Street West. This recognizes prevailing land use patterns and serves to fill out the commercial area with little adverse impact on adjacent uses. Linked together by the City Hall, the Downtown and Woodland Heights commercial areas as outlined in the Plan should offer sufficient land to contain foreseeable General Commercial development within the planning period.

Industrial Development.
An undeveloped area in the Woolen Mill Addition is available for light industrial development. This area is located near Highway 101, between Elmira and Grand and generally associated with the Bandon Cheese Factory. This area is served with city utilities.

The Portland Addition area is associated with the Douglas Pacific Veneer Plant. The Plant has expanded both In terms of production and stagin9, log storage areas. The plant management has also engaged in noise reduction activities.

Recent business activity in the vicinity of the Veneer Mill includes several new Light Industrial facilities, including an e1ectronics manufacturer, a cabinet shop and a proposed warehouse, repackaging business.

Most of the Portland Addition is planned for industrial development, a1though efforts are occurring to develop affordable housing on lands south of 14th Street, east of Grand, west of Harlem and north of 19th streets, along with lots 1 thru 10 and 27 thru 36 of Block 12, Portland Addition (occurring west of Grand Avenue).

This residential area is to be buffered from the existing mill operational area by a 300 foot buffer area, zoned for Light Industrial uses, this buffer area includes Block 1, Portland Addition, along with the vacated 13th Street and 14th Street ROW's.

By orienting the residential development to access from Harlem via Bills Creek Road, it is intended to locate the residential activity closer to existing residential areas and zones, away from heavy industrial areas and zones. (Ord. 1326 3-94)

Residential Development.
A key element of the Plan in terms of residential use in the Downtown-Woodland Heights area is the Mobile Home Residential area between Delaware and Harlem Avenues. The city plans to extend sewer lines into this area including an interceptor line along Fillmore Avenue. With the addition of sewers, this area will be available for those who wish to buy lots on which to place mobile homes, as well as for possible mobile home parks. At the same time, conventional housing

would also be permitted. The concept embodied in this type of area has several desirable features: First, the area provides a transition between the adjoining Light and Heavy Industrial, Commercial, and Urban Residential areas. Second, this type of area recognizes the growing popularity of mobile homes as an alternative to generally more expensive conventional housing. Finally, mobile homes could be relocated with relatively little difficulty in the event of expansion of adjacent uses.

East of the proposed Mobile Home Residential area, the Plan recommends continuation of the - Residential area for the Southeast Bandon area. Water is available to much of the area at present, but intensive development should be discouraged unless sewer service is provided.

Urban Residential development is proposed for the area located between the two commercial areas on the north and south, the City Hall on the west and the Light Industrial and Mobile Home Residential areas on the east. This area presently has water and sewer service which can be expanded to accommodate greater densities. Proximity to shopping areas should encourage continued development of this district.

Marine Activity Areas.
The Plan that the estuary and lands that border the estuary be managed in accordance with the provisions of the Estuary Management Plan and implementing ordinances (the Shorelands Overlay (SO) Zone, Water (W) Zone.

West Bandon

This area is bounded on the east by the commercial districts and the highway, on the west by Ogden Avenue (Beach Loop Road), on the north by the cliff (and the waterfront easterly from the Robertson concrete plant), and on the south by the city limits and Tupper Creek.

Residential Development.
West Bandon is presently the city's major residential area, and the Plan proposes Residential development for all areas not otherwise specified. Water and sewer lines are relatively extensive in the area and expansion of existing lines as needed does not appear to pose major technical problems.

Schools, shopping areas, the city park and beaches are all within relatively easy walking distance of most of the area. These factors should all serve to encourage the continued filling in of this residential area.

Commercial Development.
The Plan proposes Commercial development for the area north of First Street West between Alabama Avenue and the concrete plant. The area has a number of craft shops located there which create the potential for an attractive waterfront grouping of small businesses selling a variety of locally—manufactured goods.

Industrial Development.

The Plan does not propose industrial development for the area other than the area presently used by the

existing concrete plant. The area along First Street West could be used for industrial development as an alternative to the Commercial use proposed above, but it is submitted that this area represents a unique opportunity for development of a commercial center with a distinctively local flavor.

Open Space.
In addition to the existing city park and the school grounds, the Plan proposes open space corridors along Tupper and Gross Creeks similar to those proposed for Spring and Ferry Creeks in Bandon Heights.

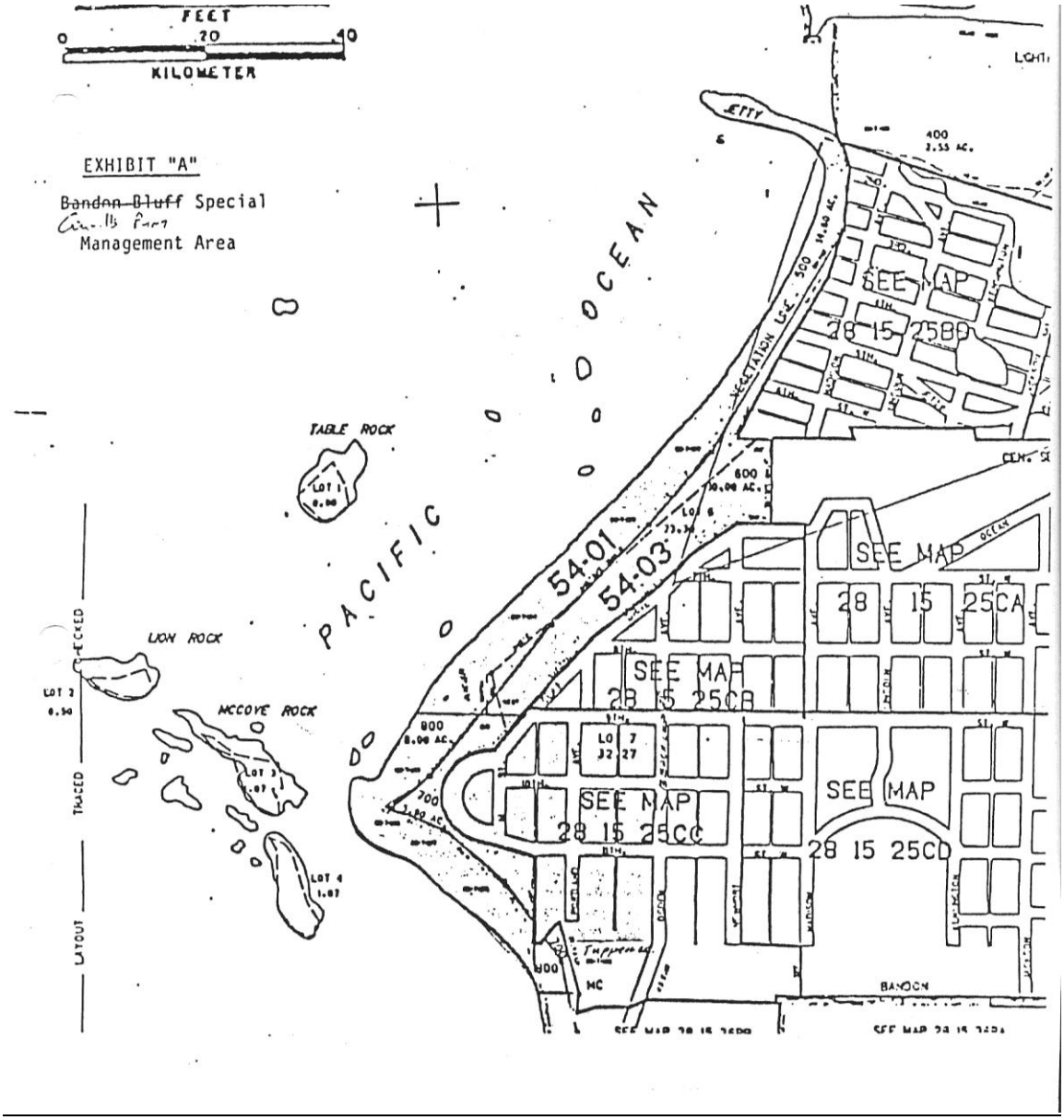
Coquille Point.
Coquille Point represented the major topic of discussion for the City of Bandon between 1988 and 1991. The discussions centered upon development/non-development issues. The discussions quieted in late 1990 when it became apparent that the U.S. Fish and Wildlife Service would purchase approximately 45 acres of land on and near Coquille Point, including beach and bluff areas extending towards the Jetty and the cliff top promontory area.

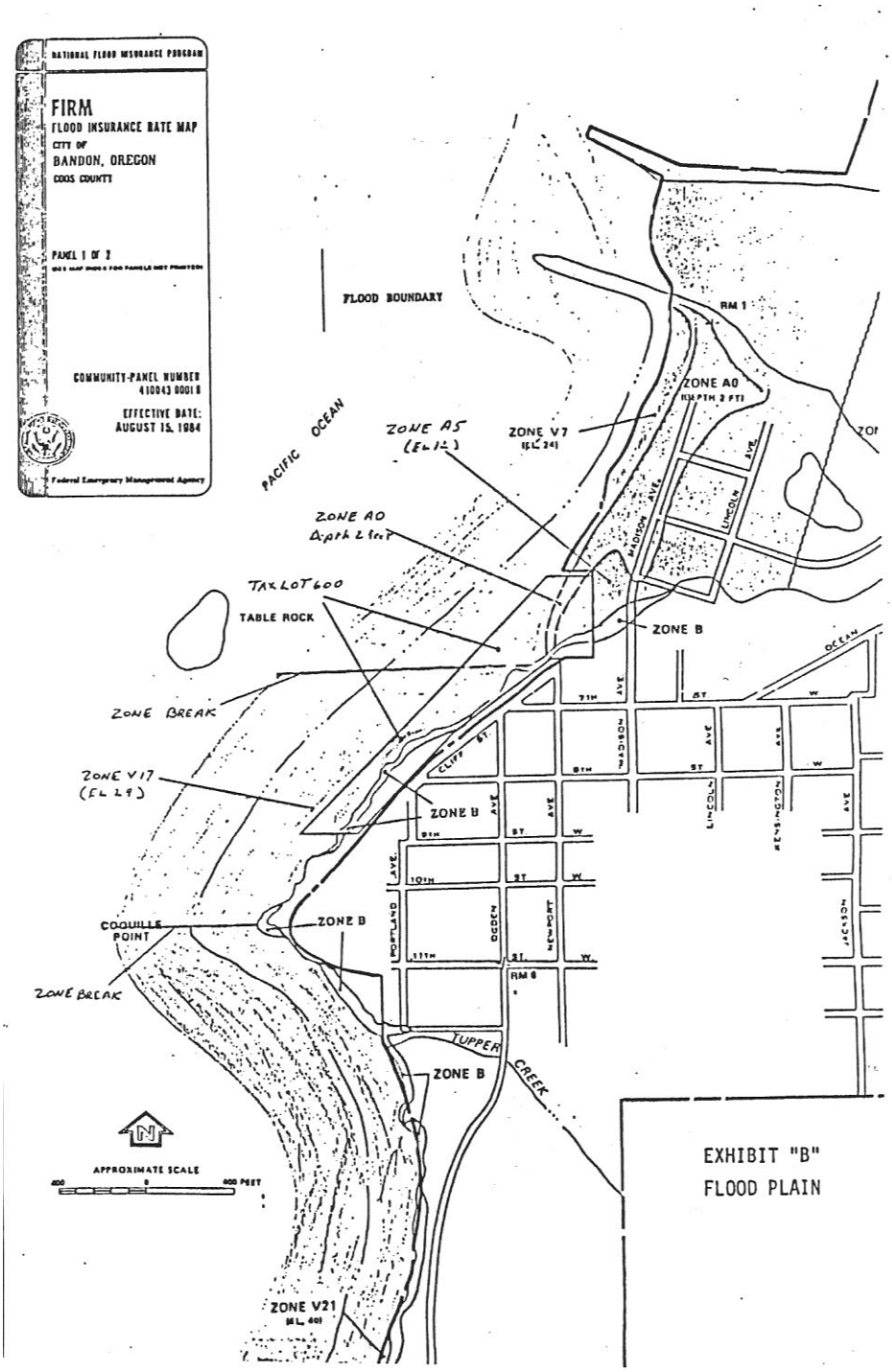
While the Coquille Point discussions were occurring the City was engaged in the State mandated comprehensive, Periodic Review process. Both governmental entities recognized that other Comprehensive Planning issues needed to be concluded and that it was appropriate to "segment" the Coquille point area from the overall Periodic Review process. The map on page 151b shows the property that was temporarily withdrawn from the review process, including tax lots 500, 600, 700 and 800, Map # 28-15-25. The map on page 151C shows the lands acquired by the U.S. Fish and Wildlife Service and added to the Oregon Islands National Wildlife Refuge. The map on page 151d shows the Zoning Districts as applicable to the general area of coquille Point, two Zoning Districts are evident, the Natural Resource Open Space Zone as applicable to the lands owned by the Federal Government, and the Controlled Development 1 Zone as applicable to privately owned lands in the vicinity.

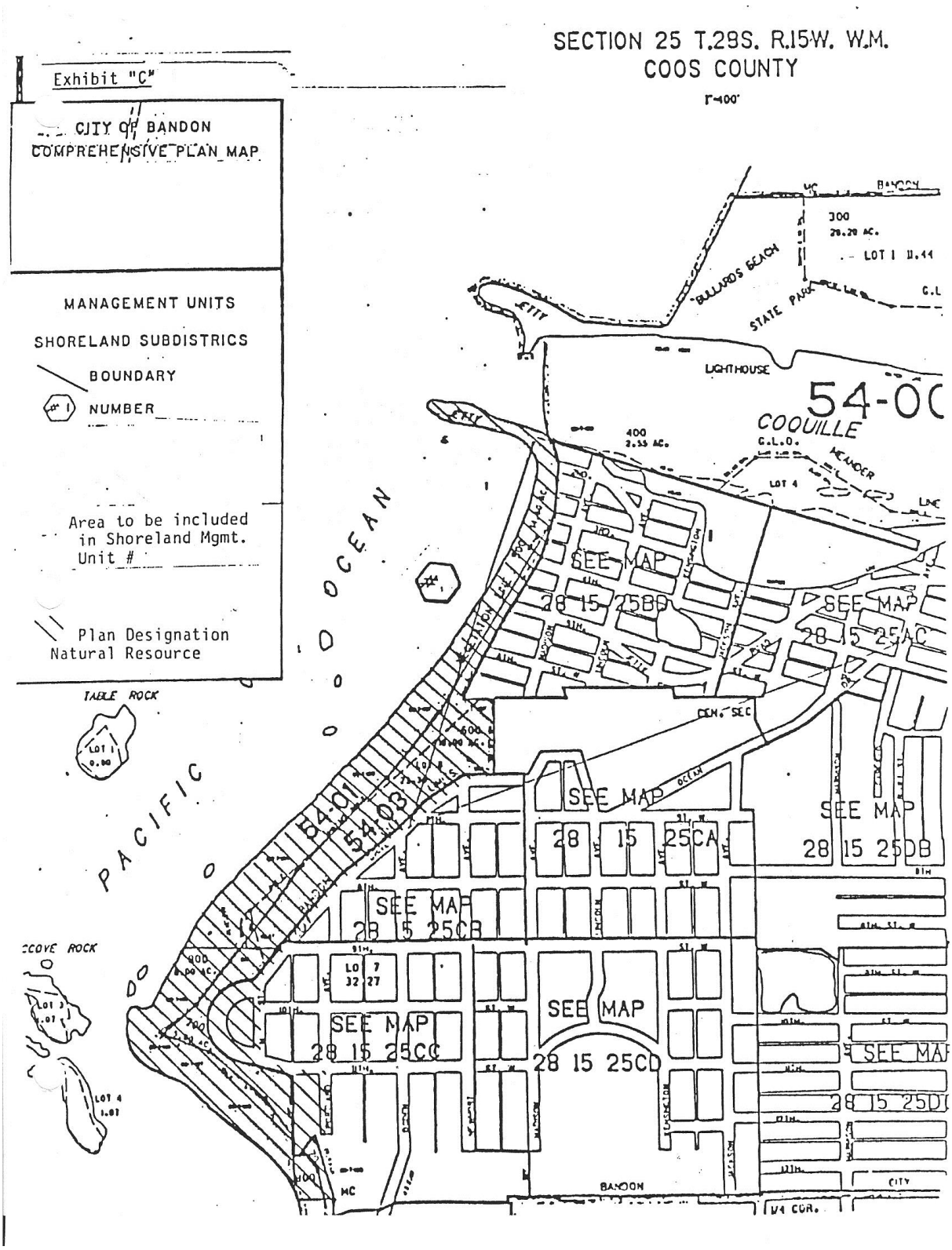
USFW began working on design concepts for the Coquille Point area and presented their initial concepts in an Interpretive Prospectus, July, 1990, the illustration on page 151E, is from the Prospectus and represents the Coquille Point site rehabilitation and restoration conceptual plan. The site is to be restored thru the use of native materials and vegetation, creating a quality site for public use.

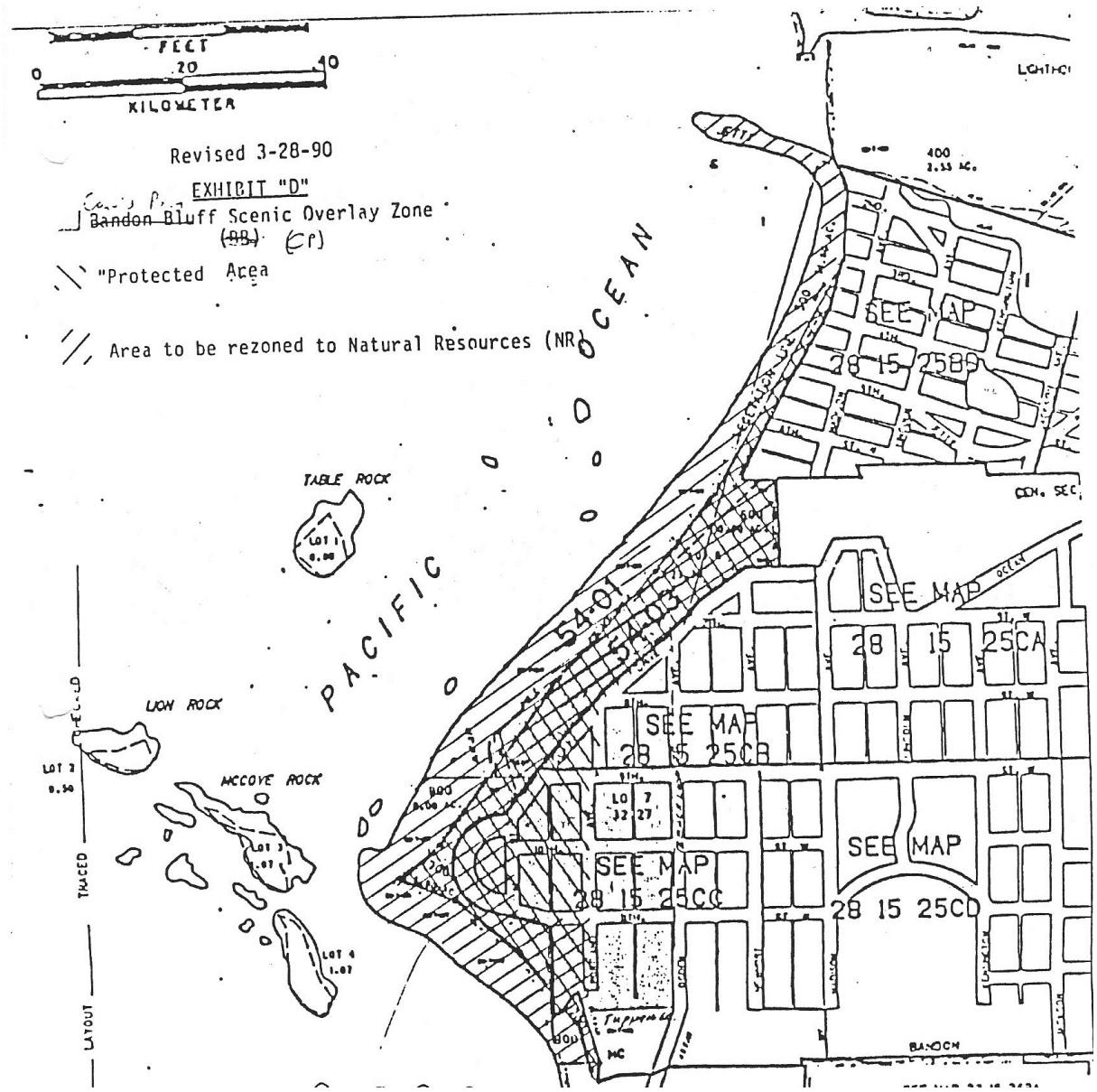
The City at the request of USFW vacated all the streets and alleys in the project area. The vacations occurred in August, 1993 and include portions of 11th Street SW, 10th Street SW, 9th Street SW, Portland Avenue SW, Cliff Drive and H Street, along with the alleys in Blocks 25 and 27, West Bandon Addition. The City has granted USFW the necessary property right to utilize portions of the remaining 11th Street and Portland Avenue right of ways for vehicular and pedestrian access to the refuge area.

The privately owned properties in the vicinity are available for development under the controlled Development provisions of the Bandon Zoning Ordinance. The establishment of the Wildlife refuge necessitates that when the neighboring private lands are proposed for development activity that special consideration occur. (Coquille Point included by Ord. 1335, August 15, 1994)


FEET
0
20
40
KILOMETER
EXHIBIT "A"
~~Bandon Bluff~~ Special
Management Area
PACIFIC
OCEAN
TABLE ROCK
LOW ROCK
MCCOVE ROCK
54.01
54.03
SEE MAP
28 15 25BD
SEE MAP
28 15 25CA
SEE MAP
28 15 25CB
SEE MAP
28 15 25CC
SEE MAP
28 15 25CD
BANDON


NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
CITY OF
BANDON, OREGON
COOS COUNTY
PANEL 1 OF 2
COMMUNITY-PANEL NUMBER
410043 0001 B
EFFECTIVE DATE:
AUGUST 15, 1984
Federal Emergency Management Agency
FLOOD BOUNDARY
PACIFIC OCEAN
ZONE A5
(EL 12)
ZONE V7
(EL 24)
ZONE A0
Depth 2 feet
TAX LOT 600
TABLE ROCK
ZONE B
ZONE BREAK
ZONE V17
(EL 29)
COQUILLE POINT
ZONE BREAK
UPPER CREEK
ZONE V21
(EL 40)
APPROXIMATE SCALE
EXHIBIT "B"
FLOOD PLAIN


SECTION 25 T.29S. R.15W. W.M.
COOS COUNTY
Exhibit "C"
CITY OF BANDON
COMPREHENSIVE PLAN MAP
MANAGEMENT UNITS
SHORELAND SUBDISTRICTS
BOUNDARY
NUMBER
Area to be included in Shoreland Mgmt. Unit #
Plan Designation Natural Resource
PACIFIC OCEAN
TABLE ROCK
COVE ROCK
BULLARDS BEACH
STATE PARK
LIGHTHOUSE
COQUILLE
54-01
54-03
SEE MAP 28 15 25BD
SEE MAP 28 15 25AC
SEE MAP 28 15 25CA
SEE MAP 28 15 25DB
SEE MAP 28 15 25CB
SEE MAP 28 15 25CC
SEE MAP 28 15 25CD
BANDON


FEET
0
20
40
KILOMETER
Revised 3-28-90
EXHIBIT "D"
Bandon Bluff Scenic Overlay Zone
(BB)
"Protected Area
Area to be rezoned to Natural Resources (NR)
PACIFIC OCEAN
TABLE ROCK
LOW ROCK
MCCOVE ROCK
SEE MAP
28 15 25BB
SEE MAP
28 15 25CA
SEE MAP
28 15 25CB
SEE MAP
28 15 25CC
SEE MAP
28 15 25CD
54.01
54.03
BANDON

Jetty-Beach Loop Road

This area includes the entire Controlled Development Area as shown on the Plan map plus all remaining area within the city limits south of Tupper Creek.

Controlled Development.
The key element of the Plan with respect to the Jetty-Beach Loop Road area is the proposed Controlled Development Area (CDA) Bandon is the only city in Coos County--and one of the relatively few cities on the Oregon coast--which offers a scenic route comparable to Beach Loop Road or the quantity of home sites with good ocean views found along this road and in the Jetty area.

Homes on the Jetty are characterized by a rustic, low-profile architectural style frequently associated with small coastal villages. The purpose of the CDA concept is to encourage development which will complement the Jetty's present character, and which will cause minimum disruption of the ocean vistas afforded by properties along the bluff.

The Plan proposes that a balanced mixture of uses be allowed in the CPA, including Tourist Commercial development, single and multi—family homes and public recreation areas. Successful implementation of the CPA concept will require careful determination of (a) the uses to be allowed in the CDA and (b) the specific controls to be used to ensure that development in the CPA will be compatible with the goals pertaining to the Jetty and bluff.

Commercial Development.
The Plan proposes that Tourist Commercial development outside of the CDA be clustered around existing locations (as shown on the Plan map). Clustering of Tourist Commercial development is consistent with the Bandon Zoning Ordinance and serves to prevent a pattern of strip development along the Beach Loop Road.

Residential Development.
Outside of the CPA, the Plan proposes Urban Residential development between Beach Loop Road the city limits from Tupper Creek south to the golf course. Water service is available from a main extending along Beach Loop Road south to Johnson Creek. Plans for a sewer extension project along Beach Loop Road have been completed. Given the demand for ocean view home sites, residential development of this area appears logical and feasible.

Residential development is proposed for the incorporated areas adjoining the golf course to the north and south. Extension of water and sewer service to the area within the planning period is anticipated. The proximity of these areas to the golf course makes them especially attractive for development of homes on relatively large lots. These considerations make residential development a reasonable course of action for this area.

Open Space.
In addition to the ocean beaches, the Jetty—Beach Loop Road area contains five public park areas as well as a public golf course. Development of the park areas can probably be limited to parking areas, rest rooms, beach access trails and possibly picnic facilities at some locations.

Adequate beach access should have the first priority regarding development of present sites and

acquisition of additional land.

South Bandon

South Bandon includes the urban growth boundary area south of the present city limits. This area represents the major direction of urbanization beyond the present city limits, and much of the area may ultimately become part of the city. Therefore, the Plan proposes guidelines for development of this area so that its growth will be an asset rather than a liability to the city.

Potential Annexation Areas.
Based on a consideration of existing development patterns together with certain physical characteristics, the Plan proposes that the urban growth area be considered for future annexation to the city. Such annexation would occur in stages, as demand for the full range of city services increases due to continuing development.

Residential Development.
Within the proposed annexation area, the Plan indicates Residential development for two areas adjacent to the present city limits. These areas contain the major concentration of suburban residential spillover in Bandon to date. Extension of existing water and sewer lines would not appear to pose any major problems; consequently, these areas would be logical for annexation within a relatively short period of time. Possible residential development beyond the area shown on the Plan map should be viewed as extremely long range and should not be encouraged.

The Plan recommends that the major portion of the proposed annexation area be classified for Planned Residential development. To date, development of this area has been relatively sparse and most of the land is in fairly large ownerships. Soil suitability for residential construction is varied, but there are many large areas of buildable soil. Because of the above conditions, the Planned Residential classification seems particularly appropriate in that it invites innovative approaches to residential development through Planned Unit Developments or imaginative sub-division arrangements. Such approaches afford opportunities to achieve optimum development of the buildable areas while incorporating the less suitable areas into these developments as open space. Streets can be planned in these areas so as to encourage slower traffic speeds than those usually associated with the conventional grid street configurations of older urban areas. It should be emphasized that any new development in this area would require extension of city water and sewer services. This condition should facilitate an orderly pattern of development by means of phased annexation and utility extensions.

Commercial Development
The city encourages the infilling and ongoing development occurring in the existing commercial areas. These areas are associated with Highway 101, the Highway 101 and Highway 42 intersection, the Old Town area and the Post Office Woodland Heights area.
There are lands in the Urban Growth Area that either have existing commercial activities or will be viable for commercial development during the tern; of this plan. These lands are located along

Highway 101 South of 17th Street and North of Seabird Lane.1

Commercial development of properties South of Johnson Creek is discouraged
The city recognizes that it has a "commercial strip" occurring along Highway 101 from Highway 42 on the North to the Seabird Lane area to the South. The continuation of this strip development is discouraged. Opportunities to alter the look of strip development through landscaping, architectural design, and mixed land uses are encouraged. Whenever possible developments occurring on properties with highway frontage shall direct their vehicle access areas to side streets or driveways providing access to multiple properties. When investigating opportunities for highway access, the safety and operational effectiveness of both the access and the highway will be considered.

The Bandon Comprehensive Plan recognizes the authority of the Coos County Plan in the airport area. However, the Bandon Plan suggests light industrial development in the vicinity of the Bandon Airport. Such a classification would pose minimal conflict with adjacent uses and would provide areas suitable for those types of firms which would derive particular benefit from being located near the airport. The major conditions for any development near the airport should be that (1) such development have an orientation to air service in some manner and (2) all developments should be carefully planned so as not to conflict with safe operation of the airport or with its future expansion.

Agricultural Uses.
There are no cranberry bogs included in the urban growth area. There are numerous bogs near some portions of the urban growth boundary, however, conflicts are expected to be minimal. The primary concern is to ensure that cranberry bogs are retained in agricultural uses.

PHYSICAL CHARACTERISTICS

Geographic Setting

Bandon occupies what can well be described as a natural town site, a marine terrace of high, flat ground overlooking the mouth of the Coquille River. There is enough level land to accommodate a fairly large population, and a bluff on two sides affords a fine view of the ocean and the river and the coastline to the north. The long sandy beach below the bluff, the high rocks offshore and the mouth of the river flanked by rock jetties are features that help give Bandon its special quality.

The town lies 23 miles south of Coos Bay on the Oregon Coast Highway (U.S. 101). Up to 1961, when the Davis Slough cutoff was first opened, southbound traffic reached Bandon circuitously through Coquille. The new stretch of highway has greatly improved access to Bandon from the Coos Bay area. Additionally, improvements to Highway 101 in Curry County have increased coastal traffic from the south.

Bandon is reached from Interstate 5, a major north—south route, by way of Oregon Highway 42 from south of Roseburg. This state primary highway is now being upgraded to provide faster access to the coast from

the Southern Oregon cities and for California traffic northbound on Interstate 5, continued improvement of Highway 42 will improve access to Bandon from Interstate 5.

The nearest rail service is at Coos Bay, where a branch line of the Southern Pacific Company extends from the main line at Eugene. The nearest commercial airline service is at North Bend. The State Board of Aeronautics owns a airstrip just south of Bandon.

The Bandon area has a mild, marine climate. Mean temperature is about 50 degrees in January and 60 degrees in July. Rainfall averages about 60 inches a year. From May through August the coastline is subject to fairly strong prevailing winds from the northwest. In the winter the winds are from the southwest, and except for occasional winter storms they are apt to be more benign.

The mild, moist climate supports a rich natural ground cover of salal, wild rhododendron, pine, cypress, and a remarkable stand of gorse. The pleasure passing motorists may take from the brilliant yellow of the gorse in full blossom is in delicate balance with the feelings local residents have for what is perhaps less a flower than a fire hazard.

Geological Characteristics

The SCS's soils map shows the general locations of the various geological formations found in the Bandon area. Below is a brief description of each of the formations indicated on the map.

Quaternary Alluvium (Qal). This formation consists of varying proportions of unconsolidated clay, silt, sand and gravel.

Marine and Stream Terraces (Qt). These terraces consist of elevated, deposits of loosely compacted, rudely bedded sand with pebbly horizons near the base and with organic matter locally. As mapped, these terraces include the Coquille Formation, which consists of poorly indurated conglomerate, sandstone, mudstone and clay.

Otter Point Formation (Jop, Js). The Otter Point Formation is composed primarily of highly sheared melanged sedimentary rock (Jop) with subordinate volcanic strata, pods of chert, and bodies of blueschist (Js).

Coaledo Formation (Tec). This formation consists of three members. The lower and upper members consist of coal-bearing, cross-bedded tuffaceous sandstone. The middle member consists of thin-bedded siltstone with minor sandstone.

Soil Limitations and Urban Development

The classification of soils for agricultural purposes has been practiced in Coos County for many years. The relationships that exist between soils and crops, cultivation, grazing, and forestry has been extensively studied in the past. Of more recent origin, however, is the study of relationships between soils and urban development. The physical qualities of the various soil types in a community have been recognized to be of paramount importance not only to farmers, but also to civil engineers, urban planners, sanitarians,

architects, and land developers. The mismatching of soil types and urban developments can be a costly error. Besides being costly, errors of this type can endanger the health, safety and welfare of the public. Foresight in using qualified soils interpretations and individualized inspections of land parcels can avoid the misuse of certain soils for urban developments. Soils inspection can help ensure that urban developments are planned for locations and areas where the soils are capable of accepting the demands that the planned uses place upon them.

Some limitations of the soil map which is discussed in this section should be noted. First, the map is not of great detail and is not a substitute for an actual investigation of the soils in a specific parcel of land. Soil mapping is accurate only on a relatively large scale and within any given plotted soil area there can be important variations, that is, small bodies of contrasting soil within the mapping unit. Therefore, special note should be made of the fact that this soil map does not replace onsite inspections and testing by qualified personnel. Secondly, the soil interpretations assess the limitations of the soil in its natural or undisturbed state. Inherent problems and limitations can often be overcome by man—made improvements. The soil limitations map indicates the probable seriousness of the soil problem and thus the probable scale of size of investment required to correct the problem. Thirdly, 'the map may give a false impression of the lands capability for urban uses. Almost all the land in the city limits and urban growth boundary is urbanizable.

The land use ratings used in the soil map are slight, moderate, and severe, and were developed by the Soil Conservation Service (SCS) of the United States Department of Agriculture. If the rating is slight, little or no adjustments are needed in use and no limitations are shown. A moderate rating means that some adjustments are needed in use. If the rating is severe, then extensive adjustments are needed before the soil is suitable for, specific purpose.

Soil Limitations Map for the Bandon Area

The map, in Figure IV-9 showing soil limitations in the Bandon area is based on data compiled by the Soil Conservation Service from a 1965 field survey and a 1977-1978 update. The map shows the limitations of various soils for (1) dwellings without basements and (2) septic tanks. Soil in darkly shaded areas has slight limitations for dwellings and moderate limitations for septic tanks. Areas with light shading have moderate limitations for dwellings and severe limitations for both dwellings and septic tanks. It should be noted that the soils do not pose development restrictions if sewer and water are provided.

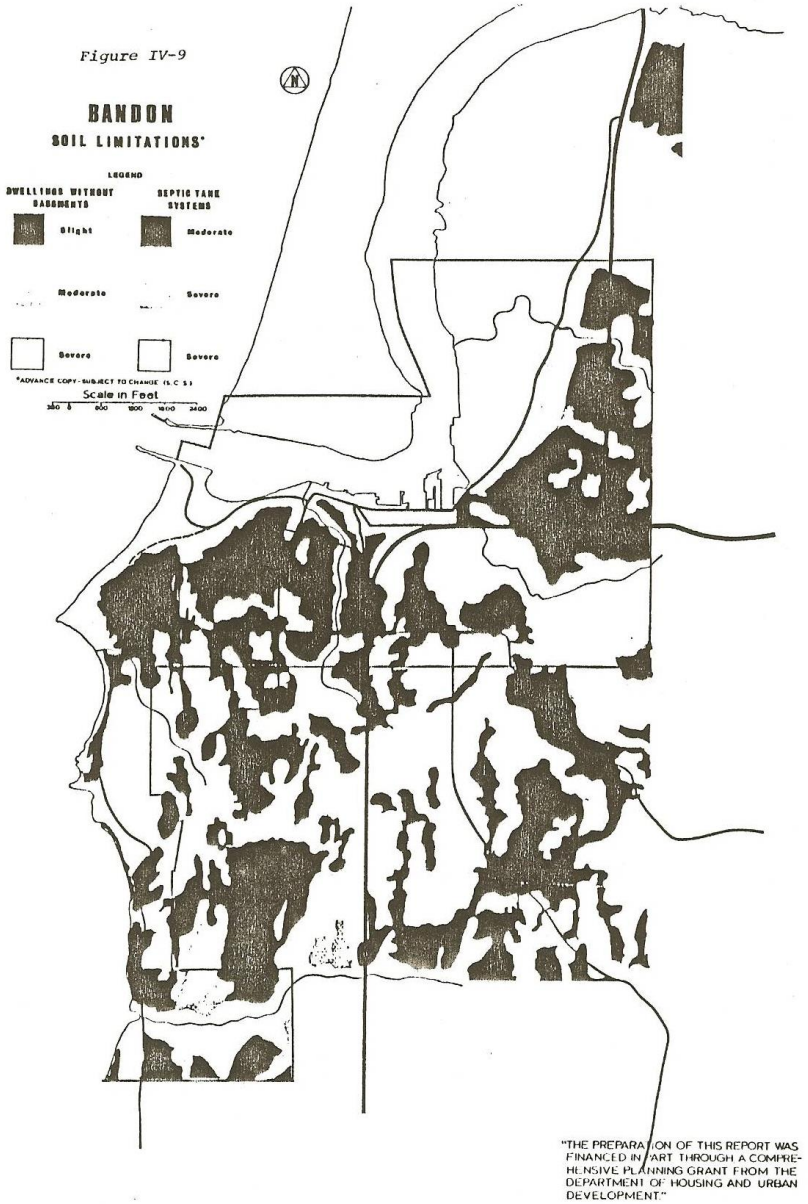


Figure IV-9
BANDON
SOIL LIMITATIONS*
LEGEND
DWELLINGS WITHOUT BASEMENTS
SEPTIC TANK SYSTEMS
Slight
Moderate
Moderate
Severe
Severe
Severe
*ADVANCE COPY-SUBJECT TO CHANGE (S.C.S.)
Scale in Feet
"THE PREPARATION OF THIS REPORT WAS FINANCED IN PART THROUGH A COMPREHENSIVE PLANNING GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT."

Limitations on Development

Within the city limits of Bandon, soil in the majority of areas currently containing significant residential development possesses slight limitations for dwellings without basements. There are variations from this pattern along the bluff, on the south jetty, along Riverside Drive and in the Southeast corner of the city. Along the bluff the soil is sandy and there are some steep slopes. The south jetty area is also sandy and the bluff which provided a "backdrop" to the beach community has steep sloped. The bluffs along the ocean and estuary are characterized by small areas of slump and slides as well as by small areas of very stable slopes. It is hard to know which areas of seemingly stable terrain may become unstable once they are developed. For those parcels that are steep or may be unstable, expert opinion should be required prior to development. There are several buildings on the face of the bluff which have been unharmed by slump or ocean flooding for decades.

Along Riverside Drive, the land is low and soils are not firm. This same condition exists in the southeast portion of the city along Ferry Creek. these soils have either moderate or severe limitations. Again, however, an on site investigation should be made to determine the exact limitations of each parcel prior to development.

There are few areas within the city where soils will limit development, such as the jetty and some areas on Riverside Drive.

Soils south and north of the city limits are generally suited for development, while there are some fairly large areas with only slight limitations for development, the major portion of the soil is suited for agricultural uses such as cranberry bogs. The urban growth boundary recognizes the importance of agricultural uses and there is adequate land outside the boundary for expansion of the cranberry industry.

With respect to suitability for septic tanks, virtually all soil in the Bandon area has either moderate or severe limitations. Areas on the map which show slight limitations for dwellings without basements have moderate limitations for septic tanks, and areas with moderate or severe limitations for dwellings without basements have severe limitations for septic tanks. Development of lands in the urban growth area will in most cases, require sewer and water hookup. The soils are capable of development if the proper municipal services are installed.

In summarizing soil characteristics in Bandon area, soils in those areas inside the city which contain most of the existing residential development are capable of accommodating development, assuming the availability of sewers. Outside the city limits, soils are also generally capable of accommodating development if sewers are available. Soil conditions could encourage development of areas inside the city limits until realistic density levels are reached. At the same time, soil conditions could discourage development outside the city limits until demand for building sites becomes sufficient to make orderly extensions of water and sewer lines economically feasible. There are some areas contiguous to the city limits which are in the urban growth boundary that may be developed and annexed prior to the development of certain areas inside the city.

Flood Plain

There is relatively little area affected by flooding in the city limits or urban growth area. The primary area of concern is the Coquille River. Settled areas in the flood plain are few. There are some residences and Moore Mill in the Riverside Road area, there is significant development in the Old Town area, there are a few houses in the Ferry Creek area, there is minor development in the south jetty area, and there are a few houses at the mouth of Johnson Creek. An additional area subject to flooding from the ocean is a low elevated beach just to the west of the Beach Loop Road - Seabird Lane Intersection. There is a public beach access and driveway down to the elevated beach area where a house exists. Storms from the winter of 1977-1978 eroded a few feet of the property and driftwood exists in the area of the house. Figure IV-10 shows the flood hazard boundary.

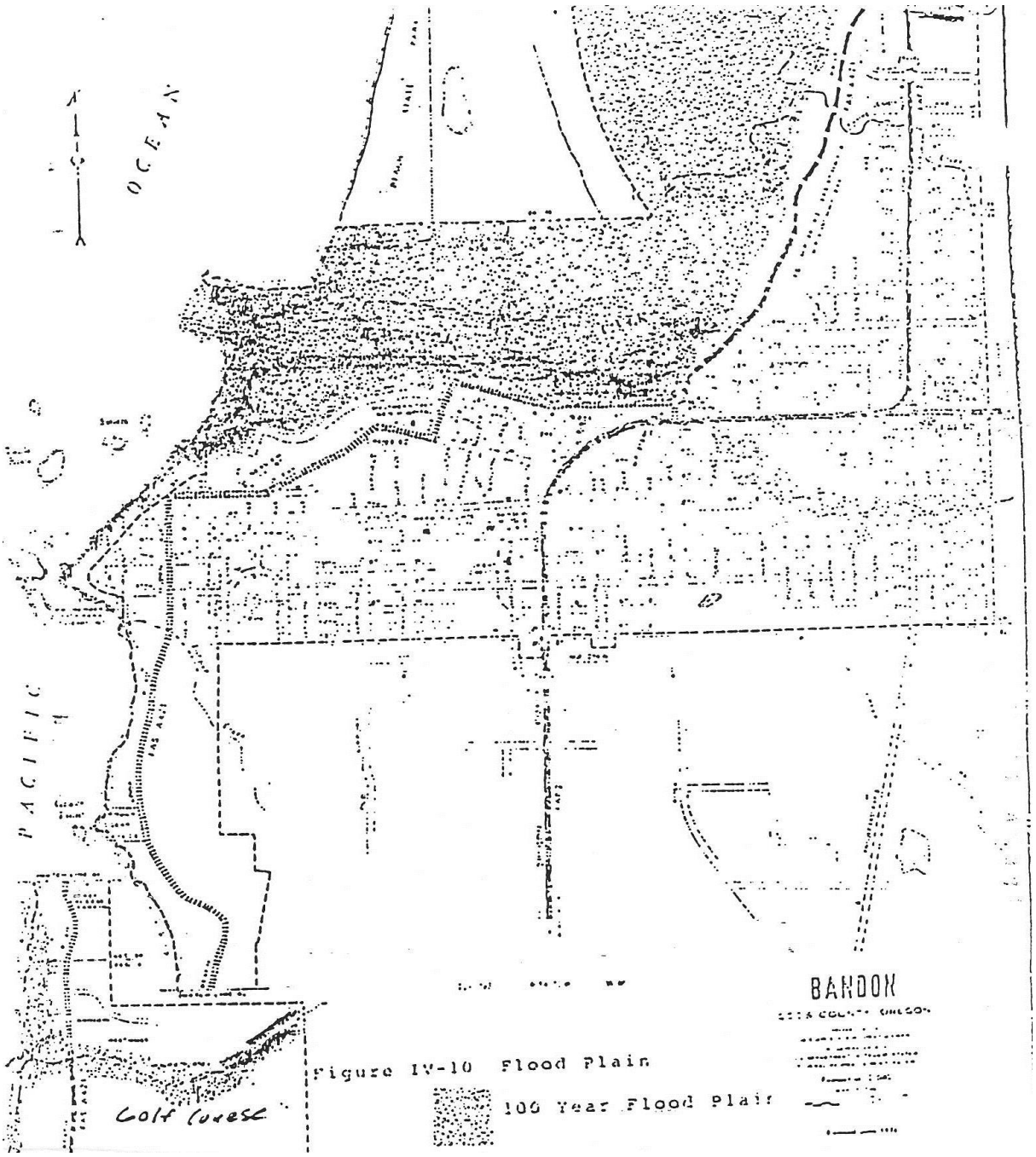


Figure IV-10 Flood Plain

CHAPTER 4: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

Only three types of natural hazards are identified as affecting the City of Bandon, 1) coastal erosion of headlands, 2) flooding of the low lying areas adjacent to the river, especially in the marsh area in the northern part of the city, and 3) wind. Coastal erosion hazards occur on the ocean front of the City. The headland is composed of heterogenous, pre-tertiary bedrock. Erosion is directed along the structural weakness such as shear zones, faults, etc.

COASTAL EROSION OF HEADLANDS

Regionally, the rate of erosion is extremely slow, and in some areas there has been little or no change in the last 100 years. In Bandon, for example, many old dwellings perched on steep faces of sea cliffs have remained undamaged. In other places, such as Bandon viewpoint, slides and noticeable erosion of weaker bedrock and overlying terrace material are apparent. Generally, the rate of erosion is very slow--less than one inch per year to almost negligible.

FLOODING OF LOW LYING AREAS

The low lying area near the Coquille River is subject to flooding in periods of exceptionally higher runoff. Such areas are under the HUD Flood Plain Insurance Program. The flood hazard is discussed above.

THE WIND

The wind hazard is not great except for infrequent severe storms, such as the Columbus Day Storm of 1962. During the fall, Winter and Spring, storms blow over the coast and occasionally a strong storm will occur. The problems created by the wind are not so great. There are occasionally power outages for short periods, but there are no cases of houses being blown down or other serious problems.

Extreme wind recurrence shown in Figure IV-l0a, indicates that hurricane force winds can occur in the Bandon area. The potential force is great enough to overturn mobile homes, automobiles, and snap trees. Combined with the common occurrence of a rainstorm, damage could be substantial. The figure shows that 90 mile per hour winds can be expected to recur every 100 years in the Bandon area. Please note, however, that the above does not mean that 90 m.p.h. wind occurred in 1962, another 90 m.p.h. wind could not occur until 2062. A 90 m.p.h. wind could occur anytime regardless of how long the last 90 m.p.h. event occurred.

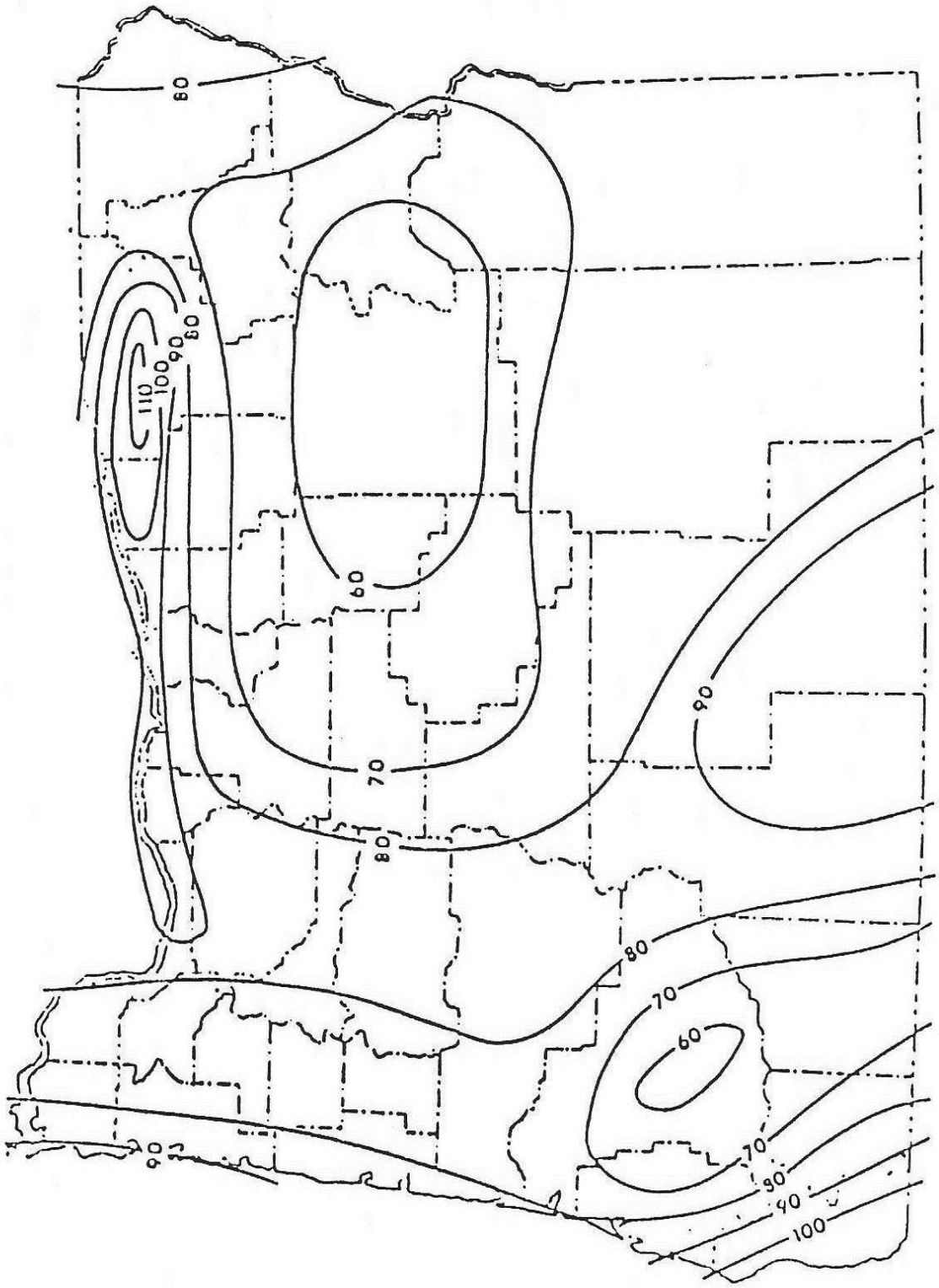
STEEP SLOPES

Several localized areas of steep slopes are encountered in the city. These slopes are along , along the bluff overlooking the beaches and the Jetty, along Riverside Drive, and at the north end of Delaware and Chicago Ave. Developments in steep slope areas are required to have geologic hazard reports to ensure that the development does not become a hazard to itself or others.

No earthquakes have originated in Coos County over the last 100 years, though increasing evidence is

available that shows strong earthquakes occur about one time every 500 years.

Vibrations generated by quakes in California and the Puget Sound area have been felt in Southwestern Oregon, but no damage has been reported.



1991 BA

CHAPTER 5: INFRASTRUCTURE

(Adopted as CHAPTER 8 PUBLIC FACILITIES AND SERVICES in Ordinance Goal 11

INTRODUCTION

This chapter address Statewide Planning Goa1 11, Public Facilities and Services. The City of Bandon is responsible for operating and maintaining public facilities and providing services for its citizens.

PUBLIC FACILITIES

Sanitary Sewer Facilities

The City of Bandon operates a wastewater collection and treatment system to serve the residents of Bandon. The sewer treatment plant has been designed to handle 3 million gallons per day, with a current capacity of 1.2 million gallons per day. The current average flow is 300,000 to 500,000 gallons per day.

The sanitary sewer collection system is primarily gravity-fed, except for the areas which are below grade and are served by pump stations. Sewage is collected by a network of sewer main lines with four pump stations throughout the community. When the effluent reaches the plant it is run through a pre-treatment (muffin monster) and then into an aeration basin. There it is treated by the activated sludge process. Treated sewage is then run into the clarifier where it is allowed to settle and the superannuate is run through a disinfection (UV) system and discharged into the Coquille River. The resulting solid sludge is pumped into the aerobic digesters and allowed to digest for at least 60 days and then is transported by tank truck to a variety of approved sites. The city's sanitary sewer system meets Oregon Department of Environmental Quality standards and discharge requirements.

One of the capacity-limiting problems associated with the sanitary sewer system is a significant amount of inflow and infiltration (1/1) within the sanitary sewer system. This means that outside water is able to enter the system through various means, such as manhole covers, private service lines, and deterioration in sewer main lines, which may be cracked or have holes. Fresh water entering a sanitary sewer system lowers its effectiveness and capacity. Thus, during large storm events or higher-than-average tides, the sewer plant may be operating at close to capacity, although the actual amount of effluent is the same.

The City's basic policy on extension of the collection system is that it shall be paid for by the developer or charged to the benefitted area through a Local Improvement District. Any extensions done by developers will be at maximum depth and through the developer’s property as circumstances permit. Expansion of service to the Urban Growth Area will be allowed as treatment plant capacity allows, subject to City Council approval. This issue will be treated more thoroughly in Chapter 7, Housing and Urbanization, as it deals directly with annexation issues.

Funding for the operation of the sanitary sewer facilities is provided primarily by the Sewer Fund, and is also financed by revenues collected from the sale of sewage treatment services to utility customers. The City maintains a Sewer Reserve Fund into which funds are deposited and saved until needed for major plant repairs and improvements. The revenues collected through System Development Charges (SDC's) for new sewer installations are deposited into the Sewer SDC fund for use in various improvement projects

to upgrade and expand the capacity of the sewage collection and treatment system.

Water Facilities

The City of Bandon obtains its water supply from the Ferry/Geiger Creek drainage area, known as the Bandon Watershed. The watershed is currently in mixed private/public ownership and is under the jurisdiction of Coos County, although the City is a large landowner and will continue to acquire property when possible. The flow of these creeks is controlled by two small dams which store about a five-day supply of water. The creeks generally flow year-round, and produce a surplus of water. There are, however, concerns that the demand for water may outstrip supply, and the City is looking to acquire other potential water rights in the area.

Other usages on the creeks include water for the Bandon State Fish Hatchery, run by the Oregon Department of Fish and Wildlife, various cranberry growers, and homeowners in the watershed. A bypass to allow the City more water will be constructed around the hatchery to utilize water not needed by the hatchery.

The new 2-million gallon treated water storage tank and a new line into town was completed in late 1999. The old 1-million gallon tank was drained and the inside sandblasted and waterproofing reapplied. New filters were brought on line and renovation of the main treatment plant building and renovation of the clarifier was begun. All improvements of the $5.2 million project are completed, giving the City a total of 3 million gallons of storage capacity.

The City water supply is tested as required by the Safe Drinking Water Act and a report on the results is designed to inform the public about the quality of water and services delivered to users. The four step treatment process provides water that meets or exceeds federal and state requirements.

Water system maintenance involves locating and ensuring the good condition of the main lines, repairing of water distribution lines, periodic main line and fire hydrant flushing, installing and maintaining water meters and ensuring the quality of all work, whether done by City crews or by private contractors. All work is done in compliance with Health Division regulations and is performed under the Public Works Department and includes monthly reading of all water meters for water utility billing.

Water services are funded by the Water Fund with revenues coming from the sale of water to utility customers. The City formed a Water Resources standing committee to develop and implement both water quality monitoring and watershed protection.

Storm Drainage

The City adopted the Storm Drain Master Plan in 1999. It includes the analysis of existing conditions, system deficiencies, needed improvements, and financing mechanisms. The Plan was adopted without any financing mechanisms, and is hereby incorporated by reference.

Streets

The City has completed a full evaluation of its street system, which is contained in the Transportation System Plan (TSP).

City Parks

Parks acquisition and maintenance is recommended by the Parks and Recreation Commission. Park maintenance is performed by the Public Works Department, which includes repair, cleaning, and maintaining of various recreational facilities such as the City Park restrooms and playground equipment, Public Works also works with the Lions Club on Community Center maintenance, removing of downed trees and

vegetation, and mowing City property.

Funding for capital improvements is provided from the Capital Improvements Fund, and day-to-day maintenance is provided from the General Fund and the Parks & Recreation Fund, with the Electric Fund contributing money for operation of the Summer Recreation Program.

Electric Department

The City of Bandon operates a municipally-owned electrical utility. The Electric Department is responsible for a safe and reliable source of power to residential, commercial and industrial customers. The Bandon Electric service area includes Bandon and extends from the Coquille River south to Denmark, and from the Pacific Ocean east on Highway 42S to the Fish Hatchery, and along both sides of Highway 101.

The City purchases power from Bonneville Power Administration at a low preferential rate authorized for publicly-owned electric utilities and takes delivery at three step-down substations located at Bills Creek, Two Mile and Langlois. From these delivery points the Electric Department distributes approximately 5,000,000 KWH of power to 3,000 customers per month.

The Electric Department is charged with the maintenance of all electric lines, buildings, vehicles and apparatus used to distribute power to its customers. When the budget permits, the Department undertakes additional system upgrade work, such as replacement of overhead lines with underground lines.

The City is a member of the Oregon Public Power Agency with the cities of McMinnville and Milton-Freewater. This agency membership provides a[1other tie-in for preferential power and the membership will help to ensure that a future source of low-cost power will be available to Bandon's electrical utility and customers.

The activities of the Electric Department are operated primarily out of the Electric Fund, and are financed by revenues collected from the sale of electric power to utility customers. The City also maintains an Electric Reserve Fund, into which funds are deposited and used for major electric system repairs and improvements.

PUBLIC SERVICES

General Services

Under the direction of the City Council, the Administration Department is responsible for the overall management, administration, financial operations, and personnel supervision activities of the City of Bandon and the Bandon Urban Renewal agency. Major activities also involve City elections, records management and public information functions, as well as grant applications, grant administration, and the intergovernmental relations of the City. The Department includes the City Manager's office, the City Recorder's office, the Economic Development department, and the contract services of the City Attorney, Municipal Judge, and Fire Department.

The Finance Department is responsible for financial planning and budget preparation; accounting; water, sewer, and electric utility billings, collections and bad-debt recovery; budget control; liens and assessments; payroll; accounts payable and accounts receivable. The "front desk" functions at City Hall, including reception, telephone answering, and utility dispatch services, are also under the direction of the Finance Department.

The Planning Department plans and manages the developmental activities of the community to achieve an optimum pattern of urban development. Control is exercised over private sector activities through various regulatory ordinances, but principally through the Zoning Ordinances and Subdivision Ordinances. Development timing and pattern is also influenced by City expenditures on the infrastructure system. The Planning Department does zoning compliance reviews for Building Codes and maintains a separate review process for zoning compliance and enforcement.

Funding for General Services is primarily provided from the General Fund, with enterprise funds (Water, Sewer, and Electric Funds) providing a reimbursement for their share of

administrative activities related to the utility systems, and Urban Renewal providing reimbursement for management of those activities.

Library

The purpose of the Bandon Public Library is to obtain, organize and make conveniently available to all the people of the community informational, educational and recreational materials. These materials may be books, periodicals, newspapers, microforms, audiovisual items and computer databases. It is the policy of the Bandon Library to maintain up-to-date material in all fields of knowledge as well as on current issues and items of local interest within the constraints of each year's budget realities.

The Bandon Public Library is a member of the Coos County Library Service District, which receives its funding through a dedicated tax rate. Other members of the Service District are the libraries of Coos Bay, Coquille, Dora, Lakeside, Myrtle Point, North Bend, and Powers. The District also provides for the count-wide library computer system and for shared services, such as the courier van and outreach service to the jails and nursing homes. As a member of the Service District the Bandon Library serves all Coos County residents without charge.

Funding is provided primarily-out of the Library Fund, which receives most of its revenues from the Coos County Library District. Due to changes brought about by Measure 50, the District now has a permanent tax rate replacing the former tax base. The use of this money is governed by the intergovernmental agreement between the District and the City. The Library also has a memorial fund for gifts and donations.

Police

The mission of the Bandon Police Department is to deliver the highest standard of law enforcement excellence in protecting life, property and human rights, and to work in a pro~ active partnership with the community to solve problems, thereby enhancing the quality of life for citizens.

The Bandon Police Department is committed to criminal investigations and apprehension of offenders, selective traffic enforcement, timely response to calls for service, investigation of accidents and the traditional duties of police in the community. In addition, the Department has a commitment to pro-active patrols including vehicle, foot and in the future, bicycle patrols to enhance positive interaction with citizens and visitors. They also work with various departments, agencies and citizens in problem solving to improve the quality of life as well as the quality of service for all citizens. Continued community education efforts, a School Resource Officer, and identification of alternate resources are also part of the Police Department activities.

The City has a Chief of Police and force of full-time officers. There are also volunteer personnel associated with the department, including reserve officers.

The Police Department is operated primarily out of the General Fund, with funding coming from property tax revenue, utility taxes, transient occupancy taxes, and utility in-lieu taxes.

Fire Protection

Under the direction of the City Council, the City Manager is responsible for contracting the services of the Bandon Rural Fire Protection District for fire protection within the City Limits. The Bandon Rural Fire Protection District, which consists of one paid position (Chief) and 25-35 volunteers, also provides fire protection "to the rural, unincorporated areas surrounding the City.

Municipal Court

The Municipal Judge is a contracted position appointed by the City Council. The focus of the Municipal Court is nuisance ordinance enforcement, zoning infractions, and other ordinance violations, as well as parking tickets, but does not process violations of State laws.

The Municipal Court is operated out of the General Fund. The Municipal Court is supported partially by revenues derived from fines and forfeits charged by the Municipal Court, but mainly by a percentage of revenues collected by District and Circuit Courts and deposited into the City's General Fund as required by State statues.

NON-CITY PUBLIC FACILITIES AND SERVICES

Cable TV

Cable television is provided by a private company under franchise to the City.

Communication Services

Phone service within the city is provided by franchise agreement. Radio is provided by stations primarily in the Coos Bay/Coquille area. Public radio is available from Ashland via a translator station. Newspaper coverage is supplied by the Bandon Western World, with a supplemental daily called The Coffee Break, and The World, published daily in Coos Bay. A new fiber optics system is nearing completion which will offer high speed access to the Internet if the final connection can be made.

Solid Waste Disposal

Garbage collection within the City is awarded to an independent contractor via the franchise process. Solid waste disposal facilities are available at the county's Beaver Hill waste facility, which is about 7 miles north of the City Limits on Highway 101. The site is expected to be adequate for some years.

Health Services

The Bandon area is served by the Southern Coos General Hospital and the Southwestern Coos County Hospital District. The Coos County Health Department offers clinics in North Bend and Coquille. The VA Clinic in Bandon serves a large population of veterans from Bandon and the surrounding area.

Schools

The Bandon School District 54 operates elementary, middle and high schools within the City. The existing facilities are adequate for foreseeable needs.

CHAPTER 6: ENERGY CONSERVATION

[Originally adopted as Chapter 10 in Ordinance 1472, 1-22-02] Goal 13

GOAL: To ensure that the new development maximizes energy efficient practices while encouraging the use of renewable energy efficient practices while encouraging the use of renewable energy sources and energy conservation.

INTRODUCTION

The purpose of this chapter is to address Statewide Planning Goal 13, Energy Conservation. The City of Bandon is an energy consumer that utilizes primarily nonrenewable, imported energy sources including petroleum products (gasoline), propane, and electricity. The greatest share of the energy is used for transportation and residential purposes. The consumption of gasoline by private vehicles continues to escalate, and as supplies of petroleum become scarce, the automobile will be forced to adapt to fuel sources such as solar and electricity. In addition, the City may have access to natural gas with the installation of the proposed pipeline which has been approved by the voters of Coos County.

Electricity ,

Bandon owns and operates its own electric utility, which serves both the City of Bandon and the rural area south of Bandon. The City purchases power from the Bonneville Power Administration (BPA), which is then distributed throughout the system. There is an electric supply problem in the Western US due to increasing demand and generation capacity, and as result, conservation efforts are underway to reduce the demand on the power-generating system. The amount of Kilowatt hours purchased from BPA by the City during the past decade has remained relatively steady, as illustrated in Table 1.

Table 1

YEAR	KWh
1990	55,888,298
1991	59,405,813
1992	55,616,551
1993	58,278,015
1994	58,135,768
1995	54,672,249
1996	58,785,352
1997	50,601,769
1998	53,917,275
1999	57,777,967
2000	56,358,658

Conservation

The role of conservation in the energy picture should not be underestimated. As technology develops,

and awareness grows, conservation of existing resources becomes more important.

Alternative Energy Sources

There are a number of alternative energy sources which the City may consider for the future, including natural gas electric generation, wind and solar power, and tidal generation systems.

(Adopted by Ordinance 1472 January 7, 2002)

CHAPTER 7: SOCIO-ECONOMIC ANALYSIS

Characteristics

Bandon's population fluctuated considerably from 1900 to 1940, as can be seen in Table III-I. After nearly tripling from 645 in 1908 to 1,803 in 1910, the population dropped sharply by 1920 and did not reach 1,800 again until a half-century later. Population fell by nearly 34% between 1930 and 1940 due largely to out-migration following the 1936 fire. Bandon experienced a relatively large gain of 32% between 1950 and 1960, when the population rose from 1,251 to 1,653. The 1970 U. S. Census recorded a population of 1,832, and the 1977 state estimate was 2,228, up 22% since 1970. Table 111-2 shows the annual Portland State University population estimates from 1970-1989.

A profile of Bandon's population broken down by 10-year age groups reveals a relatively large proportion of total population in the upper age brackets and a smaller proportion falling in the lower brackets (see table 111-3). This “top-heavy" distribution is readily apparent when the profiles for Bandon and Oregon are compared as shown in Figure III-I. The large proportion of population in the upper age brackets indicates a probable in-migration of people at or approaching retirement age.

As seen in Table III-4, Bandon's population gain of 11% between 1960 and 1970 was less than Oregon's 18% gain, but exceeded Coos County's total gain of 3%. Also important is the fact that while Bandon grew by 11%, the Bandon Census County Division (CCO) which includes Bandon and the surrounding area, had a 7% decrease in population. This situation suggests that people in the Bandon area are concentrating in the central city (and opposite trend from the flight to the suburbs evident in many large cities). This shift of population from the outlying areas into the city reflects a decline in both agriculture and forestry employment, as well as an in-migration of older people who usually locate near medical facilities and other services available in the city. The concentration of older people in the city is further evidenced by the fact that persons 55 and older comprised nearly 30% of Bandon’s 1970 population as opposed to slightly over 27% of the CCD’s population.

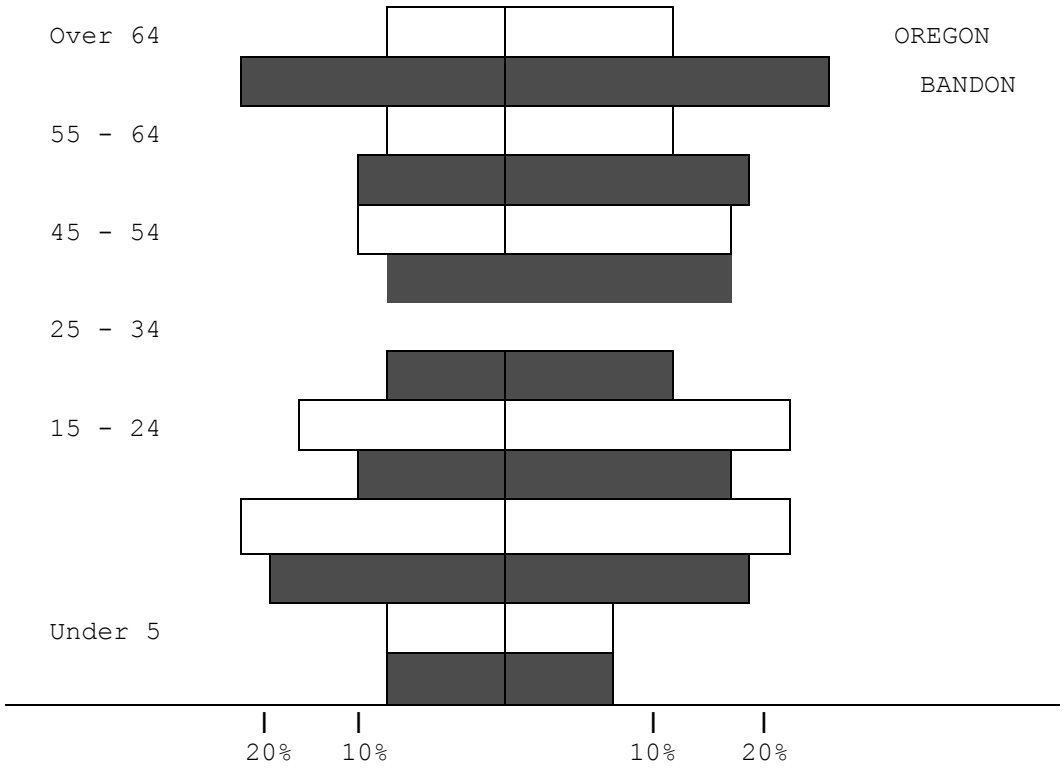
BANDON CENSUS DATA

YEAR	POP.	PERCENT CHANGE
1900	645	
1910	1803	179.53%
1920	1440	-20.13%
1930	1516	5.28%
1940	1004	-33.77%
1950	1251	24.60%
1960	1653	32.13%
1970	1832	10.83%
1980	2311	26.15%
1990	2215	-4.15%

FIGURE III - 1

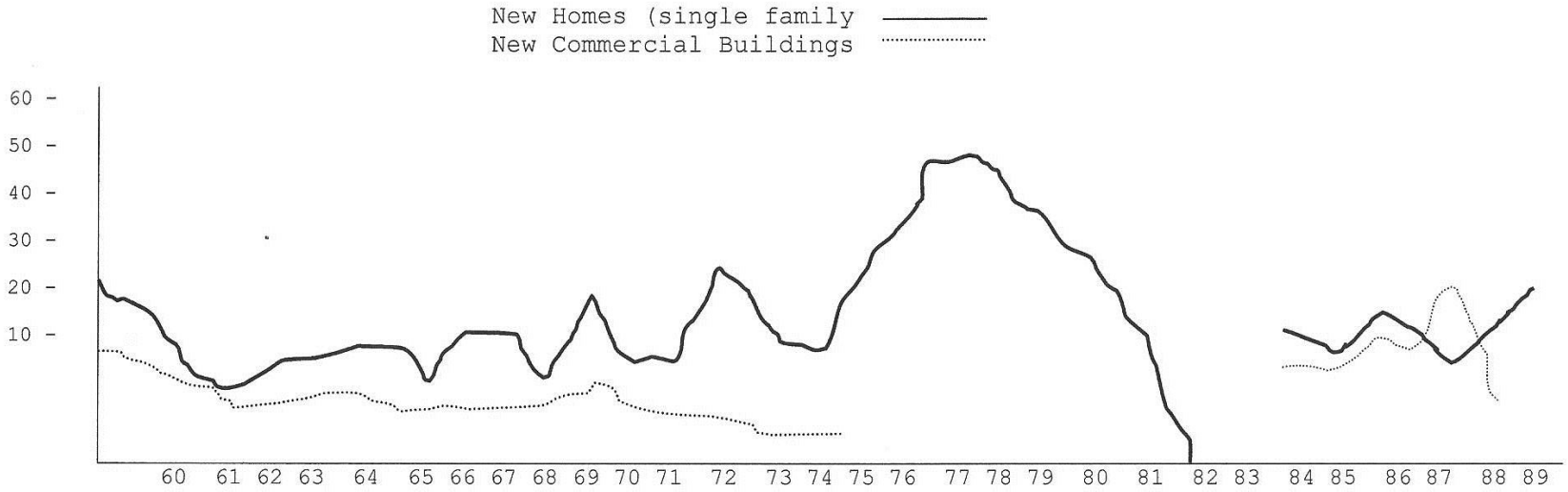
POPULATION AGE DISTRIBUTION
BANDON & OREGON

POPULATION PERCENTAGES BY
AGE GROUP & SEX, 1970



Source: U.S.Census

FIGURE III-2
BANDON'S BUILDING PERMITS 1960 - 1989



POPULATION ESTIMATES 1970 -1977

Year	Population	% Change
*1970	1,832	-
1971	1,870	2.71
1972	1,895	1.34
1973	1,940	2.37
1974	2,055	5.92
1975	2,080	1.21
1976	2,130	2.40
1977	2,228	4.00

Source: Portland State University, Center for Population Research and Census
* U.S. Census of Population

TABLE III-3

POPULATION BY AGE & SEX 1970
BANDON

Age Group	Male	%	Female	%
Under 5	60	6.98	68	7.00
5-14	146	16.90	169	17.39
15-24	126	14.65	142	14.61
25-34	84	9.77	88	9.05
35-44	77	8.95	95	9.77
45-54	110	12.79	122	12.55
55-64	114	13.25	126	12.96
Over 64	143	16.63	162	16.67

Source: * U.S. Census of Population

TABLE III-4

PERCENT CHANGE IN POPULATION 1960 - 1970 BY AGE
BANDON, OREGON, BANDON CCD, COOS COUNTY & OREGON

Age Group	Bandon City	Bandon CCD	Coos County	Oregon
Under 5	-31%	-45%	-29%	-12%
5 - 19	- 7	-11	8	24
10 - 64	7	- 5	3	19
Over 64	83	51	27	23
Total	11	-7	3	18

POPULATION BY AGE 1970

Age Group	Bandon City	Bandon CCD	Coos County	Oregon
Under 5	128	280	4713	164,060
5 - 19	491	1171	17190	608,991
10 - 64	908	2026	29497	1,091,535
Over 64	305	595	5115	226,799
Total	1832	4072	56515	2,091,385

POPULATION BY AGE 1960

Age Group	Bandon City	Bandon CCD	Coos County	Oregon
Under 5	185	505	6572	185,454
5 - 19	456	1313	1579	489,966
10 - 64	846	2124	28484	909,614
Over 64	166	394	4020	183,653
Total	1653	4336	54,955	1,768,687

Source: U.S. Census of Population

In terms of general population characteristics, it should be noted that females comprise 53% of total 1970 population for Bandon but only 51 of that for Oregon. It should also be noted that Bandon had a 1% non-white population at that time.

A comparison of population change from census data (see Table 111-5) again accentuates the high proportion of older people in Bandon. The growth rate in Bandon was over twice the Oregon rate for persons over 64. Also apparent is a general decline in Bandon's population in the working age groups, with the exception of persons aged 15-24, where there was an increase. The increase in this age group in fact reflects the bulge in the 5-14 year age group in 1960 rather than any significant in-migration.

The Bandon School District 154 has experienced decreasing enrollments. As an example, the 1972-77 enrollment totals hovered around 1,000 students. The 1991 enrollment was 857, or a decrease of approximately 15%. This is likely because of younger families being displaced by older homeowners (empty-nesters).

Since 1970, a high rate of population increase has at times been indicated by building permit activity. From 1970-1973 the city issued 47 building permits for new homes--only 10 fewer than were issued during the entire preceding decade (see Figure 111-2). Building construction activity, for the most part, continued at a steady, controlled rate, which was consistent with the comprehensive plan and the wishes of the community. The wisdom of the plan is shown in the language of the 1990 plan:

> "Whether new housing starts will continue at this increased rate (late 1970's) will depend heavily on future economic conditions such as in-migration, lumber prices, interest rates, etc. If this trend does continue, population can probably be expected to rise at a higher rate than the 11% increase experienced during the 1960's. The reason for this increase appears to be related to the growing desirability of the area for retired people and a very good market for lumber. While the first factor should continue, it is doubtful that the good lumber market will continue. The growing tourist industry and fishing industry are also contributing to the increase (see Section on Economic Trends and Planning Considerations)".

As we now know, the lumber supplies are dwindling, and ocean fisheries have been depleted for several stocks, most notably the coho salmon and some stocks of chinook salmon. Those two mainstays of Bandon's economy have been reduced in their importance, though they still amount for a large number of jobs.

The tourist-based economy is replacing the resource-based economy in Bandon. Many of those workers whose jobs have been lost have been forced to move to other locations to find family-wage jobs, primarily in the Willamette Valley or California. Consequently, much of their housing has been purchased by Californians and, to a much lower degree, residents of Eugene or Roseburg or the Southern Oregon area. Many of these owners do not claim Bandon as their primary place of residence. As a result of these factors, Bandon's 1980-1990 census population decreased by 51 people in spite of building 196 single family dwellings and siting 87 mobile homes, or 2-3 total units, between 1980 and 1990.

TABLE III-5

POPULATION BY AGES, 1960 & 1970; PERCENTAGE CHANGE
BANDON

	1960	1970	% CHANGE
Under 5	185	128	(31)
5 - 14	334	315	(6)
15 - 24	205	268	30
25 - 34	200	172	(14)
35 - 44	187	172	(9)
45 - 54	234	232	(1)
55 - 64	142	240	69
Over 64	166	305	83
TOTALS	1653	1832	11

STATE OF OREGON
POPULATION BY AGES, 1960 & 1970; PERCENTAGE CHANGE

	1960	1,970.00	% CHANGE
Under 5	185,454	164,060	(12)
5 - 14	359,835	405,629	13
15 - 24	226,583	366,000	62
25 - 34	203,578	254,577	25
35 - 44	235,410	225,782	(4)
45 - 54	213,828	243,391	14
55 - 64	160,346	205,147	28
Over 64	183,653	226,799	23
TOTALS	1,768,687	2,091,385	18

Source: U.S. Census of Population

TABLE III -6

Year	Total Enrollment	% Change	Pupils remaining	% Change
1972	992	-	-	-
1973	1017	+2.5	896	1.5
1974	1022	+0.5	909	-1.3
1975	992	-2.9	897	-2.1
1976	960	-3.2	878	-2.4
1977	1022	+6.5	857	5.0
1991*	857	- 16.1	900	

Implications for Planning Purposes

The population characteristics discussed above have several implications in terms of planning for Bandon's future. The concentration of older people, the low proportion of younger people, the shift of population from the rural areas to the city, and the increasing rate of growth all raise important planning considerations.

Given the number of older people in Bandon, plus the probability that more retirees will move to the city, provisions may be needed for adequate medical facilities for the needs of senior citizens, Such facilities would include nursing homes and office space for gerontologists and other professionals specializing in fearing, vision, etc. Benches, horse-shoe pits and other facilities which older people can utilize should be incorporated into the design of park areas, and paths and walkways should be incorporated into the design of park areas, and walkways should be designed to accommodate wheelchairs.

In general, public facilities should be designed to permit easy access by all senior citizens. Special design considerations would include such items as ramps at curbs and building entrances, easily readable signs to identify offices and service facilities, adequate handrails and guardrails where appropriate, and wide entrances to public buildings.

The relatively low percentage of children under 5 in the census data indicates a possible decline or at least a leveling off in future school enrollment. If such is the case, planning efforts and financial resources which would otherwise be directed toward expansion can instead be directed toward replacement or improvement of existing facilities. It should be noted that past public financing proposals have enjoyed a high level of voter support, owing largely to a strong sense of community awareness on the part of citizens of all ages. Such is not the case in many communities with large concentrations of older people, who are often on fixed incomes. Therefore, all efforts by public agencies to maintain this good sense of community should be
encouraged.

The continued shift of population from outlying areas into Bandon will produce increased development pressure within the city, particularly along the oceanfront. While this trend increases the demand for city services (streets, sewers, water, etc.), it is usually preferable to sprawling, scattered development for several reasons. First, development within the present city limits can be served by existing streets, sewers, etc. at far less cost than would be entailed by extensions of these services to outlying areas. Similarly, public safety is promoted by compact development because of faster response times afforded by relative closeness to fire and police stations.

For these reasons it is desirable for the city to continue to develop the necessary public services to accommodate and encourage this shift. Also, recent state and county legislation in matters such as zoning, building codes and subdivision controls will reinforce the trend for development to locate within the city and the urban growth boundary by imposing the same types of controls on urban development in unincorporated areas as those which have existed in cities for some time.

Developers should then find it more advantageous to locate inside the city and urban growth boundary as appropriate where urban services are readily available. This will be particularly true in cases where septic tank permit cannot be obtained in unincorporated areas, thereby making areas served by city sewers more attractive to developers.

Population trends in recent years suggest that Bandon will probably grow at a faster rate than it has in the past fifty years. Increases in population can be expected among older age groups who are attracted by Bandon's coastal location. This prospect implies the need to direct planning efforts toward accommodating existing and additional population with an adequate level of services, while at the same time maintaining the qualities that make the city attractive.

POPULATION PROJECTIONS

Any population projection is based upon a set of assumptions regarding future occurrences. Different assumptions then will produce different population projections. Because of this, several different projections have been made to provide a full picture of future population levels.
The 1990 plan used several sets of projections that were based on various assumptions. As someone once said~ the only thing you are assured of when you make a projection is that it will be wrong.

Planning Projection

Table 111-12 is a straight-line projection at set annual rates of 2%, 3% and 4%.

Based on the analysis of population trends and on citizen opinions, Table 111-12 has been selected as the planning projection. This projection includes three levels of potential growth. It is not possible to know which rate of growth will occur in the planning period, but the rate for the period 1970-1977 has varied closely around the 3% figure. The actual figure 3.09% per year, is just barely at the 3% level. This level was during a time of great building activity and some residents consider it as a "boom" time.

TABLE III - 12

BANDON	POPULATION	PROJECTIONS	
	2%	3%	4%
1990	2260	2260	2260
1991	2305	2328	2350
1992	2351	2398	2444
1993	2398	2470	2542
1994	2446	2544	2644
1995	2495	2620	2750
1996	2545	2699	2860
1997	2596	2780	2974
1998	2648	2863	3093
1999	2701	2949	3217
2000	2755	3037	3345
2001	2810	3128	3479
2002	2866	3222	3618
2003	2924	3319	3763
2004	2982	3418	3914
2005	3042	3521	4070
2006	3102	3627	4233
2007	3165	3735	4402
2008	3228	3847	4578
2009	3292	3963	4761
2010	3358	4082	4952

ECONOMIC CHARACTERISTICS

The economic functions of the City of Bandon are diverse for a city of its size, and the city is dependent on a variety of different sources of income. The major economic functions of the city area are listed below:

1. A small lumber and wood products processing "center".

2. A service and processing center for the surrounding agricultural area.

3. The home of a small commercial fishing fleet and processing plant.

4. A retail service center for the South Coast of Coos County. A growing tourism, retirement, and recreational center.

Lumber and Wood Products

There are at present only two lumber and wood processing firms located within the Bandon area - Rogge Lumber and Douglas Pacific Veneer Co. Rogge has one mill just east of the Bullards Bridge and one mill south of the Bandon State Airport on the west side of the road. Douglas Pacific Veneer is located on 11th St and Fillmore (Rosa Rd.).

These plants rely on highway transportation to receive their goods and to ship them to market. This reliance places many heavy trucks on Highway 101. The industry no longer uses barges to ship goods to market.

Lumber and wood products is still Bandon's largest economic sector. The trends of this sector have a large impact on the economy on Bandon.

Agriculture

The City of Bandon is the service center for agriculture in Southwestern Coos County. The major agricultural product of this area is cranberries. Cranberry production is uniquely suited to the soils of the Bandon area. Cranberries are raised in bogs on soils with very poor drainage. This permits the retention of water for long periods of time.

The blacklock soils of the area readily meet these requirements. The same poor drainage that makes the area suitable for cranberries makes it less suitable for other type of agriculture.
Although very little activity involving cranberries is conducted within the city itself, the production of cranberries brings considerable income to the area which is then expended on the trade and services of the city. The value of sales of cranberries totaled $8,000,000 in 1988.

Cranberry bogs are not located within the city itself, but several are adjacent to the east city limits, north of Highway 42-S, and at a further distance to the south of the city. The importance of the bogs to the economy of the city has been carefully considered in establishing the urban growth boundary. While the value of the bogs is sufficient to protect them from direct encroachment, the bogs are dependent on adjacent lands for their water supply. Construction on the adjacent land could adversely affect the cranberry bogs.

Dairying

Dairying is another agricultural activity in the region that directly affects Bandon. One of the important cheese processors in the region is located on Highway 101 in Bandon. This plant is a significant tourist attraction.

Another large agricultural activity, cattle production, also affects the economy of Bandon. A meat processing plant is located just east of Bandon of Hwy 42S.

Commercial Fishing and Seafood Processing

The abundant seafood resources of the coast makes any port city in the region a suitable location for commercial fishing and seafood processing. However, the dangerous conditions often present at the Coquille bar have kept development of this sector low. Diminishing salmon stocks and other fish stocks have also negatively affected this sector. It should be noted that one of the main products of Bandon Fisheries is shrimp, and that product is brought in by truck rather than by boat (personal conversation with Graydon Stinnett, 8-90).

Presently, only a few fishing vessels operate from the Port of Bandon year-around, and these boats support only part of a small processing plant. During summer more boats use the port's facilities.

Retail Service Center

Bandon serves as the trade and service center for an area roughly bounded by Beaver Hill to the north, the coastal foothills to the east, and Curry County to the south. While this area is large, the population is relatively low. Consequently, the trade and services of the city reflect only primary services required for day-to-day needs. For a greater range of services, the people usually travel to the Coos Bay-North Bend urban area, which is the service center for the entire region. Trade and service activity for this local area is located in Old Town, the Hwy 101/425 junction area and the Woodland Heights areas of Bandon.

The people served by the businesses of Bandon derive their income mostly from logging, agriculture and tourism, with a growing retirement population in the area. 21% of Coos County's total personal income is in transfer payments (The Economic Landscape of the Oregon Coast, Radke lit Davis, OCZMA, 1987).

Tourism, Recreation and Retirement

The newest but fastest growing of Bandon's economic functions are those related to tourism, recreation and retirement. The scenic beauty of Bandon, enhanced by the city's location on a bluff overlooking the Pacific Ocean and the Coquille River, makes the city ideally attractive for these activities. This attractiveness is further enhanced by the city's location on Hwy 101 (cited as one of the most scenic highways of its kind anywhere in the world) and by the location of a several major city, county, state and federal parks.

These attractions bring numerous visitors to the city each summer. Within the city this activity is largely focused Hwy 101, the Old Town area, the south jetty and the beach. Visitors support numerous businesses located along Hwy 101, the Hwy 101/42 intersection, in Old Town, in the Woodland Addition, and at the Jetty and along Beach Loop.

Much of this tourist activity is not "destination" oriented, but is "drive through", made up of people

stopping at Bandon while visiting several places on the coast. Consequently, the plans of the city to become more of a destination point will benefit this sector. The ability of the city to capture the "drive through" business is related to its ability to induce people to stop while travelling through.

In addition to tourism, an increasing number of people are attracted to the area for summer or retirement homes. The same factors that attract the tourist are attracting these people. However, the economic impact of second-home and retired people is substantially different. Neither of these groups need to be attracted to business in the same manner as the tourist.

The second-home resident would generally use the same services as the full-time resident (though earning their income from another area) and so would the retired person. The retired person, however, would tend to keep purchases more on the necessity level or for things uniquely related to that age group.

The fixed income of the retired person and the partial income of the second-home resident both produce less of a “multiplier effect” for each person than does the income of the full-time working resident, while the demand for most city services would be largely similar (except for the demand for schools, of course).

Because Bandon is the only significant service center for Southwest Coos County, most of the income generated to the area from tourists, second-home residents and .retired persons in generated within the city, although numerous businesses are located along Hwy 101 to the south.

Quality of the Economy

The quality of the area's economic system is dependent upon how well that system provides for the well-being of the people of that area. A common measure of that quality is the income level of the area's residents.

Table 111-13 compares 1970 census data for the mean family income of the Bandon Census County Division (an area bounded by the Pacific, Curry County, the coastal foothills and the Coquille River) to the average income of Coos County and the state. As is indicated, the mean family income for Bandon is equal to 81.8% of the mean family income for the state (almost one fifth lower). Also, the percentage of people below the poverty level is considerably higher for the Bandon area (17.1%) than for the county (10.1%) of for the state (11.2%).

INCOME DATA 1970

BANDON CCD, COOS COUNTY, OREGON

	Bandon CCD	Coos County	Oregon
Mean Family Income	$ 8.753	$ 10,157	$ 10,695
Persons below poverty level	696	5,736	234,848
Percent of Total	17.1%	10.1%	11.2%
Families below poverty Level	153	1,222	46,456
Percent of Total	13.6%	8.1 %	8.6%

INCOME DISTRIBUTION

	Bandon CCD		Coos County		Oregon	
Amount of Annual Income	Families	%	Families	%	Families	%
Under $ 4,000	258	22.9	2045	13.5	76,650	14.2
$4,000 - $5,999	180	16.7	1656	10.9	57,438	10.6
$6,000 - $11,999	454	40.4	7124	47.1	234,432	43.2
$12,000 +	233	20.7	4305	28.5	173,963	32.1
Total	1125	100.0	15130	100.0	42,483	100.0

POVERTY DISTRIBUTION

	Bandon CCD		Coos County		Oregon	
Amount of Annual Income	Families	%	Families	%	Families	%
In Families		76.1	4266	74.4	76,650	68.4
Unrelated Below 65	530	10.5	790	13.8	57,438	17.8
Unrelated over 65	73	13.4	680	11.8	234,432	13.8
	93					
Total				100.0		
	696	100.0	5736		234,848	100.0

Economic Trends and Planning Considerations

Normally, planning programs should attempt to analyze the economy of an area by sector. However, since only a few firms are engaged in anyone economic sector in Bandon, such a detailed analysis is not possible without unduly discussing the affairs of particular companies. Consequently, this analysis will concentrate on the economic trends within each sector in the county. The ability of this area to follow those trends will depend on the ability of each firm to realize its opportunities.

Lumber and Wood Products

The economy of Coos County is still heavily dependent upon the lumber and wood products industry. However, over the last decade the direct employment in this industry has continued to decline. This decline was largely caused by greater worker productivity (automation and technology), a reduction in the supply of timber and market trends.

The major problem confronting the future of this industry is the timber supply situation. An analysis of timber harvesting patterns indicates that the private forests of the region have been mostly harvested. Billions of board feet of raw logs were shipped to Japan for milling, which cost the region many jobs from mill shutdowns when logs became scarce.

The high rate of harvest on private lands has reduced that supply of timber, forcing the industry to rely more heavily on public lands. In addition to those public lands being depleted at a high rate, millions of acres are being set aside for spotted owl habitat and for other environmental reasons.

Although 63% of Coos County's 1970 timber harvest came from private lands, these lands could not continue that rate of harvest. As a result of these factors, the logging industry faces further reductions in the availability of logs.

Between 1970 and 1972, employment in lumber and wood products continued its drop to 5,100. This drop was in spite of a very good lumber market which has generally increased production.

Personal income from the timber sector in 1987 for Coos County was $141 million dollars, or 18.9% of total personal income (Radke & Davis, OCZMA).

In general, then, the economic outlook for Coos County in wood products appears to be a continued decline, with most of that decline occurring in the rural areas. If this continues without family-wage jobs being created in other sectors to replace those lost, employment in trade and service industries may also be expected to decline.

Agriculture

Agricultural employment in the county is also declining. This decline in employment may be expected to continue as all types of farming become increasingly automated.

While employment is decreasing, the value of agricultural sales is increasing. While the agricultural lands in the Bandon area are not the best, production of most agricultural commodities can be economically increased, particularly in livestock production and cranberries.
In 1987, Agriculture amounted for 2.1% of Coos County's total personal income, or $15.4 million dollars (Radke & Davis, OCZMA).

Of particular interest to Bandon is the value of cranberry production. It increased 29% from 1970-1972, but decreased 11% from 1975-1976. These changes are closely related to changes in price rather than changes in production, since cranberry production is a controlled commodity. It has been felt that cranberry production can be greatly increased in the area if constraining issues can be overcome. However, due to market controls, this increase may be expected to be moderate in order to maintain unit value.

While the cranberry market should assure a steady increase in the value of sales, cranberry production could be reduced if cranberry bogs and their tributary watersheds are encroached upon by development. Instream water rights for fish protection have caused water to be increasingly difficult to obtain. Conditions on impounding water in streams with anadromous fish runs and wild fish and wetland regulations also present growers with difficulties in expanding their bogs. Also, consumer awareness is forcing growers to investigate using integrated pest management and alternative strategies of weed control rather than the historical dependency on herbicides and pesticides.

After being inactive for two years, the Bandon Cheese factory is again operating, producing its high quality cheddar and other types of cheeses.

Employment in meat processing may remain stable, though Americans are becoming more sophisticated in their eating habits and have been reducing their red meat intake to lower their cholesterol, which may reduce the demand for red meat. This may also impact grazing.

Commercial Fishinq and Seafood Processing

Commercial Seafood processing is a highly competitive industry and therefore the Bandon area will have to compete with many other areas for this industry. The recent increases in demand for seafood bodes well for this industry, though offsetting factors will also cause problems in its expansion.

Any increase will be dependent upon the natural supply of seafood, government regulations and the market. Also fogging the crystal ball is the trend for issues to be addressed at a national, rather than at a regional, level. This trend reduces the local ability to determine its own destiny. The most obvious examples of this are the decimation of the region's salmon stocks on the high seas by drift nets and the administration's inability or unwillingness to remedy this tragedy.

Bandon's future is not as a large producer of seafoods. Much of the product for Bandon Fisheries is trucked to the plant rather than brought in by boat, because of the unpredictable conditions at the Coquille River bar. The bar is only manageable if it is dredged, which the Corps is more and more unwilling to do from a cost/benefit standpoint. As a result, the Port of Bandon has set its course to become a recreational facility

that also takes care of whatever commercial boats use the harbor, rather than as primarily a commercial port (personal conversation with Alex Linke, August, 1990). This is probably wise, considering that Bandon will always live in the shadow of the International Port of Coos Bay and Charleston and their superior facilities.

Tourism and Recreation

Aside from retirement and transfer payments, the most rapidly increasing economic sector on the Oregon Coast is tourism and recreation. Improvements in transportation, an increase in leisure time, and rising personal income in the nation have led to the rapid expansion of recreational activity. Places of outstanding scenic beauty, such as the Bandon area, have become a major focus of this activity. Most projections have indicated that recreational activity will continue to increase.

Since Bandon is one of the few places in Coos County with excellent access to the ocean beaches, the area can be expected to retain its role as a major focus of tourism in the county. In conjunction with this rise in tourism, it may be anticipated that second-home residential growth and retirement growth will continue at approximately its current pace.

In the future, the improved facilities planned for the U.S Fish and Wildlife National Wildlife Refuges at Coquille Point, Bandon Marsh and the Oregon Islands will also provide tourism opportunities associated with the expanding national interest in
wildlife viewing.

Trade and Services

With the exception of trade and services which depend upon tourists, second-home residents and retired persons, trade and service expansion in dependent on the trends in the other economic sectors, since trade and services draw on the income brought to the area by these sectors. Consequently, a decrease in employment in other sectors will produce a probable decrease in trade and service employment. However, as average non-inflated income increases, the amount of jobs in trade and services, supported by a given number of jobs in the other sectors, will increase.

In general, the average income of all areas is expected to continue to increase, though the increase in rural areas may be expected to be less than the increase in urban areas. Consequently, a decline in basic employment will produce a smaller proportional decline in trade and service employment, and an increase in basic employment will create a slightly higher proportional increase in trade and services.

Economic Prospects

Cost projections of the economy of Coos County based on these various factors predict either a decline in total employment or only a slight increase. One such projection was completed by BPA, which is presented on Table III-14, with a comparison to the 1988 - 1989 actual figures from Coos Curry Douglas Business Development Corp. (CCD).

Forest Products.

The forest products industry is having great problems with supply and is eliminating jobs through exporting raw logs and improving technology. The coast, however, offers a world class climate for

growing softwood, especially Douglas Fir. The forest products industry will always be a part of the coastal economy, though it is likely that it will be reduced to sustainable levels no higher than exist today and could be reduced further in the future. Secondary wood products, however, could add significantly to the employment picture if they are encouraged through government programs.

Tourism.

The tourism market is based on drive-through traffic, though the city has made progress in becoming more of a destination in recent years. This dependence on fuel makes the sector very sensitive to gas and oil prices. The fact that there is no public transportation to the Bandon area coupled with increases in gas and oil prices could have a chilling effect on the tourism industry.

For Bandon to retain its share of recreational activity, the city should consider additional steps to make itself a desirable destination rather than a drive-through area. In order to do this, the city must develop its unique qualities, allow for expansion of overnight services, increase its range of recreational services to provide a wider variety of recreational experiences, and consider ways to recruit tourists.

The impact of the cost of energy on second-home residents is less clear. While it will reduce the ability of people to go to their second homes, it may also increase the demand for second homes, since second homes are a form of destination tourism.

Factors that may work in favor of continued present patterns are the increasing fuel efficiency of newer cars and the possible introduction of alternative fuels.

TABLE III-14

COOS COUNTY EMPLOYMENT PROJECTIONS

	1970	1980	1990	*** 1989 ACTUAL
Agriculture	975	850	725	--
Self Employment	3050	2975	2850	--
Mining *	25	25	25	--
Construction	450	425	375	--
Manufacturing	6550	5825	5025	4300
Food Products	(630)	(650)	(650)	(570)
Wood Products **	(5400)	(4450)	(3500)	(2970)
Transportation and Utilities	1550	1500	1400	1220
Trade	2900	3200	3425	4490
Finances, Insurance, and Real Estate	575	650	725	850
Services	2200	2550	2825	3430
Government	3025	3600	4125	3910
TOTAL	21,300	21,600	21,500	18,700

* Assumes no development of coal resources
** The Coos Curry Douglas Economic Improvement Association decline by 1980 - 3875

Source: Popu1ation Employment and Housing Units, Projected to 1990: Oregon Bonneville Power Administration, 1973

*** C.C.D. Business Development Corporation 1988-1989 Development Report and Plan

CHAPTER 8: URBANIZATION

Urbanization Element City of Bandon

TABLE OF CONTENTS

Introduction PAGE

Population Projections 1

Basis for Alternative Projections 3
Use of Population Projections 4
Population Growth in the Urban Growth Area 6
Total Population Projection — City and Urban Growth Area 6
Coordination of Urban Growth Area Projected Growth with 7
Coos County Plan

Projected Housing and Land Needs 8

"Basic" Housing Needs 8
Extra Housing Provision for Vacant Units 9
Housing Projection by Type 10
Commercial and industrial Land Needs 11

Buildable Lands Report 13

Introduction 13
Buildable Residential Land. in the City 14
Adequacy of Land in the City to Accommodate
Projected Housing 14
Accommodation of Projected Housing Types 15
Buildable Commercial Land In the City 16
Buildable Industrial Land in the City 16

Proposed Bandon Urban Growth Area 17

Residential Land 18
Commercial Land 18
Industrial Land 19
Public Facilities Planning 19
Resource Land Considerations 20

Summary 21
Findings 21
Maps

TABLE I

City of Bandon Historical Population Figures
1950—1979

Date	Bandon	Coos County	% County in City	Annual City Growth Rate
1950	1,251	42,246	2.96	--
1960	1,653	54,955	3.01	2.81
1970	1,832	56,515	3.24	1.25
1971	1,870	56,720	3.30	2.07
1972	1.895	57,300	3.31	1.33
1973	1,940	58,100	3.34	2.38
1974	2,044	59,070	3.46	5.36
1975	2,080	59,700	3.48	1.76
1976	2,130	60,200	3.54	2.40
1977	2,228	61,100	3.65	4.60
1978	2,350	63,200	3.84	5.48
1979	2,575	63,500	4.06	9.57
1980	2,311	64,047	3.61	-10.25

Sources: 1950, 1960, 1970 Census Data, Other figures Portland State University (CPRC)
*Growth during decade used to form annual compound growth rate
**Based on 1980 Census (Final Population and Housing Counts - (PHC8O-V-39). Apparent decline is explained by differences between Portland State estimates and Bureau of Census population counts.

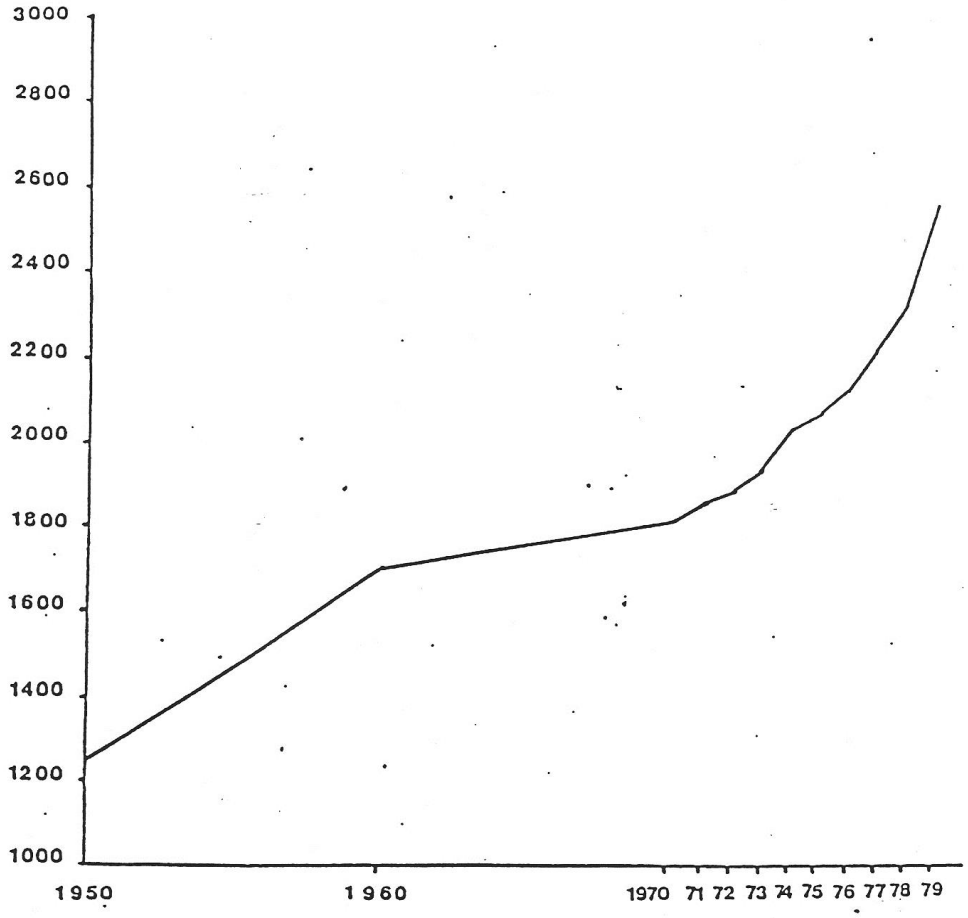
As the graphs show, Bandon's population has grown at a faster rate since 1973 than during the previous decades. Growth has been much faster than in the County as a whole. During the last few years of the seventies, growth has been particularly strong. From 1970-1979, Bandon's population has grown at a compounded rate of 3.85%. Bandon's share of Coos County's population has also been steadily rising over the seventies. The historical trends of Bandon's population growth is shown in Figure 1. Four alternative projections are presented in Table 2.

TABLE 2
Population Projections — Bandon City

Date	County Projection	A	B	C	D
1980	64,200	2,435	2,505	2,523	2,673
1985	70,400	2,822	2,822	3,094	3,229
1990	76,700	3,272	3,272	3,673	3,900
1995	84,700	3,793	3,793	4,372	4,711
2000	92,000	4,394	4,394	5,080	5,690

County Projection based on high figures, Portland State University (CPRC)

A. City/Coos-Curry Council of Governments Estimate
B. Based on 1970-1979 Trend in City
C. Based on City/County 1970-1979 Trend
D. Compound Rate of Seventies Projected



BANDON POPULATION FIGURES

Basis for Alternative Projections

Alternative A: This estimate, devised by the City of Bandon and the Coos-Curry Council of Governments, was chosen from other alternatives in the City's comprehensive plan. It is based upon a constant 3% compound annual growth rate starting from 1977. This indicates that Bandon is growing and will continue to grow faster than the County. The 1980 figures is certainly low as current estimates exceed this figure. However, it is reasonable to expect that the rapid growth of 1977-1979 will fall off in future years.

Alternative B: This alternative is based on a "linear regression equation" using 1970-1979 population figures. The equation is a mathematical model which projects the future population based upon past population growth. This linear regression projects population growth at a constant annual increment (in this case 74.6545 persons annually), and ignores compound growth factors. The result yields a straight line upon a graph. The equation is as follows: Yt = 1758.45 + 74.6545 where t - the number of years from the base year (1970), thus to predict for 1985, t = 15

Yt = predicted population for year t
R^2= 9178

This alternative will indicate probable population levels if the current amount of annual population Increase continues. As such, it means the City will grow by a constant amount annually, with a progressively lower annual growth rate. Since Alternative A maintains a constant growth rate, projections using Alternative B will be lower.

Alternative C: This alternative is based upon a different linear regression where the City's population is expressed as a relationship to the County's population. It uses the data between 1970-1979 for both the City and County population to project the City's population based upon estimates for the population in the County. Implicit in the equation is the assumption that present trends (in which the City's population share of the County has been rising) will continue. The equation is as follows:

Pt= .09199 Ct — 3383.23
where t — subscript denoting year forecasted
Ct = estimate for County population in year t
Pt - predicted population for Bandon in year tR^2 = .9526

The statistical R (square) is known as the co-efficient of determination. This expresses the closeness of the data and the line formed by the regression. When R (square) = .9178, it can be assumed that 91.78% of the variation between the data and the line is statistically explained by the equation.

This equation assumes, based upon evidence from past trends, that approximately 990 of all new residents in Coos County will locate in Bandon. Projections as to what Bandon's population will be are generated by using the County's population estimates (the Portland State University "High" figures) in the equation. This alternative yields predictions higher than those for either Alternatives A or B. Since it yields an approximate compound growth rate of 3.65%, projection from 1977, it is higher than Alternative A which uses a 3% compound rate. However, this compound growth rate is lower than the compound rate Bandon has experienced from 1970-1979: 3.85%.

Alternative D: This alternative projects the current compound growth rate, 3.135%, into future years. As an equation, it would be written as follows:

$$Pt = Po\ (1.0385)t$$

where t = number of years from base year: 1970

Pt = population of Bandon t years from 1970

Po — population of Bandon in 1970: 1,832

As this figure assumes that Bandon's compound rate of growth experienced during the seventies (3.85%) will continue into the next two decades, it creates the highest prediction. Since the compound rate remains constant, it assumes that Bandon will have ever increasing amounts of new residents in each succeeding year.

Use of Population Projections

Population projections are only estimates of the magnitude of future events. The techniques employed in each alternative projection are discussed below. All four alternatives assume certain patterns observed during the 1970's will continue in the future.

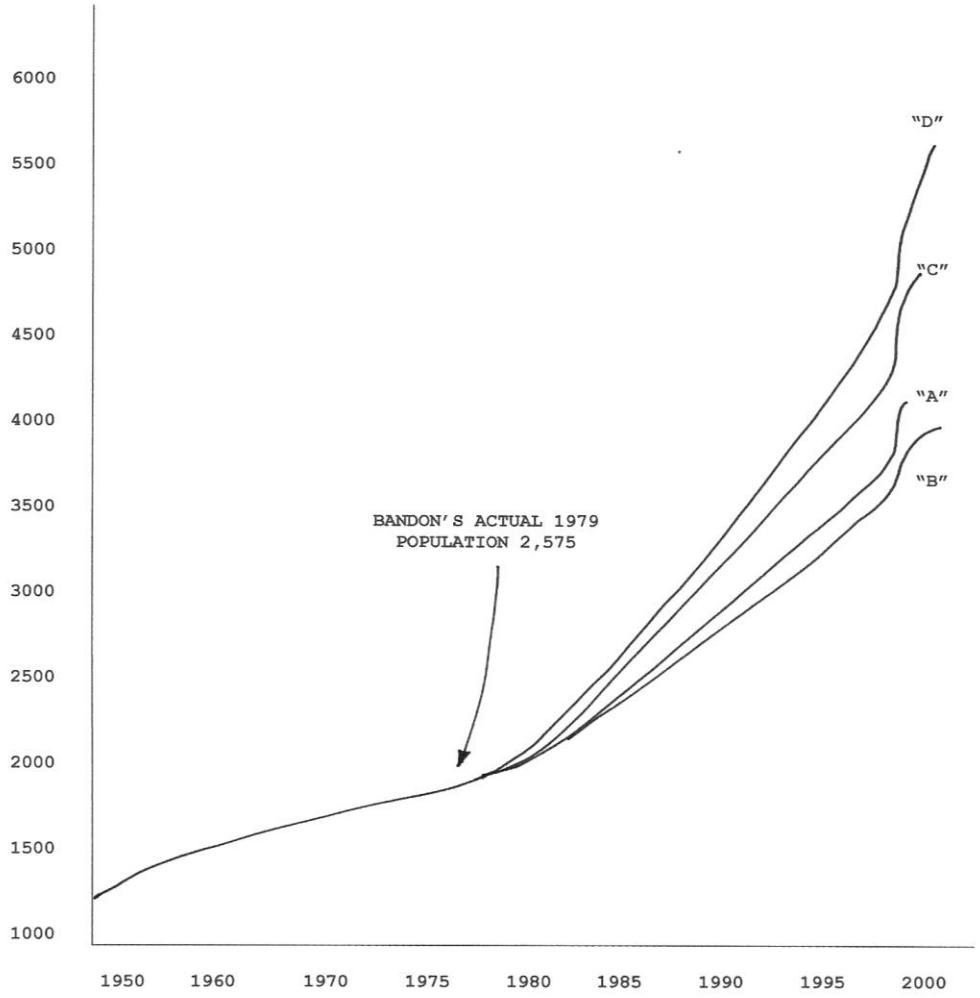
Alternative "A" makes an assumption that a 3% compound growth rate will continue for the next twenty years. While this rate appears appropriate from 1970—77 data, 1978 and 1979 offer population estimates well above those of this alternative. However, these years may be exceptional and the next few years may see this growth rate decline from the peak of 9.57 to a more moderate rate of growth which would make this alternative reasonable.

Alternative "B" assumes a constant increment for each year, with a declining annual growth rate. As such, it represents the lowest estimate, and it would be difficult to support the assumptions of this model, since during the seventies, Bandon's growth rate has Increased with increasing annual increments of population. Therefore, it is suggested that Alternative "B" is not a suitable one for use in projecting Bandon's population.

Alternative "C" is based upon the relationship between growth in Bandon to growth in the County as a whole. It observes that during the seventies, 9 out of every 100 new residents In the County were in Bandon. it assumes that this trend will continue in the next twenty years, and uses projections of the County's population to form its own projections. As a result, it yields higher estimates than "A" or "B", but assumes some slowing of the annual compound growth rate which has occurred during the seventies. However it may be that this growth rate will slow even more, making this projection too high. The assumption that 9% of the County's new residents will continue to locate in Bandon seems reasonable due to Bandon's unique status as the only ocean-front city in Coos County.

Alternative D assumes that the present compound growth rate will continue for the next twenty years. This assumes that each year Bandon will have more new residents than it did the previous year. While this may be a reasonable assumption, a compound growth rate as was experienced during the seventies may be too high to expect for another twenty years.

Of the four alternatives presented above, Alternatives A and C appear to be the most realistic choices. Alternative A has been selected by the City and is the official projection coordinated with Coos County. The City recognizes that it is unlikely that the population will follow the projection, due to difficulties in accurately projecting small populations over 20—year periods.



BANDON POPULATION PROJECTIONS

Population Growth in the Urban Growth Area

The Urban Growth Study Area (U.G.S.A.) (see Map B 1) presently contains a mix of residential, commercial, industrial and open space uses. According to a count of dwellings in 1970, the U.G.S.A. had 171 dwellings (Coos County Planning Department, County Land Use Inventory). As part of the revision of the size of the Bandon Urban Growth Area, this report revises the 171 figure down to 75 to more accurately reflect the base population that will affect growth within the UGA area during the planning period.

By multiplying the current household size for Bandon (2.22 persons/household; 1980 Census) by the number of dwellings (75), the revised U.G.S.A. population is estimated to be 165 persons. By further applying the 3% compound growth rate used in Alternative A, population growth in the U.G.S.A can be projected, as shown in Table 3.

Total Population Growth -City and Urban Growth Area

The combined total population projection for the City and U.G.A. are presented below.

TABLE 3
Combined Population Projection

Year	City	Urban Growth Area	Total
1980	2435	165 (170,175,180,186,191)	2600
1985	2822	191 (197,203,209,215,222)	3013
1990	3272	229 (229,236,243,250,257)	3494
1995	3793	257 (265,273,281,290,299)	4050
2000	4394	299	4693
TOTAL Net Growth 1980-2000	1959	134	2093

The projected net growth for the City of Bandon and the Urban Growth Study Area is 2093 persons (1959 in City plus 134 in U.G.S.A.).

Coordination of Urban Growth Area Projected Growth with Coos County Plan
The projection in Table 3 above shows a net growth of 134 persons for the U.G.A. Converted to dwelling units, this population represents about 60 units (134 persons 2.22 persons/unit). As a part of the overall analysis of county housing needs, Coos County has “allocated: 80 dwelling units to the Bandon U.G.A. (see Coos County Draft Plan, Spring, 1980, pg. Q-24, Table 16). The smaller projection by the City is largely due to the U.G.A. revisions discussed above. The discrepancy between the City projection and County allocation is only 20 units and is not considered significant.

PROJECTED HOUSING AND LAND NEEDS

Basic Housing Needs

In order to convert the population projection made above into a projected need for housing, an average household size must be assumed. Census data show that Bandon has historically had a smaller household size than Coquille, Myrtle Point, and the County as a whole:

TABLE 3A
Household Size in Bandon and Coos County (Person/Household)

Year	Bandon	Coquille	Myrtle Point	Coos County
1970	2.63	2.83	2.81	2.92
1980	2.22	2.37	2.48	2.92

Source: 1980 Census, Final Population and Housing 'Unit Counts.

Bandon's smaller household size is primarily due to relatively a large number of single-person (retiree) households, and numerous "dwelling units" which are actually seasonally occupied rental homes. Statewide demographic trends toward a general reduction in family size and increase in single-person households may be expected to further reduce Bandon's average household size in the future. Projections for the unincorporated county population show an approximate 6% decrease In household size between 1980 and 1990, with the figure holding constant from 1990 to 2000 (Coos County Planning Department, Draft Coos County Comprehensive Plan, 1980, pg. Q-4). Assuming a reduction in household size of similar magnitude will occur in Bandon, the City's household size is projected to decrease from 2.22 to 2.09 by 1990, and remain constant through to the year 2000. The projected household size is used below to make a projection of "basic" because it does not include vacant units.

TABLE 4
"Basic" Housing Needs

Year	Projected Population	Projected Household Size	Projected Dwelling Units
1980	2600	2.22	1171
1985	3013	2.15	1401
1990	3494	2.09	1672
1995	4050	2.09	1938
2000	4693	2.09	2246
Net Growth 1980-2000	2093		1075

The above table shows a "basic" need for 1075 new dwelling units between 1980 and 2000.

Extra Housing Provision to Allow for Vacant Units

In addition to the "basic" housing needs outlined previously, a certain extra provision must be made to maintain the vacancy rate at an acceptable level (1.6% for homes and 5.0% for rental units). These percentages of vacant homes and rental units are desirable in order to provide choice in the housing market place. The following two assumptions are used in the calculations of needed vacant units presented in

Table 5.

1. Current vacancy rates Bandon are 5.5% for owned homes and 2.0% for rental units, as follows:

1038 D.U. - 960 households = 78 vacant units
78 vacant units divided by 1038 D.U. = 7.5% vacancy
7.5% vacancy X 73% of housing stock in ownership = 5.5% owned
vacant units and 2.0 rental vacant units
(Source: 1980 Census, Final Population and Housing Counts).

2. A reduction in the current high vacancy rates for owned units will occur between 1980 and 1990, with a concurrent increase in the vacancy rate for rental units during the same period.

3. The proportion of owned units and rental units will remain constant and nearly the same as recorded in the 1970 Census (73% owned and 27% rental, rounded to 70% and 30% respectively).

TABLE 5
Housing Needed to Maintain Vacancy Rate

Date	Type Of Units	Basic Total # Of Units	Vacancy Rate	# of Vacant Units	Total Units Needed
1980	Owned	819	5.5%	45	864
	Rental	352	2.0%	7	359
	Total	1171			1223
1985	Owned	981	3.5%	34	1015
	Rental	420	3.5%	15	435
	Total	1401			1450
1990	Owned	1170	1.6%	19	1189
	Rental	502	5.0%	25	527
	Total	1672			1716
1995	Owned	1357	1.6%	22	1379
	Rental	581	5.0%	29	610
	Total	1938			1989
2000	Owned	1572	1.6%	25	1597
	Rental	674	5.0%	34	708
	Total	2246			2305
NET NEED					1082

Thus the projected total number of new dwelling units is 1082 (1223 in 1980 minus 2305 in 2000) to accommodate the City's population as projected to the year 2000.

Housing Projections By Type

According to the Coos County Assessor's Office, the mix of housing types in Bandon City as of May, 1981 was:

Table 5A

Type	Units	Percent
Single-Family	829	76.6
Multi-Family	164	15.2
Mobile Homes	89	8.2
	1082	100

Source: Personal communication, Coos County Assessor's Office

The following projection of housing needs by type (Table 6) is made on four assumptions:

1. Single-Family dwellings will continue to decrease in proportion to the rest of the housing stock due to increased cost, but will still be the predominant form of housing.

2. Attached forms of housing will increase in proportion to single-family dwellings due to the economic savings in common wall structures. Increases in multi—family housing have occurred in other cities in Coos County in recent years.

3. Mobile homes and multi-family dwellings will become a more acceptable housing alternative for low to moderate income people.

4. The housing mix in the year 2000 will be:

   Single-Family 60%
   Multi-Family 30%
   Mobile Homes 10%

The percentages of multi-family and mobile homes have been chosen by the City as reasonable projections of current trends and as a mechanism for providing affordable housing. In theory, if 40% of the available residential lands in the City allow multi—family and mobile homes (outright or conditionally), adequate opportunity for affordable housing will be available to people with low to moderate incomes. In 1970, about 40% of the families in Bandon had annual incomes less than $6000.

TABLE 6

Projected Housing Units by Type

Dwelling Type and Number		Percent	Additional Units by Type
1980 Total	1223	76	
SF	930	15	
MF	183	9	
MH	110		
1985 Total	1450	70	99
SF	1029	20	93
MF	276	9	35
MH	145		
1990 Total	1716	65	86
SF	1115	25	153
MF	429	10	27
MH	172		
1995 Total	1989	60	78
SF	1193	30	168
MF	597	10	27
MH	199		
2000 Total	2305	60	190
SF	1383	30	95
MF	692	10	31
MH	230		

Summary of Additional Housing Units
Needed by the Year 2000

Single-Family Homes	453
Multi-Family	509
Mobile Homes	120
	1082

Commercial and Industrial Land Needs

A very rough estimate of the City's commercial and industrial land needs can be calculated by extrapolating existing conditions to accommodate the projection for the year 2000. Such a "straight-line" estimate is made below.

TABLE 7

	1980 Population Bandon City	Acres In use	Persons/ Acre	Population Inc. 1980-2000	Additional Land
Industrial	2435	49	49.7	1959	39.4
Commercial	2435	80	30.4	1959	64.4

The estimates presented above are very rough figures of the amount of needed land. The "need" for future commercial and industrial growth is also a function of the type of uses that are desired, and the location of existing uses. Bandon's commercial growth needs include:

1. development of the Old Town area for tourist-related uses; and

2. "careful" infill and public safety planning along the commercial strip of the U.S. 101 corridor south of town.

With regard to industrial acreage, Bandon's needs are threefold:

1. Waterfront acreage for water-dependent uses (estimated to be 1440 feet of waterfront arid 13 acres of backup land - see Appendix 1;
2. Small parcels for light/small industry (e.g. meat packing, publishing);
3. A large parcel for heavy/large industry (e.g finished wood products), industrial park.

BUILDABLE LANDS REPORT

Introduction

In this report, "buildable" lands are those which are considered both physically suitable and available for urban level development.

Buildable lands have been surveyed and are presented in Map B2. This map was prepared after close scrutiny and update of the buildable lands survey of 1978. The former survey was found to include numerous areas as "buildable" that actually have severe physical constraints (e.g. the ocean beach west of Beach Loop Road), and thus extremely low suitability for development.

Lands considered unsuitable have one or more of the following characteristics:

1. they are located within designated floodplains of creeks or rivers;
2. they are immediately adjacent to the ocean and face considerable risk of ocean flooding during storm surge or tidal wave;
3. they have slopes in excess of 30%.

These buildable areas are found in the following locations (see Map B3):

1. along the ocean front where bluffs are in excess of 30% or are low enough to be susceptible to ocean flooding;
2. along the creek beds and canyons of Johnson, Gross, Ferry and Bill Creeks;
3. other areas of excessive slopes such as the bluffs by the south jetty or other isolated areas.

The South Jetty area is classified as being in a coastal high hazard area, but within the normal floodproofing regulations it may be classified as potentially suitable.

Lands considered available must possess all of the following characteristics:

1. they are not developed;
2. they are of sufficient size for the use in question;
3. they are zoned for the use in question;
4. they have reasonable access for future roads and public utilities;
5. they are not in the public right of way of U.S. 101.

The fourth criterion was a factor in considering the area southeast of the golf course as "unavailable". Lands classified as "potentially available" are parcels which presently have some development, but which could accommodate more if they were to be subdivided or partitioned. For the purposes of projecting and accommodating land needs, potentially available lands may be considered "equal" to those classified as available.

Buildable Residential Lands in the City

Within the city limits, the following acreages (by zone district) are considered to be both suitable and available for future residential development:

TABLE 8

Zone	Area	Area (Acres)
R	West of 101	46.3
R	East of 101 South of 42S	17.3
R	North of 42S	43.5
MHR	West of Ferry Creek	36.5
MHR	South of Ferry Creek	5.7
MHR	North of 42S	3.2
CD-2	Jetty	8.1
CD-1	Beach Loop Road	142.3
		302.9 Acres

Adequacy of Land In the City to Accommodate Projected Housing

To determine the adequacy of the existing buildable lands to meet the projected housing need, assumptions must be made as to the future density of dwelling units (D.U.'s) within the City. The 1978 Coos County Land Use Survey found the area of residentially zoned lands in Bandon to be 709 acres (built lands plus vacant lands). Using this area and the current D.U. count of 1094, a gross residential density of 1.54 D.U./acre is derived. The City Council and Planning Commission have expressed a desire to maintain the existing low—density residential environment as this is felt to tie part of the City's unique character and a feature the citizens have expressed a desire to retain. For the purposes of projection the following the assumptions are made:

1. Residential development in the two Controlled Development zones will occur at an average gross density of 2.25 Dwelling Units/Acre (D.U./Ac)2. This density is expected to result from:

    a. the continuation of the present pattern of very, large lots 14 5OO+ sq. ft.) and irregular infilling along the bluff.

    b. the high costs of flood/storm proofing required for new homes in the Jetty area which will serve to inhibit development.

Residential densities in these areas are currently less than two D.U./
Ac. (Plan, Figure IV-2). -

1. Residential development in the residential zones will occur at an average gross density of 3.0 D.U./Ac. This density is based upon an expected increase in the City's overall density that will accompany in-filling, together with an "offsetting" continuation of the existing

2 Gross density refers to the inclusion of rights of way and easements, which typically occupy 25% of a given residential area.

pattern of a relatively low-density residential environment.

2. Development in the Mobile Home Residential zone will occur at an average gross density of 4 D.U./Ac. This density is based upon the recognition that mobile home owners will, in general, seek small lots and that mobile home parks will typically achieve densities in excess of 5 D.U./Ac.

3. Future development in the CD-1 and CD-2 zones will be 90% residential and 10% commercial/other. This 10% allotment is made because both controlled development zones allow some commercial uses conditionally.

Using density assumptions stated above, the number of dwelling units accommodated by buildable residential lands within the City is computed as follows:

TABLE 9

Zone	Acres	D.U./Acre	Dwelling Units
Residential	107.1	3.0	321
Mobile Home Residential	45.4	4.0	182
Controlled Development	135.43	2.25	305
			808

Thus, 808 dwelling units can be accommodated within the City. Needed housing has been projected to be 1082 dwelling units, thus buildable lands are not adequate to accommodate projected housing needs. Buildable land outside the City limits is needed to accommodate the projected housing needs.

Accommodation of Projected Housing Types

The projection of housing units by type showed a need for 453 single-family homes, 509 multi—family units, and 120 mobile homes. Article 3 of the Bandon Zoning Ordinance permits the various housing types in City's "residential" zones as shown in the matrix below:

TABLE 10

Uses/Zones…	R	MHR	CD-1	CD-2
Single-Family	P	P	P	P
Duplex	P	P	C	P
Mobile Home	N	P	N	N
Multi-Family	C	C	P	C
Mobil Home Park	N	P	N	N

(P=Permitted,C=Conditional, N=Not Permitted)

3 10% of buildable lands are subtracted for commercial/other uses and thus not considered available for residential development.

From Table 10. it can be seen that single-family and multi-family units (including duplexes)are allowed either outright or conditionally in all four zones. It is apparent, then, that the projected need for single-family and multi—family units will be accommodated in the City on Urban Growth Area lands.

The accommodation of mobile homes can be approximated in the following manner:

MHR buildable land x assumed average density = units potentially accommodated

45.4 acres X 4.0 units/acre = 182 units

This approximation shows that the City's present buildable land in the MHR zone will accommodate the projected need for 120 mobile homes between 1980 and 2000. This assumes that no more than 15.4 acres (33%) of the MHR land will develop with uses other than mobile homes.

Buildable Commercial Land in the City

Buildable land within the City's commercial zones has been inventoried and equal 36 acres. Approximately 13 of the 36 acres are located along U.S. 101 and in the "Old Town". These areas have historically been the focus of commerce in Bandon. Today, "Old Town" is primarily oriented towards tourism and the City's waterfront heritage, while the U.S. 101 area serves more of the City's daily commercial activity. Another 10 acres of commercially zoned land lies east of U.S. 101 in an area of mixed commercial/residential uses. The available sites are somewhat scattered and without an arterial to carry traffic; these sites are probably better suited to commercial activity other than high volume retail sales. The remaining 13 acres is located adjacent to U.S. 101 at the junction of Seabird Lane.

In addition to the acreage in commercial zones, another 15 acres may be considered available in the Controlled Development (CD) zones of the Jetty and Beach Loop Road areas. The City estimates that 10% of the buildable land in the CD zones will go to commercial uses. Such uses will likely be tourism related.

The total buildable commercial land equals 51 acres. This is 13.4 acres short of the projected need for 64.4 acres, which is based upon "straight-line" estimates.

Buildable Industrial Land in the City

The buildable industrial land in Bandon (exclusive of potential industrial sites in the estuary) is quite limited at 6.4 acres. This area is split between two parcels located along Riverside Drive (2.4 acres) and south of Bandon Cheese Factory (4.0 acres). These sites have some limitations beyond size. Riverside Drive site is an elongated parcel (150 ft. X 700 ft.) and is broken into several ownerships. The other parcel is near some residences and a church.

An additional 13.4 acres of waterfront industrial land may be considered as potentially available. Two sites in the estuary are proposed for Development designations in the Draft Coquille River Estuary Management Plan, contingent upon adoption of "Goal 16 Exceptions" being prepared. These two sites are located north of Moore Mill and at the mouth of Ferry Creek.

The total buildable industrial land equals 19.8 acres (6.4 acres zoned and available plus 13.4 acres potentially available in the estuary). This is 19.6 acres short of the projected need for 39.4 acres, which is based on "straight—line" estimates.

PROPOSED BANDON URBAN GROWTH AREA `

Based upon the comparison of the projected land needs and buildable land within the City, Bandon will need additional urban land to accommodate growth to the year 2000. The establishment Of an Urban Growth Area (UGA) will serve to channel and accommodate projected growth and provide for an orderly and efficient transition from rural to urban land use. By using the "seven factors" of LCDC Goal 14 (Urbanization), the City has established Urban Growth Boundary (UGB) (see Map B12). The proposed land use designations in the UGA are discussed below.

Residential Land

Buildable residential lands within the City have been shown to be insufficient to accommodate projected housing needs. Buildable residential lands in the UGA are needed to accommodate approximately 274 dwelling units (1,082 DU - 808 DU = 274 DU).

The city has selected two areas to accommodate future residential growth outside the present City limits. These areas are: 1) the Sunset City addition, a legally established subdivision which is the southern extension of the Beach Loop Road "arm" of the city; and 2) the area adjacent to Seabird Lane. The number of dwelling units potentially accommodated in these areas are as follows:

TABLE 11

	Buildable Land (AC)[4]	x	Gross Density	=	Dwelling Units
Sunset City Addition	33		3.0		99
	62		3.0		186
					285

Commercial Land

Commercial land needed in the U.G.A. has been determined to equal 13.4 acres, based on straight-line estimates. As has been discussed under Residential lands above, the city estimates that 10% of all buildable land in the Controlled Developmentt (CD) zones will be occupied by commercial uses. About 106 acres have been proposed for CD zoning in the U.G.A., thus, 10.6 acres (10%) of this land expected to go to commercial uses. Subtracting the 10.6 acres from 13.4 acres "needed" leaves only 2.8 acres needed elsewhere in the U.G.A.

The City proposes to add one other commercial area to its U.G.A. This is the stretch of U.S. 101. running from the current City limits south to Edna St. west of 101 and Tacoma St. east of 101. This area is already partially developed with small businesses and professional offices. The City recognizes the potential of this area for future commercial development (particularly retail sales and tourism-related businesses) and as a "gateway" corridor into the main city. Bandon is concerned with vehicle and pedestrian safety along this corridor and would like to manage commercial growth to minimize such problems. The area proposed includes 21 acres of buildable land, with an additional 19 acres of unbuildable (already occupied) land.

4 Figures shown include 10% of total buildable land subtracted out for commercial/other uses in the CD zone.

The total proposed VGA land for commercial use is 50.6 acres (10.6 acres within the CD zone. .21 acres adjacent to U.S. 101, 19 acres unavailable adjacent to U.S. 101).

Industrial Land

An analysis of Bandon's Industrial Land needs occurred in the early 1980's portions of this analysis were included in the Urbanization Element as adopted in August 1982. Industrial land needs were determined to be 19.6 acres. The City included the Portland Addition area south of the Doyl Mill, now Douglas Pacific as an area of future industrial development. The Portland Addition has the following characteristics favorable to industrial development:

- short distance to Highway. 101
- adjacent industrial uses
- flat, vacant land (some residential land use occurring)
- no flood hazard
- sewer, water, and electrical services are adjacent to site
- fragmented ownership

In 1991 the City modified the Urban Growth Area by adding 129 acres of Industrial zoned property near the Airport. The City has determined that these areas are more than adequate to fulfill the City's long term industrial needs. The extension of City water and sewer services will be necessary of development to occur in the either the Portland Addition or the Airport areas.

The Airport area has the following site characteristics favorable for industrial development:

- adjacent to Highway 101
- existing industrial land
- flat, vacant land
- no flood hazard, no known geological hazard
- buildable land estimated a t 130 acres
- current zoning allows for industrial uses compatible with airport operations
- no existing or allowed residential uses
-

(Ord. 1326 3-94)

Public Facilities Planning

Map B11 shows city proposals for water and sewer system extensions. Currently sewer has been extended along Beach Loop Road to the edge of the Urban Growth Boundary. The City is currently engineering a water improvement district to construct a 12" water line along the west of Highway 101 to Seabird Drive and west to Beach Loop to provide adequate water service along Beach Loop and Urban Growth Area. In order to encourage the most economical provision of service, annexation to the city is normally a condition of providing sewer and water. Public facilities are recognized in the City's Comprehensive Plan as the key to ensuring an orderly and economic pattern of growth.

The City's plan for water development calls for the Improvement and expansion of the treatment and distribution system over the next 10 years. Towards the end of this ten year period, water services are

expected to be provided south of the city limits in the following areas: along Beach Loop Road, Seabird Drive, Old Airport Road, Rosa Road, and along Highway 101. Seabird Drive will serve as a cross line between Beach Loop Road and Highway 101, improving water pressure and opening up adjacent lands to development. Prospective developers have the option of paying for water extensions from existing main distributor lines. Improvements to treatment and storage facilities currently being designed and financed are expected to provide water needs till the year 2000.

Proposed improvements to the sewer system will generally occur first within the city limits and then in the same areas within the Urban Growth Area as the water system (Beach Loop Road, Seabird Drive, Highway 101). Sewer extensions are considered long term projects to be undertaken as population density increases and sufficient demand realized for sewer service. Improvements will be financed by assessments on individual properties or directly by developers. Normally, annexation to the city will accompany such extensions. A pressure sewer line with a pumping station has been constructed along Beach Loop Road south to the city limits. This enables both the southern area of the Urban Growth Area along Beach Loop Road as well as areas along Seabird Drive to be developed. If all urban areas obtain sewer services and population forecasts are correct, the sewage treatment plant may reach capacity before the year 2000.

Roads, like sewer and water services are usually developed as need arises. Their construction and improvement are normally financed by special assessments on properties or directly by developers. The recent construction of Seabird Lane opens up a large area in the Urban Growth Area for development.

Resource Land Considerations

The proposed Urban Growth Area contains approximately 60 acres of land with “agricultural” soils (60 acres Class III). An additional 45 acres of land has Class VII with Blacklock soils, the type commonly used for cranberry bogs. None of the areas selected are currently being used for commercial agriculture, largely due to intermingled Blacklock soils (Class VII), lack of water supply, and thick brush or shorepine cover. All of these limitations would place a new dairy, ranch, or cranberry farm at a comparative disadvantage with those in the Coquille Valley and adjacent areas. The UGA was drawn to specifically exclude active cranberry bogs which lie to the east of the City limits and Seabird Lane area, to reduce potential conflicts between urbanization and cranberry production.

Forest Site Class maps published by the Department of Revenue indicate that the land in the Urban Growth Area has no forest site rating (Oregon Department of Revenue Forest Site Class Maps). This does not imply that it has no forest capability whatever, but simply that there is no substantial forest cover. Therefore, the standing timber and forest site capability have not been appraised for tax purposes. It is estimated that the area has very low potential forest productivity. The potential dominant forest species is shorepine, and it may be estimated from nearby areas that the site class is State Department FE or FF (equivalent to cubic foot site class 4 and *5).* Judging by the low potential for forest production, the Urban Growth Area is correctly located. The most obvious alternative area is to the east of the City, and forest productivity generally increases in this direction.

SUMMARY

The proposed Urban Growth Area and land use designations are shown in Map B12 and summarized in the following table:

TABLE 13
PROPOSED URBAN GROWTH AREA

Designation	Area(Acres)
Controlled Development (Residential Use)	95.0
Controlled Development (Commercial Use)	10.6
Commercial	21.0
Industrial	36.0
TOTAL (Buildable Land)	162.6
Non-Buildable (Unsuitable/Unavailable)	71.8
TOTAL Urban Growth Area	234.4

Findings

The following findings summarize the City's projected need for land within the Urban Growth Boundary:

1. The combined City and Urban Growth Boundary (UGO)population will increase by 2,093 persons between 1980 and 2000.

2. The City will need 1,082 additional dwelling units (453 Single-Family, 509 Multi-Family, and 120 Mobile Homes) to accommodate the projected populations.

3. Assuming a range of densities for different zones[1] buildable residential lands within the City are adequate to accommodate 808 dwelling units. Buildable lands are needed to accommodate 274 dwelling units in an Urban Growth Area.

   The proposed UGA includes 95 acres of buildable land which is proposed for residential use under eventual "Controlled Development" zoning. This land can accommodate 285 dwelling units at gross densities of 3.0 dwelling units/acre.

4. "Straight-Line" projections show a need for 64.4 acres of additional commercial land. Assuming 10% of the available buildable land in the Controlled Development zones are developed for commercial use, buildable land within the City is available to accommodate 51.0 acres of the projected need for commercial land leaving a shortfall of 13.4 acres needed in the UGA. The proposed UGA includes 31.6 acres of buildable land which is proposed for commercial use.

5. "Straight-Line" projections show a need for 39.4 acres of additional industrial land. Approximately 6.4 acres (on two parcels) are available within the City. The suitability of these areas is limited by parcel shape in one case and adjacent residential and public uses in the other.

Approximately 13.4 acres of industrial land for water-dependent uses is potentially available, contingent upon final plan designations and Goal 16 Exceptions adoption in the Coquil1e River Estuary Plan. The proposed UGA includes 36 acres of buildable land which is proposed for industrial use.

The following findings are presented to justify the location of the Urban Growth Boundary.

6. Quantitative assessments of Bandon's need for housing are presented in findings (1)-(3). From the standpoint of a qualitative assessment of the City's need for housing availability, the selected residential urban growth areas promote the locational characteristics which are identified with Bandon and make it a unique and desirable place to live. The coastal landscape, the sights and sounds of the ocean, and even the extreme weather are all locational amenities considered "needed" by the City to promote and enhance livability in its future residential areas.

7. Another factor contributing to the selection of the Sunset City Addition for future residential urban growth is the fact the area is already substantially "committed" to residential uses. As noted in the Buildable Lands Report (see Table 11) this legally established subdivision has about 33 acres of suitable and avail-able land. The remainder of the subdivision includes unbuildable land along the beach (10 acres), the Beach Loop Road right-of-way (5 acres) and 19 lots which are improved with structures and road access (12 acres). The gross buildable residential density of the subdivision is 2.3 (33 buildable acres plus 12 improved acres divided by 19 dwelling units). According to the procedure for identifying committed areas used in the Draft Coos County Comprehensive Plan (1980, sec. 4.3.2), such a density would be defined as borderline between "physically developed" and "substantially committed."

8. The area selected to accommodate commercial needs and provide commercial employment opportunities is greater in land area than the quantitative "need" estimated in finding (4) above. The City recognizes that a "straight line" estimation of needed commercial lands must be augmented by consideration of where commercial employment opportunities exist, the types of commercial land needed, and existing traffic patterns. The commercial area along U.S. 101 has been selected to accommodate estimated needs and tap the potential to attract business oriented to both local and tourist traffic along the arterial. Existing commercial uses and traffic patterns serve to "commit" the area to future urban—level commerce. Further, the location of this land dictates that it function as a planned "gateway" corridor to the City.

9. The area select to accommodate industrial needs and provide industrial employment opportunities is greater in land area than the quantitative "need" estimated in finding (5) above. The inclusion of the proposed land south of *Douglas Pacific Veneer Mill (Ord. 1326, 3-94)* is based upon the recognition that "straight-line" estimates of needed industrial land must be augmented with the consideration of "locational characteristics" of available sites adjacent to the City. The site selected south of Doyl Mill has site characteristics which make it attractive to locating new industrial development or expanding existing uses (see discussion on industrial land).

10. Plans for additions to the city water system include a new 12" line that will run parallel to U.S. 101 and Seabird Drive. This line is needed presently to increase pressure in the Beach Loop line and guarantee adequate fire protection to the homes in that area. The extension will also serve the water needs of future residential development in the Seabird Drive area, and provide water

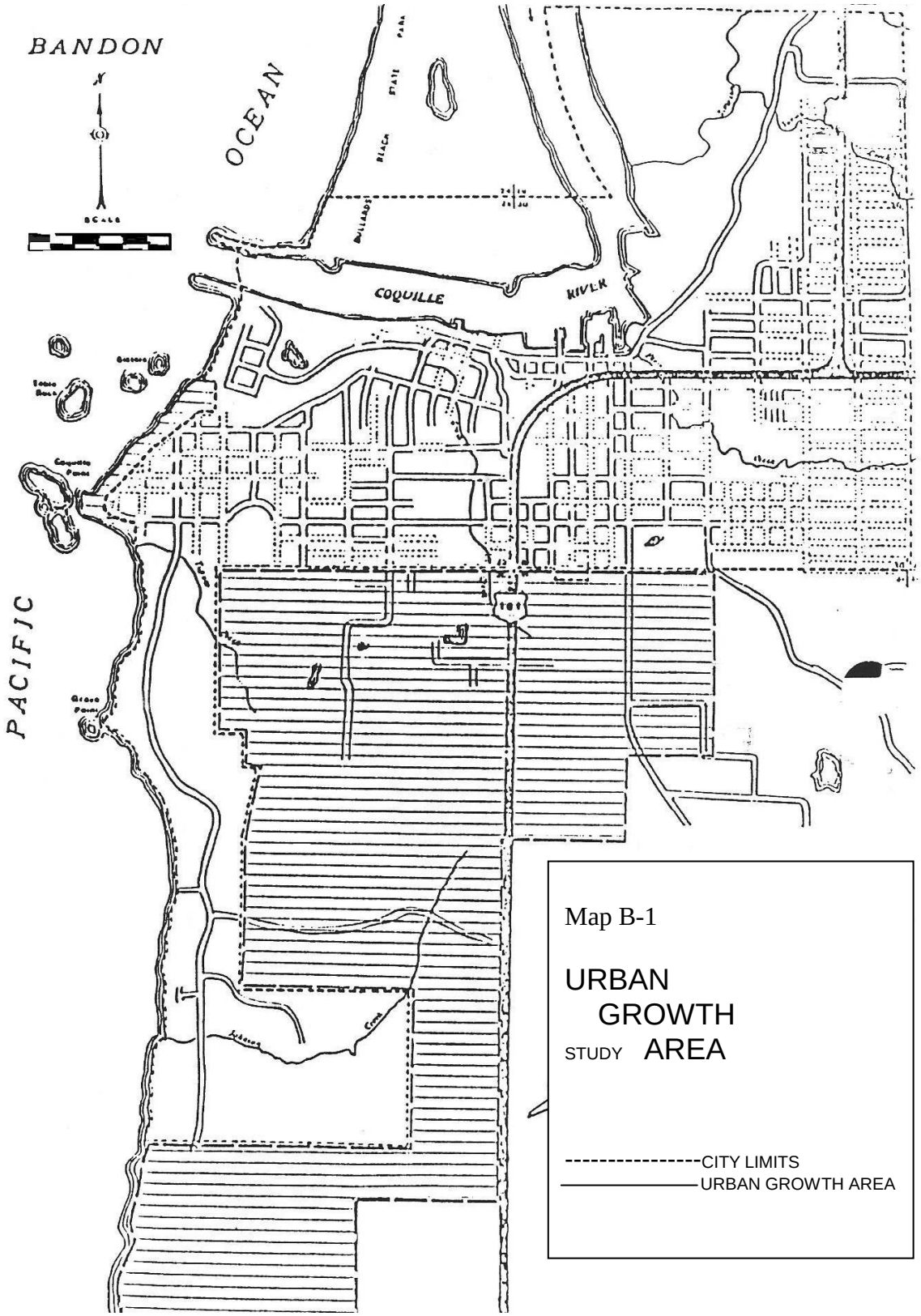
pressure for serving the Sunset City Addition. The future placement of this water line is another key factor contributing to the selection of the Seabird and Sunset City Addition areas for future urban growth. Water improvements will be facilitated through the creation of a water improvement district. The City finds these plans to be an orderly and economic public facility provision due to the multiple purposes (existing and future needs) being served. From an engineering standpoint, the improved loop system will significantly benefit pressure distribution in the southern part of the City.

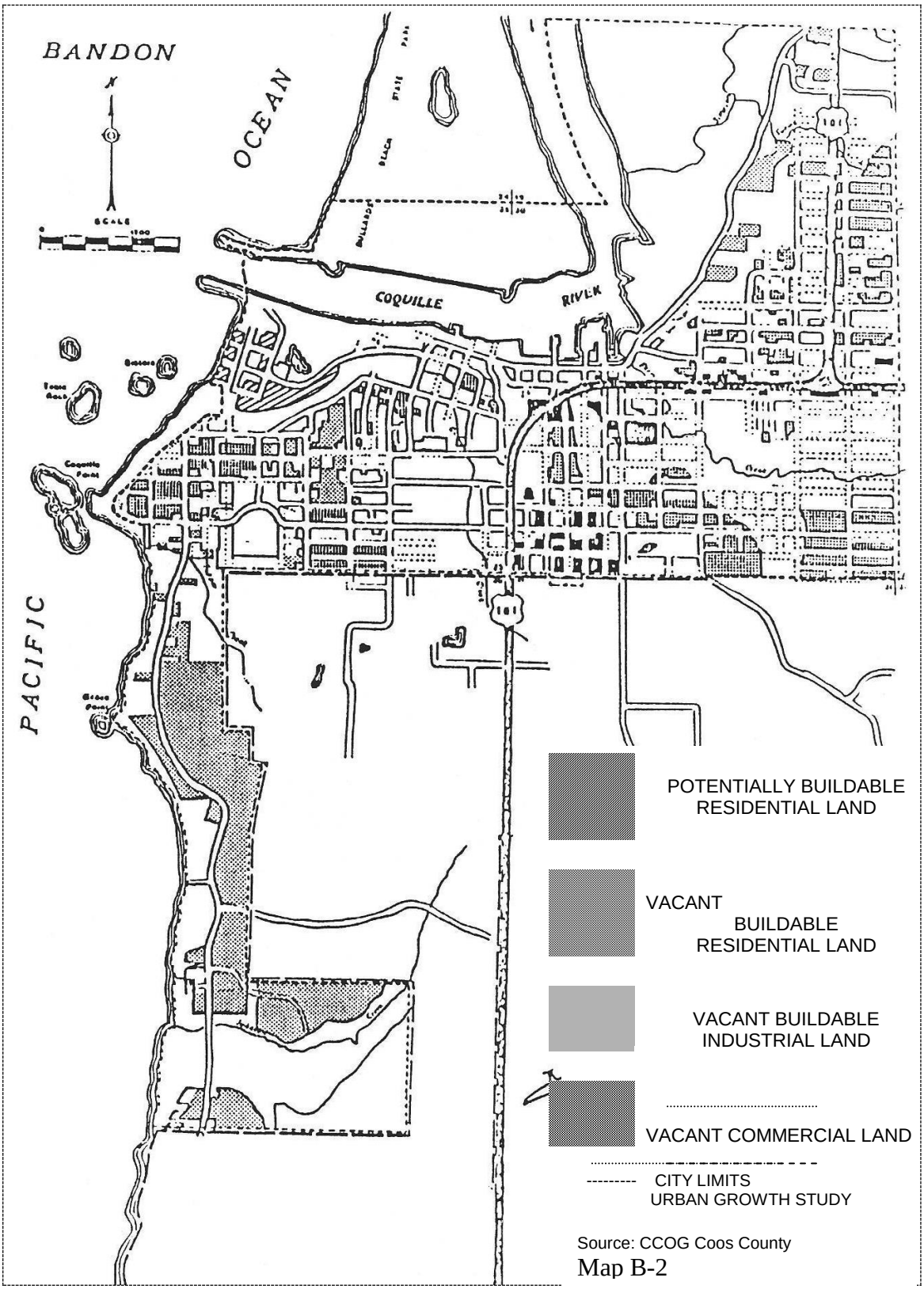
Plans for extension of sewerage facilities are only preliminary at present. Existing lines extend to the edge of all areas within the proposed UGB. Sewerage facilities planning by H.G.E., Inc. projects the sewer treatment plant to be adequate to 1996 providing infiltration/inflow are substantially reduced.

The proposed Urban Growth Area will utilize existing arterials (U.S. 101) and collector roads (Seabird Lane, Beach Loop South). Traffic on these roads will have minimal negative affect on existing neighborhoods. Road widths and street improvement requirements have been coordinated with Coos County.

11. Environmental impacts resulting from future development along the Bandon Bluff are expected to be minimized through the setback standards and geologic hazard review provisions of the Controlled Development Zone. Adverse recreational impacts are not expected due to the numerous public beach access points found within the City and the UGA. Social and economic impacts are expected to be beneficial in that the “livability” of the proposed residential areas is viewed as high and the development potential of the commercial/industrial areas is also viewed favorably.

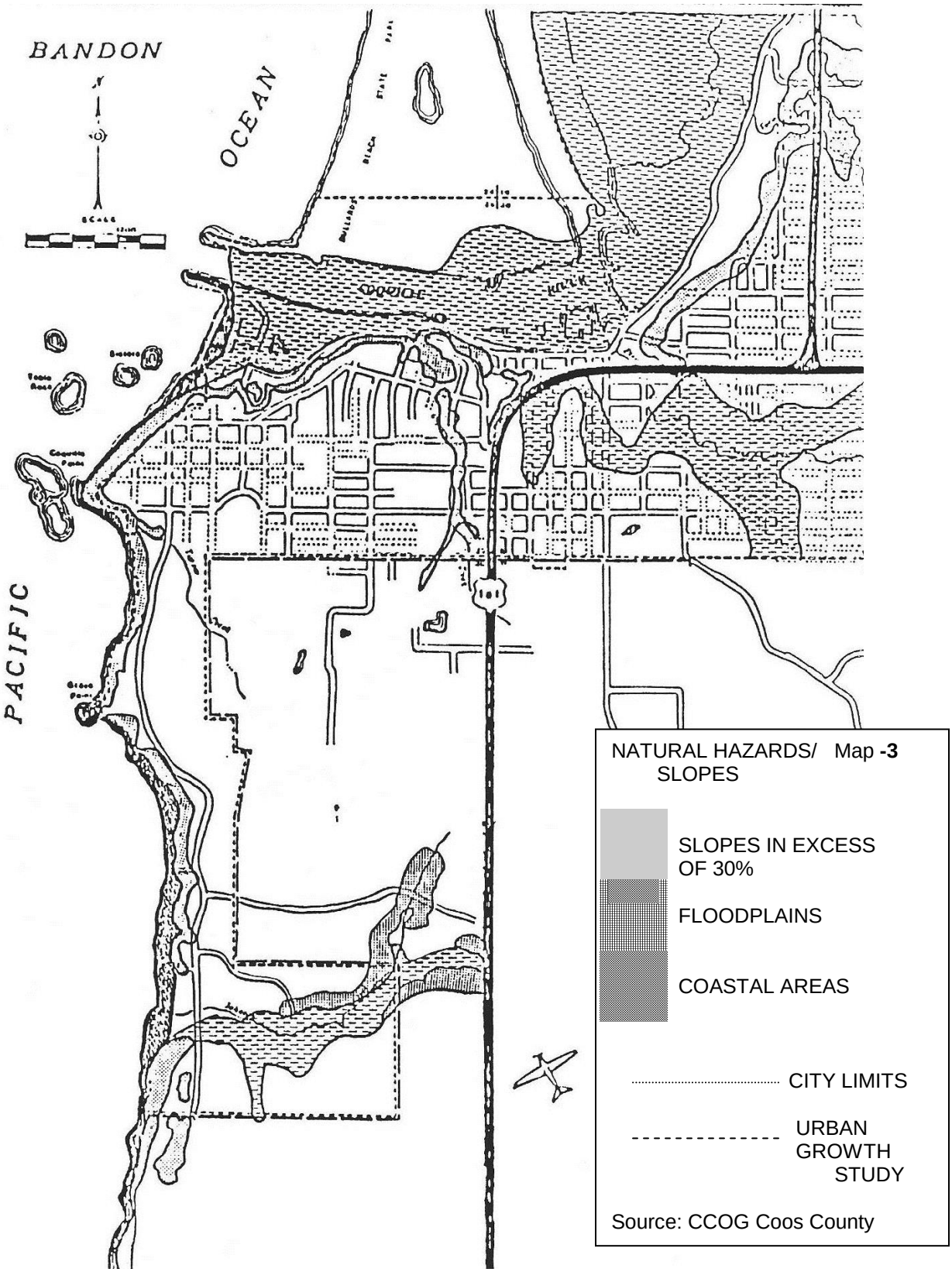
12. The proposed UGA contains approximately 60 acres of Soil Conservation Service (SCS) Class III soils. An additional 45 acres of land has Class VIIw blacklock soils, the type commonly used for cranberry bogs. There is considerable intertwining of these two soil types in some areas. None of the areas selected for future Urban Growth are currently in use for commercial agriculture, largely due to intertwined soil types, lack of water, and thick brush or shorepine cover. The UGA has been located specifically to avoid land use-related conflicts with commercial cranberry bogs to the northeast of the City.

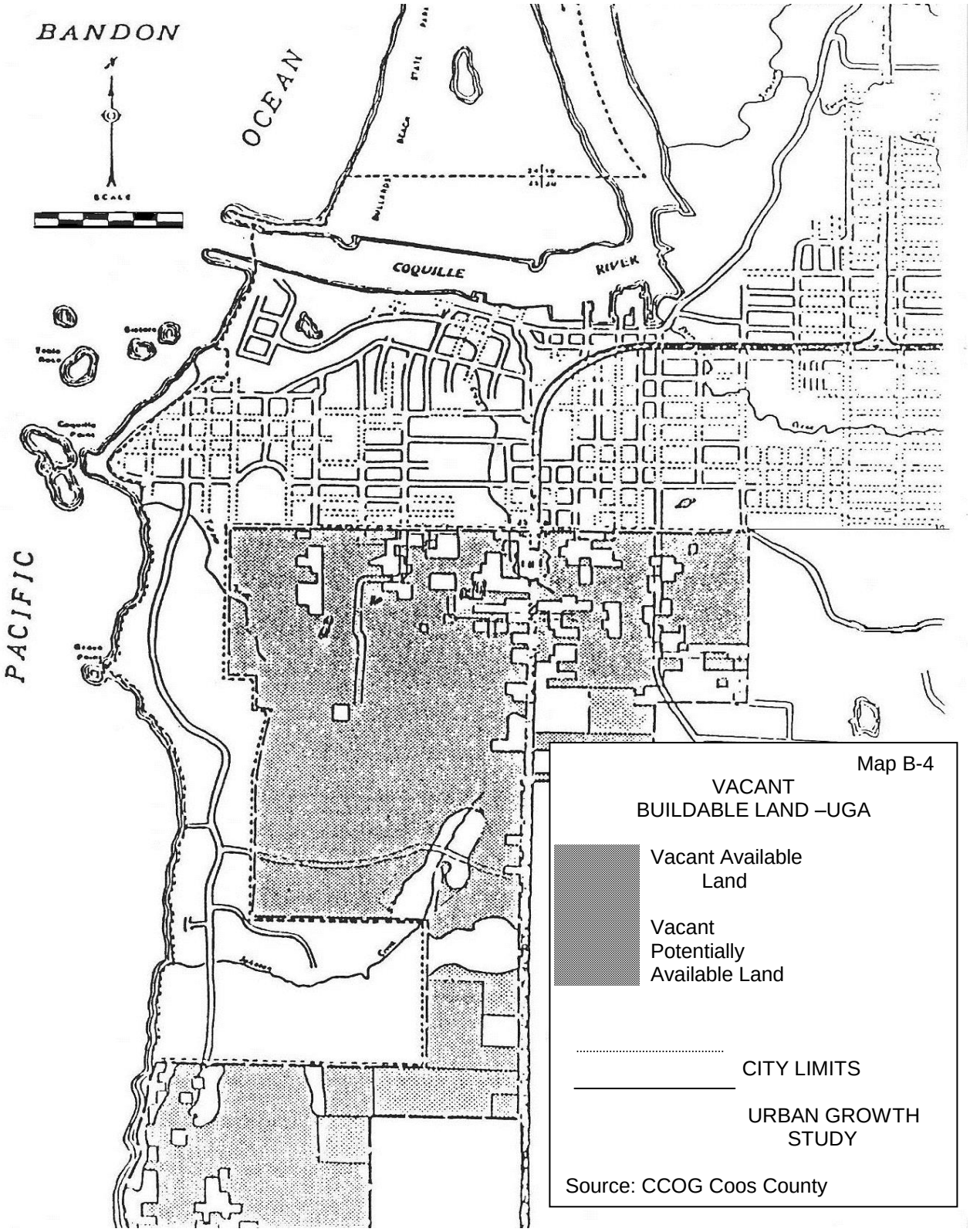

BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
Map B-1
URBAN
GROWTH
STUDY AREA
CITY LIMITS
URBAN GROWTH AREA

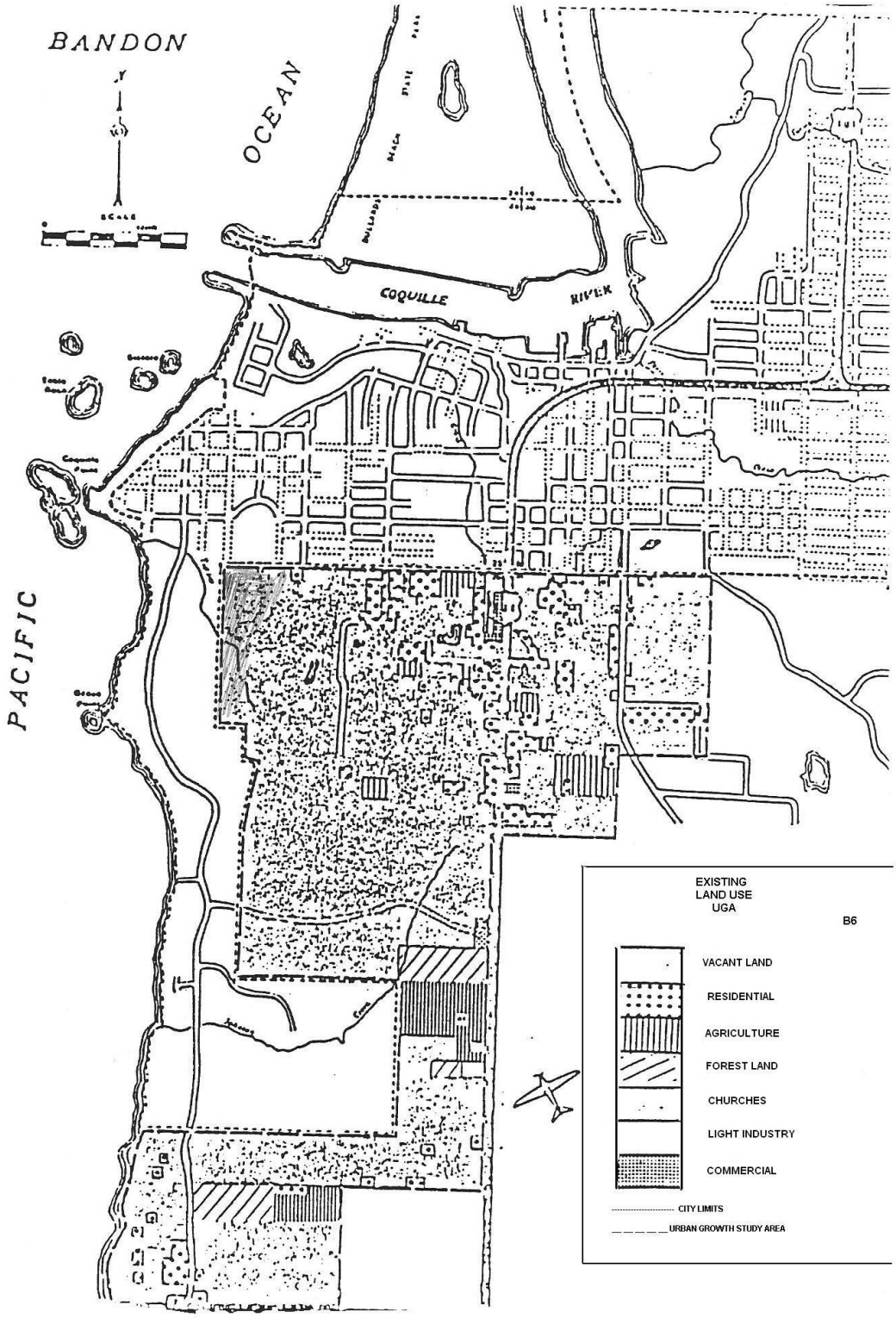


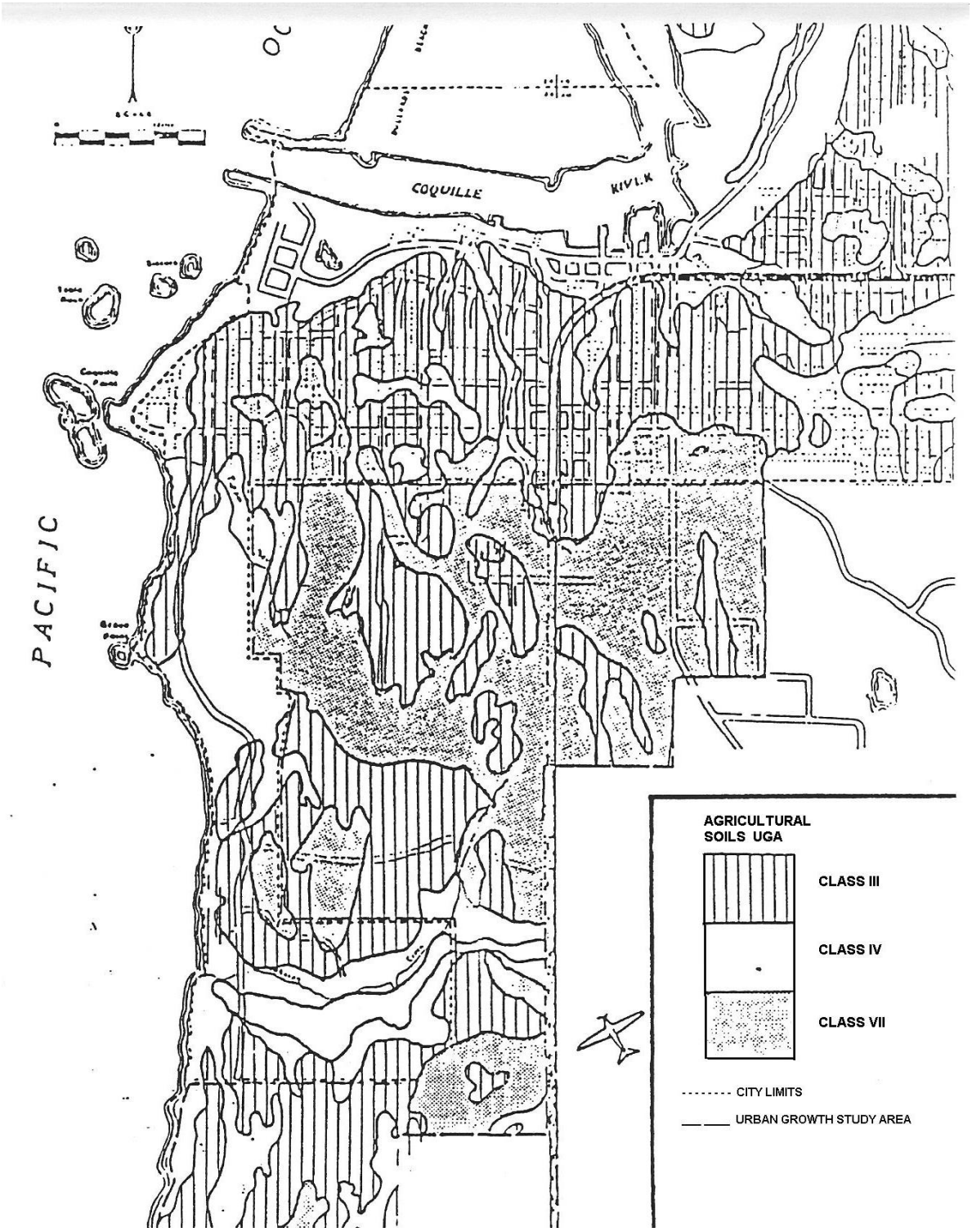
Source: CCOG Coos County

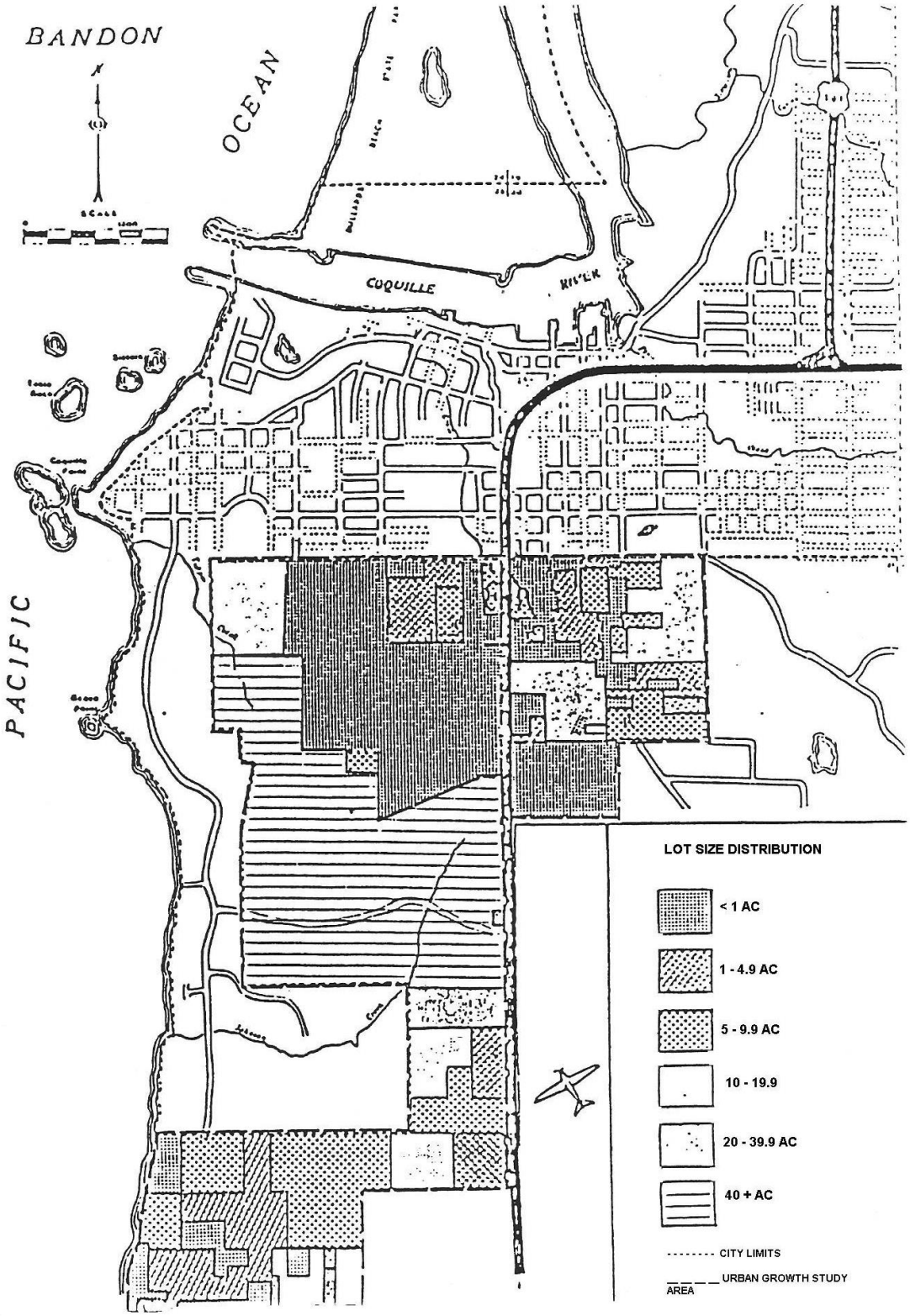
Map B-2

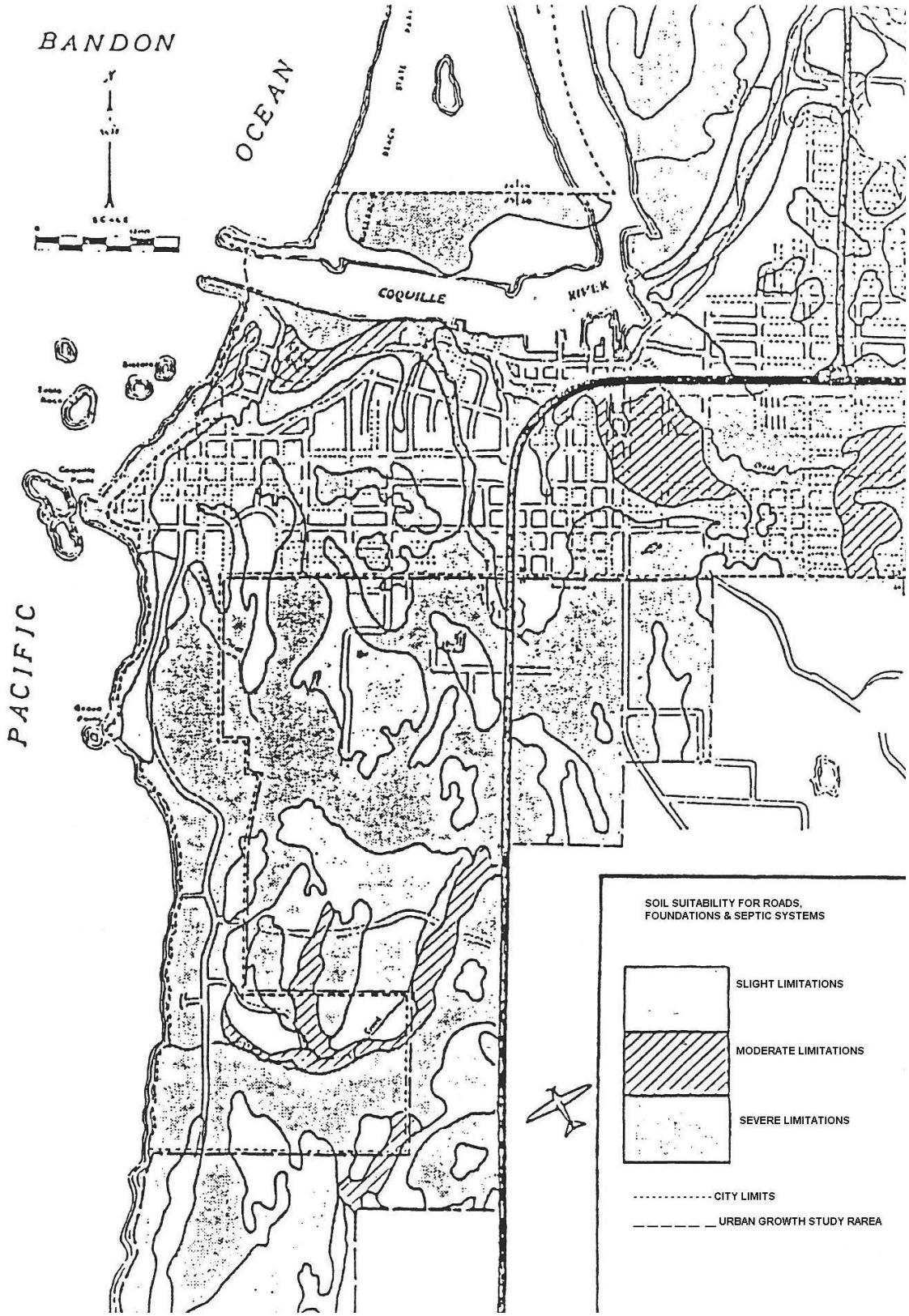

BANDON
OCEAN
PACIFIC
NATURAL HAZARDS/ SLOPES
Map -3
SLOPES IN EXCESS OF 30%
FLOODPLAINS
COASTAL AREAS
CITY LIMITS
URBAN GROWTH STUDY
Source: CCOG Coos County

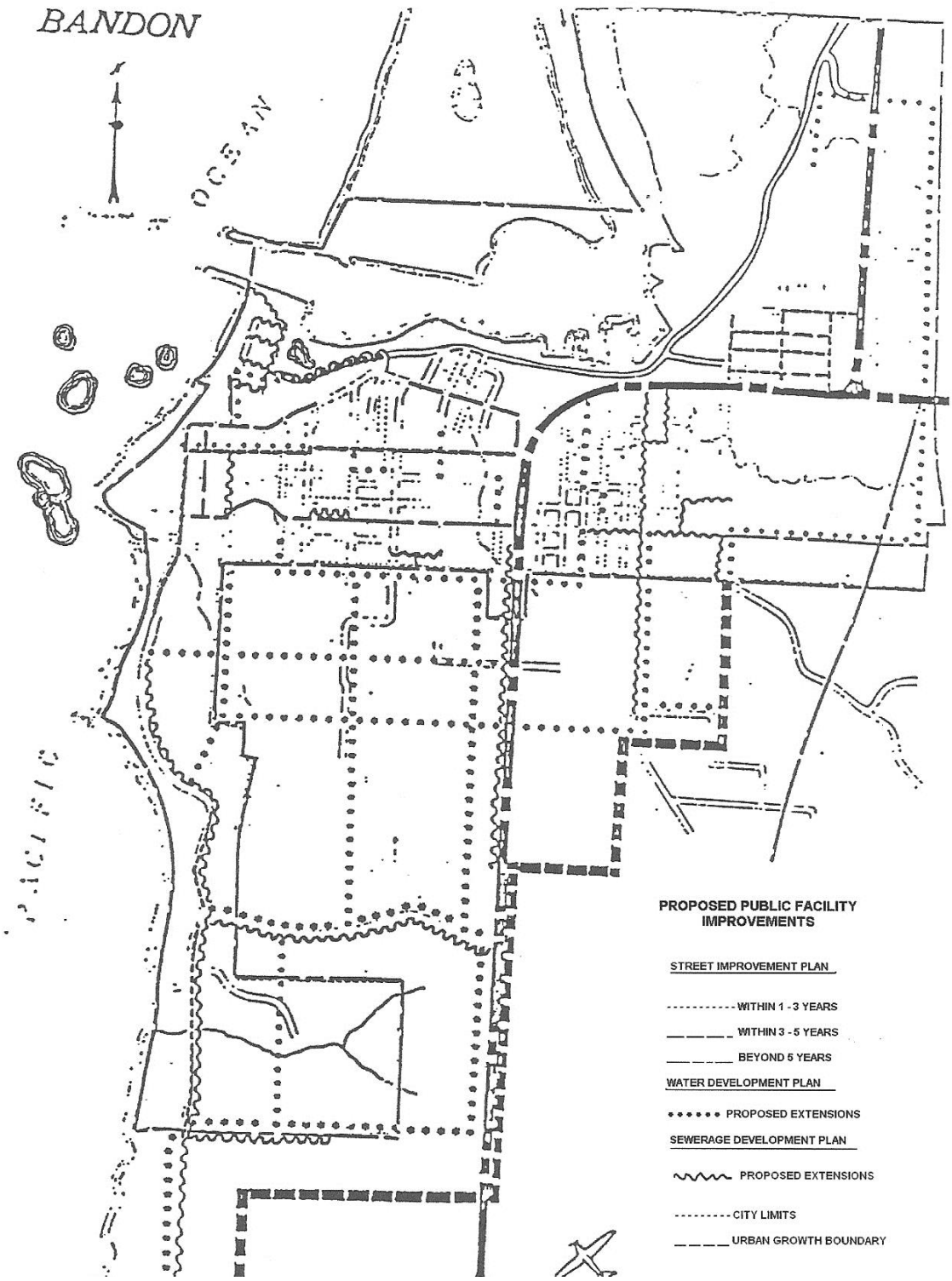

BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
Map B-4
VACANT
BUILDABLE LAND –UGA
Vacant Available Land
Vacant Potentially Available Land
CITY LIMITS
URBAN GROWTH STUDY
Source: CCOG Coos County

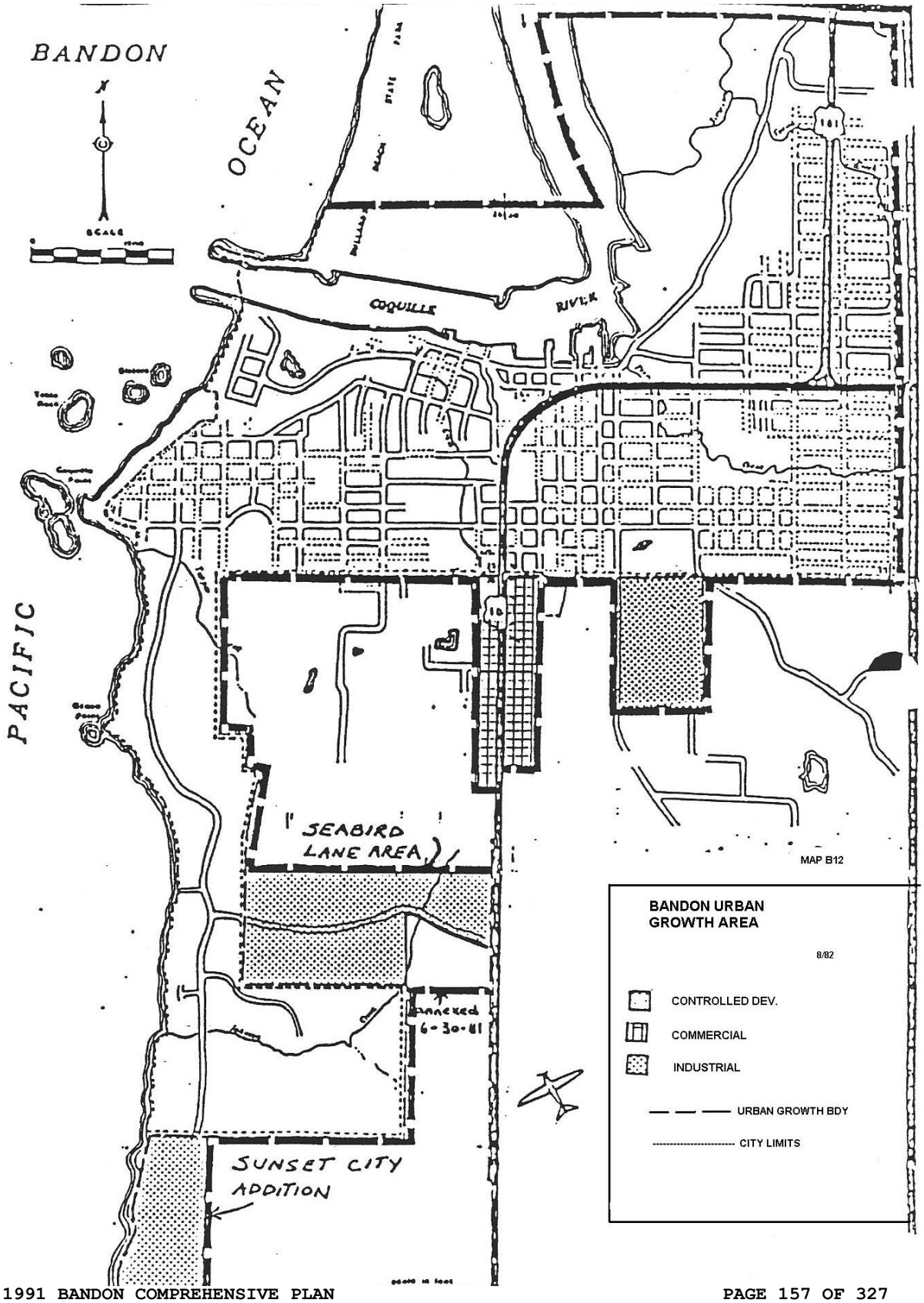

BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
EXISTING
LAND USE
UGA
B6
VACANT LAND
RESIDENTIAL
AGRICULTURE
FOREST LAND
CHURCHES
LIGHT INDUSTRY
COMMERCIAL
CITY LIMITS
URBAN GROWTH STUDY AREA


PACIFIC
COQUILLE
RIVER
AGRICULTURAL
SOILS UGA
CLASS III
CLASS IV
CLASS VII
CITY LIMITS
URBAN GROWTH STUDY AREA


BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
LOT SIZE DISTRIBUTION
< 1 AC
1 - 4.9 AC
5 - 9.9 AC
10 - 19.9
20 - 39.9 AC
40 + AC
CITY LIMITS
URBAN GROWTH STUDY AREA


BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
SOIL SUITABILITY FOR ROADS,
FOUNDATIONS & SEPTIC SYSTEMS
SLIGHT LIMITATIONS
MODERATE LIMITATIONS
SEVERE LIMITATIONS
CITY LIMITS
URBAN GROWTH STUDY RAREA


BANDON
OCEAN
PACIFIC
PROPOSED PUBLIC FACILITY IMPROVEMENTS
STREET IMPROVEMENT PLAN
WITHIN 1 - 3 YEARS
WITHIN 3 - 5 YEARS
BEYOND 5 YEARS
WATER DEVELOPMENT PLAN
PROPOSED EXTENSIONS
SEWERAGE DEVELOPMENT PLAN
PROPOSED EXTENSIONS
CITY LIMITS
URBAN GROWTH BOUNDARY


BANDON
OCEAN
PACIFIC
COQUILLE
RIVER
101
SEABIRD LANE AREA
Annexed 6-30-81
SUNSET CITY ADDITION
MAP B12
BANDON URBAN GROWTH AREA
8/82
CONTROLLED DEV.
COMMERCIAL
INDUSTRIAL
URBAN GROWTH BDY
CITY LIMITS

Open Space

Open space areas within the city consists primarily of parks, school areas, beaches, the golf course, and various undeveloped areas throughout the city. These areas are identified on the generalized land use map. Many more specific aspects of these open space areas were discussed in the plan and in the more specific topics below. In addition to any conflicts that may be identified below, the major potential conflict with open space values is the gradual conversion of the undeveloped areas to other uses, especially residential uses., However, the open space amenities provided by most of these areas are generally not required or desirable to the maintenance of the open space needs of the community because of the specific aspects of these values (parks, school areas, golf course, wetlands, etc.) are protected in the plan and because of the abundance of open space areas around the City. Consequently, the undeveloped areas of the City, except those specifically provided in the plan, or below, are not considered to be "land needed or desirable for open space."

Ecologically and Scientifically Significant Natural Areas

Bandon has four important areas of interest. In the south jetty area there is a freshwater pond of about one-tenth acre. It is quite unusual in that it is only slightly higher than the sea level and has no visible source. There has been no in-depth study of this pond, however, it must be spring fed.

Another area of interest is the north spit. The old Coquille River Lighthouse and Bullards Beach State Park are cultural features on the spit. The natural resources attraction is the large undeveloped area of dunes, habitat and driftwood. The driftwood indicates that some portions have been flooded.

Another estuary related natural resource is the Bandon Marsh in the Coquille River estuary. It is a low salt marsh of about 120 acres and an additional 75 acres are immature high marsh. It is the only sizeable salt marsh between Coos Bay and Smith River, California. It is described in greater detail in the City of Bandon Inventory of Coastal Resources and Oregon Natural Areas.

There are significant tracts of riparian vegetation within the City limits, around wetlands and along Riverside Drive, which are necessary to stabilize the shoreline and to maintain water quality and temperature for the maintenance of fish habitat and spawning areas. Riparian vegetation is protected under both this plan and the zoning ordinance

The fourth important natural area is the Oregon Islands National Wildlife Refuge administered by the United States Fish and Wildlife Service. The numerous sea stacks of the Oregon Coast comprise this refuge. Bandon has many, very beautiful offshore rocks which are part of the refuge. Even though the rocks are not within the city limits, they are still an integral part of the City and its outstanding natural setting.

Significant natural areas are primarily estuarine orientated and are not developed. Development is not

expected to put undue pressure on any of the areas. Estuaries in general, and the Coquille Estuary in particular, are important resources for the development of the area. The use of these resources may be expected to continue, especially continued dredging of the estuary for navigation, expansion of the small boat basin, and the removal of aggregate.

In the past, the U.S. Army Corps of Engineers have been responsible for the dredging of the navigation channel, disposing of the spoils in a designated area of sea. Areas outside of the navigation channel have been dredged at the expense of private interests and the spoils have been deposited at upland sites. Currently an estuarine area just north of the old Moore Mill[1]s upland log storage deck is zoned CD-1, but continuing north past the line of pilings, the zoning is Natural Resource. Development of the old Moore Mill area will not be allowed to impact negatively the Natural Resource zoned marsh area to the north.

The north spit area could be the site of some dredge spoil deposition on Port of Bandon lands or a salmon ranching operation, but these activities are not expected to generate negative impacts on the surrounding land. In the south jetty area, some development will occur, but the freshwater pond should remain undisturbed.

Overall, the ecologically and scientifically important natural areas are a very positive influence on the community. Their importance and influence should not be compromised by unbalanced growth. Careful balancing of development pressures and the natural areas discussed above is necessary.

Fish and Wildlife Habitats

The most significant fish and wildlife habitats in the area are associated with water and wetland discussed below. In addition, the undeveloped areas of the City (most notably the Northwest and Southwest corners of the city) provide-wildlife habitat values for deer, and other wildlife associated with deciduous hardwood or coastal shorepine-spruce habitats. Among these species are grouse, pigeons, gray squirrel and other small birds and animals. These habitats generally compose only a small portion of the range of these species and abundant habitat of similar qualities is available in the entire area around the city. No particular unique qualities have been identified for these habitat areas.

The above mentioned four areas of natural importance are significant fish and wildlife habitats with characteristics similar to Oregon estuaries in general. The City of Bandon Inventory of Coastal Resources discusses wildlife in greater detail.

The Ferry Creek stream corridor provides habitat for freshwater and anadromous fish, as well as many perching birds and small mammals. Some improvements to fish populations and stream habitat have been done by the Oregon Department of Fish and Wildlife (ODFW) as part of the Salmon and Trout Enhancement (STEP)Program. City zoning of the stream corridor is currently Natural Resource—Open Space, which will protect the fish habitat from conflicting uses.

Watersheds and Groundwater

The City’s Municipal Water System was discussed previously in the Public Facilities Plan. The watershed itself is relatively small, but capable of providing water to the city for the foreseeable future. Ferry Creek drains 1,130 acres and Geiger Creek drains 1,292 acres. During the sever drought of 1977, the water

supply continued despite the fact that most other nearby streams went dry. Water resources are identified in greater detail in a HGE publication and by state publications.

In response to our inquiries, Water Resources Dept. sent a report (ll-7—88) from Rick Bastasch that included the following information:

> "The City of Bandon is in the South Coast basin. Water use
> in the basin is regulated under provisions of the South Coast Basin Program. The program contains findings regarding water resources conditions and potentials, and establishes allowable uses of water and minimum perennial stream flows. The program was adopted in 1964 and was last amended in 1984.
>
> "In 1961, the State Engineer found that all the waters of Geiger Creek and Ferry Creek and their tributaries should be preserved as a municipal supply for the City of Bandon. These sources are therefore withdrawn from further appropriation to protect water supply.
>
> "Our current records show that Bandon has the following water rights:

Certif. Number	Permit	Source	Amount	Priority Date
9006	S9142	Willow Cr.	10 cfs	3—23—1921
9037	R622	Willow Cr. Res.	104 Ac Ft	2—15—1929
9754	E27	Spring Br. #3	20.625 Ac Ft.	1—24—1910
9755	R28	Spring Br. #3	2 cfs	1—24—1910

> "Certificates 9037 and 9755 are for reservoirs, the other two certificates describe the amounts that can be withdrawn from the reservoirs for use. The total allowable use from these rights is 12 cubic feet per second. This equates to about 7,755,264 gallons per day."

The availability of 7.75 million gallons of water is far more than the quantity now used by the City. Peak summer water usage is approximately 750,000 gallons per day when Bandon Fisheries is processing shrimp, which is by far our most consumptive use. To ensure that the 7.75 million gallons per day is usable and available, however, storage capacity would have to be ensured. The City has looked at the possibility of building a dam on Ferry Creek for use both as a water supply for the City and by the ODFW fish hatchery there. This is discussed in the public facilities plan portion of this plan.

One source of concern for the PC/CCI and the city in general is protection of the watershed that supplies the city's water. Logging and development could compromise the quality of the city's water. The city should do all it can to control any activities that could degrade the quality of its water supply.

II. Ground Water Programs or Investigations

Estimated yields for groundwater in the terrace and alluvium deposits within the city have been classified by the Department of Geology and Mineral Industries as medium to low (DOGAMI, 1975, Bulletin 87). Infiltration of rainwater is retarded in many areas by iron pans in the soil profile or by layers of low permeability material in greater depths. This restriction of surface water percolation results in ponding that can be controlled and used for cranberry production.

Representative groundwater data is available from the Loftin well in Sec. 8, T29S, B 14 W. The well was established in 1972 in sandstone to a depth of 77' (6" casting). The depth of water has been noted to be 45' (aquifer at 72'), with a yield of 15 gpm and total draw-down of 1 hour (DOGAMI, 1975, Bulletin 87).

Groundwater demand is not expected to be high in the UGA. Bandon requires the provision of services (including water) concurrent with, or in advance of, development.

Mr. Bastasch's letter to the City (noted above) continues:

> "There are no Critical Ground Water Areas or ground water withdrawals that affect Bandon. In addition, there are no on—going investigations regarding ground water supplies in or around the City.
>
> III. "In-closing, the Department strongly recommends that Bandon examine the water resources elements of its comprehensive plan in light of the following general guidelines.
>
> -Assure that water is available in quantities to support any expansions or annexations.
>
> —Recognize the benefits of water conservation.

The first of these two items is addressed in the Public Facilities Plan. The second item is addressed in a plan policy.

While WRD has indicated that there is no <u>critical</u> ground water area here, DEQ has indicated that there is a <u>sensitive</u> ground water area beneath the city. The City has adopted a policy to address this.

<u>Inventory of Point Sources</u>
The following have been identified as point, sources of pollution into waterways.

-The sewer outfall at the mouth of Ferry Creek

-city storm system locations

Riverside Drive and Ferry Creek

Chicago Ave at river

Baltimore Ave at river

Alabama Ave at river

Delaware Ave at river
Cleveland Ave at river
Elmira Ave at river

-Port parking lot at old boat basin location

-Bandon Fisheries permit to discharge water and fish waste into Coquille River at Bandon Fisheries building on First St.

-Bandon Fish Market permit to discharge fish waste to Coquille River

-Emergency overflow from the Riverside Drive pump station

-State storm drain at Creek St. off Hwy 101 (Ferry Creek)

-Storm Drain locations in Ferry Creek just west of Third St.

-Ferry and Gross Creek both discharge into the Coquille R.

Wildlife and Scenic Waterways

Inventoried areas are the National Wildlife refuges (Oregon Islands and Bandon Marsh), and riparian areas.

Air, Land and Water Quality

The overall environmental quality is very good. No specific inventory of air quality is available, but the quality is unquestionably high because of the constant cleansing by the coastal breezes. Land quality is good. The-Oregon Department of Environmental Quality administers the permit program for septic tanks. The land area of Bandon has not been degraded by inappropriate waste disposal. Solid waste is collected and taken to the county dump.

CHAPTER 10: COASTAL RESOURCES

Chapter VIII in 1991 Plan

Because the City had a land use plan prior to the development of the four Coastal Goals, this portion of the Inventory of the Bandon Plan is somewhat separate from the other parts. During the updating of the City of Bandon 1990 Comprehensive Plan, a coastal resources and the current and future land uses. The City of Bandon Inventory of Coastal Resources is an integral part of the inventory portion of the City of Bandon Comprehensive Plan.

The following inventory of properties along the beach in Bandon identifies which properties are not eligible for beachfront protective structures, as is required by Goal 18 as part of the City's periodic review process.

This inventory was done by reviewing Coos County Assessors' maps and records if the ownerships of the parcels. Only lots that abut the vegetation line are inventoried, and only those lots that are not eligible for beachfront protection are identified. All other lots are assumed to be eligible (or else Implementation Requirement 5 does not apply to the lot).

Goal 18, Implementation Requirement 5 states:

> Permits for beachfront protective structures shall be issued only where development existed on January 1, 1977. Local comprehensive plans shall identify areas where development existed on January 1, 1977. For the purposes of this requirement. . .development means houses, commercial and industrial buildings, and vacant subdivision lots which are physically improved through construction of streets and provision of utilities to the lot and includes areas where an exception to (2) above has been approved [restrictions on locating structures in beaches and dunes areas.]

The following lots are not eligible for beachfront protective structures;

Map	Tax Lot
28-15-25Index	500
	600
	700
	800
28-15-25BD	3700*
	3701*
	4000*
	4100*
	8100*
	8400*
	9100*
	9000*
28-15-36BB	4000
28-15-36BB	1700
28-15-36CB	1000
	1100
	1200
28-15-36CC	1100
	1200
	1500
	1600
29-15-1BB	1200
	1300
	1400
	1800
	1900
29-15-1BC	200
	300
	400
	500
	600
	700

*None of these lots abut the vegetation line.

The South Jetty and the Bluff

The south Jetty and the bluff contain the most unique and attractive areas for residential, tourist commercial, and recreation within the city. These areas have been zoned for "Controlled Development", in which only one and two family dwellings are permitted outright, and then only under rather strict conditions. These are a variety of conditional uses which may be permitted by the Planning Commission, providing additional specified conditions are met. The intent is to control future development in order to enhance the area's unique qualities.

South Jetty and Breakwater Addition. West of Robertson's concrete, sand, and gravel facility one enters the south jetty area, or Breakwater Addition as it is known to the maps. The area was created as a result of construction of the south jetty.

The south jetty is 2,700 feet long and was begun in the 1880□s from the blueschist of Tupper Rock, a sea stack on the beach at that time which reached 100 feet above the general level of the upper part of Bandon. By 1901 the top of Tupper Rock has been largely removed and quarrying continued for many years. Virtually little trace of it remains today. The jetty was completed to its present extent in 1908 and was extensively repaired in 1954. The Coast Guard maintains the navigational aids on the south of the jetty.

The Bandon South Jetty County Park, approximately one acre consisting of an unpaved parking lot and flush type restrooms, provided access for beach combers and the fishermen to the jetty, the rivers mouth, and the ocean beach. At the east end of the parking area is a seafood restaurant, located on properties belonging to the Port of Bandon.

Aside from the beach sand, the soils on the Breakwater Addition are classified as urban land fill, and some loamy sand. The entire area north and west of Jetty Road was included by the Department of Housing and Urban Development as a part of the 100 year floodplain in April, 1976. The 1964 Tsunami however, did not reach the homes of Breakwater Addition.

Geology of the Bluff. The average coastal erosion in Coos County varies from less than one inch per year to several inches per year depending upon bedrock hardness, topography, and other factors. At Bandon, the irregular headland composed of the extremely varied rocks of the Otter Point formation has had a very slow rate of erosion. There has been little or no change in the past 100 years, with the exception of a few local slides.

The Bluff. The intersections of Jetty Road and the Bandon Beach Loop begins 5 miles of scenic drive along the bluff, dunes, and beaches of South Bandon. This part of the city has been zoned for controlled development to "recognize the scenic and unique quality of Bandon's ocean front and to maintain this quality as much as possible by carefully controlling the nature and scale of future development in this area. It is intended that a mix of uses would be permitted, including residential, tourist commercial, and recreational. Future development is to be controlled in order to enhance the area's unique qualities."

In summary, the area between the bluff and highway 101 is very sparsely developed, overall, but contains some of the most attractive residential, tourist commercial, and recreation properties on the coast. Coastal erosion on the bluff is the primary geological hazard. Administration of and compliance with the city of Bandon Zoning Ordinance is the chief tool in controlling future development in order to enhance the areas

unique qualities.

CHAPTER 11: OCEAN RESOURCES

Ordinance 1472, January 7, 2002
(Adopted as Chapter 13[5])

Introduction

The purpose of this chapter is to address Statewide Planning Goal 19, Ocean Resources, as it relates to Bandon. The pacific Ocean and its variety plays an important role in the economic and social life of Bandon-by-the-Sea. The ocean attracts visitors and residents alike, provides amazing views, supports local businesses, and is an inseparable component of a. coastal town like Bandon. The history of Bandon is intertwined with the ocean, and will continue to be.

While the City of Bandon has no jurisdiction over the territorial sea, the activities conducted by the City may have impacts on the waters themselves. It is generally the responsibility of state and federal agencies to regulate activities that may affect ocean resources. Although the Goal does not require the development of complete inventories, the following information provides a basis for any more intensive inventories which may be required

THE OCEAN AND ITS INFLUENCE

From the beginning, it is the sea which gives Bandon its distinct character. It is the only city in Coos County which is on the ocean and it contains most of the privately owned ocean view property in the county. The visual experience of the ocean from a number of points within the City is not excelled anywhere. The physical setting, the biological balance, the economy, the social life and the weather are dominated by the presence of the Pacific Ocean.

This section, *The Ocean and Its Influence*, is intended to illustrate the impacts and relationships of the various features of the Pacific Ocean and the continental shelf as they affect the City of Bandon. There are brief accounts of ocean fisheries, marine mammals and birds, geology and the continental shelf, and ocean currents and tides.

These subjects are addressed because it is the ocean and its influence which set the scene. It is the ocean which turns the river into an estuary with its accompanying economic and ecological values; it is the ocean which makes the South Jetty and the Bluff such unique and desirable residential, recreational, and commercial areas.

5 This Chapter was originally located in Estuary Management (see Chapter 12)

The major impediment to waterborne transportation, as well as to offshore commercial and sport fishing, has been the often difficult and dangerous bar crossing at the channel entrance of the Coquille River. The principal difficulties are rough water during southwesterly winter storms a southerly wave set across the entrance during northwesterly storms, and annual shoaling which occurs near the seaward end of the North Jetty during periods of low river runoff and northerly storms. Channel depth is insufficient for deep-draft vessels which are used in international trade.

Marine Mammals

There are several species of marine mammals which frequent the ocean immediately offshore. The California Grey Whale makes its annual migration from the Arctic to Mexico in winter and back north in the spring and summer. Sightings are sometimes made from Bandon. At least 6,000 Grey Whales are estimated to make the annual migration. Other types of whales, such as Orcas, have been observed in the area.

Several species of seals and sea lions have been observed in the Bandon area. These mammals have historically been hunted for skin, blubber or bounty. As a result of protective laws their populations are beginning to recover from near extermination.
The Northern Elephant Seal, which breeds in California, migrates along the coast as far north as the Gulf of Alaska. Due to their behavioral patterns and lack of agility of back flippers, they are seldom, if ever, found on rocks. They haul out on relatively flat surfaces, such as sandy beaches. They are unable to climb up and over rocky surfaces.

Northern Elephant Seals, when away from their breeding grounds, dive day and night and, presumably, feed. The movement of these mammals while at sea feeding is not well known, as they spend most of their time under water.

The Harbor Seal inhabits the Bandon area and is often found in the Coquille estuary. These seals have a breeding area on Cat and Kittens Rocks and frequently haul out between Elephant Rock and the beach. Harbor Seals are protected by Oregon Department of Fish and Wildlife (ODF&W). The Northern, or Stellar, Sea Lion is sometimes observed in the area, though their population has suffered severe losses in recent years. Efforts are underway by ODF&W to help save this species.

Marine Birds

Immediately offshore from Bandon is a group of rocks, all of which are included as a part of the Oregon Islands National Wildlife Refuge. This refuge system is administered by the Unites States Fish and Wildlife Service (USF&W). The refuge is dedicated to the wildlife found on it and for management of the wildlife habitat and protection and preservation of endangered or rare wildlife.

The rocks off Bandon are used by several endangered species. The California Brown Pelican appears in the area from about August to November. This species suffered a very large population loss and is now beginning to recover. Bald Eagles and Peregrine Falcons have been observed in the area. Other commonly observed species include Double Crested Cormorants, Pigeon Guillemots and the Common Murre.
The offshore rocks represent vital habitat to many seabirds who nest there. Burrow nesting species, such as Tufted Puffins and Leach's Storm Petrals, require areas that are inaccessible because their burrows are

easily trampled. Human disturbances have been known to cause panic and destruction of young birds in breeding areas. For these reasons, the rock islands are off-limits to humans.

In the estuary lies a large salt marsh that is also administered by the USF&W. The Bandon Marsh is an important waterfowl and shorebird area. Waterfowl use of the estuary up to Riverton near river mile 16.3 is estimated at 39,000 waterfowl-use days per year. White Winged Scoters (Coots) are the most abundant. species. Others include American Widgeons, Pintails, Wood Ducks, American Mergansers and Surf Scooters.

Shorebirds include Sanderlings, Black Oyster Catchers, Killdeer and both Ruddy and Black Turnstones. In the late summer of 1990 a flock of Great Knots was observed at the South Jetty, which was a very unusual sighting. The above should be considered a very incomplete list. Many more species of birds, including upland species, inhabit the area.

Geology

It is its setting on the western margin of the North American continent which gives Bandon its distinct character. Being on the edge of the continent also places Bandon (and the rest of the Pacific Coast) near the edge of what the geologists call the North American Plate - the slab upon which our entire continent is drifting slowly towards Japan. The North American Plate meets the Pacific Plate about 200 miles west of Bandon in a complex border zone of faults, folds and rises. There is also a subduction zone where the Juan de Fuca Plate is sliding beneath the North American Plate from Southern Oregon to Vancouver Island. This is the source of all the volcanoes from Mt. Lassen through the Cascades. Recent studies indicate that strong earthquakes have occurred along the Oregon Coast about every 500 years. The most recent was approximately 300 years ago.

Continental Shelf

The continental shelf, that comparatively shallow platform which surrounds the continent, is about 20 miles wide at Bandon. For the first five or six miles it has a sandy bottom - the same sand found on the local beaches and dunes. For the next six miles or so the bottom is muddy and beyond that it has patches of mud and patches of sand. The sand generally occurs from the shoreline out to about 30 fathoms and then again near the outer edge of the continental shelf. The sandy bottom indicates a regular, strong current. The Dungeness crab and English sole are common commercial species found on the sandy bottom. The muddy sand and mud found beyond the nearshore sand occurs in water over 30 fathoms and indicates less current. Commercially important fish found on the muddy bottom includes Petrale and Dover sole and Pandalid shrimp.

Ocean Currents

The ocean currents affecting Bandon are complex and are of several types. These types include offshore wind borne currents, local longshore currents, and vertical upwelling of cold waters at the edge of the continental shelf. Because these currents exert direct influence upon the Bandon area, they will each be discussed briefly.

Windborne currents:
Windborne currents in this area are the south flowing California current and the north flowing Davidson current. The major one is the California current. It is permanent, part of the great clockwise circulation

system of the Pacific Ocean. It flows from north to south some 60 to 100 miles offshore in winter. The southwest winds, which are more predominate in winter, tend to drive the California current further offshore, and it is replaced by the warm Davidson current flowing from south to north from October to May and during summer months when the northwest winds abate. Average velocities for these currents is about .25 knots, although wind, tide, and current working together can produce surface currents as great as three or four knots.

Vertical upwelling:
The prevailing northwest winds of the spring and summer months force the warmer surface waters out to sea where they are replaced by cold, nutrient rich waters from several hundred fathoms depth at the edge of the continental shelf These cold waters provide some of the most productive fishing grounds on earth, as evidenced by the large foreign fishing fleets operating offshore from June through October of each year. The 1977 quota for USSR and Poland was 143,000 metric tons of Hake and 4,000 tons of Jack Mackerel. An estimated 50% of the total Hake resource is found off the southern Oregon coast. When the cold waters from this up-welling meet the warmer moist summer air it results in the heavy fog so common in Bandon on summer afternoons.

Longshore currents:
The action of waves striking the shore at an angle results in the local longshore currents. Waves from the northwest striking a north-south beach will produce a north to south longshore current; waves from the southwest striking the same beach will produce a south to north current. It is the longshore current which moves the tons of sand from one spot on the beach to another. The movement of sand along the coast is called "littoral drift" or "longshore transport". At Bandon the rocks and headlands at Coquille Point and the jetties interrupt the flow of the longshore currents. Local eddies appear dominant in the transport of sand on the Bandon beaches. It has not been certainly established whether the net transport of sand is from north to south or if it is "0". The overall tendency is for the more violent southwest winter waves to remove sand from the beaches and for the quieter northwest summer waves to replace it.

Ocean Flooding

There are three actions which create ocean flooding of the beaches, marshes, and other lowlands in the Bandon area. These are tides, storm surge, and tsunami (tidal wave). Tides: Tides are the periodic rise and fall of sea level which occurs twice daily due primarily to gravitational pull of the moon and secondarily by gravitational pull of the sun. The time and height offtides is accurately predictable and can be found easily in published tide tables. Tide heights are measured from mean lower low water defined as "0" and is the base level of other tidal elevations. Mean low water, the average of all observed low tides, marks the boundary between submerged lands and tidal flats. Mean sea level is another term used to interrelate land elevations and tidal elevations. On the Oregon Coast mean sea level is considered to be 4.1. feet above mean lower low water. Thus, an eight foot tide is 3.9 feet above mean sea level. Mean high water is the average of all observed high tides and is approximately 3% feet above mean sea level. This is approximately the level of mature marshes. The highest predicted tides are approximately six feet above mean sea level (10 foot tide).

The only estuary on the Oregon Coast where complete tidal data is collected is Yaquina Bay where the Oregon State University Marine Science Center collects and maintains records. The State Department of Geology and Mineral Industries has suggested that the Yaquina Bay figures are good approximations for Coos and Douglas Counties. A close comparison of the Yaquina

Bay tidal elevations with the known tidal elevations at Bandon indicates that the Bandon high tides are about 1 % feet lower than the Yaquina Bay high tides.

Tidal actions are central to the functioning of an estuary. The tide inundates the tide flats and marshes, enhances circulation, aids navigation, helps control sedimentation, and supports much of the complex biologic activity of the estuary and ocean shore.

Storm Surge:
Storm Surge is a rise of sea level above predicted tide levels due to low barometric pressure and wind. Storm surge is also affected by shore and bottom slope, position of the storm center relative to the coast and shape of the harbor.

The drop of barometric pressure which accompanies a storm causes a slight rise in sea level - about one foot per inch of mercury barometric drop. The maximum possible storm surge resulting directly from drop in barometric pressure is about three feet.

The winds associated with a storm retard the return of waves to the sea. This action, called wave set-up, can be 10 to 20 percent of wave height in extreme storms. Storm waves along the Oregon Coast are commonly 20 feet high near the shore. Wave set-up along beaches may thus approach two to four feet. Within the estuary, however, wave set-up is much less.

Extreme high tides are the sum of the highest predicted tide and the highest observed storm surge. The State Department of Geology and Mineral Industries has suggested an extreme high tide of 14.5 feet (10.4 feet above mean sea leve1) is a possibility for this area.

Tsunami:
Tsunamis are waves generated at sea by large earthquakes or violent volcanic eruptions. They can seldom be detected at sea but as they approach land the water piles upon itself creating a wave which has been recorded as high as 120 feet (at Java in 1883). The height of any given tsunami at any given location depends upon the magnitude of the earthquake or eruption, how far away the disturbance is, and depth, shape, and slope of the bottom and shores. Tsunamis often involve many waves over a period of several hours.

The Alaska earthquake of March 27,1964 provides the best example of the generation of a destructive tsunami along the Oregon Coast. It registered 8.3 to 8.6 on the Richter scale and involved vertical displacement of the sea floor. It coincided with high spring tides and was actually pointed toward the Oregon Coast. It generated wave heights of 4 to14 feet above the prevailing high water in Oregon and over 20 feet high in Crescent City, California. Downtown Bandon was temporarily flooded. There was $700,000 in damage and four drownings on the Oregon Coast. The number of drownings would undoubtedly have been greater if it had occurred during the day in summer instead of late at night in early spring.

This tsunami can be used as an approximate measure of the highest probable tsunami in this area and indicates that flooding can be expected to elevations of 17 feet above mean sea level (21 feet above mean low water). Runup to elevations of 25 feet above mean sea level are possible on the ocean beaches. Tsunamis tend to concentrate on the headlands and should dissipate in the estuary because of the marshes and winding river. It is not known whether the comparatively shallow offshore Coquille bank tends to amplify or dissipate tsunamis but it is known that earthquakes generated off the California Coast generally have horizontal displacement and do not normally cause tsunamis. For these reasons, the Alaska quake gives us the best indication we have of the effects of a destructive tsunami in this area (See Chapter 4, Natural Hazards, for more information on tsunamis).

CHAPTER 12: SCENIC RESOURCES

Adopted by Ordinance 1512, 10-06-03

As part of the City of Bandon's Periodic Review Work Program, the City has undertaken a Scenic Resources Inventory utilizing the Goal 5 process. For the purpose of the analysis, geographic viewsheds were identified and sites selected for their significant scenic qualities. Each site was mapped, described by its characteristics, and photographed. The results are contained in Appendix 1. Inventory

Bandon has many scenic resources due to its location on the Pacific Ocean and on the Coquille River in Coos County. Many of the views are already protected through public ownership. The challenge to the City is to determine, with assistance from citizens, which views are the most important ones for preservation. The viewsheds selected for protection should be those which define the qualities that the City chooses to maintain in perpetuity--expansive views of the Pacific Ocean, the Coquille River, the Coquille River Lighthouse, and any other views which contribute to Bandon's uniqueness as a coastal community.

GEOGRAPHIC VIEWSHEDS

There are three identified geographic viewsheds:

The Bluff/Beach Loop Area.
While this area is most known for the expansive ocean views and sea stack formations, it also includes some wetland/dune areas which contain ecological resources as well as provide significant backdrops for some of the residential development along Beach Loop Drive.

The Coquille River and its Lighthouse
The Coquille River and its Lighthouse viewed from the Old Town Waterfront as well as from the Jetty and other points within the city;

The Beach views
The Beach views looking toward the City and the sea stacks, cliffs and bluffs rising abruptly above which make the Bandon coast spectacular.

The ESEE analysis highlights the consequences of prohibiting, limiting or fully allowing conflicting uses in the viewsheds. The potential conflicting activities and uses identified are those currently contained in the zoning ordinance as permitted or conditional uses, as well as the construction, reconstruction and enlargement of buildings and structures on the west side of Beach Loop Drive, on the Jetty, and on the Waterfront north of 1st Street. Statewide Planning Goal 5 requires the City to protect or conserve significant scenic resources.

The Goal 5 process will be completed when the City and its residents determine which viewshed sites are significant, and where conflicting uses will be limited, prohibited, or fully allowed. Alternatively, the City may conduct an ESEE analysis each time a proposal conflicts with scenic views as its existing policy requires. However, this approach is onerous and leaves too much uncertainty for landowners and citizens alike. It is proposed that this be removed entirely.

In its discussions the Planning Commission has raised, "What constitutes a taking?" What is relevant is what is constitutionally allowed as established through case law. In Bandon, the only uses promised to landowners are those identified in the zoning ordinance as permitted. Conditional uses are just what the term implies, they are "conditional". The City has considerable discretion in determining if such uses will be approved. For example, a conditional use must first comply with the comprehensive plan. Further, the City must determine if the conditional use will alter the character of the surrounding area in a manner which substantially limits, impairs or precludes the use of surrounding properties for the permitted uses listed in the underlying zone. The purpose of the Conditional Use Permit criteria are to ensure that a proposed use is fully reviewed and assessed for conformance with applicable Comprehensive Plan and Zoning standards.

Pressures are increasing in the significant viewsheds to develop property which may substantially limit, impair or preclude the use of surrounding properties for residential uses which "fit" into existing development as encouraged in the 1991 plan. Should those pressures continue, existing views may be obstructed by larger residential structures, and more and larger tourist commercial uses. It must also be noted that the view sites identified in the Inventory are generally well protected, in public ownership, provide access to a scenic resource, and are fully utilized by the public. The purpose of this Goal 5 process is to ensure that public interests related to scenic resources quality and access are fully addressed. This process is not intended to ensure private property owners any rights or privileges beyond what is afforded in the Zoning Ordinance.

The ESEE analyses offer additional considerations for the City and its citizens to decide which scenic resources and values are so significant that conflicting uses should be limited or not be permitted.

When the scenic resources process is completed and significant resources protected, the City will have complied with Goal 5. It will have also complied with some of the requirements of Goals 16 and 17.

While not a direct determinant of potential protective measures, this preference survey process, with over

160 people participating, has illustrated the level of interest amongst citizens, has provided the public with an outlet whereby they chose the views that they deemed important, and has indicated what scenic resources are significant to the community. Sites are grouped in high, medium, and low significance categories.

RANKING OF SIGNIFICANT VIEW SITES

SIGNIFICANCE

HIGH

Site	Location	Votes	Owner	Over Private Property
BL-1	End of 8th St. SW west of Beach Loop	117	City	N
BL-3	Sunset Motel Overlook, west side of Beach Loop Boat	91	City	Y
CR-6(a-d)	Basin	84	Port	N
CR-15	End of Garfield Ave. overlooking the Jetty	67	City	N
CR-10	Port of Bandon Riverwalk	62	Port	N
BL-2	Coquille Point NWR	62	USFW	N
BL-7	Ocean View Care Center	56	SC Hosp. Dist.	N
CR-5a	North side of High Dock Building(facing NW)	52	Port	N
CR-12	Old Hospital site on 4th St	48	Private	Y
CR-3a	West of present Coast Guard Building at the end of 2nd St.	46	City	N

MEDIUM

BL-4	Face Rock Wayside State Park	44	State	N
CR-1b	East end of Jetty Road just west of Boatworks	40	County	N
CR-5b	North side of High Dock Building(facing east)	38	Port	N
CR-11	North end of Jackson overlooking Redmon Pond/Jetty	36	City	Y
BL-5	Beach Access north of Tish-a-Tang	36	City	N
CR-7	Pioneer Cemetery	34	County	N
CR-1a	South Jetty Park	31	Various	N
CR-9	West of the Coquille Lighthouse	31	USA/State	N
CR-13	Confluence of Ferry Creek and Coquille River at 1st St.	29	City/Port	N
BL-8	Wetland/Dune on Strawberry Drive	28	Private	Y
CR-16	Bandon Fisheries Plant	26	Port1/Private	N
CR-5	North Side of Chicago Ave. at High Dock	22	Port	
CR-4	Weber's Pier Parking Lot	21	Port	N
CR-4a	Oregon Ave. Walkway above Weber's Pier	21	City	N

Site	Location	Votes	Owner	Over Private Property
LOW				
CR-2	Corner of Edison and Jetty Road	19	City	Y
CR-3	Coast Guard Hill at Cleveland	19	City	N
BL-6	Johnson Creek Outlet	18	City/Private	Y
CR-9a	Oyster Point	13	State/USA	N
CR-18	Caroline looking west	11	City	N
CR-5c	Chicago above Old Town	10	City	N
CR-8	Bandon Marsh Refuge viewing platform	10	USFW	N
CR-19	Bandon Heights looking northwest	7	School Dist.	Y
CR-GC	Gross Creek from 4th St. and Bandon Ave.	6	City	Y
CR-14	Rear of the Old Coast Guard Building	5	Port	N
CR-17	Front of City Offices, Highway 101 north	4	City	N

METHODS FOR CONSERVING VIEWSHEDS AND ACCESS TO VIEWSHEDS

Regulatory- To limit or prohibit certain uses or activities and to regulate the physical characteristics of allowed uses or activities is accomplished through zoning regulations.

Purchase/Acquisition of *Property*- The acquisition of property by the City or another entity for the purpose of protecting the property from future development. Considerations: costs involved, source of funds, grant opportunities, identification of properties for acquisition, etc.

Easements- Easements for view access are usually voluntary and may occur between private parties or between a private party and government agency or nonprofit group. May have financial benefits for grantor.

Government Agency Coordination/Cooperation- This approach entails strengthening communication and coordination of government agencies that own or manage property in the viewshed areas.

Beach Loop,/Bluff Viewshed

Description

The area encompassed by the Bluff/Beach Loop viewshed includes: Ocean Drive west of 4th St., which turns into 7th St SW, and the length of Beach Loop Drive from the north end south to the City Limits. The scenic nature of the area is derived from its proximity to the Pacific Ocean, and is frequented by tourists and residents alike. Beach Loop Drive runs generally north-south along or inland of the bluff, and is accessible from 4th St. SW, 8th St. SW, 11th St. SW, Seabird Dr., and at Beach Junction on Highway 101.

The uses which occur in the viewshed vary from single family homes, vacation rentals, motels, and restaurants to State and Federal park facilities to the Ocean View Care Center. There are areas of concentrated tourist oriented development in the viewshed including the intersection of 11th St. SW and Beach Loop Drive and the area immediately surrounding the Sunset Motel. In the past few years, more structures are being remodeled and enlarged, and tourist related uses are increasing. To document the variety of scenic opportunities, eight sites, numbered BL-1 through BL-8, were inventoried to illustrate the public accessibility to and scenic values of the viewshed.

Zoning and Ownership

The area is zoned primarily Controlled Development (CD-1), except for the Federal land that makes up Coquille Point, which is zoned Natural Resources and Open Space (NR).

Property in the viewshed is mostly privately owned, with the exception of Coquille Point, Face Rock Wayside, the Ocean View Care center, and the City's parking lot and beach access, as well as all streets and rights-of-way. The beaches in the viewshed are owned by Oregonians and managed for them by the State of Oregon.

Statement Of Significance

The Bluff/Beach Loop viewshed is an area of majestic views of the beaches and Pacific Ocean. It contains visual access to the coastal sea stack formations just offshore, including Face Rock, the Cat and Kittens, and Table Rock. The views of the beaches are an important element of the viewshed, and are readily accessible via a number of public access points. These factors, when taken in combination, constitute a significant scenic resource.

Name: Bluff/Beach Loop Viewshed Resource Type: Scenic

Bluff/Beach Loop Viewshed:
Three of the top ten views ranked as significant by residents are located along Beach Loop and the Bluff. The City and U. S. Fish and Wildlife currently protect ranked area #1 at the west end of 8th Street, and will continue to protect that resource as development is proposed. The scenic resource from the Sunset Motel to Coquille Point, accessed by the street right-of-way, was ranked as the second most significant scenic resource. The Ocean View Care Center was also ranked as having a significant view. The PUD ordinance and Policy 2 place protection on scenic values at this site.

The Council considered prohibiting, limiting and fully allowing uses which conflict with scenic resources in this area and made the following analyses:

Economic: Most significant views are fully protected in this viewshed. The City policy to support economic interest, tourism, as it relates to scenic resources along Beach Loop and the Bluff and assist in the formation of a land conservancy is the affordable and feasible way to acquire land or scenic resources in the future. While this policy will not preclude increasing property values, it eliminates the necessity for the City to purchase properties with scenic values. It may also help protect the City's major.

Social: The concept of "neighborhood" has already been impacted by tourist commercial uses in this area. It will become more homogenized as few or no low or moderate income residents can afford to live in this part of the City. This area is close to the city center, tourist commercial uses, the beach, and the community center complex and park. Scenic attractions and tourist uses will be enhanced when the master trail plan is completed and implemented. Trails, when well marked, will encourage less vehicular traffic and safer walking areas for residents as well as visitors on Beach Loop Road.

Environmental: The amount of lot coverage for impervious surfaces is reduced to 65%. Some lots on the west side of Beach Loop Road extend to the ocean and appear much larger than the 5400 square feet required for single family dwellings. The "buildable" portion of these lots is much less due to the ocean bluff.

Energy: The maintenance of walking paths which are user-friendly and the protection of the City's right of way along Beach Loop Drive could reduce some traffic and fossil fuels' use in the future. It may become useful to offer a shuttle to and from Old Town and the Coquille Point parking lot to eliminate some vehicular traffic in both areas.

CONCLUSIONS

The area of primary concern in this viewshed is the west side of Beach Loop Drive. The north-south orientation of Beach Loop Drive allows access for the public at a number of sites identified in the Inventory that are publicly-owned and accessible for various ocean views. There are also secondary drive-by glimpses of the ocean and rock formations. While these secondary views contribute to the overall significance and importance of the viewshed, most occur over private property. These secondary view opportunities are partially protected by the dimensional standards required in the zone.
The preceding analysis identifies the economic, social, environmental, and energy (ESEE) consequences of fully allowing, prohibiting, and limiting conflicting uses within the viewshed. In the case of the

Bluff/Beach Loop viewshed, the consequences of prohibiting conflicting uses would entail the condemnation/purchase of property not already developed in order to ensure unobstructed views over these properties. If conflicting uses were fully allowed, the result would most likely be detrimental to the viewshed as a whole, particularly without meaningful height and setback regulations. By limiting conflicting uses, a balance of view access, preservation of the resource, and assurance of development rights, although slightly constrained, will be achieved as proposed below.

Actions to protect and/or ensure access to the resource

Encourage voluntary view/conservation easements, secure right of first refusal for the sale of publicly-owned property, limit street vacations, enhance existing public sites, and limit lot coverage.

Coquille River Viewshed

Description

The Coquille River viewshed encompasses the Coquille River and areas adjacent to the river that provide for viewing of the river and its scenic attributes. The area runs from South Jetty Park, eastward to Edison St., along the waterfront on 1st St., northward on Riverside Drive and also includes Coast Guard Hill (2nd St SW), the Bandon Cemetery, located on Harlem Ave., and Gross Creek on 4th St.

One of the areas of particular interest is the waterfront north of 1st Street, which runs from the site of the former Moore Mill Truck Shop to Cleveland Street. The property is owned by the Port of Bandon, and includes commercial and recreational facilities that constitute the heart of the waterfront.

In order to document the variety of scenic opportunities, twenty sites, numbered CR-1 through CR-19, and CR-GC, were inventoried to illustrate public accessibility to and scenic values of the viewshed.

Zoning and Ownership

The area encompassed by the viewshed includes a number of different zoning designations. South Jetty Park is zoned Public Facilities and Parks (PF), the area along Jetty Road is zoned CD-2 and CD-3, the area north of 1st Street is zoned Marine Commercial (C-3) with shoreland overlays, the Coast Guard Hill area is zoned CD-R2, the Moore Mill log yard is zoned CD-1, and the Bandon Cemetery is zoned R1. There are a number of private and public owners of property in the viewshed, with South Jetty Park, the Redmon Pond area, and the Waterfront and Boat Basin being examples of publicly-owned properties.

Statement of Significance

The Coquille River viewshed contains varied scenic opportunities considered to be significant resource. From the Jetty to the Waterfront to the Cemetery, scenic opportunities abound in the viewshed, as the Coquille River and its Lighthouse are the dominant features on the landscape. The continued access to the River via the Port facilities and South Jetty Park are critical to maintaining the significance of the resource.

Name: *Coquille River Viewshed* Resource Type: *Scenic*

Coquille River Viewshed: Three of the top ten views ranked as significant by residents are located along the Coquille River on the Waterfront. The City changed building heights and deleted some permitted and conditional uses in this zone which interfere with scenic resources. The Council considered prohibiting, limiting and fully allowing uses which conflict with scenic resources in this area and made the following analyses.

Economic: The views from Old Town of the Coquille River estuary, the lighthouse, and the ocean are significant to the economic future of the Old Town area. The heights of buildings shall be limited on the Waterfront in accord with changes made in the C-3 zone. These changes reflect a balance of allowing water-dependent and water-related economic opportunities and protecting the scenic resource.

Social: The site of the Bandon fire is a historical resource of importance to the nation in the Oregon Coastal Conservation and Development Commission's resource inventory (9/74). While many visitors and residents do not know the history, they enjoy the accessibility of the streets and sidewalks for walking, shopping and eating while, at the same time, being able to see the river, the lighthouse, and the distant ocean.

Environmental: The City has reduced the number of permitted and conditional uses in the C-3 zone. The City shall protect views and footpath accessibility in this area.

Energy: The maintenance of user-friendly access to shops, views and restaurants will continue to reduce some traffic and fossil fuels' use in this area. A future project may be a shuttle to and from Old Town and the Coquille Point parking lot to eliminate some vehicular traffic in both areas.

CONCLUSIONS

The area of primary concern in this viewshed is the waterfront from Fillmore Ave. west to Jetty Road. The north side of 1st St contains various commercial and residential buildings, the Riverwalk, boat basin, the High Dock, and the boat ramp and crabbing dock. The area is characterized by expansive vistas of the Coquille River from numerous points, primarily from facilities owned by the Port of Bandon. There are also secondary drive-by views of the river from 1st St.

The preceding analysis identifies the economic, social, environmental, and energy (ESEE) consequences of fully allowing, prohibiting, and limiting conflicting uses within the viewshed. In the case of the Coquille River viewshed, the consequences of prohibiting conflicting uses would entail the condemnation/purchase of private property not already developed and regulatory mechanisms on public property in order to ensure unobstructed views over these properties. If conflicting uses were fully allowed, the result would most likely be detrimental to the viewshed as a whole, particularly without meaningful dimensional regulations. By limiting conflicting uses, a balance of view access, preservation of the resource, and assurance of economic development opportunities, although slightly constrained, will be

Actions to protect the resource

Limit height of buildings in the C-3 zone and require separation of buildings on the High Dock. These actions, while slightly limiting the development potential of the waterfront, still afford a variety of uses consistent with the waterfront location, especially water-dependant and related uses and the structures required to serve these uses.

BEACH VIEWSHED

Description

The Beach viewshed encompasses the beach from the South Jetty south to the city limits. The beach is comprised of both dune-backed and bluff-backed shorelines. The visual character of the bluff and dunal areas are varied, with development at the top of the bluff areas, and in some instances, below the bluff. The dunal area adjacent to South Jetty Park is developed with some residences behind the foredunes. Moving southward, the bluff area begins, with two access points to the beach from the Coquille Point Refuge. Below the north access point, looking to the bluff, there continues to be almost no development intrusion into the view. The bluffs are generally vegetated, with occasional areas of visible bedrock. The bluff continues south, past the Face Rock Wayside, until it again begins to taper into dunal formations

Zoning and Ownership

The beach area itself is owned by the citizens of the State of Oregon, and is accessible to citizens pursuant to the Beach Bill. The areas of bluff and dune are owned by private landowners and public agencies, including the US Fish and Wildlife Service (Coquille Point) and the Oregon Parks and Recreation Department (Face Rock Wayside). The beach and bluff area is zoned Natural Resources (NR) from South Jetty Park south to and including Coquille Point, while the balance of the beach and bluff area moving south is zoned Controlled Development.

Statement of Significance

The scenic qualities of the Beach viewshed are derived from the view of the Pacific Ocean to the west and the bluffs and dunes to the east. The perspective gained from observing both the ocean and the bluffs rising to the east is unlike the experience of the Bluff/Beach Loop viewshed or the Coquille River viewshed, and qualifies it as a significant scenic resource.

Because the beach is owned by Oregonians, it is protected under state law through the Statewide Planning Goals, #16 (Estuarine Resources), #17 (Coastal Shorelands, and #18 (Beaches and Dunes). These goals have been implemented through Oregon Administrative Rule (OAR) 660-015-0010.

City and State Law control development on the foredunes and the bluff, which is implemented through comprehensive plan policies and the zoning ordinance.

CONCLUSIONS

Beach Viewshed: While users of Oregon's beaches may take them for granted, they are consistently ranked in surveys as the State's greatest resource. Their impact on tourist visits and Bandon's growth in retirees cannot be fully measured. Residents who ranked views were generally more concerned with the views from the City to the Ocean, than from the Ocean beach back to the City. While these significant scenic resources cannot be fully evaluated, the City considered them in its Goal 5 analysis.

This analysis does not separate the impacts of the ocean beaches from Bandon's current and future economic, social, environmental and energy health. The Coquille River and the Ocean economically sustained many generations of commercial fishermen and their families, and now sustain fewer commercial fishermen but a growing recreational fishing industry. The community of Bandon was built around the River, and its future will be intricately tied to this natural resource.

People come to the ocean for rest, recreation and renewal. The energy of the Ocean has yet to be fully utilized, and continues to be an unexplored option for Bandon's economic future.

Actions to protect the resource

Any beach views which are determined to be of exceptional significance, and whose significance is affected by development on the foredunes and the bluff, require protection by policies and ordinance provisions adopted in compliance with the Goals and Administrative Rules. These will be reflected in policies and ordinance provisions which relate to the Beach Loop/Bluff Viewshed Area and the Coquille River Viewshed Area.

CHAPTER 13: ESTUARY MANAGEMENT

SECTION I
Originally adopted as Chapter IX

1.0 ESTUARY MANAGEMENT SECTION PART 1

GENERAL INTRODUCTION TO ESTUARY LINKAGE AND INVENTORY SECTIONS

This section is meant to provide guidance necessary to assure wise use of the Coquille River Estuary and the adjacent shorelands. The plan attempts to reach a balance between conservation and development needs. This Plan is adopted as an element of the Comprehensive Plan for the City of Bandon and also provides guidance to the Port of Bandon and others for Coquille River development activities.

1.2 Policy Statement Framework

This section lists problems and opportunities which have been identified from the general discussion provided in the Inventory Section. This section also sets forth local goals and Plan Policies that are proposed to respond to the problems and opportunities and satisfy the requirements of the Statewide Planning Goals for Estuarine Resources, Coastal Shorelands, and Beaches and Dunes.

LCDC Goal #2 (Land Use Planning) states that:

> "All land use plans shall include identification of issues
> and problems, inventories and other factual information for
> each applicable Statewide Planning Goal, evaluation of alternative courses of action and ultimate policy choices".

The Plan Policies Section provides these policy choices, based on actual information in the Inventory Section. The following define the terms used in the Plan Policies:

- "Inventories" provide data and other factual information that are the basis for identifying problems, opportunities and issues.

- "Problem and Opportunity Statements" provide very general statements about concerns made evident in the Plan Inventories.

- "Goal Statements" are policies that provide very general guidance to the plan and actions that are based on it. They also provide the basic philosophical framework for the Policies.

- Plan Policies provide specific guidance. They implement, or establish specific

implementation measures for, respective Goal Statements. They also provide a means for dealing with the problems and opportunities.

The City of Bandon's Committee for Citizen Involvement (CCI) and Planning Commission took great care to ensure that the policies are understandable and internally consistent. However, the complexity of the Coastal Goals and related statutes, Administrative Rules and LCDC policies is such that the language needs to be both complex and lengthy in some instances. Wherever possible the relevant statutes, rules and LCDC policies are cited, so that the user may go to the source if necessary. Much language is based directly on explicit requirements in the coastal Goals, which should be referred to when questions arise as to the origin of the Policy.

2. PROBLEMS AND OPPORTUNITIES- COQUILLE RIVER ESTUARY

Water Quality:

Water quality problems of the Coquille River have been identified primarily as not meeting State and Federal standards for TMDL (total maximum daily load) standards. Seasonally low levels of dissolved oxygen (D.O.) have been documented in the Coquille River upstream from the City of Bandon. The U.S. Environmental Protection Agency (EPA), Oregon Dept of Environmental Quality (DEQ), and local representatives have begun a study to identify how these problems in the Coquille can be remedied. This pilot program will serve as a model for other parts of the nation in designing a program to help improve water quality through a cooperative effort. How these problems effect the estuary should become clearer through this study.

The problems of the Coquille River are aggravated by siltation and a slow rate of flushing; they include occasional high coliform bacteria counts, summer high water temperatures and seasonally high turbidity/sediment.

Sedimentation and Shoaling

There are several areas in the estuary where the deposition of sediment has caused serious shoaling.

Flooding:

Flooding in the lower riverine sections is exacerbated by salinity which causes damage to economically valuable forage crops.

Erosion

The constant dynamics of erosion and deposition inherent in a river system impact several locations within the city limits and make development of them problematic. Because the area along Jetty Road from the Jetty to Edison Ave is on the outside of the river bend the area is being eroded. Erosion there is being hastened by the surge from the ocean during times of high tides or high waves. Additionally, there are areas on the north side of the river within the City limits that are either being filled—in or eroded.

Jetties and Channel Entrance

There are persistent problems with the buildup of sediment in the channel entrance front littoral transport during late summer months, creating rough water and a difficult bar crossing which interferes with navigation.

The South Jetty area is experiencing serious erosion, which threatens a road and property, due to the disintegration of a former jetty extension.

Effects of Dredging

Though the biological effects of annual maintenance dredging are relatively slight, new dredging can cause substantial direct and indirect biological and physical changes in the estuary; these can be minimized, however, with greater knowledge of the physical and biological systems affected and careful timing of operations

Disused Pilings and Snags:

The Coquille River contains a large number of disused pilings and snags which can cause obstruction to boat passage, accumulate debris and worsen erosion and sedimentation problems.

Fishing

Poor bar conditions have inhibited the development of the fishing industry, while the abundant ocean resources provide great potential for this sector of the local economy.

Salmon ranching and Salmon and Trout Enhancement Program (STEP) can provide opportunities for growth of the Bandon fishing industry.

Port of Bandon Improvements:

The Port of Bandon has completed several major improvements to the waterfront since acknowledgment (1984), including a 90-slip boat basin, a new two lane boat ramp, improvements to the docks, and many other improvements that benefit the residents and tourists.

Tourism/Recreation:

Tourism and water—based recreation can provide a needed boost to the Coquille Valley economy, particularly in Bandon; revitalization of the Bandon water- front and increased use of the river are two of the best opportunities for growth of the tourist economy.

Recreational Fishing Access:

In 1988 the Port of Bandon completed a new two lane boat ramp near the new boat basin. This has provided a major improvement in access to the estuary.

Waterfowl Habitat:

Elimination of habitat areas suitable for migratory wildfowl causes a reduction in the resources available to support the population; removal of tidal marsh and mudflat areas from the estuarine system together with similar actions in other estuaries may have a long—term effect of reducing wildfowl numbers. The protection of the Bandon Marsh as a refuge under U.S. Fish and Wildlife Service and the protection of significant habitat areas under this plan has helped alleviate this problem.

Research Needs:

Generally, the state of knowledge about the biological resources of the Coquille Estuary, particularly the riverine section, can be characterized as sketchy at best. This means that the effects of dredging and other improvements to the river channel and various fish and wildlife management actions are not known for certain.

Riparian Vegetation:

Indiscriminate removal of riparian vegetation may contribute to bank instability, erosion, and elevated water temperature, all of which can have secondary physical and biological effects.

Mitigation/Restoration Sites

Problems exist on the Coquille as elsewhere in finding suitable and readily available sites, in matching development projects with suitable sites, and in actually implementing mitigation/restoration plan.

IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY

Goal 17 (Coastal Shorelands) requires land contiguous with the ocean, estuaries, and coastal lakes to be identified as coastal shorelands. The location of the coastal shorelands boundary (CSB) in Bandon has been identified by applying the seven identification criteria in Goal 17. The specific application of each of these criteria is described below; the CSB is shown on maps CSB-1 and CSB-2.

(1) **Lands which limit, control, or are directly affected by the hydraulic action of the coastal water body including floods** — The flood Hazard Boundary identified by the U.S. Department of Housing and Urban Developmentt is used as the boundary of hydraulic action derived from the Coquille River. The heads of tide on Johnson Creek and the other small drainages along the bluff are at the beach, therefore, these areas are not considered coastal shorelands even though they have small floodplains adjacent the sea. The Flood Hazard Boundary is considered the best published indication of the 100-Year Floodplain for the Bandon area.

(2) **Adjacent areas of geologic instability** - The portion of Bandon Bluff which has steep slopes (30% slopes and greater) and is subject to storm tides and wave action is considered to be an area of potential geologic hazards. For this reason, the CSB is located along the "top" of the bluff as it extends from the South Jetty area to the City limits south of Johnson Creek.

(3) **Riparian resources** — Riparian vegetation is found in the area west of Riverside Drive, between the road and the Bandon Marsh.

(4) **Areas of significant shoreland and wetland biological** habitats — All of these types of areas are within the boundary established by criteria (1) through (3) above.

(5) **Areas necessary for water—dependent** and water-related uses — First Street has been chosen as the upland limit of lands considered necessary for water-dependent and water—related uses.

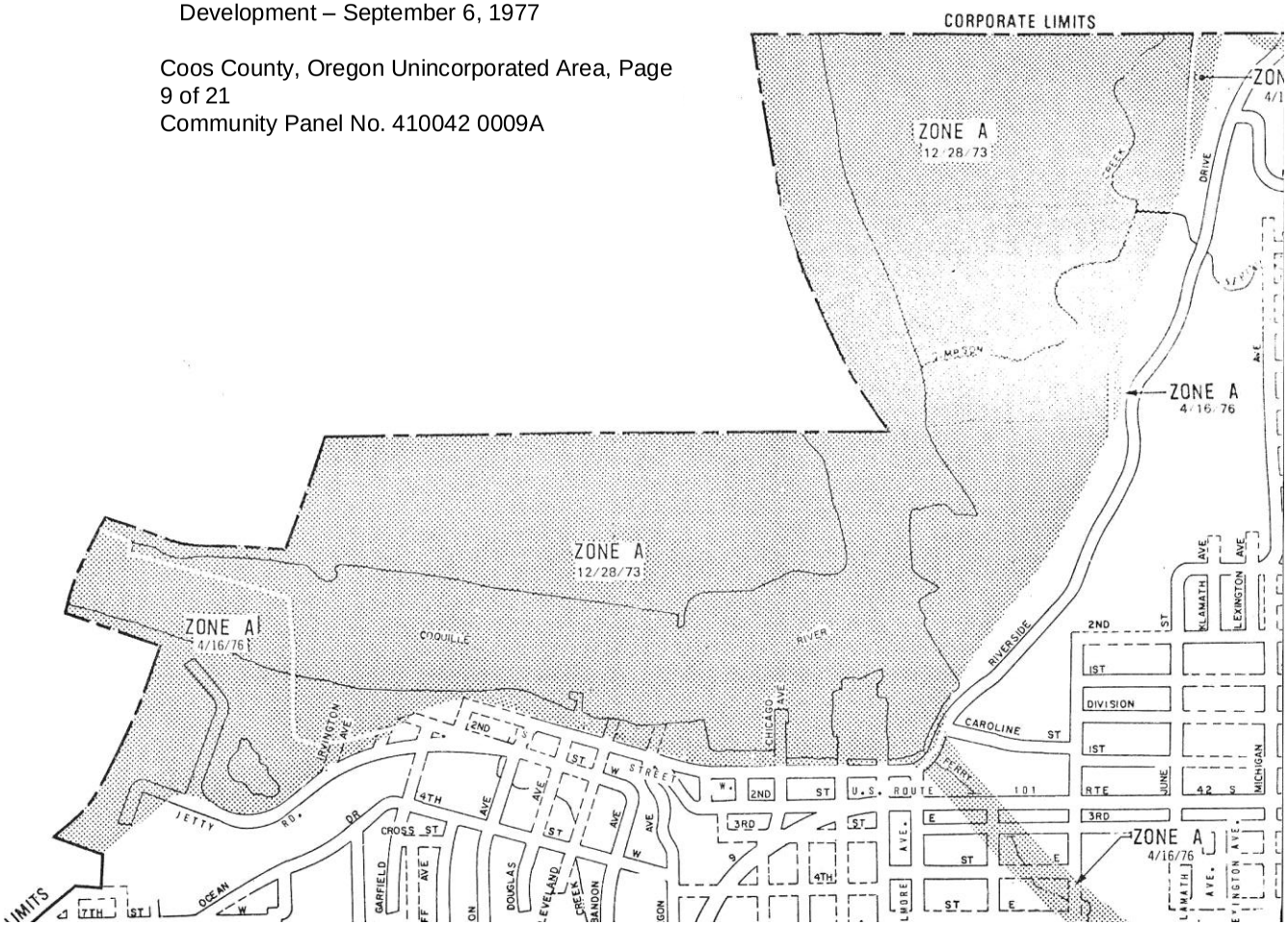
(6) **Areas of exceptional aesthetic or scenic** quality - most of the shoreline along the estuary and ocean in Bandon has scenic qualities and views "primarily derived from coastal water areas." There are no exceptionally scenic areas outside of the boundary established by criteria (1) through (5) above that would further influence the location of the CSB.

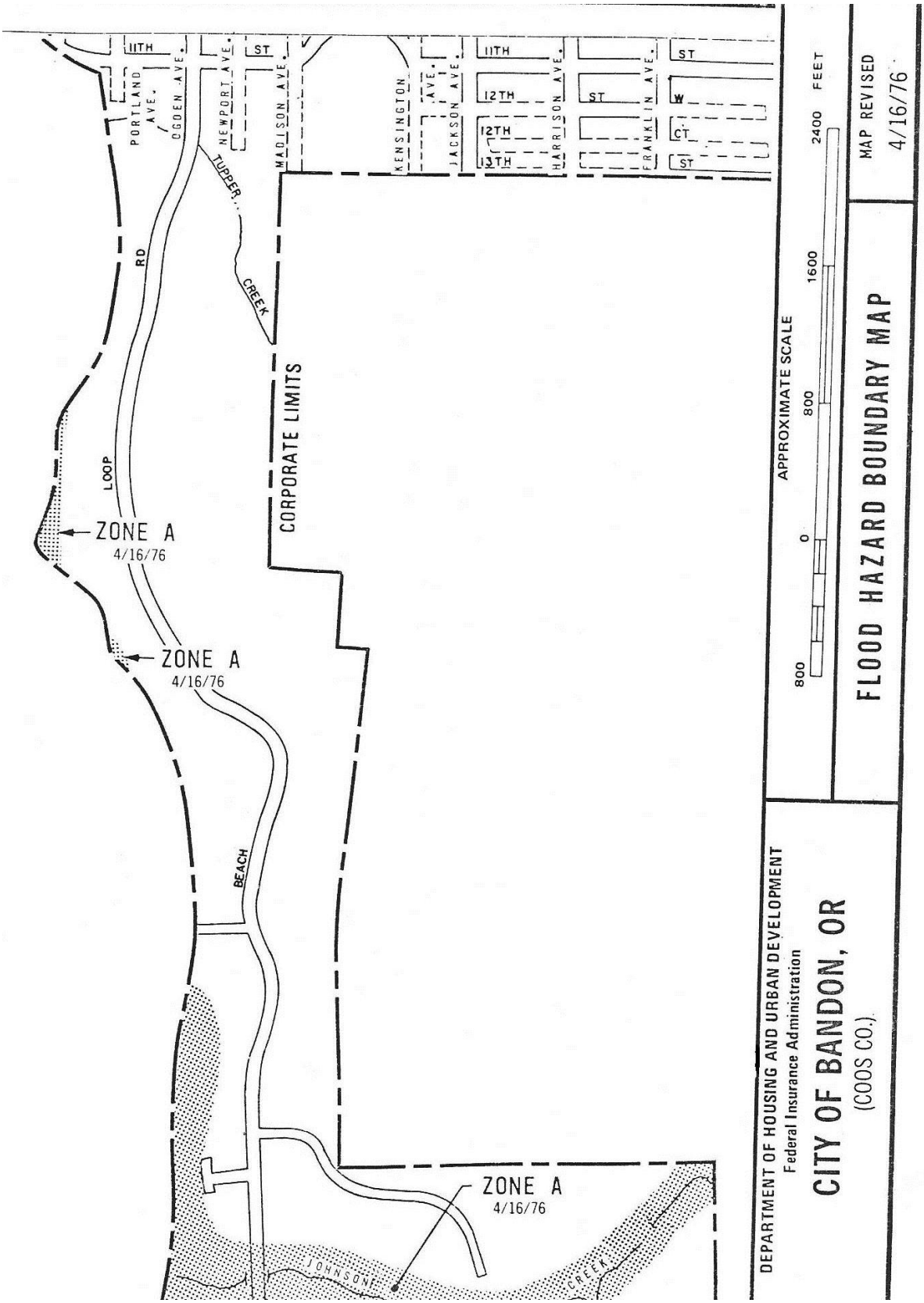
(7) **Coastal headlands** — All of Bandon's coastal headlands are within the boundary established by criteria (1) through (6) above.

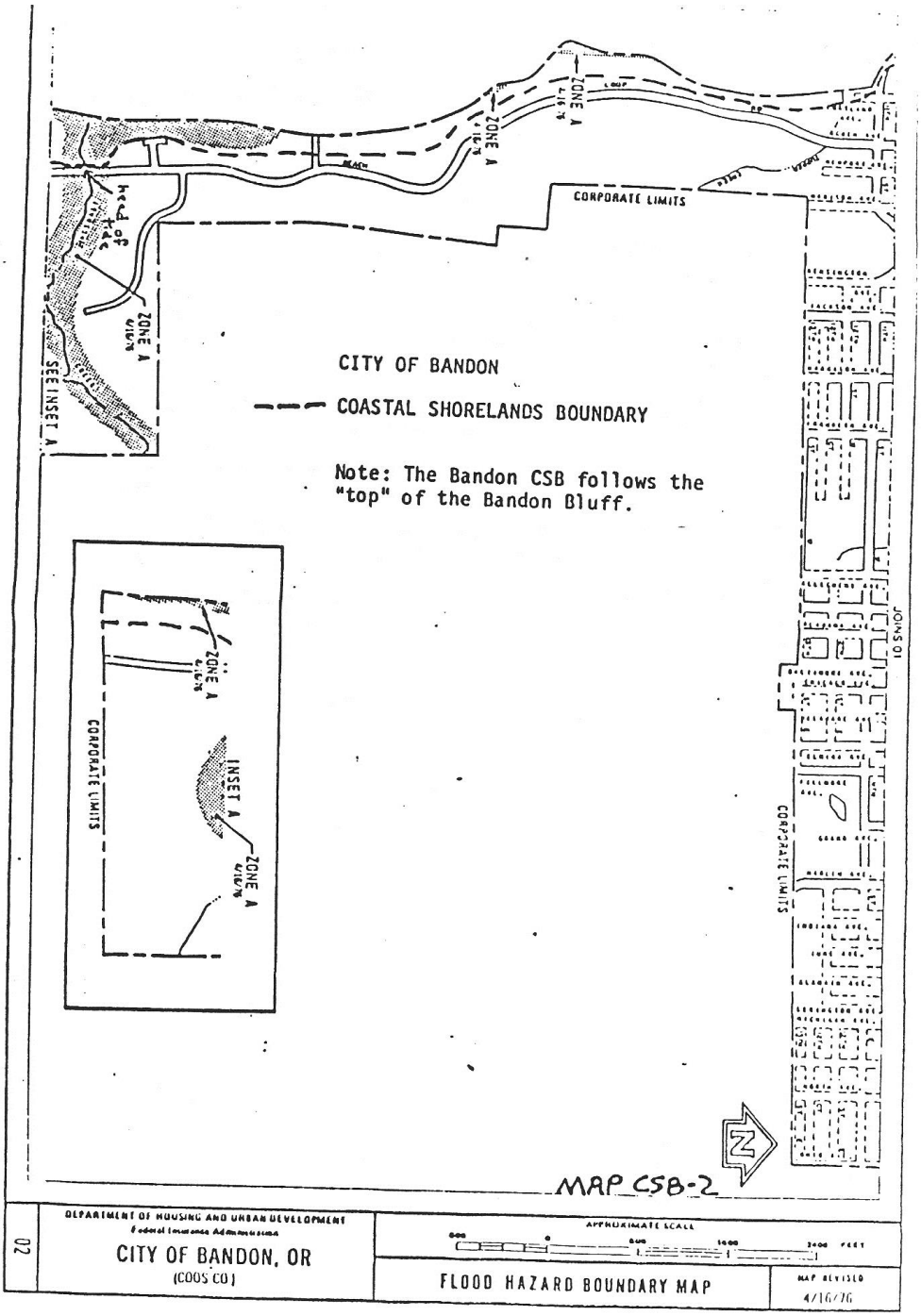
The boundary descriptions given above and shown on maps CSB-1 and CSB-2 are consistent with Coastal Shorelands Boundary adopted by the Coquille River Estuary Task Force and described in the CoquilleRiver Estuary Management Plan (Volume 111, Part 3, pg 111-5).

From U.S. Department of Housing and Urban Development – September 6, 1977

Coos County, Oregon Unincorporated Area, Page 9 of 21
Community Panel No. 410042 0009A




11TH
ST
PORTLAND AVE.
OGDEN AVE.
NEWPORT AVE.
MADISON AVE.
KENSINGTON AVE.
JACKSON AVE.
11TH
12TH
12TH
13TH
HARRISON AVE.
ST
FRANKLIN AVE.
ST
W
CT
ST
TUPPER CREEK
LOOP RD
CORPORATE LIMITS
ZONE A
4/16/76
ZONE A
4/16/76
BEACH
ZONE A
4/16/76
JOHNSON CREEK
APPROXIMATE SCALE
800
0
800
1600
2400 FEET
MAP REVISED
4/16/76
FLOOD HAZARD BOUNDARY MAP
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
CITY OF BANDON, OR
(COOS CO.)


CITY OF BANDON
COASTAL SHORELANDS BOUNDARY
Note: The Bandon CSB follows the "top" of the Bandon Bluff.
CORPORATE LIMITS
ZONE A
SEE INSET A
INSET A
JONES ST
MAP CSB-2
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
CITY OF BANDON, OR
(COOS CO)
APPROXIMATE SCALE
FLOOD HAZARD BOUNDARY MAP
MAP REVISED
4/16/76

SECTION 2:

CUMULATIVE EFFECTS OF DEVELOPMENT

Originally adopted as Chapter X

ESTUARY MANAGEMENT SECTION PART 2

CUMULATIVE EFFECTS OF DEVELOPMENT

AND INVENTORY INFORMATION

This section (Part 2) is organized into five (5) parts as follows:

SECTION 1 explains how the Coastal Shorelands Boundary was identified and describes the various parts of the Coastal Shoreland Area.

SECTION 2 analyses and explains the Plans compliance with Goal #16, the Estuarine Resources Goal.

SECTION3 analyses and explains the Plans compliance with Goals #17 and #18, Coastal Shorelands and Beaches and Dunes.

SECTION 4 details the "cumulative effects" of Development Management Units on estuarine resources, as required by Goal 116.

SECTION 5 contains inventory material which is the basis of the Plan.

SECTION 1. CUMULATIVE EFFECTS OF DEVELOPMENT.

1.0 REQUIREMENTS OF THE COASTAL SHORELANDS GOAL #17 IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY

1.1 THE "PLANNING AREA"

The Coastal Shorelands Goal states that its "inventory requirements" shall be applied within an area known as the coastal shorelands planning area". This area is intended to be for "inventory, study and initial planning for development and use to meet the Coastal Shorelands Goal." (LCDC Goals and Guidelines, page 18). In the Bandon Study Area, this area is defined by the goal as follows:

(i) all areas within the City within 1000 feet of the shoreland of the estuary, measured horizontally, and
(ii) all lands west of the Oregon Coast Highway.

1.2 Criteria for Identifying Coastal Shorelands Boundary

The following criteria are applied within the Planning Area in order to define the Units of the Coastal Shorelands Boundary, the extent of which shall include at least:

(i) Areas subject to ocean flooding and lands within 100 feet of the ocean shore or within 50 feet of an estuary or a coastal lake;

(ii) Adjacent areas of geologic instability where the instability is related to or will impact a coastal water body;

(iii) Natural or man-made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;

(iv) Areas of significant shoreland and wetland biological habitats whose habitat quality is primarily derived from or related to the association with coastal water areas;

(v) Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, dredge material disposal and mitigation sites, and areas having characteristics suitable for aquaculture;

(vi) Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal waters; and

(vii) Coastal headlands.

1.3 Application of the Coastal Shorelands Criteria

These features are mapped in the set of maps titled "Estuary Management Plan: Coastal Shorelands Inventory for the Coquille River Estuary" The Coastal Shoreland Boundary is defined as the upland extent of any of these seven types of area, as mapped, or within a limit of 50 feet from the shoreline of the estuary, whichever is greater. For the purposes of the Estuary Management Plan, the criteria have been interpreted as follows:

(i) This includes all land within the floodplain of the Coquille as shown by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

(ii) This is interpreted as any steep bluffs with over 50% slope or with earth flow/slump topography, as shown on the D.G.M.I. Natural Hazard Map. (Bulletin 87, Environmental Geology of Western Coos and Douglas Counties; Oregon, D.G.M.I., 1975].Areas of stream bank erosion are not mapped, but are assumed to be included. The purpose of this criterion is to identify those unstable areas which may affect, or be affected by, the estuary, so as to control erosion or mass movement effectively.

(iii) This criterion includes primarily riparian vegetation, which has been identified from air photo interpretation and on—site inspection. Riparian vegetation is characterized as vegetation contained within the floodplain above the high tide mark.

(iv) Significant shoreland and wetland habitats are identified from U.S. Fish and Wildlife Service Wetland maps (National Wetland Inventory] and Oregon Department of Fish and Wildlife (Pete Penn, personal communication with Coos County, 5/81].

(v) This criterion includes sites identified as Especially Suited for Water—Dependent Use (ESWD), dredge material disposal and mitigation sites, and sites with characteristics for aquaculture.

(vi) and (vii) No areas in the Coquille River Estuary are identified as having "potential for exceptional coastal experience" in "Visual Resource Analysis of the Oregon Coastal Zone." (O.C.C.D.C., 1975) There are also no coastal headlands in the estuary, though Coquille Point has been identified as a headland.

1.4 Description of Coastal Shorelands Area Management Units

The Coastal Shorelands Boundary, which was developed using the above criteria, is shown on the Coastal Shorelands Inventory maps and is described as follows:

1.4.1 Mouth to North City Limits

Along the Bandon waterfront First Street from Fillmore Ave. to the west end of the Bandon Fisheries property marks the upland limit of the boundary. The Flood Plain of Ferry Creek to the head of tide is also included. The boundary heads northerly along Bandon Fisheries westerly property line until it is 50 feet

from the estuary. It then turns westerly maintaining this 50 foot distance until it turns south to the intersection of Edison and Jetty Road, where it meets the flood hazard boundary. The Shore land Boundary then follows the flood hazard boundary and turns south until it intersects with Tax Lot 600, whose northerly property line it follows to the vegetation line. Once past Masonic Park the Shorelands Boundary continues south along the top edge of the bluff to Johnson Creek where the boundary moves inland following the flood hazard line. South of Johnson Creek the boundary follows along the crest of the bluff again.

On the east side of the bay Riverside Drive marks the boundary from the Fillmore/Riverside intersection north to the City Limits. On the north spit, the floodplain marks the boundary.

2. ANALYSIS OF COMPLIANCE WITH ESTUARINE RESOURCES GOAL (#16) BY "MANAGEMENT UNIT".

2.1 Justification of Designations for Estuarine Management Units.

2.1.1 Development Estuarine Management Units

Management Unit #1D This is the authorized channel, and is therefore automatically a "Developed" Management Unit according to Goal #16.

Management Unit #4D This is bordered by the high-dock rip-rap, the Bandon waterfront and the causeway leading to the old Moore Mill truck shop. It is the site of the Port's boat basin. Compatibility with adjacent estuarine and shoreland areas is considered high, since the entire area is devoted to the boat basin and related uses. The minimal amount of dredging required here is justified as this is a water-dependent use for which a public need is amply demonstrated . Adverse impacts are minimized by using a floating dock design requiring no fill.

2.1.2 Conservation Management Units

Management Unit #2C This Management Unit is a narrow strip immediately adjacent to uplands that are subject to erosion problems. It is a partially altered area that is adjacent to existing development of moderate intensity and contains a tide flat, sea grass and algae bed. Development of the Management Unit is limited to shoreland stabilization measures deemed necessary to protect adjacent uplands from erosion.

Management Unit #5C (Ferry Creek Flat) This area of tidal flat is partially altered due to the presence of old pilings and rip—rap and fills on three sides. (Moore Mill truck shop, sewage treatment plant and Moore Mill). It is also adjacent to development of moderate intensity and lies immediately east of the boat basin. The presence of clam beds and algal beds place it in a Conservation management unit.

Management Unit #6C Ferry Creek is a small tidal tributary stream of the Coquille River. The portion of Ferry Creek that makes up this Management Unit is entirely subtidal and Channelized as it passes through Bandon's commercial district. Thus, it is considered partially altered and adjacent to development of moderate intensity.

Management Unit #8C This is the natural river channel from above the maintained navigation channel to the City limits. It is entirely subtidal and contains none of the "significant habitat" areas which would automatically place it in a Natural or Conservation category, nor is it a "priority development area".

However, it fits best the Conservation category because it is suited to "long term uses of renewable resources that do not require major alteration of the estuary" and will be "managed to conserve the natural resources and benefits". (emphasis added). Main uses are water-borne recreation and production of fish resources with some commercial boat and barge use. It also is partially altered by old pilings in the channel. It should be noted that a future need may develop to dredge shoaled areas in this river Management Unit to allow the passage of larger shallow—draft boats and barges. As such, this activity requires an Exception, as it would be new dredging (unless it is minor enough to qualify as "minor navigational improvements").

2.1.3 Natural Management Units

Natural Management Units in the Coquille estuary contain at least one of the "major habitat" areas specified by Goal #16.

Determination which constitutes "major habitat" areas was made by ODFW staff [Reese Bender, personal communication with Coos County, 7/8/81].

Management Unit # 10N This Management Unit comprises a major part of the salt marsh and tide flat (the "Bandon salt marsh") to the east of the channel, the largest Management Unit in the estuary. This marsh is in the U.S. Fish and Wildlife Refuge System and is therefore protected. There are also clam beds in this Management Unit, but the "major" habitat resources override this consideration, and place it in the Natural designation. There is a potential restoration site in Management Unit # 10.

2.4 Uses/Activities for Estuarine Management Units

2.4.1 Introduction

The Estuarine Resources Goal (16) lists the types of uses and activities that may be permitted in each type of Management Unit *in* the Comprehensive Plan Requirements (Management Units) section. These uses are spelled-out in the Zoning Ordinance.

2.4.2 Uses/Activities Permitted in Development Estuarine Management Units

Development management units are generally intended for navigation or water-dependent uses. However, water-related industrial, commercial and recreational uses are allowed where appropriate as a conditional use in Aquatic Management Units # 1D (Coquille Channel) and # 4D (Bandon Waterfront). With the wide variety of port-related uses occurring it would be impractical to exclude water-related uses that are closely related to water-dependent uses.

Mining/mineral extraction is only permitted in Management Unit # 1D, where this is an existing use (Robertson's), dependent upon access to deposits of gravel off the Bandon waterfront. Aquaculture may not be consistent with the Development designation because of the impact of intensive Port development and the wide availability of other undeveloped sites.

High intensity water-dependent recreational uses are considered consistent in Segments #1D and #4D because of the general compatibility of commercial and recreational boat moorage on the Bandon waterfront. Similarly, marinas are considered appropriate here for the same reasons. Mitigation/Restoration is allowed in Development Management Units 10 and 4D, though it is questionable whether there are any

resources which could be restored as part of a project.

Flow-lane disposal of dredged material from the Port's Boat Basin is allowed by this Plan (as a conditional use) in Aquatic Management Unit # 1D. Other uses/activities related to navigation and industrial/commercial development (like dredging, fill, navigational structures, structural shoreline stabilization, etc.) are permitted because this is consistent with the primary purpose of these Management Units.

Flow-lane disposal allows for the removal of silt in the moorage basins and navigational channels via pumping the material into the main or deepest part of the river channel during peak periods in the winter months when the outgoing tide is also at its peak. The additional volume of water flowing at its greatest rate carries the silt out to sea.

Siltation in Management Unit #4 of the boat basin of the boat basin has accumulated to a great degree. Navigation and moorage are impaired. An economically feasible, expedient means of removal is required. Alternatives to flow-lane disposal have been considered and rejected due to various factors that rendered each unacceptable.

Trucking of dredged materials to an approved site on the north side of the Coquille River across from the boat basin, is not considered economically or environmentally acceptable. Spoils dumped in this are prevent regeneration of the site and use of that area by wildlife and for recreational purposes. It is also unsightly. Trucking also increases air pollution, muddies the highway and prolongs disposal time. Extension of an outfall and pumping across to the spoils site would additionally be very expensive . Barging dredged materials to sea is impossible due to winter bar conditions.

Flow-lane disposal is a viable alternative due to the minimal quantity (5,000 cu. yds initially and up to 3,000 cu. yds annually thereafter) and the tremendous amount of flow and velocity of runoff during the winter months. The Port of Astoria has successfully pumped 150,000 to 200,000 cubic yards 12 miles from the open sea. Monitoring studies to date show this to be a successful method even though the quantities and distance are vastly greater than those proposed for the Coquille. [Ordinance 1235, 11-22-88]

2.4.3 Uses/Activities Permitted in Estuarine Conservation Management Units

A number of uses/activities are permitted outright in Estuarine Conservation Management Units, as specified in the Zoning Ordinance.

A number of uses are only allowed "where consistent with the resource capabilities of the area and the purposes of [the] Management Unit". Uses not mentioned in the Ordinance will require an Exception to the Statewide Planning Goals.

2.4.4 Uses/Activities Permitted In Estuarine Natural Management Units

A small number of uses/activities are permitted outright by the Zoning Ordinance in Estuarine Natural

Management Units.

Where consistent with the resource capabilities of the area and the purposes of the Management Unit other uses may be allowed as Conditional uses. These also are identified in the Zoning Ordinance

3.0 ANALYSIS OF COMPLIANCE WITH COASTAL SHORELANDS GOAL (#17) AND BEACHES AND DUNES GOAL (#18) BY "SHORELAND MANAGEMENT UNIT".

3.1 Introduction

The Coastal Shore lands Goal (#17) sets priorities for shoreland uses, requiring that preference be given in appropriate locations to water-dependent or water-related uses and activities. It also requires a high degree of protection for certain important natural resources (e.g. major marshes, significant wildlife habitats) and distinguishes between the uses allowed in cities and urban growth areas and those allowed in rural areas. The Beaches and Dunes Goal 18 also applies wherever dunes fall within the Coastal Shore lands Boundary.

The following sections deal with the rationale behind certain of the Management Unit decisions, where it is not self-evident, so as to explain more fully how the Plan complies with Goal #17.

3.2 Justification of Designations for Shore land Management Units

3.2.1 Especially Suited For Water Dependent Use sites in Shoreland Management Units within the City and Urban Growth Areas

There are 10 Shore land Management Units within the City limits and Urban Growth Area of the City of Bandon. Goal 17 requires that sites especially suited to water-dependent uses" (ESWD sites) be protected for water-dependent recreational, commercial and industrial uses, citing the four factors which indicate this special suitability.

Management Unit # 1: The South Jetty: "Public Facilities" designation. The Jetty *is* especially suited for water-dependent recreation (fishing, for example)

Management Unit # 3: The Bandon Waterfront: Marine Commercial (C-3) designation. This area has a shallow draft channel close to shore with supporting land facilities." Protected areas are available which are subject to scour by the current of the river as it bends west toward the mouth. There are also outstanding water-dependent recreational opportunities at the boat basin. The Marine Commercial (C-3) zoning designation reserves specified ESWD sites for water-dependent or water-related uses as the highest priorities, consistent with the "Priority" requirements of Goal 117. These sites begin at the west end of the Bandon Fisheries Building and extend up to the High Dock, where there exists a fish buying station and the remainder of the jetty that protects the boat basin.

Other sites in the C-3 zone which do not have ESWD qualities are afforded a broader range of uses, mostly as conditional uses, though they still retain the C-3 Marine Commercial designation. These sites include the remainder of the C-3 properties west of the Bandon Fisheries building, the new port office and the remainder of the high dock facility which, for various reasons, cannot be used for or do not have the essential characteristics of ESWD sites.

Management Unit # 8: Moore Mill: A 50 foot strip adjacent to the channel is designated as ESWD. This area, earlier a mill designated as Heavy Industrial, has been rezoned to a Controlled Development zone.

Management Units # 9 & 10: The North Jetty and Vicinity: "Public Facilities" and "Natural Resources" designations, respectively. Bother areas are suited to water-dependent recreational activities (fishing) and are suitably protected.

Management Units #2, #4, #5, #6 & # 7: The remaining Management Units do not have lands that have features which make them ESWD sites. They are designated for more general urban uses. Certain Shoreland Management Units contain significant resources, which require protection. Management unit #2, (Controlled Development) has a small freshwater lagoon on part of the site. This will be protected by the public review procedure which is part of Bandon's Controlled Development Ordinance.

Special note: Management Units # 3 and 10 have archaeological sites in part of the Management Unit. These will be protected as required in the appropriate Policy (see Policy U).

3.2.3 Protection Of Dredged Material Disposal Sites And Mitigation/Restoration Sites.

Within the City Limits and Urban Growth Boundary (UGB) there are no dredged material disposal sites that are protected as such. Dredged material disposal (DMD) is allowed as a conditional use in Shore land Management Units # 8 and # 10, but these Management Units are not protected for this use. There are, however, sites that are protected for dredged material disposal that are under County jurisdiction. In addition to the previously mentioned DMD sites, Estuarine Management Unit # 1, the main channel of the Coquille, is used for flow-lane disposal of dredged material by the Port of Bandon's Boat Basin dredge project. This site also has many specified uses besides DMD.

There are no sites specifically protected for mitigation because there is little expected fill. Unprotected sites exist in several locations. Mitigation will be coordinated with state and federal fish and wildlife agencies.

3.2.4 Consistency Determination

The Matrix, together with the findings in the above explanatory narrative, have established that the use designations for each of the Shoreland Management Units are consistent with the requirements of the Goals. This process also deals with 'the Goal requirements relating to several types of uses and activities, and the conditions under which some of them may be permitted. These requirements are embodied in the Shore lands Uses/Activities Matrix of the zoning Ordinance.

3.3 Justification Of Shorelands Uses/Activities Matrix And Goal 18

3.3.1 Introduction

Uses and activities permitted in each of the Shoreland Management Units are laid out in the matrix of the Zoning Ordinance. The uses and activities permitted are to a large degree determined by the Coastal Shorelands Goal. Areas within the Shoreland Overlay Zone of the Zoning Ordinance are subject to compliance with both the underlying zone and the matrix. In cases where the requirements of the Shorelands Overlay Zone conflict with the requirements of the underlying zone, the more restrictive shall apply.

As with the Estuarine Management Units, reference is made to specific Policies which provide policy statements on conditions which shall apply to uses/activities. Footnotes are also used for the same purpose, where no formal Policy is necessary.

3.3.3 Segments in Urban/Urbanizable Areas.

Sites in these areas which are found to be ESWD are to be protected for water-dependent industrial, commercial and recreational uses. Such sites are found in Management Units #1,#3, #8, #9 and #10 and are reserved for a narrow range of uses, as appropriate. All other sites in these areas are not considered ESWD arid are designated for non-water-dependent uses, based primarily on existing use patterns.

4. CUMULATIVE EFFECTS OF USES AND ACTIVITIES IN AQUATIC DEVELOPMENT MANAGEMENT UNITS

This section addresses the Goal's requirements for uses/activities in development management units. "The cumulative effect of all such uses, activities and alterations shall be considered and described during Plan development and adoption". (Goal 16, Management Units, Development).

Aquatic Management Units 1D and 4D are designated as "Development Management Units". Management Unit #1D is the authorized channel plus the old boat basin area, which includes the boat ramp. Management Unit #4D is the Boat Basin area.

The following alterations are expected to occur in the Development Management Units during the planning period:

- Maintenance dredging of authorized channel, possibly including dredging to increased depth.
- Maintenance dredging of the boat basin.
- Flow lane disposal of dredge materials in the authorized channel from the boat basin.
- Flow lane disposal in Management Unit #1

The effects of these actions are considered as follows:

(i) SUB-TIDAL DREDGING:
The effects of subtidal dredging on estuarine resources are expected to be fairly minor. Even with channel deepening, anadromous fish populations are not expected to be affected, provided that activities are timed to avoid periods of migration. The main effect would be the displacement of benthic organisms, possibly including some clam populations. However, these organisms are expected to recolonize the dredged areas from surrounding populations in a season or two.

(ii) INTERTIDAL DREDGING:
New dredging (including new intertidal dredging)is a conditional use in Estuarine Development Management Units #1, #4 and #5. As shown in the Zoning Ordinance, all applications for new dredging are subject Policies F (dredge and fill), N (Dredge Material Disposal) and H (Mitigation). New dredging is also a conditional use in Conservation

Management Unit 8 subject to Footnote 11 (". . .only permitted for new marinas without jetty or dredged channel"). These policies require that there be no upland alternative sites, that impacts be kept to a minimum, that all required local, state and federal permits be obtained, and that D.S.L. will require mitigation if the impacts are considered to be "significant". Thus, considering the size of the estuary, the overall effect of intertidal dredging will not be significant.

(iii) SUBTIDAL FILL:
Filling for water-dependent development will cause permanent displacement of benthic organisms, possibly including clams. If allowed, this would require mitigation.

(iv) INTERTIDAL FILL:
Intertidal fill can cause permanent displacement of benthic organisms. If the effects are determined to be significant by D.S.L., mitigation is required. Thus, these activities should not cause significant impacts.

(iv) FLOW-LANE DISPOSAL:
Flow-lane disposal of dredged materials from the Port of Bandon s Boat Basin (Estuarine Mgmt. Unit #4) will disburse these materials in the main channel of the Coquille (Estuarine Mgmt. Unit 1) during periods of high winter runoff and outgoing tides. This project will be monitored according to Policy #R to "assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied."

In addition to the uses/activities which are expected to occur, a number of others are to be permitted, should the need arise. These are mainly low-impact uses/activities like navigational structures/improvements, pilings/dolphins, docks/moorage, utilities and shoreline stabilization. Compared to dredge and fill, these uses would have insignificant effects on the estuary. Water dependent/related industrial, commercial (and in some cases recreational) uses are permitted in these Management Units, as appropriate. Again, the cumulative effects of these uses are expected to be minor compared to the dredge and fill activities needed to accommodate them. Note that mineral extraction (gravel) is a conditional use in #1. The effects of gravel extraction are expected to be minor because the resource is self-renewing over a period of time.

In cases where uses like docks and moorage occupy the water surface by means other than fill there is an obvious need to have direct access to the water, which upland sites will not fulfill adequately.

The Plan and its Policies fully address uses and the conditions required for those uses in the various Management Units. Compliance with the Goals is carried out through the Plan and its implementing document, the City's Zoning Ordinance.

CITY OF BANDON

INVENTORY OF COASTAL RESOURCES

for the

1990 Comprehensive Plan

December 1977

Revised June 9, 1990

The preparation of this document was financed in part through grants from the Department of Land Conservation and Development, under the provisions of the Coastal Zone Management Act of 1972, and

The Department of Housing and Urban Development, under the provisions of section 701 of the Housing Act of 1954, as amended.

TABLE OF CONTENTS[6]

INTRODUCTION ii
THE OCEAN AND ITS INFLUENCE 1

Seaborne Transportation 2
Fisheries 4
Marine Mammals 6
Marine Birds 6
Earthquakes 7
Continental Shelf 9
Ocean Currents 10
Ocean Flooding/Tides 12

THE RIVER AND THE ESTUARY 17

North Jetty Site 17
Estuary Physical Description 20
Coquille River Tideflat 24
City Waterfront 28

THE SOUTH JETTY AND THE BLUFF 34

South Jetty and Breakwater Addition 34
Geology of the Bluff 36
The Bluff and Beach Loop Road 38

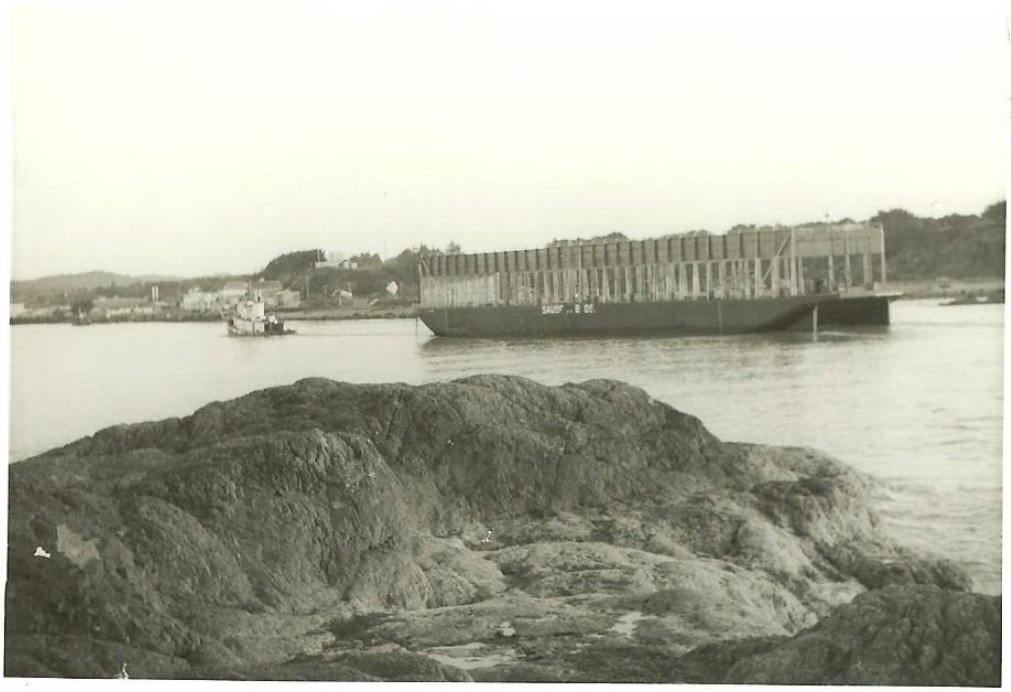
MAPS 43

U.S. Geological Survey Maps 43
Flood Hazard Boundary Maps 45
Soils Survey Maps 50

BIBLIOGRAPHY 52
INDEX AND INVENTORY of TERMS 56
APPENDICES:
Appendix A - List of Important Estuarine Wild1ife
Resources of Coos and Coquille Estuaries
Appendix B - 1978 Coastal Commercial Shad Fishing
Southwest Region Information Report

6 Please note: This Table of Contents is original and does not reflect the current page numbers.

The jetties and harbor entrance, showing strong cross currents at the bar.



Empty barge heading upstream to Rogge's Mill to take on partial load.

Sause Bros. Tug “Cochise” with barge crossing the bar.Harbor tug in foreground.

DEC 77

The original Bandon Fisheries Building.

THE RIVER AND THE ESTUARY

The most significant economic assets and the most delicate ecological balances affecting the City of Bandon are to be found on the Coquille River estuary. It is here that the emergence of potentially conflicting uses are most striking; it is here that the health of the City's economy is determined; it is here that wastes are converted into elements of the food chain, greatly enriching the offshore marine life; it is here that the hard decisions must be made.

The following pages discuss the north jetty site, the physical properties of the river, the estuary and the estuary tideflat, and describes the current facilities of the city waterfront. The intent is to place these elements into perspective, the one with the other, so that informed decisions pertaining to uses and policies may be more readily made.

North Jetty Site

On the north side of the mouth of the Coquille River is a sand spit containing low lying sand dunes. The southern tip of this spit contains the site of the north jetty of the Coquille River entrance and the Coquille River Lighthouse. The site, containing 34.5 acres is within the Bandon city limits and has been zoned as a natural resource by the City. The property is owned by the U.S. Army Corps of Engineers and is currently leased for 25 years to the State of Oregon for use as an extension of the 1,226 acre Bullards Beach State Park which it joins to the north. The lease commenced in November, 1963 and terminates in November, 1988 (23:365,374).

The north jetty site, Bullards Beach State Park, and the Bullards Beach frontage to the north of the park contain most of the significant active sand dunes between Cape Arago and the California border. The dunes at the jetty site include a well stabilized foredune and a wet deflation plain, also well stabilized with vegetation. The foredune, heavily vegetated, is backed by an extensive area of stabilized grass-farb with smaller islands of deflation plain marshes. The vegetation is generally in good condition because a paved road and parking lot funnel people to the beach, jetty, and lighthouse. The primary focal point of the site is the lighthouse but the jetty is used to some extent for sport fishing and the beach is used for beachcombing. There is adequate parking and restroom facilities. The Army Corps of Engineers has recommended that "the quality of recreation in the north jetty area would be enhanced by light fertilization to strengthen the vegetation, random plantings of shorepine to act as windbreaks, and paved trails through the beach grass to prevent excessive habitat damage". The only significant wildlife population reported to be resident at the site is the marine life associated with the jetty (23:375).

A number of potentially endangered species may be resident or frequent visitors. One rare plant, silvery phacelia (Pacelia Argentea) is found on the Bullards Beach frontage to the north but has not been found at the north jetty site (l5:CS3).

Prior to the first jetty construction in 1884, the river mouth regularly shifted positions north and south. For example, Corps of Engineers surveys show the mouth of the river in 1860 to be approximately at its present location. By 1880 it had shifted south almost 3,000 feet to the bluff west of the Bandon business district. Since 1884, continued jetty construction and repair have held the mouth of the river approximately at its present location (21:24).

The present jetties were first completed in 1908, and again in 1933. The north jetty was reconstructed In

1942, and a 750 foot extension running east under the south end of the spit was completed in 1951. Current length of the north jetty is 3,450 feet (24:1-4).

The north jetty has stopped the southward growth of the sand spit. Only minor shoreline changes have occurred, primarily the creation of a small pocket beach on the north side of the jetty (21:24).

The beach sand is subject to seasonal erosion and accretion (growth) due to ocean currents and waves. Large amounts of driftwood tend to accumulate on the upper beach just below the foredune, and the entire north jetty site is considered a part of the 100 year floodplain (27:1). The Army Corp of Engineers has recommended the encouragement of beach logging "to enhance the aesthetic quality of the area and to reduce the significant hazard created by the vast driftwood accumulation" (23:375). Some people believe the removal of logs 'leads to greater sand removal by wind action, however.

Winter storms efficiently erode the foredune and beach and cause movement of sand to the north. During the summer there is a tendency for the gentler wave action to rebuild the beaches and provide sand for rebuilding the eroded foredunes. During some years the foredune and beach will remain undercut throughout the year because winter erosion is exceeding summer replacement. This is considered a temporary, unstable condition which will eventually be healed by new increments of sand (7:73).

The stellar attraction at the north jetty is the old Bandon lighthouse, one of the most scenic on the Oregon Coast and one of only two National Historic Sites in Coos County. It was constructed in 1896 on a large basaltic rock at a cost of $17,600. Its light was 47 feet above mean sea level and it had a steam operated fog horn. It was built as a result of increasing commerce on the Coquille River (coal mines at Riverton, shipbuilding at Parkersburg and Prosper, and several sawmills). There had been a regular succession of shipwrecks on the Coquille River bar beginning with the schooner Commodore which foundered October 22, 1870, and the light was badly needed. During the great Bandon fire of September, 1936, hundreds of citizens fleeing the burning city crossed to the lighthouse for refuge in the adjoining dunes and open sands. The lighthouse discontinued operation in 1939 when it was replaced by a small automatic light on the south jetty
(10:)(9:27) (33:92).

The Lighthouse at the North Jetty Site.

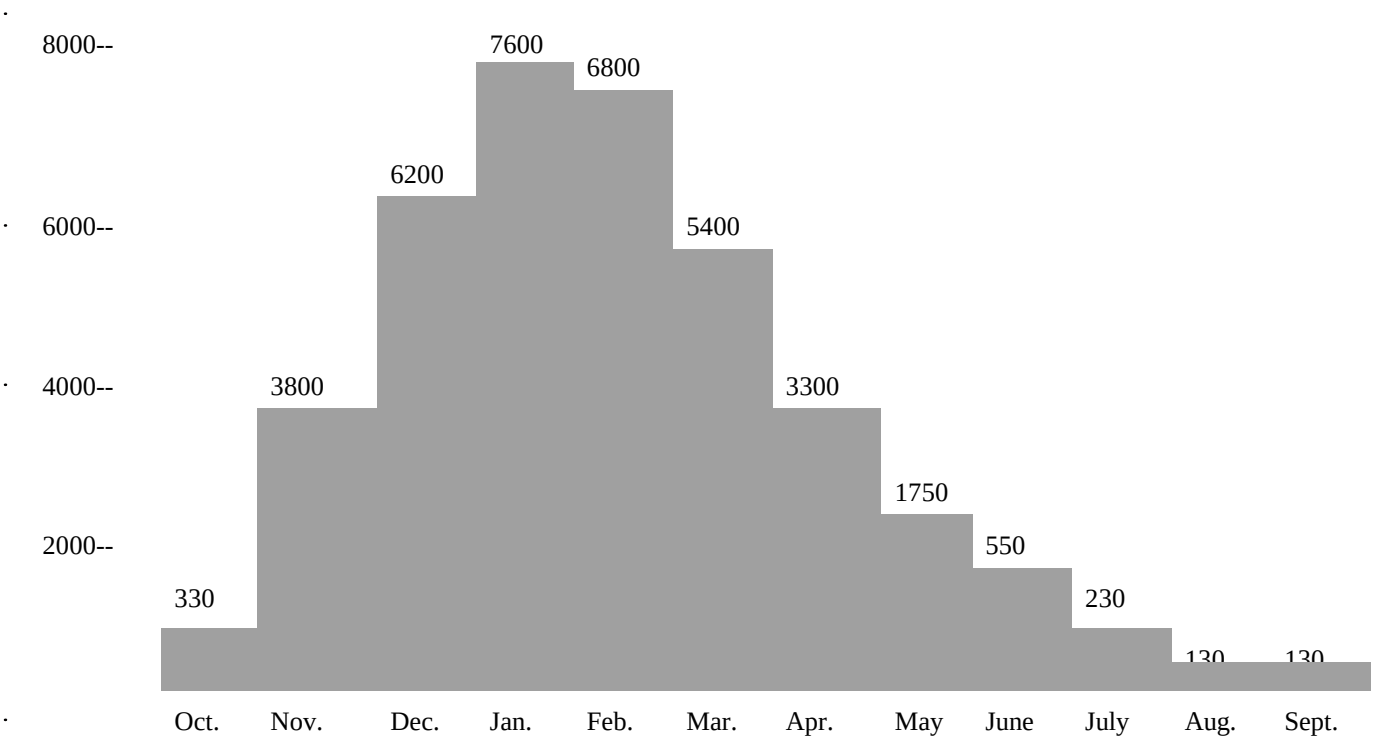
In summary, the north jetty site, a part of the City of Bandon, is of great historical, aesthetic, recreational, and economic value to the area. Its history, exemplified by the lighthouse, has been recognized as having great significance to the nation. The jetty, the uncrowded beach, and the forlorn charm of the lighthouse has attracted tourists, artists, and photographers. The existence of the harbor, the river channel, and even the lower part of the City are almost totally dependent upon the continued existence of the jetty and the jetty site.

Estuary Physical Description

The Coquille River is 99.1 miles long and drains 1,058 square miles. Approximately 88% of the drainage area is forest, 5% cropland, and 6% rangeland (24:D-1). Tidal influence extends 35 miles - to Reed's Ford. 1.0 mile above the Arago Road bridge in Myrtle Point. The bulk of the tidal lands lie in the first 3.6 miles of the river up to the Highway 101 bridge. Beyond the bridge the former tidal marshes have been diked and have long since been converted to farm land. Average depth of the estuary lagoon is 7 feet below mean sea level (19:68).

The monthly discharge of fresh water from the Coquille River has been compiled over a 28 year period. It has averaged over 3,000 cubic feet per second with extremely high flow from December through March. Monthly averages are depicted on the following hydrograph (24:0-5):

Coquille River Mean Monthly Discharge
Cubic Feet Per Second - 1933-1972



Water quality in the Coquille River has met the State's water quality standards. Turbidity and fecal bacteria concentrations are seasonally high during high runoff periods, however. In late summer, water temperature in certain tributaries rise to about 80F due to reduced stream flow. Sluggish waters in log storage areas have experienced seasonal problems with low dissolved oxygen and high water temperature (24:0-7,8). There have been no known problems of an oxygen block to fish migration on the Coquille River, however.

The salt content (salinity) of the water in the Coquille estuary has never been determined (19:71). It is known that during periods of high runoff. it is essentially a fresh water bay. During late summer, July through October, when runoff is very low, it is assumed that the denser ocean water flows upstream along the bottom permitting certain salt tolerant species such as crab to migrate further into the bay at that time.

Approximately 100,000 tons of sediment per year are washed down the Coquille River and deposited. Dredge samples indicate that it is predominantly fine to medium sand with an organic content from .44% to .60%. Although a large part of it is deposited in the estuary, there is also a large build-up behind the south jetty (19:71). Annual dredging of the bar and ships channel is necessary to keep the harbor open to navigation. During a typical average year about 62,000 cubic yards are removed by hopper dredge and deposited in an Environmental Protection Agency approved open water disposal site .9 mile due west of the river mouth In 40-60 fathoms of water (24:1-8, 1-25).

The ship channel is maintained by the U.S. Army Corps of Engineers dredging and is protected by the jetties. Since 1933 the channel has been maintained at 13 feet to river mile 7.3 (Moore Mill). In 1976 the bar entrance was dredged to 18 feet, which has been considerable help to navigation (3:-). The channel between Moore Mill (mile 1.3) and Rogge Mill (mile 3.5) is eight feet at mean lower low water, but is not maintained by the U.S. Corps of Engineers (24:2-72,73). The bottom area impacted by the dredging totals 98 acres of which 20% is affected in an annual cycle (24:1-8).

During the low runoff of the summer months, sediments are not sufficiently removed from the harbor entrance by flushing action of the river. The strong southerly set of ocean current accompanying the northwesterly waves carry sand around the end of the north jetty depositing it in the channel. This creates serious shoaling in late summer. Periodic river freshets during winter months tend to remove the shoaling but there are times even in winter that the entrance is shoaled, interfering with navigation (24:2-12).

Coquille River estuary. Moore Mill at left/Oregon ocean island rocks offshore. Estuary tideflats flood lands in foreground.

There are varying estimates of the surface area of the Coquille River estuary. The U.S. Army Corps of Engineers, using tidal measurements taken at the Highway 101 bridge, arrived at the following figures:

High tide surface area: 2.564×10^7 square feet which is equal to 588.61 acres. However, the same document has a map which shows 818 acres in the estuary. The difference could reflect the acreage of high, mature marsh lying above mean high water, but the document does not indicate whether this is so or not. 818 acres is shown as the high water area in the Oregon State University Description and Information Sources for Oregon Estuaries. It gives 512 acres as the area at mean sea level and 346 acres as the area for low water (19:68). Coastal Wetlands of Oregon (8:105) gives 771 acres as the size of the estuary and the Inventory of Filled Lands of the State Land Board indicates that the estuary contains 703 acres, of which 350 acres is tideland. The inventory indicates that since 1896, there have been 56.76 acres of the estuary filled for city, port, commercial, and residential uses (16:unnumbered).

Another measurement of an estuary is by volume known as the "tidal prism". The tidal prism is the volume of water within the estuary between mean low water (boundary between tideland and submerged land) and mean high water (boundary between tideland and "upland" mature high marsh). If the volume of water at these two levels Is known, the tidal prism can be calculated by subtracting the one from the other. There are two estimates of the tidal prism of the Coquille River estuary.

(l) U.S. Army Corps of Engineers (24:B-1,2)

112 million cubic feet at high tide
-50 million cubic feet at low tide
62 million cubic feet Tidal Prism

(2) Oregon State University Description and Information Sources for Oregon Estuaries states (19:70):

"Tidal prism on mean range is 1.32×10^8 cubic feet with a diurnal range of 1.77×10^8 cubic feet." This is a 132 million cubic foot prism on mean range and 177 million cubic foot prism with a diurnal range and is two and three times the tidal prism estimated by the Army Corp of Engineers.

Coquille River Estuary Tideflat

Riverside Drive, from Highway 701 at the south end of the Coquille River bridge to the site of Moore Mill passes by the edge of the Bandon tidal marsh, a major portion of the Coquille River estuary tideflat. The 195 acres of this marsh consists of over 25% of the entire Coquille River estuary. This marsh totals about 120 acres of low sand marsh and about 75 acres of immature high marsh. The low sand marsh is the major area of this type along the Oregon Coast and has been expanding rapidly since 1895. From 1887 to 1916 it expanded as much as 70 feet per year (for a total of 1,500 feet), and a very high rate of expansion continued until about 1939. Since 1939 the marsh has expanded at four or five feet per year (8:106).

The Bandon Marsh is now in the ownership of U.S. Fish and Wildlife Service. As part of the wildlife refuge system its protection is assured for future generations.

Coquille estuary tideflat from Highway 101 bridge. Old Bullards ferry in foreground. Low sand marsh, partially flooded, in background.

The soils associated with the Bandon tidal marsh were formed by river deposits of variable amounts of sand, silt, clay, gravel, and peat. There are at least four soil types recognized by the U.S. Soil Conservation Service which occur in this marsh.

(1) Tidal Flats. The lower area of the tidal flats are bare of vegetation due to daily tidal flooding. They contain some softshell clam beds. These are found on the south side of the river immediately downstream of the Coquille River bridge, and on both sides of the river about midway between the bridge and Moore Mill. The softshell clam is the only bay clam adaptable to the "fresh water" of Coquille Bay. They are present but scarce. The higher areas are very sparsely vegetated with salt tolerant species such as eelgrass, seaside arrow-grass, Pacific coast bullrush, tufted hairgrass, baltic rush, and various other sedges and grasses. Tidal flat soils are unsuitable for sanitary facilities, community development, source material, or water management due to tidal flooding, excess salts, and low strength. There are three large beds of eelgrass within the tidal flats. These are extremely valuable spawning grounds for fish and crabs and represent a stable estuarine condition (26:-) (6:-).

(2) Coquille Peaty Silt Loam, and (3) Clatsop Silty Clay Loam. The higher areas of the Bandon tidal marsh - 1 to 10 feet - contain poorly drained silty barns. The vegetation cover is thick and consists of rushes, sedges, marsh grass, tules, and reeds. This soil is excellent wildlife habitat for numerous aquatic species of birds. Most notable are pintails and widgeons which winter in the area. This salt marsh and adjacent tidal area is considered by the U.S. Army Corp of Engineers, Portland District to be one of the two most important waterfowl and shorebird resting and feeding areas along the southern Oregon Coast (24:2-38), although the Oregon Coastal Conservation and Development Commission did not consider the

bay of major importance to waterfowl (8:105). When diked and drained, these type soils make fair pasture land. They are not suitable for sanitary facilities, community development, source material, or water management due to flooding and low strength (26:-) (6:-).

Fine Sand. Between Riverside Drive and the marsh proper, there is in places a narrow strip of poorly drained sandy soil which had originally been formed as a deflation plain between larger dunes. The native vegetation is sedge, rushes, lupine, water tolerant grasses, willows, wax myrtle, shorepine, and douglas fir. In addition to wild-life habitat, this soil is good for raising cranberries.
(26:-)(6:-).

The following is quoted from the Oregon Natural Heritage Program, the Nature Conservancy, Portland, March 7, 1977. "The Coquille River estuary tideflats is considered as an area of unusual natural value and has been identified by marine biologists as a medium priority research natural area need. It is the only sizable saltmarsh between Coos Bay and Smith River California, and is one of the best and most extensive occurrences of the low sandy marsh vegetation type on the Oregon Coast. It is particularly interesting as it is primarily on a silt substrate. The marsh is known as one of the more important waterfowl feeding and resting areas on the Oregon Coast and is of great significance for the overall contribution to fishery productivity. . . Because of the impressive array of habitats the marsh is very valuable for autecological studies of salt tolerance, habitat specificity, etc."

"The marsh receives some human use, primarily from hunters and hikers due to Its proximity to the City of Bandon and Highway 101. The overall effect of this use on the marsh has been relatively light and has not resulted in any obvious compositional changes. A few old tire tracks are found in the marsh and a few weeds occur there. Access restriction is suggested for the area during the breeding and nesting seasons, but no restriction should be necessary otherwise, unless use increases. The marsh vegetation is relatively fragile but recovers rapidly from minor disturbances. If use increases, a raised trail may be a necessity.

Coquille estuary tideflat. General view from
Highway 101 bridge.

A portion of the Coquille estuary tideflats lie within the city limits. The north half of the parcel within the City has been zoned as natural resource by the City (1:45). The southern half contains the major eel-grass beds on the estuary. It borders the Moore Mill properties on the south and has been zoned industrial along with the mill site. It has been platted early in this century as the Timmons Waterfront Addition (32:-) (4:-). No development has occurred and it remains in its natural state at this time.

City Water Front

Much of the economic life of Bandon is related to the properties along the City waterfront. These properties include the Moore Mill and Lumber Company, the properties of the Port of Bandon, Bandon Fisheries, and other businesses. The central business district is only one block in from the waterfront. The following paragraphs describe that essential stretch between the estuary tideflats and the south jetty.

Between Riverside Drive and Highway 10l is the predominantly residential old Bandon Heights area. This area, zoned as residential, contains some very attractive, modern residences, some large, older homes that survived the fire of 1936, and a variety of modest homes. Most of the streets are unpaved. The unused Bandon Heights School buildings and grounds are in this area, as well as the cemetery which includes the Bandon Cemetery, the GAR Cemetery, and the Catholic Cemetery. Lord Bennett, Bandon's founder is buried there, as well as veterans of the Civil War, making it a site of historical Interest (4:-).

Immediately south of the tide flats platted as Timmons Waterfront Addition and below Bandon Heights is the site of Moore Hill. This mill had been owned and operated at the right angle bend of the river by the Moore Mill and Lumber Company since 1890 (2:10). Moore Mill was Bandon's largest single employer with, in 1977, about 170 employees. It ships about 27,000,000 board feet of lumber annually. Between 1913 and 1977, 25.4 acres of tidelands had been filled to provide the site for the sawmill. At the east end of the mill additional tidelands are used as a log storage area. In 1961-62 .41 acres was filled to provide an access road to the Moore Mill truck maintenance shop which stands on piling off the foot of Delaware Avenue. The fill is 40 by 450 feet (10:-). It is of interest to note that the truck shop was one of the very few structures in west Bandon which did not burn in the great fire of September 26, 1936. Moore Mill escaped that fire (2:10). but was destroyed in another fire in August of 1987.

Between Moore Mill and the Moore Mill truck maintenance shop is the sewage treatment plant. The outfall for the chlorinated effluent is in the tideflat between the mill and the shop. This tideflat also has a small bed of softshell clams. The sewage treatment plant which is located at river mile .5 was completed in 1971. It serves about 3/4 of the area of Bandon, and about 1/3 of the population, providing secondary treatment by extended aeration and activated sludge.

Moore Mill truck shop.

The Port of Bandon has made several major changes in the past 12 years since the first Coastal Resources Inventory. The first major change was the building of the boat basin. Built in 1982, this 90-slip facility is the cornerstone of the Port's marine activities. In 1988 a new double lane boat ramp was built where the old boat basin was. Between these areas, the Port built the High Dock, which contains a fish buying station and the new Port offices and ticket facilities for the river boat. In 1989 the Port paved and finished the parking areas from Chicago Ave to Alabama Ave, linking this area to the already paved boat ramp parking area.

In a trade with United States Fish and Wildlife Service, the Port exchanged its 290 acres of Bandon Marsh for the Historic 1939 Coast Guard Station. This swap insured protection of one of the largest areas of undisturbed salt estuarine marshland on the south coast. The trade also put the Coast Guard Station back into use.

Bandon Fisheries is also located on the waterfront. It is the only fish processing plant on the Coquille estuary. This plant discharges cooling waters and screened wash waters into the river under permit of DEQ.

Most of the fish processed at Bandon Fisheries is landed at other ports:

	1988
Salmon	219,052 lbs.
Crab	460,000 lbs.
Black Cod	220,000 lbs.
Shrimp	2,600,000 lbs.
Bottom Fish	300,000 lbs.
Meat Extraction*	500,000 lbs.

*Mostly Dungeness Crab from Alaska

Source: Greydon Stinnett, personal conversation 7-10-90

Inland from the Port of Bandon facilities is the Old Town district. The area from northeast of Fillmore Avenue to west of Alabama Avenue, from the river back beyond Third Street, is filled in. Construction took place from 1896 to 1916 for use as dock facilities, city streets, and residential land. This filled area occupies 27.67 acres and is owned by various commercial and residential owners, in addition to the City and Port of Bandon (16:-).

The Bandon central business district, as well as the rest of west Bandon, are a part of the site of the big fire of September 26, 1936. For an accounting of structures remaining from the fire, see the City of Bandon 1990 Comprehensive Plan of July, 1974, page 11 (2:11). The site of the Bandon fire is listed as a historical or archaeological resource of importance to the nation in the Oregon Coastal Conservation and Development Commissions resource inventory of September, 1974 (9:27). The central business district of Bandon may be considered a historic, unique, and scenic community.

Robertson□s concrete, sand, and gravel operation.
(Lighthouse in background) 1977

Bandon Fisheries facility is an area containing about eight older residential homes, and beyond that is the old Coast Guard building (34:-).

The old Coast Guard building is owned by the Port of Bandon. USF&W traded the building for the Bandon Marsh. During the summer months, depending upon boating activity, a Coast Guard detachment from North Bend mans a temporary life saving station at the harbor. The boats are moored at the Port's boat basin, and the personnel are quartered in trailers on "Coast Guard Hill". Search and Rescue (SAR)is conducted by helicopter from North Bend, 15 minutes away. There is a fog horn and light serviced by the Coast Guard on the south jetty, but it is removed during winter months to prevent damage. Channel and ocean buoys are maintained by cutter from other stations with some assist from helicopters (25:..).

West of the old Coast Guard building are two old frame buildings used as storefront businesses. Next to them is the concrete, sand, and gravel operation of Robertson□s Inc. Robertsons has been at that location since 1940 (34:-).

Port of Bandon small boat harbor. (1977)

The Bandon waterfront north of First Street is considered to be in the 100 year floodplain ,as is the Old Town Area.

The Port before the boat basin was moved (circa 1976).

THE SOUTH JETTY AND THE BLUFF

The south jetty and the bluff contain the most unique and attractive areas for residential, tourist commercial, and recreation within the City. These areas have been zoned for "Controlled Development", in which only one or two family dwellings are permitted outright, and then only under rather strict conditions. There are a variety of conditional uses which may be permitted by the Planning Commission, providing additional specified conditions are met. The intent is to control future development in order to enhance the area's unique qualities. Following is a description of the South Jetty Area, a description of the Geology of the Bluff, and a description of the development and other features along the Bluff.

Breakwater Addition (South Jetty) and the Bluff.

South Jetty and Breakwater Addition

West of the Robertson's concrete, sand, and gravel facility one enters the south jetty area, or Breakwater Addition as it is known on the maps. This area was created as a result of construction of the south jetty. Survey maps of 1880 show the Coquille River running through the center of what is now Breakwater Addition (21:23). Construction of the jetty has held the mouth.of the river in its present position, and natural accretion and spoils from early dredging of the channel created the young, stabilized dunes which have since become a residential housing area.

The south jetty is 2,700 feet long and was begun in the 1880□s from the blueschist of Tupper Rock, a sea stack on the beach at that time which reached nearly 100 feet above the general level of the upper part of Bandon. By 1901 the top of Tupper Rock had been largely removed and quarrying continued for many

years. Virtually little trace of it remains today (12:66-67). The jetty was completed to its present extent in 1908 and was extensively repaired in 1954 (24:1—4). The Coast Guard maintains the navigational aids on the south jetty (25:—).

The Bandon south jetty county park, approximately one acre consisting of an unpaved parking lot and flush type restrooms, provides access for beachcombers and fishermen to the jetty, the river mouth, and the ocean beach (5:7). At the east end of the parking area is a seafood restaurant.

Beachcombers (and migratory birds) find interest in the numerous tide pools of a marsh strewn with jetty rocks immediately east of the park behind the jetty. Marine algae, invertebrates, and small fish are found there, in addition to a bed of softshell clams which contains an occasional Gaper Clam. The Army Corp of Engineers Reconnaissance Study of June, 1974, found the environmental quality to be "poor" (23:371). Fishing along the perimeter of the rocky jetty is popular. Between the tidal pool/marsh and the old Coast Guard Station is an abandoned sand and gravel operation where river gravel deposited during freshets was formerly obtained.

The sand beach which runs southwest from the jetty has developed as part of the shoreline advance resulting from construction of the jetty. It is interesting that this shoreline is developing independently of the shoreline north of the river, and that it has advanced several hundred feet further due to the larger bay which was created with the south jetty. There is evidently no transport of sand from one side of the river to the other. The short beach runs approximately 3/4 mile, from the south jetty to Coquille Point, with rocky islands and an ocean tidal flat in front and the bluff behind
(21 :23,24)(31 :—).

Aside from beach sand, the soils on the Breakwater Addition are classified as urban land fill, and some loamy sand (6:-). The entire area north and west of Jetty Road was included by the Department of Housing and Urban Development as a part of the 100 year floodplain in April, 1976 (27:1). The 1964 tsunamis, however, did not reach the homes at Breakwater Addition.

The Breakwater Addition contains about 30 houses. It has been zoned by the City as a controlled development to "enhance and protect the unique character, natural resources and habitat characteristics of the Bandon jetty, to encourage the development of a coastal village atmosphere of the area, and to exclude those uses which would be inconsistent with the area's character" (1:22). A small lagoon pond was entrapped when the river shifted north to its present position. This lagoon adds to the charm of the residential community and provides habitat for a considerable variety of wildlife. Local residents report that a flock of ducks are present year round and that many species of birds and mammals are regularly observed.

Geology of the Bluff

The land of the City of Bandon has been under the ocean during most of the past 200 million years or so. The bedrock visible in the sea cliff as viewed from the south jetty beach, as well as the offshore rocks, were laid down 135 to 155 million years ago during the late Jurassic period. These rocks are part of the Otter Point formation, named after Otter Point, three miles north of the Rogue River. This formation is thought to represent what was once the bottom of a deep sea trench with adjacent Islands similar to the Aleutian Islands of today. The extremely varied rock type - a diverse mixture of sandstone, siltstone, volcanic rock, chert, and blueschist - have defied all attempts at a simple explanation of their origin. It is probable that this area was geologically very active during the late Jurassic period. There is evidence that portions of what was the edge of the Pacific Plate had been jammed into parts of the edge of the North American Plate, with simultaneous volcanic activity and local uplift, tilting, and distortion. The result was the highly disordered assembly of rocks we see in the sea cliff and beach at Bandon today.

It was during the last 2 million years that the surface of the Bandon area was deposited. As the land and sea rose and fell - sometimes together, sometimes in opposition - the Bandon area was alternately a part of a shallow continental shelf, a beach, and a floodplain of the ancestral Coquille River. The action of the waves leveled off the top of the Otter Point bedrock. Later, the sedimentary deposits from the river and near shore ocean, composed of sand, silt, clay, and gravel were deposited to compose the land which is now the City of Bandon. The Coquille River, which once met the ocean at Whiskey Run changed to its present course after the ocean rose following the retreat of the last glaciers about 100,000 years ago. The land rose out of the ocean for the last time and gave us a terrain in the high part of Bandon about 80 to 100 feet above the ocean. According to geologists, It is still rising.

More recently, during the past 15 to 20,000 years, the sea level has risen about 400 feet which indicates an average of about one foot every 7O-years. It has, however, been relatively stable for the past 5,000 years. On the continental shelf off Bandon the lowest submerged lands are less than 300 feet below the sea. The lowest ones are 10 miles off the Curry County shore which indicates that the coast has retreated from the ocean at a rate of three feet per year, although it has been considerably less during the past 5,000 years.

The average coastal erosion in Coos County varies from less than one inch per year to several inches per year depending upon bedrock hardness, topography and other factors. At Bandon, the irregular headland composed of the extremely varied rocks of the Otter Point formation has had a very slow rate of erosion. There has been little or no change in the past 100 years, with exception of a few local slides.

Rocks of the Otter Point formation are of limited economic use. The blueschist makes good jetty rock and has been used on both the Coos Bay and Bandon jetties. Tupper Rock, which once stood 100 feet above the level of the plain at Bandon, was of blueschist. It was blasted away and removed to build the south jetty prior to 1900. Good quality chert can be used for building or ornamental stone. Varicolored jaspers are sometimes found in the banded chert of the Otter Point formation. Other gemstones such as agate and petrified wood are sometimes found along the beaches and are of interest primarily to hobbyists who collect, shape, and polish them. Much of the rock of the Otter Point formation is adequate for fill for construction. The rocks are generally difficult to excavate and blasting is required in areas of intact bedrock. Interesting examples of non-bedded chert, basaltic pillow lava, and blueschist are visible in the sea cliff at Bandon beach (12:13-15) (13:19—21).

The Bluff

The Intersections of Jetty Road and the Bandon Beach Loop begins 5 miles of scenic drive along the bluff, dunes, and beaches of South Bandon. This part of the City has been zoned for controlled development to "recognize the scenic and unique quality of Bandon's ocean front and to maintain this quality as much as possible by carefully controlling the nature and scale of future development in the area. It is intended that a mix of uses would be permitted, including residential, tourist commercial, and recreational. Future development is to be controlled in order to enhance the area's unique qualities." (1:20)

The first facility to be found at the top of the hill, overlooking the ocean and south jetty is the modern 20 bed South Coos General Hospital. The next half mile is taken up with residential properties, with some of the most attractive homes on the Oregon Coast together with very modest homes. There are a number of vacant lots, some for sale, and construction of several homes in progress. Along this stretch one also passes the abandoned quarry of Tupper Rock, the blueschist outcrop which had once stood 100 feet above the plain but was quarried for construction of the South Jetty. (34:-)

At about .8 miles from Jetty road is the first of the motels and novelty shops which are interspersed with residential and recreational lands for the next 4 miles. One passes a novelty shop, the Table Rock Motel, and, near Coquille Point, the Bandon Beach and Gorman Motels and the Three Gables Restaurant. At Coquille Point there are the public Masonic Viewpoint and a stairway to the beach that the City built.

Moving to the south one encounters many residences, another novelty shop and the Sunset Motel before arriving at Face Rock Viewpoint (Bandon Ocean Wayside). Continuing south one passes more homes, Oceanview Care Center, the City's beach access just north of Seabird Drive, and the Windermere Motel and the Inn at Pace Rock, which is located next to the golf course. More houses are encountered as one moves south toward the City Limits at Polaris St.

Face Rock Viewpoint (Bandon Ocean Wayside) provides a viewpoint and beach access in addition to parking and restroom facilities. This park was donated by the late J.F. Kronenberg in a deed dated January 27, 1932 (14:87). The parking lot is above one of the most interesting wave-cut formations on the coast.

Masonic Viewpoint was given to the City for public use by the
Masonic Lodge. From this viewpoint you can view several offshore rocks in the Oregon Islands National Wildlife Refuge, such as Elephant Rock and the Cat and Kittens Rocks. This area, according to United States Fish and Wildlife Service, provides one of the best seabird viewing sites on the West Coast.

At the south boundary of Bandon Ocean State Wayside (about 2 miles south of Jetty Road) is the Bandon Retirement Home, perhaps the only home for the elderly anywhere which commands such a dramatic view of the Ocean.

The next half-mile - - to the city limits - - contains numerous homes on the ocean bluff along with vacant land, some with for sale signs. At the southern limits of the City is the Windermere Motel on the right and the 9-hole golf course on the left. Johnson Creek empties onto the beach at that point.

One item of geological interest occurs at the mouth of Johnson Creek. "A layer of black sand about 1 foot thick and 100 feet or more in width extends along the base of the sea cliff for almost 2,500 feet north from the mouth of the creek." Samples taken in 1945 contained 7.6 percent chromite. This is one of only 5

beach deposits of black sand identified in Coos County. (12:51)

The land between the Beach Loop Road and Highway 101 contains sandy loam soil. It is about evenly distributed between well-drained and poorly-drained soils. The well-drained sand loam (Bullards series) is well suited for recreation, wildlife habitat, homesites, pastures, and timber. The poorly-drained sandy loam (Blacklock series) is very poor for homesites, but is good for cranberry bogs, wildlife, pasture, specialty and timber crops, water supply, and recreation. In actual use, this area is sparsely settled with rural homesites. There are a few cranberry bogs. The rest, for the most part, is in natural cover.
(6:-) (26:—)

Typical foredune and beach. South of City Limits.

South of the city, limits, following Beach Loop Road, there are about eighteen homes and one Motel in the .7 mile before arriving at the first access point of the 878.81 acre Bandon State Park (5:11). This park, primarily undeveloped, has several access points providing parking space and restrooms, picnic tables, viewpoints, and beach access. Dunes along this stretch are classed as younger stabilized dunes. In spots, the high foredune shelters the picnic areas from the northwest wind (14:87). High winds and shifting sands tend to discourage picnicking in many areas of the park, but beachcombing, fishing, and hiking are well suited to the area. The sandy areas have been planted to Holland Beach grass and scots broom, as well as shorepine (14:87) (34:-).

Between the beach and Highway 101, following the Beach Loop Road, there are about 2 dozen houses, a dog kennel, the Blue Jay Campground, and the Millard School (District 54). Highway 101, leading north into Bandon, is sporadically developed with tourist oriented businesses, such as novelty shops and motels, as well as a scattering of residential homes, and other businesses (34:-).

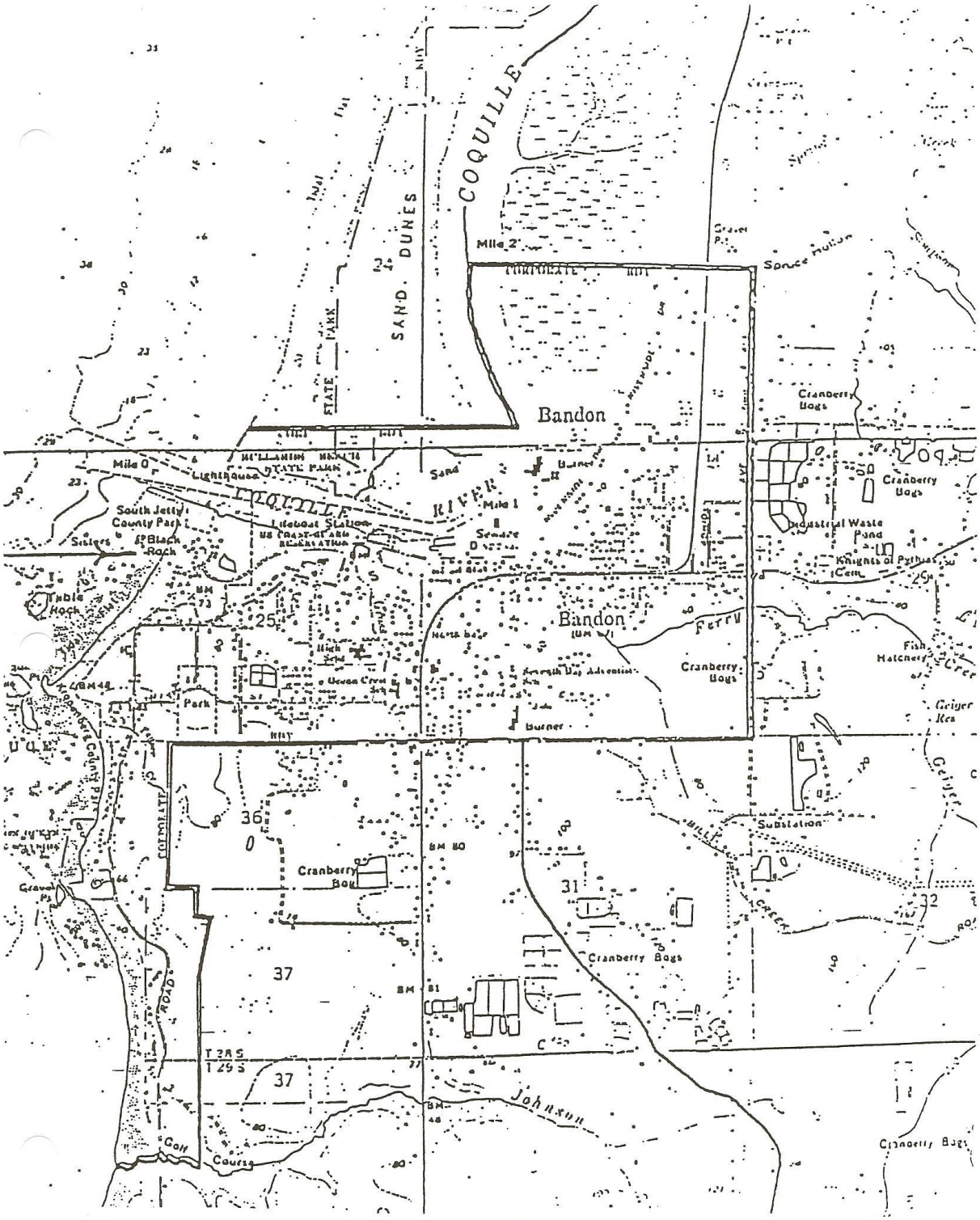
* * * * * * * * * * * * *

In summary, the area between the bluff and Highway 101 is very sparsely developed, overall, but contains some of the most attractive residential, tourist commercial, and recreation properties on the coast. Coastal erosion of the bluff is the primary geological hazard. Administration of and compliance with the City of Bandon Zoning Ordinance is the chief tool in controlling future development in order to enhance the area's unique qualities.

U.S. GEOGRPAHICAL SURVEY MAP

FOR

BANDON ENVIRONS


COQUILLE
SAND DUNES
STATE PARK
Mile 2
Bandon
Mile 0
Lighthouse
South Jetty County Park
Sisters
Black Rock
Table Rock
Mile 1
Cranberry Bogs
Industrial Waste Pond
Knights of Pythias Cem
Bandon
Ferry
Fish Hatchery
Park
Cranberry Bog
Substation
Cranberry Bogs
Johnson
Golf Course
Cranberry Bogs
25
36
37
31
32
37
T 28 S
T 29 S

FLOOD HAZARD BOUNDARY MAPS

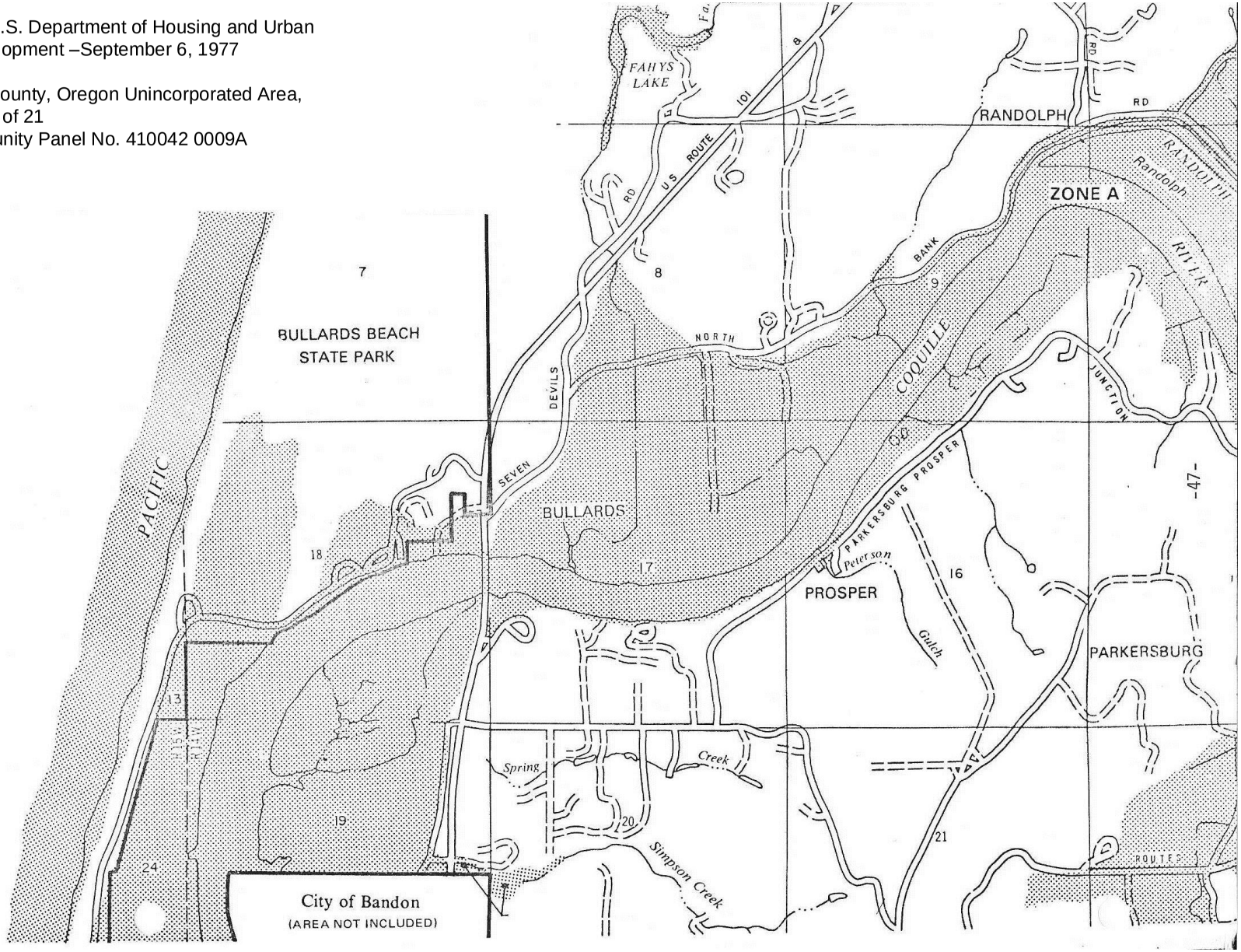
FOR

BANDON ENVIRONS

FLOOD HAZARD BOUNDARY

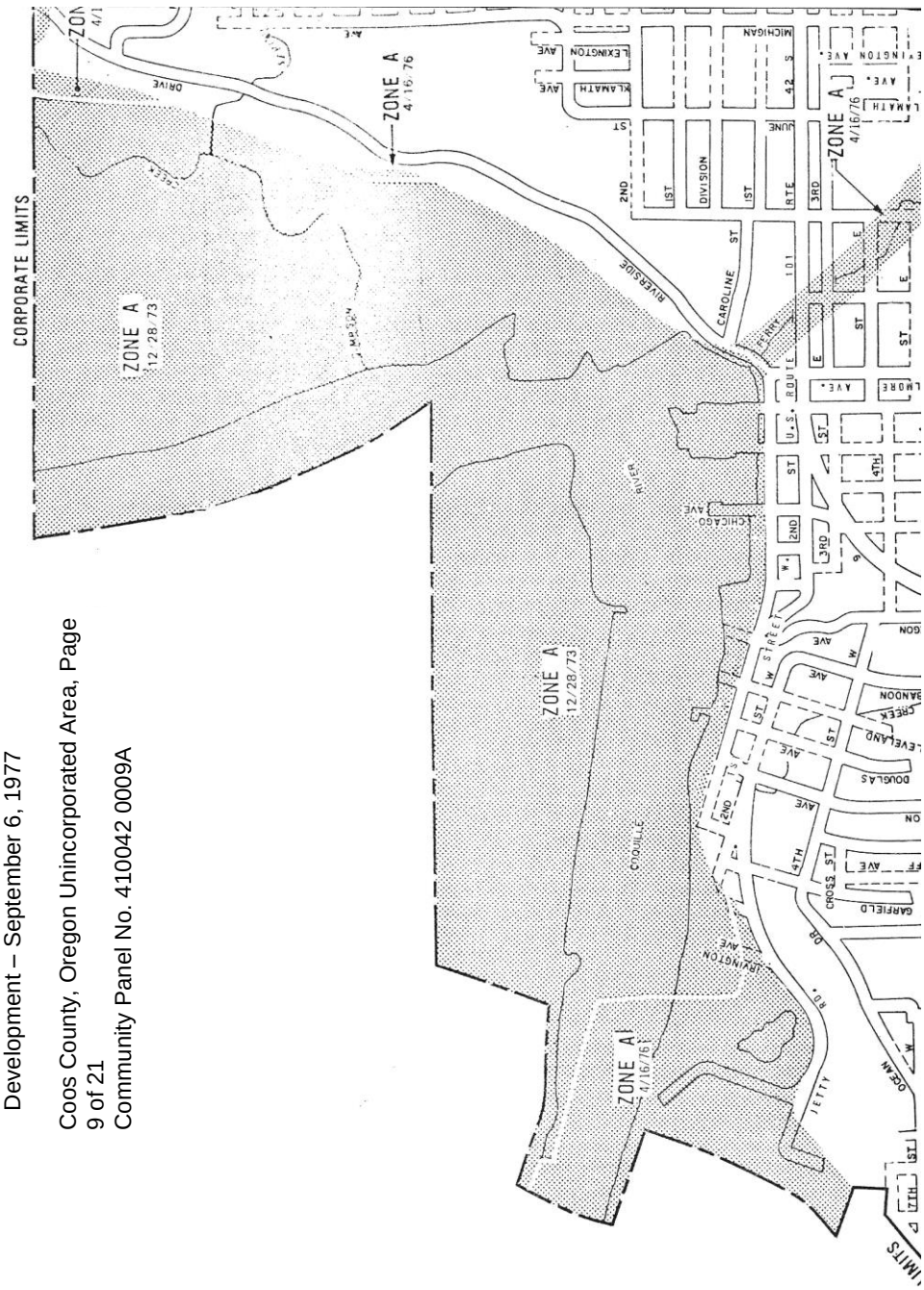
From U.S. Department of Housing and Urban Development –September 6, 1977

Coos County, Oregon Unincorporated Area,
Page 9 of 21
Community Panel No. 410042 0009A



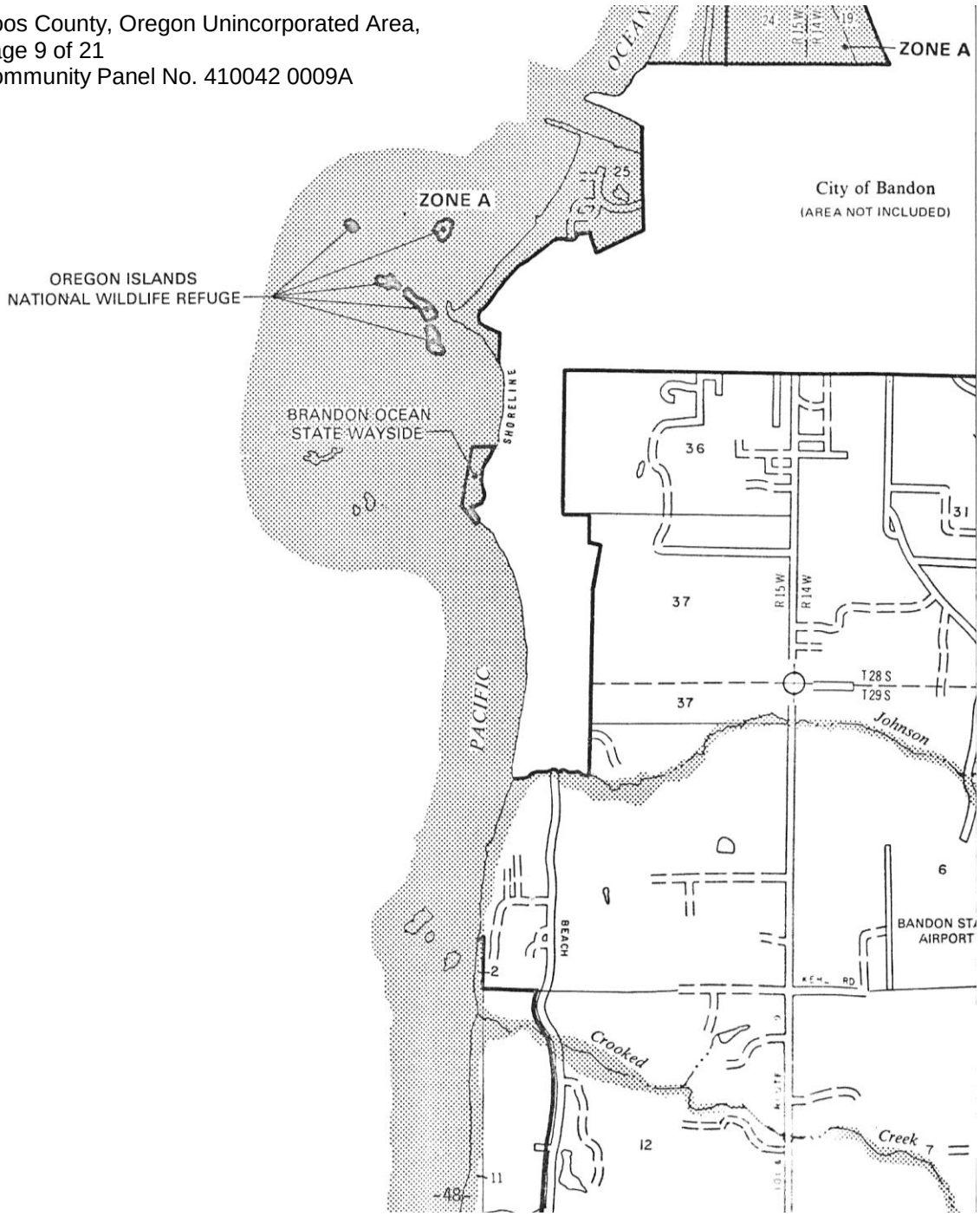
From U.S. Department of Housing and Urban Development – September 6, 1977

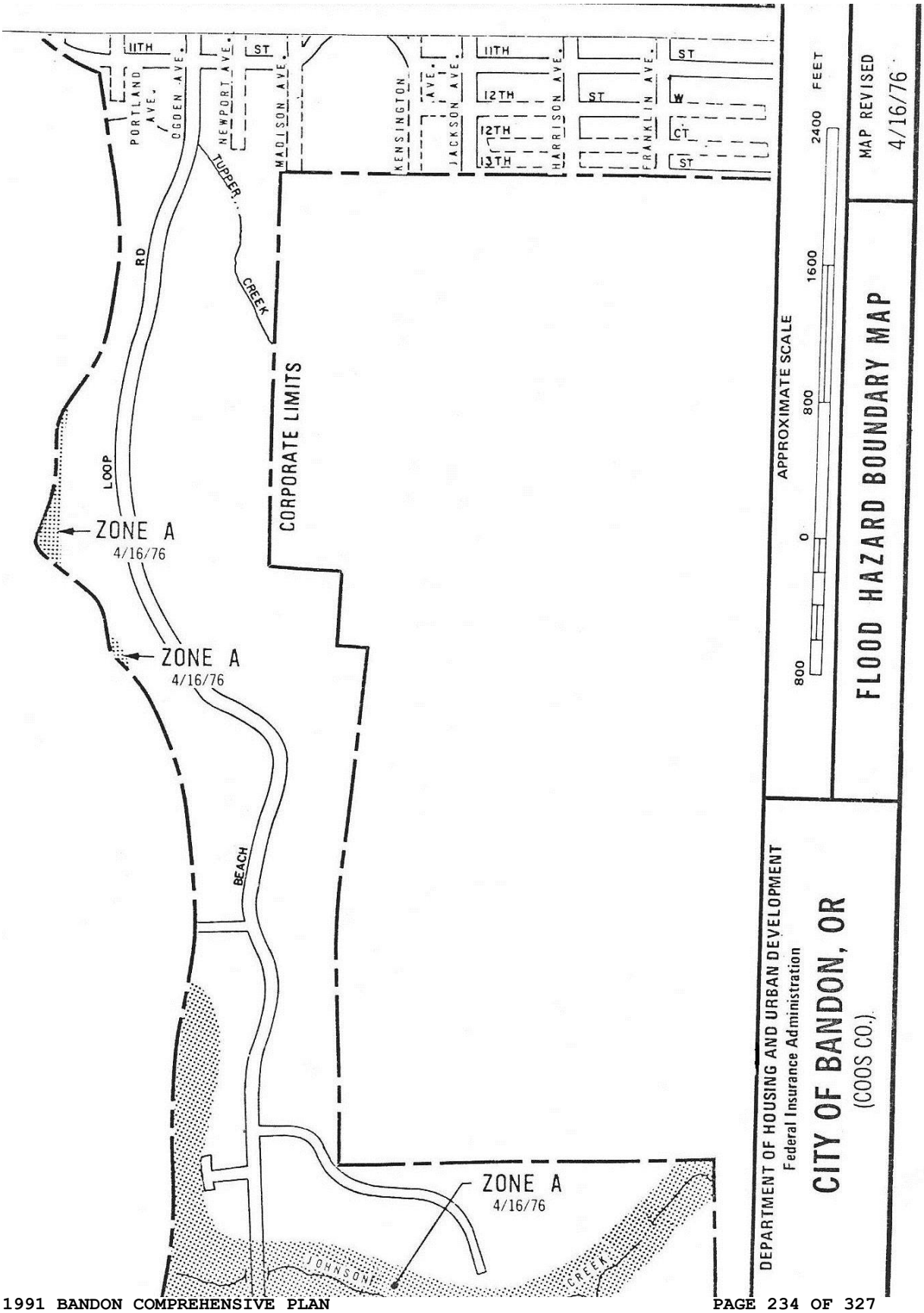
Coos County, Oregon Unincorporated Area, Page 9 of 21
Community Panel No. 410042 0009A



From U.S. Department of Housing and Urban
Development – September 6, 1977

Coos County, Oregon Unincorporated Area,
Page 9 of 21
Community Panel No. 410042 0009A

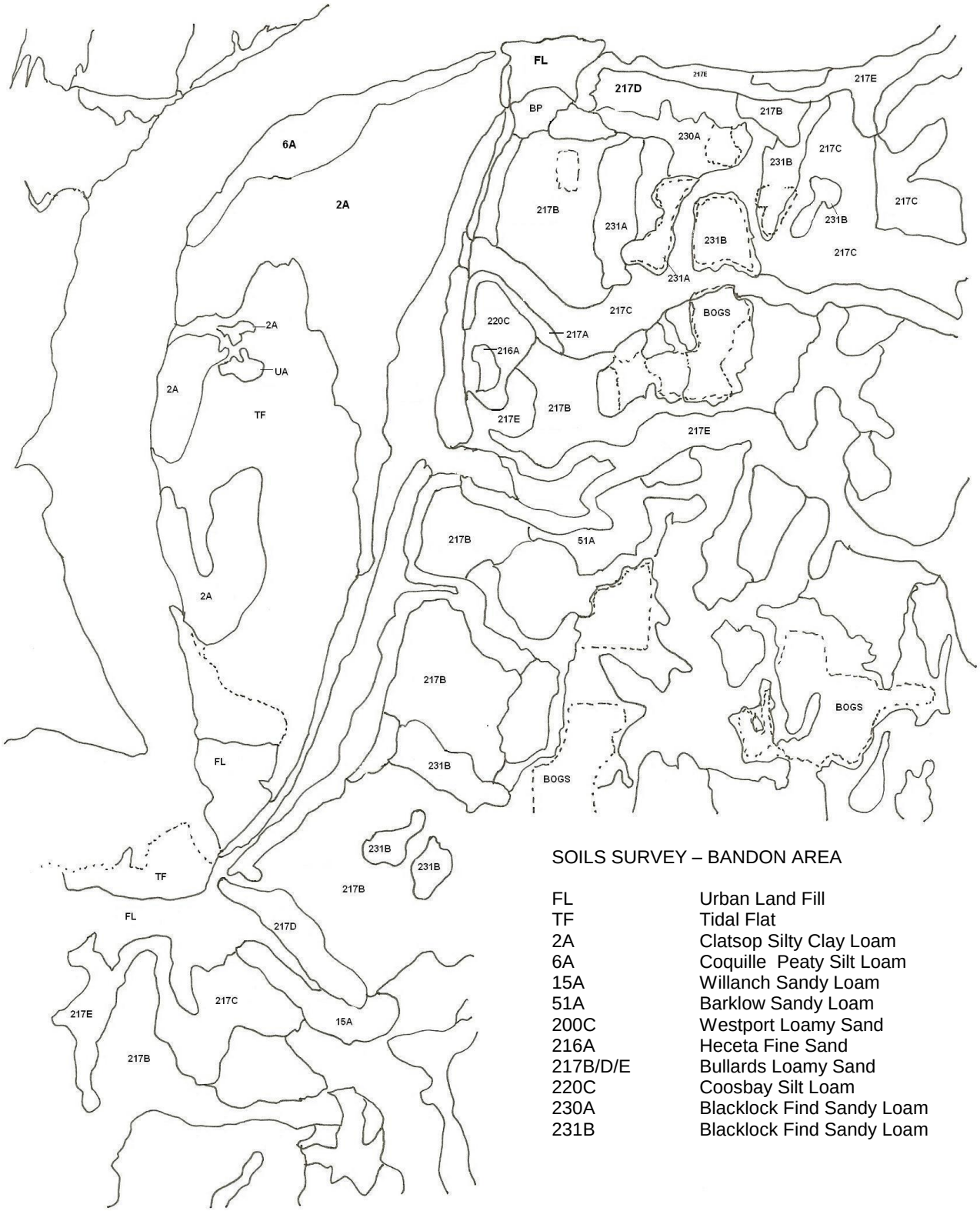



FLOOD HAZARD BOUNDARY MAP
MAP REVISED
4/16/76
APPROXIMATE SCALE
800
0
800
1600
2400
FEET
CITY OF BANDON, OR
(COOS CO.)
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
CORPORATE LIMITS
ZONE A
4/16/76
ZONE A
4/16/76
ZONE A
4/16/76
PORTLAND AVE.
OGDEN AVE.
NEWPORT AVE.
MADISON AVE.
KENSINGTON AVE.
JACKSON AVE.
HARRISON AVE.
FRANKLIN AVE.
11TH
12TH
13TH
ST
W
CT
LOOP RD
TUPPER CREEK
BEACH
JOHNSON CREEK

SOILS AND SURVEY MAPS

FOR

BANDON ENVIRONS

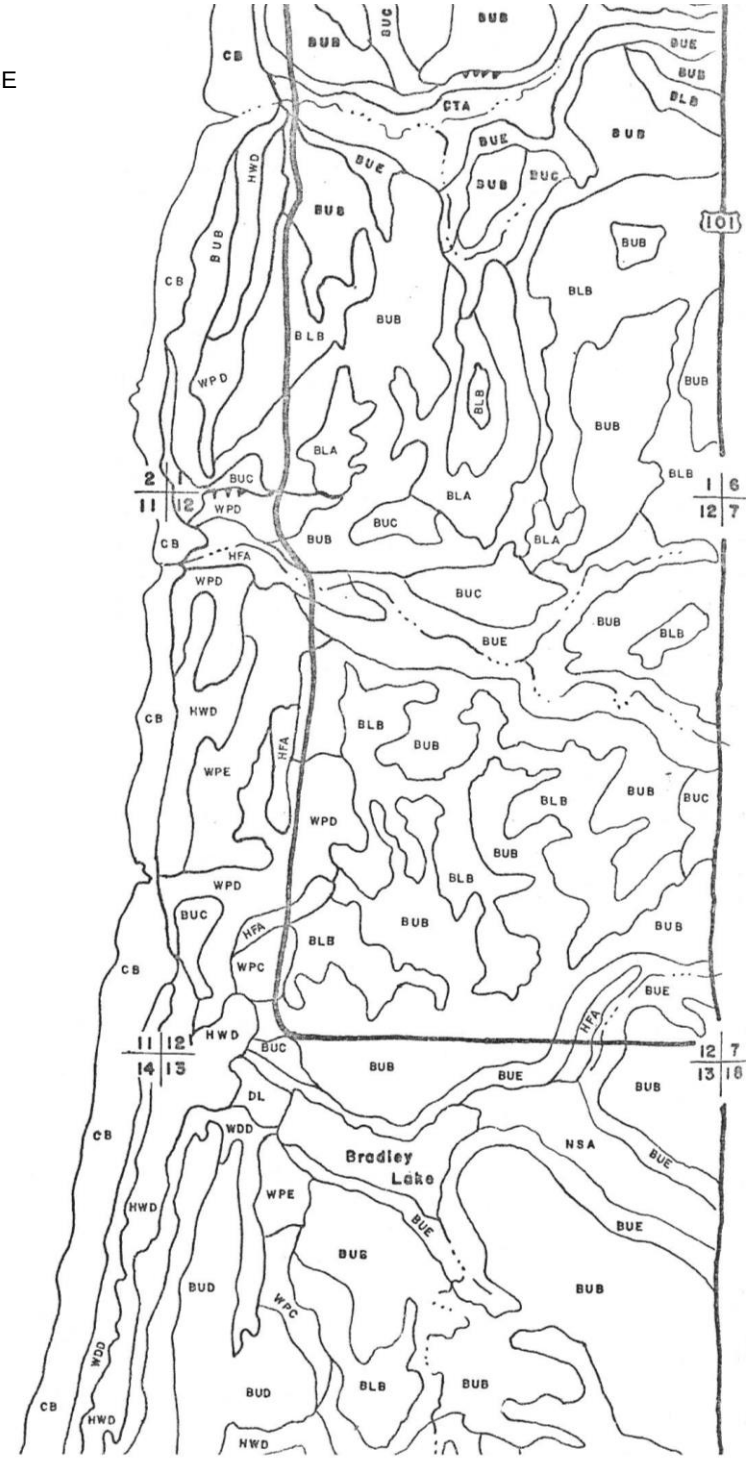


SOILS SURVEY – BANDON AREA

FL	Urban Land Fill
TF	Tidal Flat
2A	Clatsop Silty Clay Loam
6A	Coquille Peaty Silt Loam
15A	Willanch Sandy Loam
51A	Barklow Sandy Loam
200C	Westport Loamy Sand
216A	Heceta Fine Sand
217B/D/E	Bullards Loamy Sand
220C	Coosbay Silt Loam
230A	Blacklock Find Sandy Loam
231B	Blacklock Find Sandy Loam

SOILS SURVEY – BANDON AREA
USDA SOIL CONSERVATION SERVICE
FEBRUARY, 1977

BLA	Blacklock Fine Sandy Loam
BLB	Blacklock Fine Sandy Loam
BUB	Bullards Sandy Loam
BUC	Bullards Sandy Loam
BUE	Bullards Sandy Loam
CB	Coastal Beach
CTA	Chetco Silt Loam
DL	Dune Land
HWD	Hecata-Westport Complex
HFA	Hecata Fine Sand
WDD	Westport Loamy Sand
WPE	Westport Loamy Sand



Bibliography-List of sources

Bandon, City of

1. Zoning Ordinance No. 972. Adopted by the Common Council of the City of Bandon, December 1, 1976.

2. City of Bandon 1990 Comprehensive Plan. Coos-Curry Council of Governments, July, 1974.

Bandon, Port of

3. Interview, Topic: The Port and Coastal Resources. Lionel Youst with Mr. Robert Belcher, Port of Bandon Manager, at Bandon, December 19, 1977.

4. Interview, Topic: The Port and Coastal Resources. Lionel Youst with Mr. George Hanna, Port of Bandon Commissioner, at Bandon, (telephone) December 28, 1977.

Coos County

5. Combs, Gary R. Coos County Recreation Faci1ity Inventory. Coos County Parks and Recreation Department, Coquille, OR, No date.

6. Soils Survey Maps, From February 1977 U.S.D.A. Soil Survey of Township 28S R13W. Coos County Planning Department, Coquille, December 1977.

Oregon Coastal Conservation and Development Commission

7. Beaches and Dunes of the Oregon Coast. U.S.D.A. Soil Conservation Service and Oregon Coastal Conservation and Development Commission, March, 1975.

8. Akins, Glenn J. and Jefferson, Carol A. Coastal Wetlands of Oregon. 0.C.C.& D.C., August, 1973.

9. Beckham, Stephan Dow, and Hepp, Donna Lee. Historical and Archaeological Resources of the Oregon Coast. O.C.C & D.C., September, 1974

10. Beckham, Stephan Dow, Ph.D. The Oregon Seaboard: An Inventory of Historical and Archaeological Sites. .O.C.C. & D.C., November 1972.

Oregon Department of Fish and Wildlife

11. Demory, Robert L., Hosie, Michael J., Eyck, Neil Ten, and Forsberg, Brent 0. Groundfish Surveys on the Continental Shelf off Oregon, 1971-74. Oregon Department of Fish and Wildlife Informational Report 76-9, December 1976.

Oregon Department of Geology and Mineral Industries

12. Baldwin, Ewart M. and others Geology and Mineral Resources of Coos County, Oregon. Oregon Department of Geology and Mineral Industries, Portland, OR 1973.

13. Beaulier, John D. and Hughes, Paul W. Environmental Geology of Western Coos and Douglas Counties, Oregon. Oregon Department of Geology and Mineral Industries, 1975.

Oregon State Highway Department

14. Armstrong, Chester H. History of the Oregon State Parks, 1917-1963. Oregon State Highway Department, July 1965.

Oregon State Land Conservation and Development Commission

15. Oregon Natural Areas--Data Summary, prepared by The Nature Conservancy, Portland OR. March 1,1977.

Oregon State Land Board

16. An Inventory of Filled Lands in the Coquille River, prepared by the Engineering Staff of the Advisory Committee to the State Land Board, November, 1972.

Oregon State University Sea Grant Program,

17. Morgan, John, and Holton, Robert. A Bibliography of Estuarine Research in Oregon. Pub. #1 of the 0regon Estuarine Research Council; Sea Grant Publication #ORESUCLC77-001. OSU, Corvallis, April, 1977.

18. Wick, William Q. Crisis in Oregon Estuaries OSU Marine Advisory Program Report #1, No date.

19. Percy, Katherine L., Bella, David A., Sutterlin, Chet, and Klingeman, Peter C. Descriptions and Information Sources for Oregon Estuararies. Sea Grant College Program, 0regon State University, Corvallis, OR, May,1974

20. Osis, Vicki. 4-H Ocean Adventures Leader's Guide. 4-H Pub. 350L, Oregon State University Extension Service, Corvallis, 1975.

21. Komar, Paul D., Lizarraga-Arciniega, Jose R., and Terich, Thomas A. Oregon Coast Changes Due to Jetties. Reprinted from Journal of the Waterways, Oregon State Sea Grant College Program Reprint No. ORESU-R-76-002, 1976.

22. Byrne, John V. and Panshin, Daniel A. Continental Shelf Sediments off Oregon. Extension Marine Advisory Program SG No.8, OSU, Corvallis, October 1972.

U.S. Army Corps of Engineers

23. Coastal Reconnaissance Study, Oregon and Washington. Prepared for the U.S. Army Corps of Engineers, Portland District, by Battelle Pacific Northwest Laboratories, Richland, WA, June, 1974.

24. Final Environmental Impact Statement, Corps of Engineers Activities in the Chetco, Coquille and Rogue River Estuaries and Port Orford, Oregon. Vol I and Vol II, Technical Appendix A-Z. U.S. Army Engineer District Portland, OR, December, 1975.

U.S. Coast Guard

25. Interview, Topic: Coast Guard Facilities at Bandon. Lionel Youst with Lt./Commander Lawrence Minor (telephone), North Bend Coast Guard Air Station, December 12, 1977.

U.S.D.A. Soil Conservation Service

26. Soil Interpretations for Oregon, OR-SOILS-1. U.S.D.A. Soil Conservation Service, various dates.

U. S. Department of Housing and Urban Development

27. Flood Hazard Boundary Map H-01-02, City of Bandon, OR, Coos Co., Community No. 410043A. Department of Housing and Urban Development, Federal Insurance, Administration, December 28, 1973, revised April 16, 1976.

28. Flood Hazard Boundary Map, Coos County, Oregon, Unincorporated Area, Page 9 of 21, Community Panel No. 410042 0009 A. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Sept. 6, 1977

29. Flood Hazard Boundary Map, Coos County, Oregon, Unincorporated Area, Page 13 of 21, Community Panel No. 410042 0013 A. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Sept. 6, 1977.

U.S. Fish and Wildlife Service

30. Interview, Topic: Wildlife of the Oregon Islands off Bandon. Lionel Youst with Mr. Palmer C. Sekora of Oregon Islands National Wildlife Refuge, Corvallis, (telephone) December 12, 1977.

U.S. Geological Survey

31. U.S. Geological Survey Quadrangle Maps, 72 minute series, Bandon and Bullards Quadrangles, 1970.

Other Sources

32. Metsker, Thomas C. Metsker Maps, Township 28 & 29 S., Range 14 & 15 W.W.M. Coos County, OR, Metsker Maps, Seattle WA, November, 1975.

33. Gibbs. Jim West Coast Lighthouses. Superior Publishing Co., Seattle, 1974.

34. Youst, Lionel. On site surveys of Bandon and environs November 29. 1977, December 8, 1977 (aerial), December 13, 1977, and December 19, 1977.

35. Walker, Theodore J., Ph.D., "The California Grey Whale Comes Back", National Geographic Magazine, Vol. 139, No. 3 (March, 1971), 394C415.

36. Port of Coos Bay, Report of Port of Coos Bay Pacific Hake Fishery Task Force. September 27, 1977.

37. Interview, Topic: Pollution sources in the Coquille estuary. Lionel Youst with Mr. Tim Davidson of The Oregon Department of Environmental Quality, North Bend (telephone), December 20, 1977.

Please Note: The following Index and Inventory of Terms was created in 1991 and does not reflect current page numbers. For current numbers, refer to the 2008 Index at the end of this document.

INDEX AND INVENTORY OF TERMS

ESTUARINE RESOURCES
A. Biological Characteristics
(1) BENTHIC FLORA AND FAUNA crab, during low runoff 21
salt tolerant vegetation in 25
tidal flats
clams, soft shell, availability 25, 29, 35
eelgrass beds, fish and crab 25-26
spawning grounds
marine algae and invertebrates 35
in South Jetty tidal pooling
(2) FISH AND WILDLIFE SPECIES
brown bullhead, surf smelt, perch,
Dungeness crab and softshell clam
common species
marine life on North Jetty 18
striped bass and shad, spawn, in June 5
endangered species, silvery phacelia 18
birds and mammals regularly observed in South Jetty lagoon pond 36
bottom fish, 20
commercial species listed 4
commercial fish landings at Dandori 4
finfish, 20 species caught in estuary 5
coho, upstream run excellent
salmon—like species spawn in Coquille River, 5
species listed
trout, State fish hatchery 6
California grey whale, annual migration 6
Northern elephant seal, rare in Oregon 6
harbor seal, protected in Oregon 6
Northern sea lion, protected 6
sea otters; Bandon within range 6
fishery productivity, importance of tidal
marsh 26

(3) BIRDS California brown pelican, endangered species 7
Southern fish tailed petral, breeds on coastal rocks 7
Oregon Islands National Wildlife Refuge, dedicated to 7 wildlife waterfowl use of estuary 7

white winged scoter (coot), most abundant 7
American widgeon, pintail, wood ducks, American merganzer, surf scoters also found 7
shorebirds great blue heron, gulls, belted kingfisher, double breasted carmorant most abundant 7
common crow frequently found 7
waterfowl hunting 7
doves, quail, grouse, pigeon, game, and song 7
birds also found 7
Bandon tidal marsh, important waterfowl and shore-bird nesting and feeding area 26-27
South Jetty tidepools beachcombers and migratory birds find interesting 35
pintails and widgeons, winter in Coquille River tidal marsh 26
ducks and other birds in South Jetty lagoon pond 36

(4) RECREATIONAL FISHING AND HUNTING
North Jetty site used for sport fishing 17-18

Bandon tidal marsh, used by hunters 27
South Jetty County Park provides access for fishermen 35
waterfowl hunting, peaks in December 7

(5) WETLANDS
extent of tidal influence 20
Bandon tidal marsh, size of 24
soil types, Bandon tidal marsh 25-26
tidal flats, Bandon tidal marsh 25—26
Coquille peaty silt loam, Bandon tidal marsh 26
Clatsop silty clay loam, Bandon tidal marsh 26
Hecata fine sands, Bandon tidal marsh 26
ownership, Bandon tidal marsh 24-25
an area of unusual nitural value, Bandon tidal marsh 26
location of eelgrass beds, Bandon tidal marsh 25-26
portion zoned industrial, Bandon tidal marsh 27-28
small boat basin, proposed expansion 30
South Jetty, tide pools 35
sand and gravel operation 35
breakwater addition, lagoon pond 36
poorly drained sandy loam, south of Bandon 40
North Jetty site, wet deflation plain 17

(6) SPAWNING AREAS
salmon-like species using Coquille River 5
striped bass and shad spawn in June 5

State fish hatchery, spawns trout for planting in streams 6
eelgrass beds, valuable spawning grounds for
fish and crabs 26

(7) NATURAL AREAS

Coquille River estuary tideflat,
considered area of unusual natural value 26-27
identified as medium priority, research 26
natural area need
North Jetty site, contains significant dunes 17
South Jetty, tidepool environmental quality poor 35
Kronenberg County Park, completely undeveloped 39
Bandon Ocean State Wayside, wave cut formation 39
Bandon State Park, primarily undeveloped 41
Oregon Islands National Wildlife Refuge, must
remain free of human disturbance

B. Social and Economic Characteristics
(1) ECONOMY, IMPORTANCE OF ESTUARY IN
international trade—channel depth insufficient 2
commercial fish landings at Bandon 4
lighthouse, constructed in 1896 as result of
increased commerce on Coquille River 19
Coquille River estuary tideftats, great significance
for fishery productivity 27
City waterfront, economic life of City related to 28
coastwise lumber shipments exceeded 40,000,000 board feet 2

(2) LAND USES SURROUNDING ESTUARY

North Jetty, leased as extension to Bullards State Park 17
farm land above Highway 101 bridge, diked former20
tidal marshes
Coquille estuary tideflat, remains in natural l28
state
City waterfront, description 28-33
South Jetty tidepools, used by beachcombers
and migratory birds 35
sand and gravel formerly obtained 35

(3) ALTERATIONS OF ESTUARY, MAN-MADE

North Jetty 3,450 feet long 18
former tidal marshes diked for farm use 20
annual dredging of channel,
Average 62,000 cubic yards 22

Bottom area affected 98 acres 22
Bandon tidal marshes has no obvious compositional changes 27
Tideland fill
25.4 acres: Moore Mill 29
.41 acres: Access Road 29
27.67 acres: central business district 31
South Jetty 2,700 feet long 35
South Jetty tidal pools strewn with Jetty rock 35
river gravel sometimes obtained 35
breakwater addition, urban land fill soils 36
log storage in tidelands 29

(4) COMMERCIAL ENTERPRISES, WATER DEPENDENT
Moore Mill, channel maintenance at 13 feet 22
Rogge Mill, channel not maintained 22
Bandon tidal marsh, joins Moore Mill 28
Moore Mill, Bandon's largest employer 28-29
Bandon fisheries, only fish processor 30
on Coquille River
Bandon fisheries, new facility 32
Robertson's Inc., sand and gravel 32
Bandon Central business district, historic, 31
unique and scenic community
Seafood Restaurant, Sailor Joes 35

(5) PUBLIC ACCESS TO ESTUARY
North Jetty site, paved road and parking lot 17
Bandon tidal marsh, proximity to Highway 101 27
and city
Bandon tidal marsh, raised trail needed if 27
use increases
boat basin, possible expansion 30
Port of Bandon, parking lot 31
Port of Bandon, small boat basin 31
Port of Bandon, 400 foot wharf 31
Port of Bandon, public boat ramp 31
Bandon South Jetty County Park, parking lot 35
and restrooms

(6) HISTORIC SITES
Bandon Lighthouse 19
Bandon Fire site 31
Tupper Rock 35
Bandon Cemetery 28

(7) TRANSPORTATION
Seaborne transportation 2
Bandon lighthouse, built as a result of 19

increased commerce
ships channel, maintained by dredging 22

C. Physical Characteristics
Area - varying estimates 23
tidal prism - 2 estimates 23-24
river drainage: 1,058 square mile 20
Coquille River mean monthly discharge 21
water characteristics:
salinity unknown 21
temperature, sometimes high in tributaries 21
turbidity, seasonally high and fecal bacteria 21
sediments - 100,000 tons/year 22
dissolved oxygen 21
treated sewage outfall 29
fisheries cooling and screened wash water 30
Bottom:
dredge samples: fine sand 22
organic content: .44-.60% 22
river gravel deposited during freshets 35
Bandon tidal marsh, rapid rate of growth 24

COASTAL SHORELANDS

A. Hazard Areas
Geological Instability
earthquakes, probability and description 7-10
tsunamis 13-14
beach erosion 18-19
100-Year Floodplain
tides and storm surges, general 12-13
North Jetty site, within 100-year floodplain 19
Central business district, not in floodplain 33
waterfront north of 1st Street, in floodplain 33
South Jetty, breakwater addition in floodplain 36
flood hazard boundary maps 45
Hydraulic Alteration
longshore currents, sand transport 11
tidal action, controls sedimentation 12
river mouth formerly shifted positions 10
foredune and beach erosion 19
100,000 tons of sediment deposited annually 22
large build-up behind South Jetty 22
shoaling in summer 22
South Jetty Lagoon Pond 36
headland at Bandon erodes very slowly 37
little change in 100 years except a few 37
local slides

B. Existing Land Uses
Ownership Patterns
North Jetty site, owned by Corps of Engineers 17
leased to State
Bandon tidal marsh, ownership uncertain: Port 24-25
of Bandon and Oregon Division of State Lands
Bandon waterfront 28-33
Port of Bandon wharf and boat basin 31
Central business district filled lands 31
the bluff, mix of uses 38
Economic Resources
fisheries 4-6
sawmills 28-29
boat basin 30
harbor and ships channel 22
River gravel 35
blueschist, Tupper Rock 35
rocks of Otter Point formation, limited 37-38
economic value blueschist, chart, jasper,
agate, petrified wood
black sand (chromite) at Johnson Creek 40
Development Needs
annual dredging necessary 22
Bandon tidal marsh -
raised trail may be needed 27
threatened by potential for development 27
boat basin, Port of Bandon expansion 30
Port of Bandon wharf, seriously deteriorated 30
increased fish processing 30
breakwater addition: controlled development 36
bluff area: controlled development 30
Kronenberg County Park: undeveloped 39
Public Facilities
Bullards Beach State Park 17
lighthouse, parking and restrooms
Port of Bandon, on City waterfront 31
small boat basin
boat ramp
parking lot
wharf
storage yard
Bandon Cemetery 28
Coast Guard building 32
North Jetty 18
South Jetty 34-6
South Jetty County Park 35
Port of Bandon, South Jetty facilities, 35
Seafood Restaurant leased

South Coos General Hospital 38
Bandon Ocean State Wayside 39
Kronenberg County Park 39
Bandon Retirement Home 40
Bandon State Park 41
Oregon Islands National Wildlife Refuge 7
Topography
tsunami - runup to 25 feet above mean sea level possible 14
North Jetty - sand spit/dunes 17-18
Bandon tidal marsh - description 25-28
Coquille River - former mouth 34-35
breakwater addition - soils 36
Otter Point formation 36-38
bluff, descriptions 38-41

Hydrography
longshore currents, interrupted by rocks, headlands, and jetties 11
tides 12,15,16
storm surge 13
tsunamis 13,14
tidal elevations 12,15,16
river mouth shifting positions 18
foredune erosion 19
tidal influence - 35 miles 20
estuary average depth, 7 feet BMSL 20
river mean monthly discharge 21
flushing action, shoaling 22
estuary surface area and tidal prism 23-24
tidal flats 25-26
sand transport across river mouth 35
coastal erosion 37

C. Aesthetic and Scenic Areas
Bullards Beach State Park 17
North Jetty - lighthouse 19
Central business district 31
Bandon tidal marsh 24-28
South Jetty Beach 35
Bluff area:
Kronenberg County Park 39
Bandon Ocean State Wayside 39
Bandon State Park 41

D. Biological Habitats
Finfish - 20 species caught in estuary 5
salmonid spawn in River 5
bass and shad spawn in estuary 5
State trout hatchery 6

marine mammals, 4 species of seals and sea lions, 6
sea otters, harbor seals
Oregon Islands National Wildlife Refuge 7
waterfowl use of estuary 7
shorebirds 7
North Jetty marine life 18
Silvery phacelia, endangered plant 18
crab, move into estuary in summer 21
Bandon tidal marsh, excellent habitat for aquatic birds 26
tidal flats 25
South Jetty tide pool 35
South Jetty Lagoon Pond 36
E. Recreational Areas
Coquille River, waterfowl hunting 7
Bullards Beach State Park 17
North Jetty site, beach combing, fishing 18
Bandon tidal marsh, hunting 27
estuary, sport fishing 5
Port of Bandon, boat ramp and boat basin 31
South Jetty, fishing, tidepools 35
bluff area
Kronenberg County Park 39
Bandon Ocean State Wayside 39
Bandon State Park 41
F. Vegetative Cover
North Jetty site 17-18
Coquille River estuary tide flat 25-26
Beach Loop Road to Highway 101 41
G. Sedimentation Sources
100,000 tons annually from Coquille River 22
South Jetty shoreline advance 35
H. Public Access
(See also Estuarine Resources: Public Access to Estuary)
Bandon Ocean State Wayside 39
Bandon State Park 41
I. Historical Sites
(See Estuarine Resources: Historical Sites)
J. Coastal Headlands
Coquille Point, interrupts flow of longshore current 11
Coquille Point, Beach connecting with South Jetty 35
Coquille Point, geology of 36-38
Tupper Rock, former sea stack 38

BEACHES AND DUNES

A. Nature and Stability
Longshore current, influence on beach 11
North Jetty site and Bullards State Park, 17

significant active dunes
South Jetty, breakwater addition: young, stabilized 35
dunes

B. Erosion, Accretion, and Migration
Sand removed by winter waves, replaced in summer 11
North Jetty stopped growth of sand spit 18
foredune undercutting 19
breakwater addition, added by natural accretion and dredging 35
South Jetty Beach, developed as result of
South Jetty construction 35
advanced independently of North Jetty beach 35 coastal erosion at Bandon very slow 37

C. Storm and Ocean Flood Hazards
storm surge on beaches, 2 to 4 feet 13
tsunami - 25 foot runup possible on beaches 13-14
North Jetty site within 100-year floodplain 19
South Jetty, breakwater addition in 100-year floodplain 36
flood hazard boundary maps 45

D. Existing and Projected Uses
North Jetty site, leased as part of Bullards State Park 17
South Jetty Beach 35
Kronenberg County Park 39
Bandon Ocean State Wayside 39
Bandon State Park 41

E. Biological Importance
Bullards Beach frontage
rare plants silvery phacelia 18
North Jetty, marine life 18
South Jetty tide pools 35
South Jetty Lagoon Pond 36
Marine mammals 6
Marine birds 7

OCEAN RESOURCES
A. Hydrographic Conditions
(1)OCEAN WAVES AND CURRENTS
difficult and dangerous bar crossing 2
windborne, upwelling, and longshore currents 10-11
storms erode foredune and beach 19
no transport of sand across river mouth 35
(2) TIDES
general discussion 12
storm surge 13

tidal elevations 15-16
(3) BOTTOM
continental shelf, sand and mud 9
Coquille bank, relatively shallow 14
B. Geology
North American Plate/Pacific Plate join near Bandon 7
earthquakes, originate in Mendicino fault 7
earthquakes, only five recorded, potential quite large 8
continental shelf, 20 miles wide off Bandon 9
Alaska earthquake, generated tsunami 13
Coquille bank, effect on tsunamis 14
North Jetty area: low lying sand dunes 17
Bandon tidal marsh, expanding rapidly 24
Coquille River mouth, formerly shifted positions 34-35
Otter Point formation, geology of the bluff 36-38
C. Biological Features
commercial fish landings 4
20 species of bottom fish 4
Cape Blanco to Heceta head-"high catch area" 4
spawn or salmonoid, bass, and shad 5
marine mammals, 6 species 6
Oregon Islands National Wildlife Refuge7
continental shelf: crab, shrimp and sole common species 9
hake and jack mackeral, USSR and Poland quotas 10
North Jetty marine life 18
South Jetty tidal pools 35
D. Mineral Deposits
black sands 9
oil and gas 9-10
blueschist, sea stack 35
gemstones on beach 38
E. Present and Projected Uses
(1) COMMERCIAL FISHING
1977 landings at Bandon 4
lack of facilities at Bandon 4,30
foreign fishing, quotas 10-11
boat basin, proposed expansion 30
shrimp, transported by truck 30
Bandon fisheries, only fish processor30

(2) PORT AND NAVIGATION
lumber shipments,40,000,000 board feet annually 2
difficult and dangerous bar crossing 2
20 barge loads lumber in 1977 2
Rogge Mill, 1/3 load, Moore Mill 2/3 load 2
tandem tows to California 2
Jetty, holds river mouth 18
Jetty, construction 18

lighthouse, response to increased commerce 19
lighthouse, replaced by automatic light 19
annual dredging required 22
13 feet to Moore Mill
8 feet to Rogge Mill
serious shoaling in late summer 22
Port of Bandon, ownership of tide flats 24-25
Port of Bandon, proposed expansion of boat basin 30
Port of Bandon, offices, small boat basin, wharf,
storage yard, parking lot, and boat ramp 31
Port of Bandon, wharf unusable 31
Coast Guard
maintains navigational aids 35
search and rescue from North Bend 32
summer life saving station 32

(3) RECREATION
North Jetty site, sport fishing, beachcombing 18
lighthouse, attracted tourists, artists, photographers 20
South Jetty County Park, access for fisherman 35
and beachcombers
bluff area, parks and access 38-41

(4) WASTE DISCHARGE
dredge spoils: .9 mile offshore 22
sewage treatment plant 29

CHAPTER 13 : AMENDMENTS

AMENDING THE COMPREHENSIVE PLAN

The Comprehensive Plan reflects the desires of the community at the time it is adopted and serves as the basis for the City's planning program. It must be recognized, however, that the Plan must be revised and amended to reflect changing circumstances, new information, and changes in community desires and visions. The Plan should be reviewed every five years in order to ensure compliance with state law and changing community circumstances.

Amendments to the Bandon Comprehensive Plan, including text and/or map amendments and boundary changes, may be initiated by an individual or group, affected agency, or government body. The party who seeks the revision shall be responsible for filing an application accompanied by adequate written documentation in a format prescribed by the City. Final legislative action on amendment requests shall be based on compliance with the following factors:

1. The amendment satisfies a demonstrated need for the change in order to accommodate population trends, housing needs, or adequate employment opportunities, or other factors which may better address changing circumstances.
2. The amendment will provide for an economic and orderly provision of urban facilities and services.

3. The amendment is consistent and compatible with the other chapters of the City and/or County Comprehensive Plans.

4. The amendment is in compliance with the Statewide Planning Goals, Oregon Revised Statutes, and Oregon Administrative Rules.

Procedure:
Upon filing of the completed application, the proposed amendment will be presented to the Planning Commission, at which point the Planning Commission shall hold a public hearing in order to hear from the applicant and interested parties. Upon completion of its hearing process, the Planning Commission shall forward a written recommendation to the City Council. The City Council will then hold a public hearing, and render a decision whether or not to enact the proposed amendment. All amendments of the Comprehensive Plan shall be adopted by Ordinance and accompanied by written findings of fact supporting the decision.

APPENDIX A: DEFINITIONS

ACCRETION: The build-up of land along a beach or shore by the deposition of waterborne or airborne sand, sediment, or other material. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

AGRICULTURAL LAND: See definition in Goal 3, "Agricultural Lands." [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ANADROMOUS: Referring to fish, such as salmon, which hatch in fresh water, migrate to ocean waters to grow and mature, and return to fresh waters to spawn. ARCHAEOLOGICAL RESOURCES: Those districts, sites, buildings, structures, and artifacts which possess material evidence of human life and culture of the prehistoric and historic past. (See Historical Resources definition.) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

AQUACULTURE: Raising, feeding, planting and harvesting fish and shellfish, and associated facilities necessary for the use.

AQUACULTURE AQUACULTUREDEFINITION: Raising, feeding, planting and harvesting fish and shellfish, and associated facilities necessary for the use.

AVULSION: A tearing away or separation by the force of water. Land which is separated from uplands or adjacent properties by the action of a stream or river cutting through the land to form a new stream bed. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BEACH: Gently sloping areas of loose material (e.g., sand, gravel, and cobbles) that extend landward from the low-water line to a point where there is a definite change in the material type or landform, or to the line of vegetation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BENTHIC: Living on or within the bottom sediments in water bodies. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BRIDGE CROSSING SUPPORT STRUCTURES: Pilings, pillars, bulkheads and similar structures used in bridge construction.

BRIDGE CROSSING SUPPORT STRUCTURES: Piers, piling, and similar structures necessary to support a bridge span but not including fill for causeways or approaches. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BRIDGE CROSSINGS: The portion of a bridge spanning a waterway not including supporting structures or fill located in the waterway or adjacent wetlands. [Ord. 1472, 1-22-02, Adopted as Chapter 14,

Amendments and Definitions]

BULKHEAD: An upright retaining wall of wood, concrete or masonry along a waterfront that separates uplands from aquatic areas.

CARRYING CAPACITY: Level of use which can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem and the quality of air, land, and water resources. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN INVOLVEMENT PROGRAM (CIP): A program established by a city or county to ensure the extensive, ongoing involvement of local citizens in planning. Such programs are required by Goal 1 , "Citizen Involvement," and contain or address the six components described in that goal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN ADVISORY COMMITTEE (CAC): A group of citizens organized to help develop and maintain a comprehensive plan and its land use regulations,. Local governments usually establish one such group for each neighborhood in a city or each district in a county. CAC's may also be known as neighborhood planning organizations, area advisory committees, or other local terms. CAC's convey their advice and concerns on planning issues to the planning commission or governing body. CAC's also convey information from local officials to neighborhood and district residents. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN: Any individual within the planning area; any public or private entity or association within the planning area, including corporations, governmental and private agencies, associations, firms, partnerships, joint stock companies and any group of citizens. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN INVOLVEMENT ADVISORY COMMITTEE (CIAC): A state committee appointed by the Land Conservation and Development Commission to advise that commission on matters of citizen involvement, to promote public participation in the adoption and amendment of the goals and guidelines, and to assure widespread citizen involvement in all phases of the planning process. CIAC is established in accordance with ORS 197.160. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL ZONE: The area lying between the Washington border on the north to the California border on the south, bounded on the west by the extent of the state's jurisdiction, and in the east by the crest of the coastal mountain range., with the exception of (a) The Umpqua River basin, where the coastal zone shall extend to Scottsburg; (b) The Rogue River basin, where the coastal zone shall extend to Agness; (c) The Columbia River basin, where the coastal zone shall extend to the downstream end of Puget Island. (Formerly ORS 191.110) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL LAKES: Lakes in the coastal zone that are bordered by a dune formation or that have a direct hydrologic surface or subsurface connection with saltwater. COASTAL SHORELANDS: Those areas immediately adjacent to the ocean, all estuaries and associated wetlands, and all coastal lakes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL STREAM: Any stream within the coastal zone. [Ord. 1472, 1-22-02, Adopted as Chapter 14,

Amendments and Definitions]

COASTAL WATERS: TERRITORIAL OCEAN WATERS OF THE CONTINENTAL SHELF; ESTUARIES; AND COASTAL LAKES.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COMMERCIAL USES: : Privately-owned or operated facility or place of business open to the public for the sale of goods or services. Examples include: restaurants, taverns, hotels, motels, offices, personal services, and retail stores, Public facilities offering similar goods or services are also defined as commercial uses.

COMMITTEE FOR CITIZEN INVOLVEMENT (CCI): A local group appointed by a governing body for these purposes: assisting the governing body with the development of a program that promotes and enhances citizen involvement in land use planning; assisting in the implementation of the citizen involvement program; and evaluating the process being used for citizen involvement. A CCI differs from a citizen advisory committee (CAC) in that the former advised the local government only on matters pertaining to citizen involvement and Goal 1. A CAC, on the other hand, may deal with a broad range of planning and land use issues. Each city or county has only one CCI, whereas there may be several CAC's. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONSERVATION: The act of conserving the environment. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONSERVE: To manage in a manner which avoids wasteful or destructive uses and provides for future availability. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONTINENTAL SHELF: The area seaward from the ocean shore to the distance when the ocean depth is 200 meters, or where the ocean floor slopes more steeply to the deep ocean floor. The area beyond the state's jurisdiction is the OUTER Continental Shelf. DEFLATION PLAIN: The broad interdune area which is wind-scoured to the level of the summer water table. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DEVELOP: To bring about growth or availability; to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of land, to divide land into parcels, or to create or terminate rights to access. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DEVELOPMENT: The act, process or result of developing. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DIKES: : Structures designed and built to prevent inundation of a parcel of land by water. A dike is considered new when placed on an area which:

(i) has never been diked, or;
(ii) has previously been diked, but all or a substantial part of the area is subject to daily inundation and tidal marsh has been re-established.

Maintenance and repair refer to:

(i) existing serviceable dikes (including those that allow some seasonal inundation), and,

(ii) those that have been damaged by flooding, erosion, tidegate failure, etc., but where reversion to tidal marsh has not yet occurred, except in drainage ways.

Repair/maintenance of existing dikes is considered a Shoreland Activity even where erosion has created additional aquatic area.

DIVERSITY: The variety of natural, environmental, economic, and social resources, values, benefits, and activities. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DOCKS AND MOORAGE: A pier or secured float or floats for boat tie-up or other water use, often associated with a specific land use on the adjacent shoreland, such as a residence or a group of residences, but not exceeding 5 berths. Small commercial moorages (less than 5 berths) with minimal shoreside services and no solid breakwater are included in this category. However, docks in conjunction with industrial uses are included under the definition of "industrial" Floathouses, which are used for boat storage, net-drying and similar purposes are also included in this category.

DRAINAGE (INCLUDING TIDEGATING): : The construction and maintenance of drainage channels including the disposal of resulting dredged material, construction and maintenance of tidegates, tideboxes, pump houses and associated structures.

DREDGED MATERIAL DISPOSAL (DMD): : The deposition of dredged material in aquatic or upland areas. Methods of disposal include in—water disposal, beach and land disposal., flow—lane and ocean disposal.

In-Water Disposal is the deposition of dredged materials in a body of water

Ocean Disposal is the deposition of dredged materials in the Ocean.

Beach Disposal is the deposition of dredged materials in beachfront areas west of the foredunes or vegetation line.

Land Disposal is the deposition of dredged materials landward of the line of non -.aquatic vegetation, in "upland" areas.

Flow-Lane Disposal is the transporting of dredged materials to the main channel of a river via a pipeline during strong flows and outgoing tides whereby the materials are transported to the ocean and disbursed.

DUNE STABILIZATION MEASURES: The use of vegetative materials, structures or other means, to prevent movement of unstable dune forms.

DUNE, OLDER STABILIZED: A dune that is stable from wind erosion, and that has significant soil

development and that may include diverse forest cover. They include older foredunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE COMPLEX: Various patterns of small dunes with partially stabilized intervening areas. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE: A hill or ridge of sand built up by the wind along sandy coasts. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, CONDITIONALLY STABLE: A dune presently in a stable condition, but vulnerable to becoming active due to fragile vegetative cover. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, OPEN SAND: A collective term for active, unvegetated dune landforms. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, RECENTLY STABILIZED: A dune with sufficient vegetation to be stabilized from wind erosion, but with little, if any, development of soil or cohesion of the sand under the vegetation. Recently stabilized dunes include conditionally stable foredunes, conditionally stable dunes, dune complexes, and younger stabilized dunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, ACTIVE: A dune that migrates, grows and diminishes from the effect of wind and supply of sand. Active dunes include all open sand dunes, active hummocks, and active foredunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE COMPLEX: Various patterns of small dunes with partially stabilized intervening areas. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNES, YOUNGER STABILIZED: A wind-stable dune with weakly developed soils and vegetation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ECOSYSTEM: The living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the energy systems in which they exist. All the components of an ecosystem are inter-related. ENCOURAGE: Stimulate; give help to; foster. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ECOSYSTEM: The living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the energy systems in which they exist. All the components of an ecosystem are inter-related. ENCOURAGE: Stimulate; give help to; foster. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ENHANCEMENT: An action which results in a long-term improvement of existing estuarine functional characteristics and processes that is not the result of a creation or restoration action. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ENHANCEMENT: An action which results in a long-term improvement of existing estuarine functional characteristics and processes that is not the result of a creation or restoration action. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ESTUARY: A body of water semi-enclosed by land, connected with the open ocean, and within which salt water is usually diluted by freshwater derived from the land. The estuary includes: (a) estuarine water; (b) tidelands; (c) tidal marshes; and (d) submerged lands. Estuaries extend upstream to the head of tidewater, except for the Columbia River Estuary, which by definition is considered to extend to the western edge of Puget Island. ESTUARINE [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ESTUARY: A body of water semi-enclosed by land, connected with the open ocean, and within which salt water is usually diluted by freshwater derived from the land. The estuary includes: (a) estuarine water; (b) tidelands; (c) tidal marshes; and (d) submerged lands. Estuaries extend upstream to the head of tidewater, except for the Columbia River Estuary, which by definition is considered to extend to the western edge of Puget Island. ESTUARINE [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FILL: The placement by man of sand, sediment, or other material, usually in submerged lands or wetlands, to create new uplands or raise the elevation of land.

FLOODFRINGE: The area of the floodplain lying outside of the f1oodway, but subject to periodic inundation from flooding. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOOD, REGIONAL (100-YEAR): A standard statistical calculation used by engineers to determine the probability of severe flooding. It represents the largest flood which has a one-percent chance of occurring in anyone year in an area as a result of periods of higher-than-normal rainfall or streamflows, extremely high tides, high winds, rapid snowmelt, natural stream blockages, tsunamis, or combinations thereof. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOOD, REGIONAL (100~YEAR): A standard statistical calculation used by engineers to determine the probability of severe flooding. It represents the largest flood which has a one-percent chance of occurring in anyone year in an area as a result of periods of higher-than-normal rainfall or streamflows, extremely high tides, high winds, rapid snowmelt, natural stream blockages, tsunamis, or combinations thereof. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOODPLAIN: The area adjoining a stream, tidal estuary or coast that is subject to regional flooding. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOODWA Y: The normal stream channel and that adjoining area of the natural floodplain needed to convey the waters of a regional flood while causing less than one foot increase in upstream flood elevations. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREDUNE, CONDITIONALLY STABLE: An active foredune that has ceased growing in height and that has become conditionally stable with regard to wind erosion. FOREDUNE, OLDER: A conditionally stable foredune that has become wind stabilized by diverse vegetation and soil development. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREDUNE, ACTIVE: An unstable barrier ridge of sand paralleling the beach and subject to wind erosion, water erosion, and growth from new sand deposits. Active foredunes may include areas with beach grass, and occur in sand spits and at river mouths as well as elsewhere. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREST LANDS: See definition of commercial forest lands and uses in the Oregon Forest Practices Act and the Forest Lands Goal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

GEOLOGIC: Relating to the occurrence and properties of earth. Geologic hazards include faults, land and mudslides, and earthquakes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HEADLANDS: Bluff, promontories or points of high shoreland jutting out into the ocean, generally sloping abruptly into the water. Oregon headlands are generally identified in the report on Visual Resource Analysis of the Oregon Coastal Zone, OCCDC, 1974. HISTORICAL RESOURCES: Those districts, sites, buildings, structures, and artifacts which have a relationship to events or conditions of the human past. (See Archaeological Resources definition.) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HUMMOCK, ACTIVE: Partially vegetated (usually with beach grass), circular, and elevated mounds of sand which are actively growing in size. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDRAULIC: Related to the movement or pressure of water. Hydraulic hazards are those associated with erosion or sedimentation caused by the action of water flowing in a river or streambed, or oceanic currents and waves. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDRAULIC PROCESSES: Actions resulting from the effect of moving water or water pressure on the bed, banks, and shorelands of water bodies (oceans, estuaries, streams, lakes, and rivers). [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDROGRAPHY: The study, description and mapping of oceans, estuaries, rivers and lakes.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDROLOGIC: Relating to the occurrence and properties of water. Hydrologic hazards include flooding (the rise of water) as well as hydraulic hazards associated with the movement of water. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

IMPACT: The consequences of a course of action; effect of a goal, guideline, plan or decision. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INDUSTRIAL USES: : Public or private use of land or structures for manufacturing, processing and energy-generating facilities. Port development and docking facilities associated with industrial uses (other than marinas and docks and moorage, which are defined elsewhere) are also included in this category.

INSURE: Guarantee; make sure or certain something will happen. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTEGRITY: The quality or state of being complete and functionally unimpaired; the wholeness or entirety of a body or system, including its parts, materials, and processes. The integrity of an ecosystem emphasizes the interrelatedness of all parts and the unity of its whole. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTERDUNE AREA: Low-lying areas between higher sand landforms and which are generally under

water during part of the year (See also Deflation Plain.) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTERTIDAL: Between the levels of mean lower low tide (MLL T) and mean higher high tide (MHHT) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

KEY FACILITIES: Basic facilities that are primarily planned for by local government but which also may be provided by private enterprise and are essential to the support of more intensive development, including public schools, transportation, water supply, sewage and solid waste disposal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LCDC: Land Conservation and Development Commission of the State of Oregon. Seven lay citizens, non-salaried, appointed by the Governor, confirmed by the Oregon Senate; at least one commissioner from each Congressional District; no more than two from Multnomah County. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LITTORAL DRIFT: The material moved, such as sand or gravel, in the littoral (shallow water near shore zone) under the influence of waves and currents. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LOG STORAGE/SORTING YARD (DRY LAND): : An area where logs are gathered from surrounding harvest areas, weighed, sorted for species, size and quality, and store until ready for transfer to water storage areas or to market.

LOG STORAGE (IN WATER): : The use of water surface area to store commercial logs prior to or during processing. Water areas used for log dumping or removal are included in this definition.

MAINTAIN: Support, keep, and continue in an existing state or condition without decline.
MANAGEMENT UNIT: A discrete geographic area, defined by biophysical characteristics and features, within which particular uses and activities are promoted, encouraged, protected, or enhanced, and others are discouraged, restricted, or prohibited.
MINOR NAVIGATIONAL IMPROVEMENTS: Alterations necessary to provide water access to existing or permitted uses in conservation management units, including dredging for access channels and for maintaining existing navigation but excluding fill and in-water navigational structures other than floating breakwaters or similar permeable wave barriers.
MITIGATION: The creation, restoration, or enhancement of an estuarine area to maintain the functional characteristics and processes of the estuary, such as its natural biological productivity, habitats, and species diversity, unique features and water quality (ORS 541.626). [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

MARINAS: Facilities which provide moorage, launching, storage, supplies and a variety of services for recreational, commercial fishing and charter fishing vessels. They are differentiated from docks/moorage by a marina's larger scale (greater than 5 berths), the provision of significant landside services and may include a solid breakwater (rock, bulkheading, etc.).

MINING/MINERAL EXTRACTION: : The removal for economic use of minerals, petroleum resources, sands, gravel or other naturally-occurring materials from the shorelands and/or a bed within an aquatic area.

MITIGATION/RESTORATIONMITIGATION: is the creation, enhancement or restoration of an

estuarine area to compensate for the biological losses of an intertidal dredge or fill action. (See following definition of "restoration and "enhancement"). Also, as used by certain federal agencies, any action taken to compensate for biological impacts of estuary or shorelands projects as a condition of permit issuance, and not required by Coal #16, but authorized by federal laws or agency policy.

Restoration is the replacing or restoring of original attributes or amenities such as natural biological productivity and aesthetic or cultural resources which have been diminished or lost by past alterations, activities or catastrophic events.

Active restoration involves the use of specific remedial actions such as removing dikes or fills, installing water treatment facilities, or-rebuilding or removing deteriorated urban waterfront areas.
Passive is the use of natural processes, sequences or timing to bring about restoration after the removal or reduction of adverse stresses.

Enhancement is the improvement of conditions in an area which remains under estuarine influence, but has experienced past degradation or reduction in productivity due to obstruction of flow, sedimentation, log debris, etc.

NATURAL RESOURCES: Air, land and water and the elements thereof which are valued for their existing and potential usefulness to man. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

NATURAL AREAS: Includes land and water that has substantially retained its natural character, which is an important habitat for plant, animal, or marine life. Such areas are not necessarily completely natural or undisturbed, but can be significant for the study of natural, historical, scientific, or paleontological features, or for the appreciation of natural features. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

NAVIGATIONAL STRUCTURES: : Pile dikes, groins, fills, jetties and breakwaters that are installed to help maintain navigation channels, control erosion or protect marinas and harbors by controlling water flow, wave action and sand movement.

NAVIGATIONAL AIDS: Beacons, buoys and similar floating, anchored structures requiring no alteration of the estuary.

NOTE: see below for definition of "minor navigational improvement" and "navigational aids".

Minor Navigational Improvements: Removal of obstructions from a channel used for commercial or recreational navigation, whether the authorized channel or a natural channel. This shall include removal of snags, sunken logs and other debris, and shall also include minor dredging for the purpose of "scalping" shoaled areas where necessary to permit commercial or recreational navigation.

Navigational Aids: Beacons, buoys and similar floating, anchored structures requiring no alteration of the estuary.

OCCDC: Oregon Coastal Conservation And Development Commission, created by ors 191; existed from

1971 to 1975. its work is continued by LCDC.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

OCEAN FLOODING: The flooding of lowland areas by salt water owing to tidal action, storm surge, or tsunamis (seismic sea waves). land forms subject to ocean flooding include beaches, marshes, coastal lowlands, and low-lying interdune areas. Areas of ocean flooding are mapped by the Federal Emergency Management Agency (FEMA). Ocean flooding includes areas of velocity flooding and associated shallow marine flooding.

PLANNING AREA: The air, land and water resources within the jurisdiction of a governmental agency. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PILING/DOLPHIN INSTALLATION: The driving of wood, concrete or steel piling into the bottom in aquatic areas to support piers or docks, structures, moored floating structures, vessels, log rafts or floating structures.

POLLUTION: The violation or threatened violation of applicable state of federal environmental quality statutes, rules and standards. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PRESERVE: To save from change or loss and reserve for a special purpose. PROGRAM: Proposed or desired plan or course of proceedings and actions. PROTECT: Save or shield from loss, destruction, or injury or for future intended use. PROVIDE: Prepare, plan for, and supply what is needed. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PUBLIC FACILITIES AND SERVICES: Projects, activities and facilities which the planning agency determines to be necessary for the public health, safety and welfare. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PUBLIC GAIN: The net gain from combined economic, social, and environmental effects which accrue to the public because of a use of activity and its subsequent resulting effects. QUALITY: The degree of excellence or relative goodness. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RECREATION: Things like boat ramps, toilet and camping or picnic facilities and related improvements? that promote and are used in conjunction with recreational activities. Low-intensity recreation facilities include boat ramps with minimal toilet facilities and similar improvements that are low-intensity in nature. High intensity recreation facilities may include the same types of facilities as low-intensity recreation facilities but are generally more intense in nature and may include large improved parking lots or highly developed picnic or camping areas. High-intensity facilities can include small docks that provide temporary, day-use only, transient boat tie-ups when in conjunction with approved boat ramps.

RECREATION: Any experience voluntarily engaged in largely during leisure (discretionary time) from which the individual derives satisfaction. Coastal Recreation occurs in offshore ocean waters, estuaries, and streams, along beaches and bluffs, and in adjacent shorelands. It includes a variety of activities, from swimming, scuba diving, boating, fishing, hunting, and use of dune buggies, shell collecting, painting, wildlife observation, and sightseeing, to coastal resorts and water-oriented restaurants. Low-Intensity Recreation does not

require developed facilities and can be accommodated without change to the area or resource. For example, boating, hunting, hiking, wildlife photography, and beach or shore activities can be low-intensity recreation. High-Intensity Recreation uses specially built facilities, or occurs in such density or form that it requires or results in a modification of the area of resource. Campgrounds, golf courses, public beaches, and marinas are examples of high-intensity recreation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RESEARCH AND EDUCATIONAL OBSERVATION: Activities such as sampling of water and vegetation, surveying, inventorying, trapping or taking of fish, birds or other animals for the purposes of scientific research or education.

RESIDENTIAL USES: Development of land and structures for human occupancy as living quarters. This category includes conventional single-family dwellings, mobile homes and two-family/multi-family dwellings as permitted by the zoning ordinance.

RESTORE: Revitalizing, returning, or replacing original attributes and amenities, such as natural biological productivity, aesthetic and cultural resources, which have been diminished or lost by past alterations, activities, or catastrophic events. For the purposes of Goal 16 estuarine restoration means to revitalize or reestablish functional characteristics and processes of the estuary diminished or lost by past alterations, activities, or catastrophic events. A restored area must be a shallow subtidal or an intertidal or tidal marsh area after alteration work is performed, and may not have been a functioning part of the estuarine system when alteration work began. Active Restoration involves the use of specific positive remedial actions, such as removing fills, installing water treatment facilities, or rebuilding deteriorated urban waterfront areas. Passive Restoration is the use of natural processes, sequences, and timing which occurs after the removal or reduction of adverse stresses without other specific positive remedial action.

RIPARIAN: Of, pertaining to, or situated on the edge of the bank of a river or other body of water. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RIP-RAP: A layer, facing or protective mount of stones, concrete rubble, or other hard materials, etc., randomly placed to prevent erosion, scour or sloughing of a structure or embankment.

RIPRAP: A layer, facing, or protective mound of stones randomly placed to prevent erosion, scour or sloughing of a structure or embankment; also, the stone so used. In local usage, the similar use of other hard material, such as concrete rubble, is also frequently included as riprap. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RURAL LAND: Rural lands are those which are outside the urban growth boundary and are: (a) Non-urban agricultural, forest or open space lands or; (b) Other lands suitable for sparse settlement, small farms or acreage homesites with no or hardly any public services, and which are not suitable, necessary or intended for urban use. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SEDENTARY: Attached firmly to the bottom, generally incapable of movement. SHORELINE: The boundary line between a body of water and the land, measured on tidal waters at mean higher high water, and on non-tidal waterways at the ordinary high-water mark. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SHORELINE STABILIZATION: : The protection of the banks of tidal or non-tidal streams, rivers or estuarine waters by non-structural (vegetative) or structural means (rip-rap, bulkheading) (see above for definition of rip-rap,bulkheading).

SIGNIFICANT HABITAT AREAS: A land or water area where sustaining the natural resource characteristics is important or essential to the production and maintenance of aquatic life or wildlife populations. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SOCIAL CONSEQUENCES: The tangible and intangible effects upon people and their relationships with the community in which they live resulting from a particular action or decision. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

STRUCTURE: Anything constructed or installed or portable, the use of which requires a location on a parcel of land. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SUBSTRATE: The medium upon which an organism lives and grows. The surface of the land or bottom of a water body. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SUBTIDAL: Below the level of mean lower low tide (MLL T). [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

TEMPORARY ALTERATION: Dredging, filling, or another estuarine alteration occurring over a specified short period of time which is needed to facilitate a use allowed by an acknowledged plan. Temporary alterations may not be for more than three years and the affected area must be restored to its previous condition. Temporary alterations include: (1) alterations necessary for federally authorized navigation projects (e.g., access to dredged material disposal sites by barge or pipeline and staging areas or dredging for jetting maintenance), (2) alterations to establish mitigation sites, alterations for bridge construction or repair and for drilling or other exploratory operations, and (3) minor structures (such as blinds) necessary for research and educational observation. TERRITORIAL SEA: The ocean and seafloor area from mean low water seaward three nautical miles. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

TIDAL MARSH: Wetlands from lower high water (LHW) inland to the line of non-aquatic vegetation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

URBAN LAND: Urban areas are those places which must have an incorporated city. Such areas may include lands adjacent to and outside the incorporated city and may also: (a) Have concentrations of persons who generally reside and work in the area (b) Have supporting public facilities and services. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

URBANIZABLE LAND: Urbanizable lands are those lands within the urban growth boundary and which are identified and (a) Determined to be necessary and suitable for future urban uses; (b) Can be served by urban services and facilities; (c) Are needed for the expansion of an urban area. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

UTILITIES: Public service structures which fall into two categories: (i) low intensity facilities consist of communication facilities (including power and telephone lines, sewer, water and gas lines), and (ii) High-intensity facilities, which consist of storm water and treated waste water outfalls (including industrial waste water). Note: in Shoreland Management Units

this category also includes sewage treatment plants, electrical substations and similar public service structures. However, these structures are defined as "fill for non-water-dependent/related uses" in Aquatic Management Units.

WATER ORIENTED: A use whose attraction to the public is enhanced by a view of or access to coastal waters. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

WATER-DEPENDENT: A use or activity which can be carried out only on, in, or adjacent to water areas because the use requires access to the water body for water-borne transportation, recreation, energy production, or source of water. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

WATER-RELATED: Uses which are not directly dependent upon access to a water body, but which provide goods or services that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. Except as necessary for water-dependent or water-related uses or facilities, residences, parking lots, spoil and dump sites, roads and highways, restaurants, businesses, factories, and trailer parks are not generally considered dependent on or related to water location needs. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

APPENDIX B ESTUARINE WILDLIFE

List of important estuarine wildlife resources of Coos and Coquille estuaries. 1/

Common Name	Local Names	Scientific Names
FISH		
* American Shad		*Alosa sapidissima*
Big skate		*Raja binoculata*
* Black rockfish	Black sea bass, black snapper	*Sebastes melanops*
* Boccacio Rockfish	Bass, snapper	*Sebastes paucispinis*
* Brown Irish lord	Bullhead	*Hemilepidotus spinosus*
* Buffalo Sculpin	Bullhead	*Enophrys bison*
* Cabezon	Rock cod, bullhead	*Scorpaenichthys marmoratus*
* Chinook salmon	King salmon, salmon	*Oncorhynchus tshawytscha*
* Coho salmon	Silver salmon	*Oncorhynchus kisutch*
* Copper rockfish	Redsnapper, bass	*Sebastes caurinus*
* Cutthroat trout		*Salmo clarki*
* English sole		*Parophrys vetulus*
* Eulachon		*Thaleichthys pacificus*
* Green sturgeon		*Acipenser medirostris*
* Jacksmelt		*Atherpenser mediostris*
* Kelp greenling	Seatrout	*Hexagrammos decagrammus*
* Lingcod		*Opiodon elogatus*
* Longnose skate		*Raja Rhina*
* Northern anchovy		*Engraulis mordax*
* Pacific herring		*Clupea harengus*
* Pacific sanddab		*Citharichthys sordidus*
* Pacific staghorn sculpin	Bullhead	*Leptocottus armatus*
* Pacific tomcod		*Microgadus proximas*
* Pile perch		*Rhacochilus vacca*
* Prickly sculpin	Bullhead	*Cottus asper*
* Quillback rockfish		*Sebates maliger*
* Rainbow trout (Steelhead)		*Salmo gairdneri*
* Redtail surf perch		*Amphistichus rhodoterus*
* Rock greenling	Seatrout	*Hexagrammos lagocephalus*
* Sand sole		*Psettichthys melanostictus*
* Shiner perch	Shiners	*Cymatogaster aggregata*
* Silver surfperch		*Hyperprosopon ellipticum*
* Starry flounder		*Platichthys stellatus*
* Striped bass		*Morone saxatilis*
* Striped seaperch	Rainbow perch	*Embiotoca saxatilis*
* Surf smelt		*Hypomesus pretiosus*
* Walleye surfperch		*Hyperprosopon argenteum*
* White seaperch		*Phanerodon furcatus*
* White sturgeon		*Acipenser transmontanus*
* Whitespotted greenling	Seatrout	*Hexagrammos stelleri*
* Wolf-eel		*Anarrhichthys ocellatus*
* Yellowtail rockfish		*Sebastes flavidus*

1/ All species listed occur in Coos Bay Estuary. Species with an asterisk * also occur in the Coquille Estuary.

APPENDIX B, (Continued)
List of important estuarine wildlife resources of Coos and Coquille estuaries.

Common Name	Local Name	Scientific Name
CRABS		
* Dungeness crab	Market crab,Japanese	*Cancer magister*
* Red rock crab	crab, rock crab	*Cancer productus*
CLAMS		
Bentnose clam		*Macoma nasuta*
Butter clam	Washington clam, quahog,Coney Island,	*Saxidomas giganteus*
Copper clam	beefsteak clam, giant Oregon clam,	*Clinocardium nuttallii*
* Caper clam	Basket cockle, Steamer, Blue clam	*Tresus capax*
Native littleneck clam	Empire clam, Horse clam, Horse neck clam, Blueneck	*Vencrupis staminea*
Piddock clam	Steamer clam, butter clam	*Zirfaea pilsbryi, and*
Razor clam	Rock Oyster	*Penitella penita*
Softshell clam		*Siliqua patula*
	Mud clam, Bay clam	*Mya arenaria*
MISCELLANEOUS INVERTABRATES		
* Bay mussel		
* Ghost shrimp		
* Kelp worm	Sand shrimp	*Mylitus eaulis*
* Lug worm	Clam worm, mussel worm	*Callianassa*
* Mud shrimp		*californiensisNereis sp.*
Pacific oyster	Sand shrimp	*Arenicola claparedii*
* Piling worm	Japanese oyster	*Upogebia pugettensis*
* Shore crab	Mud crab	*Crassostrea gigas*
		Eudistylia polymopha
		Hemigrapsus oregonensis
BIRDS		*and Hemigrapsus nudus*
Family caviiae		
* Arctic loon		
* Common loon		*Cavia aretica*
* Red-throated loon		*Cavia immer*
		Cavia stellata
Family Podicipedae		
* Horned grebe		
* Red-necked grebe		
* Western grebe		*Podiceps auritus*
		Podiceps grisegena
Family Pelecanidae		*Aechmophorus occidentalis*
*Brown pelican		
Family Phalacrocoracidae		*Pelecanus occidentalis*
* Brandt's cormorant		
* Double crested cormorant		*Phalacrocorax penicillatus*
* Pelagic cormorant		*Phalacrocorax auritus*
		Phalacrocorax pelagicus

1/ All species listed occur in Coos Bay Estuary. Species with an asterisk * also occur in the Coquille Estuary.

APPENDIX B, cont., List of important estuarine wildlife resources of Coos and Coquille estuaries.

Common Name	Local Name	Scientific Name
Birds		
Family Ardeidae		
Black-crowned night heron		*Nycticorax nycticorax*
Great blue heron		*Ardea herodias*
Great egret		*Casmerodius albus*
Green heron		*Butorides virescens*
Family Anatidae		
American green-winged teal		*Anas crecca nycticorax*
American wigeon		*Anas americana*
Blank brant		*Branta bernicla orientalus*
Bufflehead		*Bucephala albeola*
Canvasback		*Aytha valisineria*
Common goldeneye		*Bucephala clangula*
Common scoter		*Melanitta nigra*
* Gadwall		*Anas strepera*
* Greater scaup		*Aythya marila*
* Harlequin duck		*Histrionicus histrionicus*
* Mallard		*Anas platyrhynchos*
* Northern shoveler		*Anas clypeata*
* Oldsqua		*Clangula hymalis*
* Pintail		*Anas acuta*
* Red-breasted merganser		*Mergus serrator*
* Redhead		*Aythya americana*
* Ruddy duck		*Oxyura jamaicensis*
* Surf scoter		*Melanitta perspicillata*
* White-winged scoter		*Melanitta fusca*
Family Accipitridae		
Bald eagle		*Haliaeetus leucucephalus*
Marsh hawk		*Circus cyaneus*
Family Pandionidae		
Osprey		*Pandion haliaetus*
Family Rallidae		
American coot		*Fulica americana*
Sora rail		*Parzana carolina*
Virginia rail		*Rallus limicola*
Family Charadriidae		
Black-bellied plover		*Pluvialis squatarola*
Purple turnstone		*Arenaria melanocephela*
Common snipe		*Calidris alpina*
Dunlin		*Capella gallinago*
Greater yellowlegs		*Tringa melanoleuca*
Killdeer		*Charadrius vociferus*
Least sandpiper		*Calidris minutilla*
Lesser yellowlegs		*Tringa flavipes*
Marble godwit		*Limosa fedoa*
Red knot		*Calidris canutus*
Ruddy turnstone		*Arenaria interpres*

1/ All species listed occur in Coos Bay Estuary. Species with an asterisk * also occur in the Coquille Estuary.

Common Name	Local Name	Scientific Name
Birds, Cont.		
Family Charadriidae		
Semipalmated plover		*Charadrius semipalmatus*
Short-billed dowicher		*Limndromus scolopaceus*
Snowy plover		*Charadrius alexandrinus*
Surf bird		*Aphriza virgata*
Wandering tattler		*Heteroscelus incanus*
Western sandpiper		*Calidris mauri*
Whimbrel		*Numenius phaeopus*
Family Phalaropodidae		
Northern Phalarope		*Lobipes lobatus*
Family Laridae		
Bonaparte's gukk		*Larus philadelphia*
Caspian tern		*Hydroprogne caspia*
Heermann's gull		*Larus heermanni*
Glaucous-winged gull		*Larus glaucescens*
Mew gull		*Larus canus*
Ring-billed gull		*Larus delawarensis*
Western gull		*Larus occidentalis*
Family Alcidae		
Common murre		*Uria aalge*
Pigeon guillemot		*Cepphus columba*
Family Columbidae		
Band-tailed Pigeon		*Columba fasciata*
Family Alcedinidae		
Belted kingfisher		*Mergaceryle alcyon*
Fur Bearers		
Mink		*Mustela frenata*
Musrat		*Ondatra zibethicus*
Racoon		*Lutra canadensis*
Marine Mammals		
Harbor seal		*Phoca vitulina*

/ All species listed occur in Coos Bay Estuary. Species with an asterisk * also occur in the Coquille Estuary.

APPENDIX C

COASTAL RESOURCES RESEARCH MATERIAL

Beaches and Dunes. Bandon's western city limits extend to the line 16 feet above sea level which is described as the vegetation line in O.R.S. 390.770.

Development on Foredunes. Residential, commercial, and industrial development will not occur on active foredunes, conditionally stable foredunes, conditionally stable foredunes which are subject to ocean flooding. Any other proposed development will be of minimal value. Proposed development shall be designed, as much as possible, to minimize adverse environmental effects.

Ocean Beaches. The City shall protect Bandon's ocean beaches for recreational activities.

Estuarine Beaches. Bandon's estuarine beaches shall be protected for uses necessary to support water-dependent and water-related activities where appropriate and for S conservation activities where appropriate.

Beach and Dune Erosion. It is the policy of the City of Bandon to regulate land use actions in beach and dune areas in order to minimize erosion and protect coastal resources. In areas identified as "younger stabilized dunes", "open sand", the City shall require a site review prior to development. The review shall, at a minimum, address hazards to life and public/private property, and recommend appropriate precautions that would avoid endangering life or property and minimize erosion of beaches, cliffs, and dune forms. Wherever possible, non—structural temporary and permanent sand stabilization programs shall be used to minimize sand erosion. Structural stabilization or beachfront protection will be allowed only as a last resort and only where allowed by the plan (see inventory of sites qualifying for beachfront protection in the inventories sections of this plan).

The City shall prohibit breaching of the foredune except to replenish sand supply in interdune areas, or on a temporary basis in an emergency, and only if breaching and following restoration is consistent with sound principals of conservation. No structures shall be developed on the foredune.

Bandon's Unique Coasta1 Resources. To recognize the unique coastal location of the city and provide development areas near the ocean where unique resources can be experienced residentially.

The Jetty. The City shall:

1. enhance the special character and appeal of the jetty as a unique community on the Oregon Coast by ensuring that future developments on the jetty will be consistent with its present character.

2. achieve balanced use of the jetty and to enhance its character through controlling residential and commercial development by taking into consideration the -natural resources of the area.

Estuarine Resources, Statewide P1anning Goal 16

The City of Bandon shall recognize and protect the unique environmental, economic and social values of

the Coquille Estuary and its associated wetlands.

The City shall also strive to protect, maintain and where appropriate, develop or restore the long—term environmental, economic and social values, diversity, and benefits of the Coquille Estuary.

The City of Bandon Comprehensive Plan provides and shall continue to provide for appropriate uses (including preservation) with as much diversity as is consistent with the overall Oregon Estuary Classification (O.A.R. 660-17—000), as well as with the biological, economic, recreational and aesthetic benefits of the estuary.

The Plan protects and shall continue to protect the estuarine ecosystem, including its natural biological productivity, habitat, diversity, unique features and water quality.

Coastal Shorelands, Statewide Planning Goal17

The City shall strive to conserve, protect and, where appropriate, develop or restore the resources and benefits of the coastal shorelands within its jurisdiction, recognizing their value for the protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources, recreation and aesthetics.

The City shall also manage these coastal shorelands in a way that is compatible with the characteristics on the adjacent estuary.

The City shall also strive to reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat resulting from the use and enjoyment on the Coastal Shorelands of the Coquille Estuary.

The Plan and related implementing actions and permit reviews shall consider the critical relationships between shorelands and estuarine resources, and the geologic hazards associated with shorelands. The City shall, within the limit of its authority, maintain the diverse environmental, economic and social values of coastal shorelands, and maintain estuarine water quality, which shall include minimizing man—induced sedimentation.

Beaches and Dunes, Statewide Planning Goal 18

The City shall strive to conserve; protect, and, where appropriate, develop and restore the resources and benefits of dune areas within the coastal shorelands of the Coquille Estuary.

The City shall also strive to reduce the hazard to human life and property from natural or man—induced actions associated with these areas.

The Plan and related implementing actions shall provide for diverse and appropriate use of dune areas consistent with their ecological, recreational, aesthetic, water resource and economic values, and consistent with the natural limitations of dunes and their vegetation for development or use. Where dunes provide protection to inland areas from ocean or river flooding, they shall be protected.

POLICY A. ESTUARY CLASSIFICATION

The City shall officially recognize the Coquille River Estuary as a “Shallow—Draft Development Estuary”,

consistent with the overall Oregon Estuary Classification. Further, the Plan's allowed uses and activities are, and must remain, consistent with the "shallow—draft development" designation and the estuarine management unit requirements of Goal #16.

This Policy recognizes that the Land Conservation and Development Commission (LCDC) and the Statewide Planning Goals limit the maximum allowable development of Oregon estuaries.

POLICY B. NATURAL ESTUARINE MANAGEMENT UNITS

In the Coquille River Estuary, areas shall be designated as Natural Estuarine Management Units to assure the protection of significant fish and wildlife habitats, of continued biological productivity within the estuary, and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological, and evolutionary processes. Natural Estuarine Management Units shall include, at a minimum, all major tracts of salt marsh, tideflats, and seagrass and algae beds.

POLICY C. CONSERVATION ESTUARINE MANAGEMENT UNITS

In the Coquille River estuary, areas shall be designated as Conservation Estuarine Management Units for long—term uses of renewable resources that do not require major alteration of the estuary, except for the purpose of restoration. These areas shall be managed to conserve the natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in the Natural Estuarine Management Units, and recreational or commercial oyster and clam beds not included in the Natural Estuarine Management Units. Areas that are partially altered and adjacent to existing development of moderate intensity which do not possess the resource characteristics of natural or development units shall also be included in this classification.

POLICY D. DEVELOPMENT ESTUARINE MANAGEMENT UNITS

In the Coquille River estuary, Development Estuarine Management Units shall be designated to provide for navigation and other identified needs for public, commercial, and industrial water-dependent uses, consistent with the level of development of alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, sub-tidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary not included in Natural or Conservation Estuarine Management Units.

In designating uses for these areas, the City shall consider the potential for using upland sites to reduce or limit the commitment of the estuarine surface area for surface uses.

POLICY E. RESOURCE CAPABILITY; CONSISTENCY AND IMPACT ASSESSMENT:

The City concludes that all proposed actions (approved in this Plan) which would alter or potentially alter the integrity or the estuarine ecosystem have been based upon a full consideration of the impacts of the proposed alteration and a demonstration of the public's need and gain which warrant such modification or loss, except for uses and activities which require the resource capability consistency test as a condition within a particular management unit.

For uses and activities requiring the resource capabilities test, a clear presentation of the impacts of the proposed alteration shall be required. The impact assessment shall include:

v. The type and extent of alterations expected;

vi. The type of resource(s) affected;

vii. The expected extent of impacts of the proposed alteration of water quality and other physical characteristics of the estuary, living resources, recreational and aesthetic use, navigation and other existing and potential uses of the estuary; and

viii. The methods which could be employed to avoid or minimize adverse impacts.

POLICY F. ESTUARINE FILL AND REMOVAL

The City shall support dredge, fill or other reduction or degradation of estuarine values only if such activities are allowed in the respective Management Unit and:

e. If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this goal; and,

f. If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and

g. If no feasible alternative upland locations exist; and

h. If adverse impacts are minimized.

This Policy shall be implemented by the preparation of findings by the City documenting that such proposed actions are consistent with the Comprehensive Plan, and with the criteria listed above.

This Policy recognizes that Goal #16 limits dredge, fill and other estuarine degradation in order to protect the integrity of the estuary.

POLICY G. TEMPORARY ALTERATIONS

The City shall support as consistent with this Plan (without taking Exceptions to the Statewide Planning Goals) temporary dredge, fill or other structure or alteration to the estuary, to major freshwater marshes, or to shorelands identified as “significant wildlife habitat” when such temporary actions would not otherwise be allowed by the Plan. Such actions shall be limited to alterations in support of uses permitted by Goal #16 and providing that:

3. The short-term damage to the resource is consistent with the resource capabilities of the area; and

4. The area and affected resources can be substantially restored to original condition.

This Policy is based on the recognition that temporary estuarine fill and habitat alterations are frequently legitimate actions when in conjunction with jetty repair and other important economic activities. It is not uncommon for projects to need staging areas and access that require temporary alteration to habitat that is otherwise protected by this Plan.

POLICY H. ESTUARINE MITIGATION REQUIREMENTS

When dredge or fill activities are permitted in intertidal or tidal marsh areas, their effects shall be mitigated by creation, restoration or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained. Designated mitigation sites identified in the Plan shall be protected.

POLICY I. SOLUTIONS TO EROSION AND FLOODING PROBLEMS

The City shall prefer non-structural solutions to problems of erosion and flooding in the Coquille Estuary to structural solutions. Where shown to be necessary and consistent with policy, water and erosion control structures such as jetties, bulkheads, seawalls and similar protective, structures and fill shall be designed to minimize adverse impacts on water currents, erosion and accretion patterns.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Development Estuarine Management Units upon finding that:

4. land use management practices and non-structural solutions are inadequate; and

5. adverse impacts on water currents, erosion and accretion patterns are minimized; and

6. it is consistent with the Development Management Unit objectives of LCDC Goal #16, Estuarine Resources.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Conservation Estuarine Management Units upon finding that:

4. land use management practices and non-structural solutions are inadequate; and

5. adverse impacts on water currents, erosion and accretion patterns are minimized; and

6. riprap is consistent with the resource capabilities of the area and the purposes of maintaining Conservation Management Units.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Natural Estuarine Management Units upon finding that:

5. there is a need to protect from erosion: uses existing as of October 7, 1977, unique natural resources and historic archaeological values, or public facilities;

6. land use management practices and non-structural solutions are inadequate; and

7. it is consistent with the Natural Management Unit as set forth in this Plan and required by Goal #16; and

8. adverse impacts on water currents, erosion and accretion patterns and estuarine organisms and their habitat are minimized.

POLICY J. PROLIFERATION OF SINGLE-PURPOSE DOCKS AND PIERS

The City shall restrict the proliferation of single purpose docks and piers by encouraging community facilities common to several uses and interests. The size shall be limited to that required for the intended use.

This Policy recognizes the requirements of Goal #16 and the environmental benefits of multi-purpose and multi-ownership docks and moorage facilities.

POLICY K. AUTHORITY OF OTHER AGENCIES

The City shall recognize the authority of the following agencies and their programs for managing land and water resources:

4. the non-point discharge water quality program administered by the Department of Environmental Quality under Section 208 of the Federal Water Quality Act as amended in 1972 (PL 92-500); and

5. the Fill and Removal Permit Program administered by the Division of State Lands under ORS 541.605-541.665; and

6. the programs of the State Soil and Water Conservation Commission and local districts.

This Policy recognizes that there are several agencies with authority over coastal waters, and that their management programs should be used rather than developing new or duplicatory management techniques or controls, especially as related to existing programs functioning to maintain water quality and minimize man-induced sedimentation.

POLICY L. PROTECTION OF SITES ESPECIALLY SUITED TO WATER-DEPENDENT (ESWD) USES

The City shall manage urban and urbanizable shorelands which are especially suited for water-dependent (ESWD) uses so as to protect these important areas for water-dependent (ESWD) commercial, recreational and industrial uses.

This Policy is implemented through appropriate land use designations in this Plan which provide for water-dependent uses within areas that are “especially suited” for such uses.

This Policy is based upon recognition that ESWD areas are given priority consideration because of their unique attributes, which include:

5. deep water close to shore with supporting land transport facilities suitable for ship and barge facilities;

6. potential for aquaculture;

7. protected areas subject to scour which would require little dredging for use as marinas; and

8. potential for recreational utilization of coastal water or riparian resources.

Unless otherwise allowed through an Exception, the City shall allow new non-water-dependent uses in Management Units which are "especially suited for water-dependent uses" (ESWD) only if it is established prior to permitting such uses that:

5. the proposed use or activity is temporary in nature (such as storage, etc);

6. the proposed use would not preempt the ultimate use of the property for water-dependent development;

7. no immediate and economically viable demand exists to enable use of the site for water-dependent development;

8. the site is committed to long—term water-dependent use or development by the landowner.

This Policy shall be implemented through provisions in ordinance measures that require the above findings made prior to approval of proposed activities.

This Policy, is based on the recognition that sites which are "Especially Suited for Water-dependent uses" must be protected for such, but that temporarily allowing non—preemptory, non—water—dependent uses is not inconsistent with that overriding objective.

POLICY M. PROTECTION OF "MAJOR MARSHES" AND SIGNIFICANT "WILDLIFE HABITATS" IN COASTAL SHORELANDS

The City shall protect major marshes and significant wildlife habitat located within the Coquille River Coastal Shorelands Boundary. Uses in these areas shall be consistent with the area's natural values.

This Policy recognizes that special protective consideration must be given to key resources in coastal shorelands over and above the protection afforded such resources elsewhere in this Plan.

POLICY N. DREDGED MATERIAL DISPOSAL (DMD) SITES

The City shall protect identified dredged material disposal sites from new uses and activities which would prevent their ultimate use for dredged material disposal.

This Policy recognizes that sites designated in the Comprehensive
Plan reflect the following key environmental considerations required by LCDC Goals:

iv. Disposal of dredged material in upland or ocean waters or Via proper use of flow—lane disposal was given general preference in the overall site selection process;

v. Disposal of dredged material in estuary water is permitted in this Plan only when such

disposal is consistent with state and federal law.

vi. Selected DMD sites must be protected from preemptory uses.

POLICY O. INTERTIDAL DREDGED MATERIAL DISPOSAL

The City shall prohibit dredged material disposal in intertidal or tidal marsh areas except where such disposal is part of an approved fill project.

This Policy shall be implemented through operation of the waterway permit process as a response to a "request for comment" from the Division of State Lands.

This strategy recognizes that upland disposal, flow-lane disposal, and ocean disposal are alternatives to intertidal disposal.

POLICY P. LIMITING DREDGE AND FILL AS ESTUARINE RESTORATION

The City shall support estuarine dredge or fill actions as estuarine restoration when appropriate in areas where activities have adversely affected some aspect of the estuarine system and where such restoration would contribute to the objectives of Goal #16.

This Policy recognizes that not all estuarine dredge or fill actions may be considered estuarine restoration pursuant to LCDC Statewide Planning Goals.

POLICY R. FLOW—LANE DISPOSAL OF DREDGED MATERIAL IN DEVELOPMENT MANAGEMENT UNITS

Flow—lane disposal of dredged materials shall be allowed Management Unit #1 in the deep draft navigational channel adjacent to the boat basin provided that such disposal is monitored to assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied.

A copy of the results of monitoring, if required by the permitting agencies, will be sent to the city and may satisfy the above monitoring requirement.

POLICY S. REDEVELOPMENT OF WATERFRONT AREAS

The City shall determine whether there are any existing, developed commercial/industrial waterfront areas which are suitable for redevelopment which are not designated as especially suited for water-dependent uses. Plans shall be prepared for these areas which allow for a mix of water-dependent, water-related, and water oriented nondependent uses and shall provide for public access to the shoreline.

POLICY T. PUBLIC ACCESS

The City in coordination with the Parks and Recreation Division shall develop and implement a program to provide increased public access. Existing public ownerships, rights of way, and similar public easements in

coastal shorelands which provide access to or along coastal waters shall be retained or replaced if sold, exchanged or transferred. Rights of way may be vacated to permit redevelopment of shoreland areas provided public access across the affected site is retained.

POLICY U. (RESERVED)

Beaches and Dunes. Bandon's western city limits extend to the line 16 feet above sea level which is described as the vegetation line in O.R.S. 390.770.

Development on Foredunes. Residential, commercial, and industrial development will not occur on active foredunes, conditionally stable foredunes, conditionally stable foredunes which are subject to ocean flooding. Any other proposed development will be of minimal value. Proposed development shall be designed, as much as possible, to minimize adverse environmental effects.

Ocean Beaches. The City shall protect Bandon's ocean beaches for recreational activities.

Estuarine Beaches. Bandon's estuarine beaches shall be protected for uses necessary to support water-dependent and water-related activities where appropriate and for S conservation activities where appropriate.

Beach and Dune Erosion. It is the policy of the City of Bandon to regulate land use actions in beach and dune areas in order to minimize erosion and protect coastal resources. In areas identified as "younger stabilized dunes", "open sand", the City shall require a site review prior to development. The review shall, at a minimum, address hazards to life and public/private property, and recommend appropriate precautions that would avoid endangering life or property and minimize erosion of beaches, cliffs, and dune forms. Wherever possible, non—structural temporary and permanent sand stabilization programs shall be used to minimize sand erosion. Structural stabilization or beachfront protection will be allowed only as a last resort and only where allowed by the plan (see inventory of sites qualifying for beachfront protection in the inventories sections of this plan).

The City shall prohibit breaching of the foredune except to replenish sand supply in interdune areas, or on a temporary basis in an emergency, and only if breaching and following restoration is consistent with sound principals of conservation. No structures shall be developed on the foredune.

Bandon's Unique Coasta1 Resources. To recognize the unique coastal location of the city and provide development areas near the ocean where unique resources can be experienced residentially.

The Jetty. The City shall:

3. enhance the special character and appeal of the jetty as a unique community on the Oregon Coast by ensuring that future developments on the jetty will be consistent with its present character.

4. achieve balanced use of the jetty and to enhance its character through controlling residential and commercial development by taking into consideration the -natural resources of the area.

Estuarine Resources, Statewide P1anning Goal 16

The City of Bandon shall recognize and protect the unique environmental, economic and social values of the Coquille Estuary and its associated wetlands.

The City shall also strive to protect, maintain and where appropriate, develop or restore the long—term

environmental, economic and social values, diversity, and benefits of the Coquille Estuary.

The City of Bandon Comprehensive Plan provides and shall continue to provide for appropriate uses (including preservation) with as much diversity as is consistent with the overall Oregon Estuary Classification (O.A.R. 660-17—000), as well as with the biological, economic, recreational and aesthetic benefits of the estuary.

The Plan protects and shall continue to protect the estuarine ecosystem, including its natural biological productivity, habitat, diversity, unique features and water quality.

Coastal Shorelands, Statewide Planning Goal17

The City shall strive to conserve, protect and, where appropriate, develop or restore the resources and benefits of the coastal shorelands within its jurisdiction, recognizing their value for the protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources, recreation and aesthetics.

The City shall also manage these coastal shorelands in a way that is compatible with the characteristics on the adjacent estuary.

The City shall also strive to reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat resulting from the use and enjoyment on the Coastal Shorelands of the Coquille Estuary.

The Plan and related implementing actions and permit reviews shall consider the critical relationships between shorelands and estuarine resources, and the geologic hazards associated with shorelands. The City shall, within the limit of its authority, maintain the diverse environmental, economic and social values of coastal shorelands, and maintain estuarine water quality, which shall include minimizing man—induced sedimentation.

Beaches and Dunes, Statewide Planning Goal 18

The City shall strive to conserve; protect, and, where appropriate, develop and restore the resources and benefits of dune areas within the coastal shorelands of the Coquille Estuary.

The City shall also strive to reduce the hazard to human life and property from natural or man—induced actions associated with these areas.

The Plan and related implementing actions shall provide for diverse and appropriate use of dune areas consistent with their ecological, recreational, aesthetic, water resource and economic values, and consistent with the natural limitations of dunes and their vegetation for development or use. Where dunes provide protection to inland areas from ocean or river flooding, they shall be protected.

POLICY A. ESTUARY CLASSIFICATION

The City shall officially recognize the Coquille River Estuary as a “Shallow—Draft Development Estuary”, consistent with the overall Oregon Estuary Classification. Further, the Plan’s allowed uses and activities are, and must remain, consistent with the “shallow—draft development” designation and the estuarine management unit requirements of Goal #16.

This Policy recognizes that the Land Conservation and Development Commission (LCDC) and the Statewide Planning Goals limit the maximum allowable development of Oregon estuaries.

POLICY B. NATURAL ESTUARINE MANAGEMENT UNITS

In the Coquille River Estuary, areas shall be designated as Natural Estuarine Management Units to assure the protection of significant fish and wildlife habitats, of continued biological productivity within the estuary, and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological, and evolutionary processes. Natural Estuarine Management Units shall include, at a minimum, all major tracts of salt marsh, tideflats, and seagrass and algae beds.

POLICY C. CONSERVATION ESTUARINE MANAGEMENT UNITS

In the Coquille River estuary, areas shall be designated as Conservation Estuarine Management Units for long—term uses of renewable resources that do not require major alteration of the estuary, except for the purpose of restoration. These areas shall be managed to conserve the natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in the Natural Estuarine Management Units, and recreational or commercial oyster and clam beds not included in the Natural Estuarine Management Units. Areas that are partially altered and adjacent to existing development of moderate intensity which do not possess the resource characteristics of natural or development units shall also be included in this classification.

POLICY D. DEVELOPMENT ESTUARINE MANAGEMENT UNITS

In the Coquille River estuary, Development Estuarine Management Units shall be designated to provide for navigation and other identified needs for public, commercial, and industrial water-dependent uses, consistent with the level of development of alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, sub-tidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary not included in Natural or Conservation Estuarine Management Units.

In designating uses for these areas, the City shall consider the potential for using upland sites to reduce or limit the commitment of the estuarine surface area for surface uses.

POLICY E. RESOURCE CAPABILITY; CONSISTENCY AND IMPACT ASSESSMENT:

The City concludes that all proposed actions (approved in this Plan) which would alter or potentially alter the integrity or the estuarine ecosystem have been based upon a full consideration of the impacts of the proposed alteration and a demonstration of the public's need and gain which warrant such modification or loss, except for uses and activities which require the resource capability consistency test as a condition within a particular management unit.

For uses and activities requiring the resource capabilities test, a clear presentation of the impacts of the proposed alteration shall be required. The impact assessment shall include:

ix. The type and extent of alterations expected;

x. The type of resource(s) affected;

xi. The expected extent of impacts of the proposed alteration of water quality and other physical characteristics of the estuary, living resources, recreational and aesthetic use, navigation and other existing and potential uses of the estuary; and

xii. The methods which could be employed to avoid or minimize adverse impacts.

POLICY F. ESTUARINE FILL AND REMOVAL

The City shall support dredge, fill or other reduction or degradation of estuarine values only if such activities are allowed in the respective Management Unit and:

i. If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this goal; and,

j. If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and

k. If no feasible alternative upland locations exist; and

l. If adverse impacts are minimized.

This Policy shall be implemented by the preparation of findings by the City documenting that such proposed actions are consistent with the Comprehensive Plan, and with the criteria listed above.

This Policy recognizes that Goal #16 limits dredge, fill and other estuarine degradation in order to protect the integrity of the estuary.

POLICY G. TEMPORARY ALTERATIONS

The City shall support as consistent with this Plan (without taking Exceptions to the Statewide Planning Goals) temporary dredge, fill or other structure or alteration to the estuary, to major freshwater marshes, or to shorelands identified as “significant wildlife habitat” when such temporary actions would not otherwise be allowed by the Plan. Such actions shall be limited to alterations in support of uses permitted by Goal #16 and providing that:

5. The short-term damage to the resource is consistent with the resource capabilities of the area; and

6. The area and affected resources can be substantially restored to original condition.

This Policy is based on the recognition that temporary estuarine fill and habitat alterations are frequently legitimate actions when in conjunction with jetty repair and other important economic activities. It is not uncommon for projects to need staging areas and access that require temporary alteration to habitat that is

otherwise protected by this Plan.

POLICY H. ESTUARINE MITIGATION REQUIREMENTS

When dredge or fill activities are permitted in intertidal or tidal marsh areas, their effects shall be mitigated by creation, restoration or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained. Designated mitigation sites identified in the Plan shall be protected.

POLICY I. SOLUTIONS TO EROSION AND FLOODING PROBLEMS

The City shall prefer non-structural solutions to problems of erosion and flooding in the Coquille Estuary to structural solutions. Where shown to be necessary and consistent with policy, water and erosion control structures such as jetties, bulkheads, seawalls and similar protective, structures and fill shall be designed to minimize adverse impacts on water currents, erosion and accretion patterns.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Development Estuarine Management Units upon finding that:

7. land use management practices and non-structural solutions are inadequate; and

8. adverse impacts on water currents, erosion and accretion patterns are minimized; and

9. it is consistent with the Development Management Unit objectives of LCDC Goal #16, Estuarine Resources.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Conservation Estuarine Management Units upon finding that:

7. land use management practices and non-structural solutions are inadequate; and

8. adverse impacts on water currents, erosion and accretion patterns are minimized; and

9. riprap is consistent with the resource capabilities of the area and the purposes of maintaining Conservation Management Units.

Further, where listed as an allowable activity within the respective Management Unit, riprap shall only be allowed in Natural Estuarine Management Units upon finding that:

9. there is a need to protect from erosion: uses existing as of October 7, 1977, unique natural resources and historic archaeological values, or public facilities;

10. land use management practices and non-structural solutions are inadequate; and

11. it is consistent with the Natural Management Unit as set forth in this Plan and required by Goal #16; and

12. adverse impacts on water currents, erosion and accretion patterns and estuarine organisms and their habitat are minimized.

POLICY J. PROLIFERATION OF SINGLE-PURPOSE DOCKS AND PIERS

The City shall restrict the proliferation of single purpose docks and piers by encouraging community facilities common to several uses and interests. The size shall be limited to that required for the intended use.

This Policy recognizes the requirements of Goal #16 and the environmental benefits of multi-purpose and multi-ownership docks and moorage facilities.

POLICY K. AUTHORITY OF OTHER AGENCIES

The City shall recognize the authority of the following agencies and their programs for managing land and water resources:

7. the non-point discharge water quality program administered by the Department of Environmental Quality under Section 208 of the Federal Water Quality Act as amended in 1972 (PL 92-500); and

8. the Fill and Removal Permit Program administered by the Division of State Lands under ORS 541.605-541.665; and

9. the programs of the State Soil and Water Conservation Commission and local districts.

This Policy recognizes that there are several agencies with authority over coastal waters, and that their management programs should be used rather than developing new or duplicatory management techniques or controls, especially as related to existing programs functioning to maintain water quality and minimize man-induced sedimentation.

POLICY L. PROTECTION OF SITES ESPECIALLY SUITED TO WATER-DEPENDENT (ESWD) USES

The City shall manage urban and urbanizable shorelands which are especially suited for water-dependent (ESWD) uses so as to protect these important areas for water-dependent (ESWD) commercial, recreational and industrial uses.

This Policy is implemented through appropriate land use designations in this Plan which provide for water-dependent uses within areas that are “especially suited” for such uses.

This Policy is based upon recognition that ESWD areas are given priority consideration because of their unique attributes, which include:

9. deep water close to shore with supporting land transport facilities suitable for ship and barge facilities;

10. potential for aquaculture;

11. protected areas subject to scour which would require little dredging for use as marinas; and

12. potential for recreational utilization of coastal water or riparian resources.

Unless otherwise allowed through an Exception, the City shall allow new non-water-dependent uses in Management Units which are "especially suited for water-dependent uses" (ESWD) only if it is established prior to permitting such uses that:

9. the proposed use or activity is temporary in nature (such as storage, etc);

10. the proposed use would not preempt the ultimate use of the property for water-dependent development;

11. no immediate and economically viable demand exists to enable use of the site for water-dependent development;

12. the site is committed to long—term water-dependent use or development by the landowner.

This Policy shall be implemented through provisions in ordinance measures that require the above findings made prior to approval of proposed activities.

This Policy, is based on the recognition that sites which are "Especially Suited for Water-dependent uses" must be protected for such, but that temporarily allowing non—preemptory, non—water—dependent uses is not inconsistent with that overriding objective.

POLICY M. PROTECTION OF "MAJOR MARSHES" AND SIGNIFICANT "WILDLIFE HABITATS" IN COASTAL SHORELANDS

The City shall protect major marshes and significant wildlife habitat located within the Coquille River Coastal Shorelands Boundary. Uses in these areas shall be consistent with the area's natural values.

This Policy recognizes that special protective consideration must be given to key resources in coastal shorelands over and above the protection afforded such resources elsewhere in this Plan.

POLICY N. DREDGED MATERIAL DISPOSAL (DMD) SITES

The City shall protect identified dredged material disposal sites from new uses and activities which would prevent their ultimate use for dredged material disposal.

This Policy recognizes that sites designated in the Comprehensive
Plan reflect the following key environmental considerations required by LCDC Goals:

vii. Disposal of dredged material in upland or ocean waters or Via proper use of flow—lane disposal was given general preference in the overall site selection process;

viii. Disposal of dredged material in estuary water is permitted in this Plan only when such disposal is consistent with state and federal law.

ix. Selected DMD sites must be protected from preemptory uses.

POLICY O. INTERTIDAL DREDGED MATERIAL DISPOSAL

The City shall prohibit dredged material disposal in intertidal or tidal marsh areas except where such disposal is part of an approved fill project.

This Policy shall be implemented through operation of the waterway permit process as a response to a "request for comment" from the Division of State Lands.

This strategy recognizes that upland disposal, flow-lane disposal, and ocean disposal are alternatives to intertidal disposal.

POLICY P. LIMITING DREDGE AND FILL AS ESTUARINE RESTORATION

The City shall support estuarine dredge or fill actions as estuarine restoration when appropriate in areas where activities have adversely affected some aspect of the estuarine system and where such restoration would contribute to the objectives of Goal #16.

This Policy recognizes that not all estuarine dredge or fill actions may be considered estuarine restoration pursuant to LCDC Statewide Planning Goals.

POLICY R. FLOW—LANE DISPOSAL OF DREDGED MATERIAL IN DEVELOPMENT MANAGEMENT UNITS

Flow—lane disposal of dredged materials shall be allowed Management Unit #1 in the deep draft navigational channel adjacent to the boat basin provided that such disposal is monitored to assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied.

A copy of the results of monitoring, if required by the permitting agencies, will be sent to the city and may satisfy the above monitoring requirement.

POLICY S. REDEVELOPMENT OF WATERFRONT AREAS

The City shall determine whether there are any existing, developed commercial/industrial waterfront areas which are suitable for redevelopment which are not designated as especially suited for water-dependent uses. Plans shall be prepared for these areas which allow for a mix of water-dependent, water-related, and water oriented nondependent uses and shall provide for public access to the shoreline.

POLICY T. PUBLIC ACCESS

The City in coordination with the Parks and Recreation Division shall develop and implement a program to provide increased public access. Existing public ownerships, rights of way, and similar public easements in coastal shorelands which provide access to or along coastal waters shall be retained or replaced if sold, exchanged or transferred. Rights of way may be vacated to permit redevelopment of shoreland areas

provided public access across the affected site is retained.

POLICY U. (RESERVED)

ESTUARY MANAGEMENT SECTION
PART 1

GENERAL INTRODUCTION TO ESTUARY LINKAGE AND INVENTORY SECTIONS

This section is meant to provide guidance necessary to assure wise use of the Coquille River Estuary and the adjacent shorelands. The plan attempts to reach a balance between conservation and development needs. This Plan is adopted as an element of the Comprehensive Plan for the City of Bandon and also provides guidance to the Port of Bandon and others for Coquille River development activities.

1.2 Policy Statement Framework

This section lists problems and opportunities which have been identified from the general discussion provided in the Inventory Section. This section also sets forth local goals and Plan Policies that are proposed to respond to the problems and opportunities and satisfy the requirements of the Statewide Planning Goals for Estuarine Resources, Coastal Shorelands, and Beaches and Dunes.

LCDC Goal #2 (Land Use Planning) states that:

> "All land use plans shall include identification of issues and problems, inventories and other factual information for each applicable Statewide Planning Goal, evaluation of alternative courses of action and ultimate policy choices".

The Plan Policies Section provides these policy choices, based on actual information in the Inventory Section. The following define the terms used in the Plan Policies:

- "Inventories" provide data and other factual information that are the basis for identifying problems, opportunities and issues.

- "Problem and Opportunity Statements" provide very general statements about concerns made evident in the Plan Inventories.

- "Goal Statements" are policies that provide very general guidance to the plan and actions that are based on it. They also provide the basic philosophical framework for the Policies.

- Plan Policies provide specific guidance. They implement, or establish specific implementation measures for, respective Goal Statements. They also provide a means for dealing with the problems and opportunities.

The City of Bandon's Committee for Citizen Involvement (CCI) and Planning Commission took great care to ensure that the policies are understandable and internally consistent. However, the complexity of the Coastal Goals and related statutes, Administrative Rules and LCDC policies is such that the language needs to be both complex and lengthy in some instances. Wherever possible the relevant statutes, rules and

LCDC policies are cited, so that the user may go to the source if necessary. Much language is based directly on explicit requirements in the coastal Goals, which should be referred to when questions arise as to the origin of the Policy.

2. PROBLEMS AND OPPORTUNITIES- COQUILLE RIVER ESTUARY

Water Quality:

Water quality problems of the Coquille River have been identified primarily as not meeting State and Federal standards for TMDL (total maximum daily load) standards. Seasonally low levels of dissolved oxygen (D.O.) have been documented in the Coquille River upstream from the City of Bandon. The U.S. Environmental Protection Agency (EPA), Oregon Dept of Environmental Quality (DEQ), and local representatives have begun a study to identify how these problems in the Coquille can be remedied. This pilot program will serve as a model for other parts of the nation in designing a program to help improve water quality through a cooperative effort. How these problems effect the estuary should become clearer through this study.

The problems of the Coquille River are aggravated by siltation and a slow rate of flushing; they include occasional high coliform bacteria counts, summer high water temperatures and seasonally high turbidity/sediment.

Sedimentation and Shoaling

There are several areas in the estuary where the deposition of sediment has caused serious shoaling.

Flooding:

Flooding in the lower riverine sections is exacerbated by salinity which causes damage to economically valuable forage crops.

Erosion

The constant dynamics of erosion and deposition inherent in a river system impact several locations within the city limits and make development of them problematic. Because the area along Jetty Road from the Jetty to Edison Ave is on the outside of the river bend the area is being eroded. Erosion there is being hastened by the surge from the ocean during times of high tides or high waves. Additionally, there are areas on the north side of the river within the City limits that are either being filled—in or eroded.

Jetties and Channel Entrance

There are persistent problems with the buildup of sediment in the channel entrance front littoral transport during late summer months, creating rough water and a difficult bar crossing which interferes with navigation.

The South Jetty area is experiencing serious erosion, which threatens a road and property, due to the disintegration of a former jetty extension.

Effects of Dredging

Though the biological effects of annual maintenance dredging are relatively slight, new dredging can cause substantial direct and indirect biological and physical changes in the estuary; these can be minimized, however, with greater knowledge of the physical and biological systems affected and careful timing of operations

Disused Pilings and Snags:

The Coquille River contains a large number of disused pilings and snags which can cause obstruction to boat passage, accumulate debris and worsen erosion and sedimentation problems.

Fishing

Poor bar conditions have inhibited the development of the fishing industry, while the abundant ocean resources provide great potential for this sector of the local economy.

Salmon ranching and Salmon and Trout Enhancement Program (STEP) can provide opportunities for growth of the Bandon fishing industry.

Port of Bandon Improvements:

The Port of Bandon has completed several major improvements to the waterfront since acknowledgment (1984), including a 90-slip boat basin, a new two lane boat ramp, improvements to the docks, and many other improvements that benefit the residents and tourists.

Tourism/Recreation:

Tourism and water—based recreation can provide a needed boost to the Coquille Valley economy, particularly in Bandon; revitalization of the Bandon water- front and increased use of the river are two of the best opportunities for growth of the tourist economy.

Recreational Fishing Access:

In 1988 the Port of Bandon completed a new two lane boat ramp near the new boat basin. This has provided a major improvement in access to the estuary.

Waterfowl Habitat:

Elimination of habitat areas suitable for migratory wildfowl causes a reduction in the resources available to support the population; removal of tidal marsh and mudflat areas from the estuarine system together with similar actions in other estuaries may have a long—term effect of reducing wildfowl numbers. The protection of the Bandon Marsh as a refuge under U.S. Fish and Wildlife Service and the protection of significant habitat areas under this plan has helped alleviate this problem.

Research Needs:

Generally, the state of knowledge about the biological resources of the Coquille Estuary, particularly the riverine section, can be characterized as sketchy at best. This means that the effects of dredging and other improvements to the river channel and various fish and wildlife management actions are not known for certain.

Riparian Vegetation:

Indiscriminate removal of riparian vegetation may contribute to bank instability, erosion, and elevated water temperature, all of which can have secondary physical and biological effects.

Mitigation/Restoration Sites

Problems exist on the Coquille as elsewhere in finding suitable and readily available sites, in matching development projects with suitable sites, and in actually implementing mitigation/restoration plan.

IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY

Goal 17 (Coastal Shorelands) requires land contiguous with the ocean, estuaries, and coastal lakes to be identified as coastal shorelands. The location of the coastal shorelands boundary (CSB) in Bandon has been identified by applying the seven identification criteria in Goal 17. The specific application of each of these criteria is described below; the CSB is shown on maps CSB-1 and CSB-2.

(1) **Lands which limit, control, or are directly affected by the hydraulic action of the coastal water body including floods** — The flood Hazard Boundary identified by the U.S. Department of Housing and Urban Developmentt is used as the boundary of hydraulic action derived from the Coquille River. The heads of tide on Johnson Creek and the other small drainages along the bluff are at the beach, therefore, these areas are not considered coastal shorelands even though they have small floodplains adjacent the sea. The Flood Hazard Boundary is considered the best published indication of the 100-Year Floodplain for the Bandon area.

(2) **Adjacent areas of geologic instability** - The portion of Bandon Bluff which has steep slopes (30% slopes and greater) and is subject to storm tides and wave action is considered to be an area of potential geologic hazards. For this reason, the CSB is located along the "top" of the bluff as it extends from the South Jetty area to the City limits south of Johnson Creek.

(3) **Riparian resources** — Riparian vegetation is found in the area west of Riverside Drive, between the road and the Bandon Marsh.

(4) **Areas of significant shoreland and wetland biological** habitats — All of these types of areas are within the boundary established by criteria (1) through (3) above.

(5) **Areas necessary for water—dependent** and water-related uses — First Street has been chosen as the upland limit of lands considered necessary for water-dependent and water—related uses.

(6) **Areas of exceptional aesthetic or scenic** quality - most of the shoreline along the estuary and ocean in Bandon has scenic qualities and views "primarily derived from coastal water areas." There are no exceptionally scenic areas outside of the boundary established by criteria (1) through (5) above that would further influence the location of the CSB.

(7) **Coastal headlands** — All of Bandon's coastal headlands are within the boundary established by criteria (1) through (6) above.

The boundary descriptions given above and shown on maps CSB-1 and CSB-2 are consistent with Coastal Shorelands Boundary adopted by the Coquille River Estuary Task Force and described in the Coquille River Estuary Management Plan (Volume 111, Part 3, pg 111-5).

The boundary descriptions given above and shown on maps CSB-1 and CSB-2 are consistent with Coastal Shorelands Boundary adopted by the Coquille River Estuary Task Force and described in the Coquille River Estuary Management Plan (Volume 111, Part 3, pg 111-5).

SECTION 1. CUMULATIVE EFFECTS OF DEVELOPMENT.

1.0 REQUIREMENTS OF THE COASTAL SHORELANDS GOAL #17 IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY

1.1 THE "PLANNING AREA"

The Coastal Shorelands Goal states that its "inventory requirements" shall be applied within an area known as the coastal shorelands planning area". This area is intended to be for "inventory, study and initial planning for development and use to meet the Coastal Shorelands Goal." (LCDC Goals and Guidelines, page 18). In the Bandon Study Area, this area is defined by the goal as follows:

(ii) all areas within the City within 1000 feet of the shoreland of the estuary, measured horizontally, and

(ii) all lands west of the Oregon Coast Highway.

1.2 **Criteria for Identifying Coastal Shorelands Boundary**

The following criteria are applied within the Planning Area in order to define the Units of the Coastal Shorelands Boundary, the extent of which shall include at least:

(i) Areas subject to ocean flooding and lands within 100 feet of the ocean shore or within 50 feet of an estuary or a coastal lake;

(ii) Adjacent areas of geologic instability where the instability is related to or will impact a coastal water body;

(iii) Natural or man—made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;

(iv) Areas of significant shoreland and wetland biological habitats whose habitat quality is primarily derived from or related to the association with coastal water areas;

(v) Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, dredge material disposal and mitigation sites, and areas having characteristics suitable for aquaculture;

(vi) Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal waters; and

(vii) Coastal headlands.

1.3 Application of the Coastal Shorelands Criteria

These features are mapped in the set of maps titled "Estuary Management Plan: Coastal Shorelands Inventory for the Coquille River Estuary" The Coastal Shoreland Boundary is defined as the upland extent of any of these seven types of area, as mapped, or within a limit of 50 feet from the shoreline of the estuary, whichever is greater. For the purposes of the Estuary Management Plan, the criteria have been interpreted as follows:

(i) This includes all land within the floodplain of the Coquille as shown by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

(ii) This is interpreted as any steep bluffs with over 50% slope or with earthflow/slump topography, as shown on the D.G.M.I. Natural Hazard Map. (Bulletin 87, Environmental Geology of Western Coos and Douglas Counties; Oregon, D.G.M.I., 1975].Areas of stream bank erosion are not mapped, but are assumed to be included. The purpose of this criterion is to identify those unstable areas which may affect, or be affected by, the estuary, so as to control erosion or mass movement effectively.

(iii) This criterion includes primarily riparian vegetation, which has been identified from air photo interpretation and on—site inspection. Riparian vegetation is characterized as vegetation contained within the floodplain above the high tide mark.

(iv) Significant shoreland and wetland habitats are identified from U.S. Fish and Wildlife Service Wetland maps (National Wetland Inventory] and Oregon Department of Fish and Wildlife (Pete Penn, personal communication with Coos County, 5/81].

(v) This criterion includes sites identified as Especially Suited for Water—Dependent Use (ESWD), dredge material disposal and mitigation sites, and sites with characteristics for aquaculture.

(vi) and (vii) No areas in the Coquille River Estuary are identified as having "potential for exceptional coastal experience" in "Visual Resource Analysis of the Oregon Coastal Zone." (O.C.C.D.C., 1975) There are also no coastal headlands in the estuary, though Coquille Point has been identified as a headland.

1.4 **Description of Coastal Shorelands Area Management Units**

The Coastal Shorelands Boundary, which was developed using the above criteria, is shown on the Coastal Shorelands Inventory maps and is described as follows:

1.4.1 Mouth to North City Limits

Along the Bandon waterfront First Street from Fillmore Ave. to the west end of the Bandon Fisheries property marks the upland limit of the boundary. The Flood Plain of Ferry Creek to the head of tide is also included. The boundary heads northerly along Bandon Fisheries westerly property line until it is 50 feet from the estuary. It then turns westerly maintaining this 50 foot distance until it turns south to the intersection of Edison and Jetty Road, where it meets the flood hazard boundary. The Shore land Boundary then follows the flood hazard boundary and turns south until it intersects with Tax Lot 600, whose

northerly property line it follows to the vegetation line. Once past Masonic Park the Shorelands Boundary continues south along the top edge of the bluff to Johnson Creek where the boundary moves inland following the flood hazard line. South of Johnson Creek the boundary follows along the crest of the bluff again.

On the east side of the bay Riverside Drive marks the boundary from the Fillmore/Riverside intersection north to the City Limits. On the north spit, the floodplain marks the boundary.

2. ANALYSIS OF COMPLIANCE WITH ESTUARINE RESOURCES GOAL (#16) BY "MANAGEMENT UNIT".

2.1 Justification of Designations for Estuarine Management Units.

2.1.1 Development Estuarine Management Units

Management Unit #1D This is the authorized channel, and is therefore automatically a "Developed" Management Unit according to Goal #16.

Management Unit #4D This is bordered by the high-dock rip-rap, the Bandon waterfront and the causeway leading to the old Moore Mill truck shop. It is the site of the Port's boat basin. Compatibility with adjacent estuarine and shoreland areas is considered high, since the entire area is devoted to the boat basin and related uses. The minimal amount of dredging required here is justified as this is a water-dependent use for which a public need is amply demonstrated . Adverse impacts are minimized by using a floating dock design requiring no fill.

2.1.2 Conservation Management Units

Management Unit #2C This Management Unit is a narrow strip immediately adjacent to uplands that are subject to erosion problems. It is a partially altered area that is adjacent to existing development of moderate intensity and contains a tide flat, sea grass and algae bed. Development of the Management Unit is limited to shoreland stabilization measures deemed necessary to protect adjacent uplands from erosion.

Management Unit #5C (Ferry Creek Flat) This area of tidal flat is partially altered due to the presence of old pilings and rip—rap and fills on three sides. (Moore Mill truck shop, sewage treatment plant and Moore Mill). It is also adjacent to development of moderate intensity and lies immediately east of the boat basin. The presence of clam beds and algal beds place it in a Conservation management unit.

Management Unit #6C Ferry Creek is a small tidal tributary stream of the Coquille River. The portion of Ferry Creek that makes up this Management Unit is entirely subtidal and Channelized as it passes through Bandon's commercial district. Thus, it is considered partially altered and adjacent to development of moderate intensity.

Management Unit #8C This is the natural river channel from above the maintained navigation channel to the City limits. It is entirely subtidal and contains none of the "significant habitat" areas which would automatically place it in a Natural or Conservation category, nor is it a "priority development area". However, it fits best the Conservation category because it is suited to "long term uses of renewable resources that do not require major alteration of the estuary" and will be "managed to conserve the natural resources and benefits". (emphasis added). Main uses are water—borne recreation and production of fish

resources with some commercial boat and barge use. It also is partially altered by old pilings in the channel. It should be noted that a future need may develop to dredge shoaled areas in this river Management Unit to allow the passage of larger shallow—draft boats and barges. As such, this activity requires an Exception, as it would be new dredging (unless it is minor enough to qualify as “minor navigational improvements”).

2.1.4 Natural Management Units

Natural Management Units in the Coquille estuary contain at least one of the “major habitat” areas specified by Goal #16.

Determination which constitutes “major habitat” areas was made by ODFW staff [Reese Bender, personal communication with Coos County, 7/8/81].

Management Unit # 10N This Management Unit comprises a major part of the salt marsh and tide flat (the "Bandon salt marsh") to the east of the channel, the largest Management Unit in the estuary. This marsh is in the U.S. Fish and Wildlife Refuge System and is therefore protected. There are also clam beds in this Management Unit, but the "major" habitat resources override this consideration, and place it in the Natural designation. There is a potential restoration site in Management Unit # 10.

2.4 Uses/Activities for Estuarine Management Units

2.4.1 Introduction

The Estuarine Resources Goal (16) lists the types of uses and activities that may be permitted in each type of Management Unit *in* the Comprehensive Plan Requirements (Management Units) section. These uses are spelled-out in the Zoning Ordinance.

2.4.2 Uses/Activities Permitted in Development Estuarine Management Units

Development management units are generally intended for navigation or water-dependent uses. However, water-related industrial, commercial and recreational uses are allowed where appropriate as a conditional use in Aquatic Management Units # 1D (Coquille Channel) and # 4D (Bandon Waterfront). With the wide variety of port-related uses occurring it would be impractical to exclude water-related uses that are closely related to water-dependent uses.

Mining/mineral extraction is only permitted in Management Unit # 1D, where this is an existing use (Robertson's), dependent upon access to deposits of gravel off the Bandon waterfront. Aquaculture may not be consistent with the Development designation because of the impact of intensive Port development and the wide availability of other undeveloped sites.

High intensity water-dependent recreational uses are considered consistent in Segments #1D and #4D because of the general compatibility of commercial and recreational boat moorage on the Bandon waterfront. Similarly, marinas are considered appropriate here for the same reasons. Mitigation/Restoration is allowed in Development Management Units 10 and 4D, though it is questionable whether there are any resources which could be restored as part of a project.

Flow-lane disposal of dredged material from the Port's Boat Basin is allowed by this Plan (as a conditional

use) in Aquatic Management Unit # 1D. Other uses/activities related to navigation and industrial/commercial development (like dredging, fill, navigational structures, structural shoreline stabilization, etc.) are permitted because this is consistent with the primary purpose of these Management Units.

Flow-lane disposal allows for the removal of silt in the moorage basins and navigational channels via pumping the material into the main or deepest part of the river channel during peak periods in the winter months when the outgoing tide is also at its peak. The additional volume of water flowing at its greatest rate carries the silt out to sea.

Siltation in Management Unit #4 of the boat basin of the boat basin has accumulated to a great degree. Navigation and moorage are impaired. An economically feasible, expedient means of removal is required. Alternatives to flow-lane disposal have been considered and rejected due to various factors that rendered each unacceptable.

Trucking of dredged materials to an approved site on the north side of the Coquille River across from the boat basin, is not considered economically or environmentally acceptable. Spoils dumped in this are prevent regeneration of the site and use of that area by wildlife and for recreational purposes. It is also unsightly. Trucking also increases air pollution, muddies the highway and prolongs disposal time. Extension of an outfall and pumping across to the spoils site would additionally be very expensive . Barging dredged materials to sea is impossible due to winter bar conditions.

Flow-lane disposal is a viable alternative due to the minimal quantity (5,000 cu. yds initially and up to 3,000 cu. yds annually thereafter) and the tremendous amount of flow and velocity of runoff during the winter months. The Port of Astoria has successfully pumped 150,000 to 200,000 cubic yards 12 miles from the open sea. Monitoring studies to date show this to be a successful method even though the quantities and distance are vastly greater than those proposed for the Coquille.7

2.4.3 Uses/Activities Permitted in Estuarine Conservation Management Units

A number of uses/activities are permitted outright in Estuarine Conservation Management Units, as specified in the Zoning Ordinance.

A number of uses are only allowed "where consistent with the resource capabilities of the area and the purposes of [the] Management Unit". Uses not mentioned in the Ordinance will require an Exception to the Statewide Planning Goals.

2.4.4 USES/ACTIVITIES PERMITTED IN ESTUARINE NATURAL MANAGEMENT UNITS

7 Ordinance 1235, 11-22-88

A small number of uses/activities are permitted outright by the Zoning Ordinance in Estuarine Natural Management Units.

Where consistent with the resource capabilities of the area and the purposes of the Management Unit other uses may be allowed as Conditional uses. These also are identified in the Zoning Ordinance

3.0 ANALYSIS OF COMPLIANCE WITH COASTAL SHORELANDS GOAL (#17) AND BEACHES AND DUNES GOAL (#18) BY "SHORELAND MANAGEMENT UNIT".

3.1 Introduction

The Coastal Shore lands Goal (#17) sets priorities for shoreland uses, requiring that preference be given in appropriate locations to water-dependent or water-related uses and activities. It also requires a high degree of protection for certain important natural resources (e.g. major marshes, significant wildlife habitats) and distinguishes between the uses allowed in cities and urban growth areas and those allowed in rural areas. The Beaches and Dunes Goal 18 also applies wherever dunes fall within the Coastal Shore lands Boundary.

The following sections deal with the rationale behind certain of the Management Unit decisions, where it is not self-evident, so as to explain more fully how the Plan complies with Goal #17.

3.2 Justification of Designations for Shore land Management Units

3.2.1 Especially Suited For Water Dependent Use sites in Shoreland Management Units within the City and Urban Growth Areas

There are 10 Shore land Management Units within the City limits and Urban Growth Area of the City of Bandon. Goal 17 requires that sites especially suited to water-dependent uses" (ESWD sites) be protected for water-dependent recreational, commercial and industrial uses, citing the four factors which indicate this special suitability.

Management Unit # 1: The South Jetty: "Public Facilities" designation. The Jetty *is* especially suited for water-dependent recreation (fishing, for example)

Management Unit # 3: The Bandon Waterfront: Marine Commercial (C-3) designation. This area has a shallow draft channel close to shore with supporting land facilities." Protected areas are available which are subject to scour by the current of the river as it bends west toward the mouth. There are also outstanding water-dependent recreational opportunities at the boat basin. The Marine Commercial (C-3) zoning designation reserves specified ESWD sites for water-dependent or water-related uses as the highest priorities, consistent with the "Priority" requirements of Goal 117. These sites begin at the west end of the Bandon Fisheries Building and extend up to the High Dock, where there exists a fish buying station and the remainder of the jetty that protects the boat basin.

Other sites in the C-3 zone which do not have ESWD qualities are afforded a broader range of uses, mostly as conditional uses, though they still retain the C-3 Marine Commercial designation. These sites include the remainder of the C-3 properties west of the Bandon Fisheries building, the new port office and the remainder of the high dock facility which, for various reasons, cannot be used for or do not have the essential characteristics of ESWD sites.

Management Unit # 8: Moore Mill: A 50 foot strip adjacent to the channel is designated as ESWD. This area, earlier a mill designated as Heavy Industrial, has been rezoned to a Controlled Development zone.

Management Units # 9 & 10: The North Jetty and Vicinity: "Public Facilities" and "Natural Resources" designations, respectively. Bother areas are suited to water-dependent recreational activities (fishing) and are suitably protected.

Management Units #2, #4, #5, #6 & # 7: The remaining Management Units do not have lands that have features which make them ESWD sites. They are designated for more general urban uses. Certain Shoreland Management Units contain significant resources, which require protection. Management unit #2, (Controlled Development) has a small freshwater lagoon on part of the site. This will be protected by the public review procedure which is part of Bandon's Controlled Development Ordinance.

Special note: Management Units # 3 and 10 have archaeological sites in part of the Management Unit. These will be protected as required in the appropriate Policy (see Policy U).

3.2.3 PROTECTION OF DREDGED MATERIAL DISPOSAL SITES AND MITIGATION/RESTORATION SITES.

Within the City Limits and Urban Growth Boundary (UGH) there are no dredged material disposal sites that are protected as such. Dredged material disposal (DMD) is allowed as a conditional use in Shore land Management Units # 8 and # 10, but these Management Units are not protected for this use. There are, however, sites that are protected for dredged material disposal that are under County jurisdiction. In addition to the previously mentioned DMD sites, Estuarine Management Unit # 1, the main channel of the Coquille, is used for flow-lane disposal of dredged material by the Port of Bandon's Boat Basin dredge project. This site also has many specified uses besides DMD.

There are no sites specifically protected for mitigation because there is little expected fill. Unprotected sites exist in several locations. Mitigation will be coordinated with state and federal fish and wildlife agencies.

3.2.4 CONSISTENCY DETERMINATION

The Matrix, together with the findings in the above explanatory narrative, have established that the use designations for each of the Shoreland Management Units are consistent with the requirements of the Goals. This process also deals with 'the Goal requirements relating to several types of uses and activities, and the conditions under which some of them may be permitted. These requirements are embodied in the Shore lands Uses/Activities Matrix of the zoning Ordinance.

3.3 JUSTIFICATION OF SHORELANDS USES/ACTIVITIES MATRIX AND GOAL 18

3.3.1 Introduction

Uses and activities permitted in each of the Shoreland Management Units are laid out in the matrix of the Zoning Ordinance. The uses and activities permitted are to a large degree determined by the Coastal Shorelands Goal. Areas within the Shoreland Overlay Zone of the Zoning Ordinance are subject to compliance with both the underlying zone and the matrix. In cases where the requirements of the

Shorelands Overlay Zone conflict with the requirements of the underlying zone, the more restrictive shall apply.

As with the Estuarine Management Units, reference is made to specific Policies which provide policy statements on conditions which shall apply to uses/activities. Footnotes are also used for the same purpose, where no formal Policy is necessary.

3.3.3 Segments in Urban/Urbanizable Areas.

Sites in these areas which are found to be ESWD are to be protected for water—dependent industrial, commercial and recreational uses. Such sites are found in Management Units #1,#3, #8, #9 and #10 and are reserved for a narrow range of uses, as appropriate. All other sites in these areas are not considered ESWD arid are designated for non—water—dependent uses, based primarily on existing use patterns.

4. CUMULATIVE EFFECTS OF USES AND ACTIVITIES IN AQUATIC DEVELOPMENT MANAGEMENT UNITS

This section addresses the Goal's requirements for uses/activities in development management units. "The cumulative effect of all such uses, activities and alterations shall be considered and described during Plan development and adoption". (Goal 16, Management Units, Development).

Aquatic Management Units 1D and 4D are designated as "Development Management Units". Management Unit #1D is the authorized channel plus the old boat basin area, which includes the boat ramp. Management Unit #4D is the Boat Basin area.

The following alterations are expected to occur in the Development Management Units during the planning period:

- Maintenance dredging of authorized channel, possibly including dredging to increased depth.
- Maintenance dredging of the boat basin.
- Flow lane disposal of dredge materials in the authorized channel from the boat basin.

The effects of these actions are considered as follows:

(i) SUB-TIDAL DREDGING: The effects of subtidal dredging on estuarine resources are expected to be fairly minor. Even with channel deepening, anadromous fish populations are not expected to be affected, provided that activities are timed to avoid periods of migration. The main effect would be the displacement of benthic organisms, possibly including some clam populations. However, these organisms are expected to recolonize the dredged areas from surrounding populations in a season or two.

(ii) INTERTIDAL DREDGING: New dredging (including new intertidal dredging)is a conditional use in Estuarine Development Management Units #1, #4 and #5. As shown in the Zoning Ordinance, all applications for new dredging are subject Policies F (dredge and fill), N (Dredge Material Disposal) and H (Mitigation). New dredging is also a conditional use in Conservation Management Unit 8 subject to Footnote 11 (". . .only permitted for new marinas without jetty or dredged channel"). These policies require that there be no

upland alternative sites, that impacts be kept to a minimum, that all required local, state and federal permits be obtained, and that D.S.L. will require mitigation if the impacts are considered to be "significant". Thus, considering the size of the estuary, the overall effect of intertidal dredging will not be significant.

(iii) SUBTIDAL FILL: Filling for water-dependent development will cause permanent displacement of benthic organisms, possibly including clams. If allowed, this would require mitigation.

(iv) INTERTIDAL FILL: Intertidal fill can cause permanent displacement of benthic organisms. If the effects are determined to be significant by D.S.L., mitigation is required. Thus, these activities should not cause significant impacts.

(v) FLOW-LANE DISPOSAL: Flow-lane disposal of dredged materials from the Port of Bandon□s Boat Basin (Estuarine Mgmt. Unit #4) will disburse these materials in the main channel of the Coquille (Estuarine Mgmt. Unit 1) during periods of high winter runoff and outgoing tides. This project will be monitored according to Policy #R to "assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied."

In addition to the uses/activities which are expected to occur, a number of others are to be permitted, should the need arise. These are mainly low—impact uses/activities like navigational structures/improvements, pilings/dolphins, docks/moorage, utilities and shoreline stabilization. Compared to dredge and fill, these uses would have insignificant effects on the estuary. Water dependent/related industrial, commercial (and in some cases recreational) uses are permitted in these Management Units, as appropriate. Again, the cumulative effects of these uses are expected to be minor compared to the dredge and fill activities needed to accommodate them. Note that mineral extraction (gravel) is a conditional use in #1. The effects of gravel extraction are expected to be minor because the resource is self—renewing over a period of time.

In cases where uses like docks and moorage occupy the water surface by means other than fill there is an obvious need to have direct access to the water, which upland sites will not fulfill adequately.

The Plan and its Policies fully address uses and the conditions required for those uses in the various Management Units. Compliance with the Goals is carried out through the Plan and its implementing document, the City's Zoning Ordinance.

The boundary descriptions given above and shown on maps CSB-1 and CSB-2 are consistent with Coastal Shorelands Boundary adopted by the Coquille River Estuary Task Force and described in the Coquille River Estuary Management Plan (Volume 111, Part 3, pg 111-5).

SECTION 1. CUMULATIVE EFFECTS OF DEVELOPMENT.

1.0 REQUIREMENTS OF THE COASTAL SHORELANDS GOAL #17 IDENTIFICATION OF THE COASTAL SHORELANDS BOUNDARY

1.1 THE "PLANNING AREA"

The Coastal Shorelands Goal states that its "inventory requirements" shall be applied within an area known as the coastal shorelands planning area". This area is intended to be for "inventory, study and initial planning for development and use to meet the Coastal Shorelands Goal." (LCDC Goals and Guidelines, page 18). In the Bandon Study Area, this area is defined by the goal as follows:

(iii) all areas within the City within 1000 feet of the shoreland of the estuary, measured horizontally, and

(ii) all lands west of the Oregon Coast Highway.

1.2 **Criteria for Identifying Coastal Shorelands Boundary**

The following criteria are applied within the Planning Area in order to define the Units of the Coastal Shorelands Boundary, the extent of which shall include at least:

(i) Areas subject to ocean flooding and lands within 100 feet of the ocean shore or within 50 feet of an estuary or a coastal lake;

(ii) Adjacent areas of geologic instability where the instability is related to or will impact a coastal water body;

(iii) Natural or man—made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;

(iv) Areas of significant shoreland and wetland biological habitats whose habitat quality is primarily derived from or related to the association with coastal water areas;

(v) Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, dredge material disposal and mitigation sites, and areas having characteristics suitable for aquaculture;

(vi) Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal waters; and

(vii) Coastal headlands.

1.3 Application of the Coastal Shorelands Criteria

These features are mapped in the set of maps titled "Estuary Management Plan: Coastal Shorelands Inventory for the Coquille River Estuary" The Coastal Shoreland Boundary is defined as the upland extent of any of these seven types of area, as mapped, or within a limit of 50 feet from the shoreline of the estuary, whichever is greater. For the purposes of the Estuary Management Plan, the criteria have been interpreted as follows:

(i) This includes all land within the floodplain of the Coquille as shown by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

(ii) This is interpreted as any steep bluffs with over 50% slope or with earthflow/slump topography, as shown on the D.G.M.I. Natural Hazard Map. (Bulletin 87, Environmental Geology of Western Coos and Douglas Counties; Oregon, D.G.M.I., 1975].Areas of stream bank erosion are not mapped, but are assumed to be included. The purpose of this criterion is to identify those unstable areas which may affect, or be affected by, the estuary, so as to control erosion or mass movement effectively.

(iii) This criterion includes primarily riparian vegetation, which has been identified from air photo interpretation and on—site inspection. Riparian vegetation is characterized as vegetation contained within the floodplain above the high tide mark.

(iv) Significant shoreland and wetland habitats are identified from U.S. Fish and Wildlife Service Wetland maps (National Wetland Inventory] and Oregon Department of Fish and Wildlife (Pete Penn, personal communication with Coos County, 5/81].

(v) This criterion includes sites identified as Especially Suited for Water—Dependent Use (ESWD), dredge material disposal and mitigation sites, and sites with characteristics for aquaculture.

(vi) and (vii) No areas in the Coquille River Estuary are identified as having "potential for exceptional coastal experience" in "Visual Resource Analysis of the Oregon Coastal Zone." (O.C.C.D.C., 1975) There are also no coastal headlands in the estuary, though Coquille Point has been identified as a headland.

1.4 **Description of Coastal Shorelands Area Management Units**

The Coastal Shorelands Boundary, which was developed using the above criteria, is shown on the Coastal Shorelands Inventory maps and is described as follows:

1.4.1 Mouth to North City Limits

Along the Bandon waterfront First Street from Fillmore Ave. to the west end of the Bandon Fisheries property marks the upland limit of the boundary. The Flood Plain of Ferry Creek to the head of tide is also included. The boundary heads northerly along Bandon Fisheries westerly property line until it is 50 feet from the estuary. It then turns westerly maintaining this 50 foot distance until it turns south to the intersection of Edison and Jetty Road, where it meets the flood hazard boundary. The Shore land Boundary then follows the flood hazard boundary and turns south until it intersects with Tax Lot 600, whose

northerly property line it follows to the vegetation line. Once past Masonic Park the Shorelands Boundary continues south along the top edge of the bluff to Johnson Creek where the boundary moves inland following the flood hazard line. South of Johnson Creek the boundary follows along the crest of the bluff again.

On the east side of the bay Riverside Drive marks the boundary from the Fillmore/Riverside intersection north to the City Limits. On the north spit, the floodplain marks the boundary.

2. ANALYSIS OF COMPLIANCE WITH ESTUARINE RESOURCES GOAL (#16) BY "MANAGEMENT UNIT".

2.1 Justification of Designations for Estuarine Management Units.

2.1.1 Development Estuarine Management Units

Management Unit #1D This is the authorized channel, and is therefore automatically a "Developed" Management Unit according to Goal #16.

Management Unit #4D This is bordered by the high-dock rip-rap, the Bandon waterfront and the causeway leading to the old Moore Mill truck shop. It is the site of the Port's boat basin. Compatibility with adjacent estuarine and shoreland areas is considered high, since the entire area is devoted to the boat basin and related uses. The minimal amount of dredging required here is justified as this is a water-dependent use for which a public need is amply demonstrated . Adverse impacts are minimized by using a floating dock design requiring no fill.

2.1.2 Conservation Management Units

Management Unit #2C This Management Unit is a narrow strip immediately adjacent to uplands that are subject to erosion problems. It is a partially altered area that is adjacent to existing development of moderate intensity and contains a tide flat, sea grass and algae bed. Development of the Management Unit is limited to shoreland stabilization measures deemed necessary to protect adjacent uplands from erosion.

Management Unit #5C (Ferry Creek Flat) This area of tidal flat is partially altered due to the presence of old pilings and rip—rap and fills on three sides. (Moore Mill truck shop, sewage treatment plant and Moore Mill). It is also adjacent to development of moderate intensity and lies immediately east of the boat basin. The presence of clam beds and algal beds place it in a Conservation management unit.

Management Unit #6C Ferry Creek is a small tidal tributary stream of the Coquille River. The portion of Ferry Creek that makes up this Management Unit is entirely subtidal and Channelized as it passes through Bandon's commercial district. Thus, it is considered partially altered and adjacent to development of moderate intensity.

Management Unit #8C This is the natural river channel from above the maintained navigation channel to the City limits. It is entirely subtidal and contains none of the "significant habitat" areas which would automatically place it in a Natural or Conservation category, nor is it a "priority development area". However, it fits best the Conservation category because it is suited to "long term uses of renewable resources that do not require major alteration of the estuary" and will be "managed to conserve the natural resources and benefits". (emphasis added). Main uses are water—borne recreation and production of fish

resources with some commercial boat and barge use. It also is partially altered by old pilings in the channel. It should be noted that a future need may develop to dredge shoaled areas in this river Management Unit to allow the passage of larger shallow—draft boats and barges. As such, this activity requires an Exception, as it would be new dredging (unless it is minor enough to qualify as “minor navigational improvements”).

2.1.5 Natural Management Units

Natural Management Units in the Coquille estuary contain at least one of the “major habitat” areas specified by Goal #16.

Determination which constitutes “major habitat” areas was made by ODFW staff [Reese Bender, personal communication with Coos County, 7/8/81].

Management Unit # 10N This Management Unit comprises a major part of the salt marsh and tide flat (the "Bandon salt marsh") to the east of the channel, the largest Management Unit in the estuary. This marsh is in the U.S. Fish and Wildlife Refuge System and is therefore protected. There are also clam beds in this Management Unit, but the "major" habitat resources override this consideration, and place it in the Natural designation. There is a potential restoration site in Management Unit # 10.

2.4 Uses/Activities for Estuarine Management Units

2.4.1 Introduction

The Estuarine Resources Goal (16) lists the types of uses and activities that may be permitted in each type of Management Unit *in* the Comprehensive Plan Requirements (Management Units) section. These uses are spelled-out in the Zoning Ordinance.

2.4.2 Uses/Activities Permitted in Development Estuarine Management Units

Development management units are generally intended for navigation or water-dependent uses. However, water-related industrial, commercial and recreational uses are allowed where appropriate as a conditional use in Aquatic Management Units # 1D (Coquille Channel) and # 4D (Bandon Waterfront). With the wide variety of port-related uses occurring it would be impractical to exclude water-related uses that are closely related to water-dependent uses.

Mining/mineral extraction is only permitted in Management Unit # 1D, where this is an existing use (Robertson's), dependent upon access to deposits of gravel off the Bandon waterfront. Aquaculture may not be consistent with the Development designation because of the impact of intensive Port development and the wide availability of other undeveloped sites.

High intensity water-dependent recreational uses are considered consistent in Segments #1D and #4D because of the general compatibility of commercial and recreational boat moorage on the Bandon waterfront. Similarly, marinas are considered appropriate here for the same reasons. Mitigation/Restoration is allowed in Development Management Units 10 and 4D, though it is questionable whether there are any resources which could be restored as part of a project.

Flow-lane disposal of dredged material from the Port's Boat Basin is allowed by this Plan (as a conditional use) in Aquatic Management Unit # 1D. Other uses/activities related to navigation and industrial/commercial development (like dredging, fill, navigational structures, structural shoreline stabilization, etc.) are permitted because this is consistent with the primary purpose of these Management Units.

Flow-lane disposal allows for the removal of silt in the moorage basins and navigational channels via pumping the material into the main or deepest part of the river channel during peak periods in the winter months when the outgoing tide is also at its peak. The additional volume of water flowing at its greatest rate carries the silt out to sea.

Siltation in Management Unit #4 of the boat basin of the boat basin has accumulated to a great degree. Navigation and moorage are impaired. An economically feasible, expedient means of removal is required. Alternatives to flow-lane disposal have been considered and rejected due to various factors that rendered each unacceptable.

Trucking of dredged materials to an approved site on the north side of the Coquille River across from the boat basin, is not considered economically or environmentally acceptable. Spoils dumped in this are prevent regeneration of the site and use of that area by wildlife and for recreational purposes. It is also unsightly. Trucking also increases air pollution, muddies the highway and prolongs disposal time. Extension of an outfall and pumping across to the spoils site would additionally be very expensive . Barging dredged materials to sea is impossible due to winter bar conditions.

Flow-lane disposal is a viable alternative due to the minimal quantity (5,000 cu. yds initially and up to 3,000 cu. yds annually thereafter) and the tremendous amount of flow and velocity of runoff during the winter months. The Port of Astoria has successfully pumped 150,000 to 200,000 cubic yards 12 miles from the open sea. Monitoring studies to date show this to be a successful method even though the quantities and distance are vastly greater than those proposed for the Coquille.8

2.4.3 Uses/Activities Permitted in Estuarine Conservation Management Units

A number of uses/activities are permitted outright in Estuarine Conservation Management Units, as specified in the Zoning Ordinance.

A number of uses are only allowed "where consistent with the resource capabilities of the area and the purposes of [the] Management Unit". Uses not mentioned in the Ordinance will require an Exception to the Statewide Planning Goals.

---

8 Ordinance 1235, 11-22-88

2.4.4 USES/ACTIVITIES PERMITTED IN ESTUARINE NATURAL MANAGEMENT UNITS

A small number of uses/activities are permitted outright by the Zoning Ordinance in Estuarine Natural Management Units.

Where consistent with the resource capabilities of the area and the purposes of the Management Unit other uses may be allowed as Conditional uses. These also are identified in the Zoning Ordinance

3.0 **ANALYSIS OF COMPLIANCE WITH COASTAL SHORELANDS GOAL (#17) AND BEACHES AND DUNES GOAL (#18) BY "SHORELAND MANAGEMENT UNIT".**

3.1 Introduction

The Coastal Shore lands Goal (#17) sets priorities for shoreland uses, requiring that preference be given in appropriate locations to water-dependent or water-related uses and activities. It also requires a high degree of protection for certain important natural resources (e.g. major marshes, significant wildlife habitats) and distinguishes between the uses allowed in cities and urban growth areas and those allowed in rural areas. The Beaches and Dunes Goal 18 also applies wherever dunes fall within the Coastal Shore lands Boundary.

The following sections deal with the rationale behind certain of the Management Unit decisions, where it is not self-evident, so as to explain more fully how the Plan complies with Goal #17.

3.2 Justification of Designations for Shore land Management Units

3.2.1 Especially Suited For Water Dependent Use sites in Shoreland Management Units within the City and Urban Growth Areas

There are 10 Shore land Management Units within the City limits and Urban Growth Area of the City of Bandon. Goal 17 requires that sites especially suited to water-dependent uses" (ESWD sites) be protected for water-dependent recreational, commercial and industrial uses, citing the four factors which indicate this special suitability.

Management Unit # 1: The South Jetty: "Public Facilities" designation. The Jetty *is* especially suited for water-dependent recreation (fishing, for example)

Management Unit # 3: The Bandon Waterfront: Marine Commercial (C-3) designation. This area has a shallow draft channel close to shore with supporting land facilities." Protected areas are available which are subject to scour by the current of the river as it bends west toward the mouth. There are also outstanding water-dependent recreational opportunities at the boat basin. The Marine Commercial (C-3) zoning designation reserves specified ESWD sites for water-dependent or water-related uses as the highest priorities, consistent with the "Priority" requirements of Goal 117. These sites begin at the west end of the Bandon Fisheries Building and extend up to the High Dock, where there exists a fish buying station and the remainder of the jetty that protects the boat basin.

Other sites in the C-3 zone which do not have ESWD qualities are afforded a broader range of uses, mostly as conditional uses, though they still retain the C-3 Marine Commercial designation. These sites include the remainder of the C-3 properties west of the Bandon Fisheries building, the new port office and the remainder of the high dock facility which, for various reasons, cannot be used for or do not have the essential characteristics of ESWD sites.

Management Unit # 8: Moore Mill: A 50 foot strip adjacent to the channel is designated as ESWD. This area, earlier a mill designated as Heavy Industrial, has been rezoned to a Controlled Development zone.

Management Units # 9 & 10: The North Jetty and Vicinity: “Public Facilities” and “Natural Resources” designations, respectively. Bother areas are suited to water-dependent recreational activities (fishing) and

are suitably protected.

Management Units #2, #4, #5, #6 & # 7: The remaining Management Units do not have lands that have features which make them ESWD sites. They are designated for more general urban uses. Certain Shoreland Management Units contain significant resources, which require protection. Management unit #2, (Controlled Development) has a small freshwater lagoon on part of the site. This will be protected by the public review procedure which is part of Bandon's Controlled Development Ordinance.

Special note: Management Units # 3 and 10 have archaeological sites in part of the Management Unit. These will be protected as required in the appropriate Policy (see Policy U).

3.2.3 PROTECTION OF DREDGED MATERIAL DISPOSAL SITES AND MITIGATION/RESTORATION SITES.

Within the City Limits and Urban Growth Boundary (UGH) there are no dredged material disposal sites that are protected as such. Dredged material disposal (DMD) is allowed as a conditional use in Shore land Management Units # 8 and # 10, but these Management Units are not protected for this use. There are, however, sites that are protected for dredged material disposal that are under County jurisdiction. In addition to the previously mentioned DMD sites, Estuarine Management Unit # 1, the main channel of the Coquille, is used for flow-lane disposal of dredged material by the Port of Bandon's Boat Basin dredge project. This site also has many specified uses besides DMD.

There are no sites specifically protected for mitigation because there is little expected fill. Unprotected sites exist in several locations. Mitigation will be coordinated with state and federal fish and wildlife agencies.

3.2.4 CONSISTENCY DETERMINATION

The Matrix, together with the findings in the above explanatory narrative, have established that the use designations for each of the Shoreland Management Units are consistent with the requirements of the Goals. This process also deals with 'the Goal requirements relating to several types of uses and activities, and the conditions under which some of them may be permitted. These requirements are embodied in the Shore lands Uses/Activities Matrix of the zoning Ordinance.

3.3 JUSTIFICATION OF SHORELANDS USES/ACTIVITIES MATRIX AND GOAL 18

3.3.1 Introduction

Uses and activities permitted in each of the Shoreland Management Units are laid out in the matrix of the Zoning Ordinance. The uses and activities permitted are to a large degree determined by the Coastal Shorelands Goal. Areas within the Shoreland Overlay Zone of the Zoning Ordinance are subject to compliance with both the underlying zone and the matrix. In cases where the requirements of the Shorelands Overlay Zone conflict with the requirements of the underlying zone, the more restrictive shall apply.

As with the Estuarine Management Units, reference is made to specific Policies which provide policy statements on conditions which shall apply to uses/activities. Footnotes are also used for the same purpose, where no formal Policy is necessary.

3.3.3 Segments in Urban/Urbanizable Areas.

Sites in these areas which are found to be ESWD are to be protected for water-dependent industrial, commercial and recreational uses. Such sites are found in Management Units #1,#3, #8, #9 and #10 and are reserved for a narrow range of uses, as appropriate. All other sites in these areas are not considered ESWD arid are designated for non-water—dependent uses, based primarily on existing use patterns.

This section addresses the Goal's requirements for uses/activities in development management units. "The cumulative effect of all such uses, activities and alterations shall be considered and described during Plan development and adoption". (Goal 16, Management Units, Development).

Aquatic Management Units 1D and 4D are designated as "Development Management Units". Management Unit #1D is the authorized channel plus the old boat basin area, which includes the boat ramp. Management Unit #4D is the Boat Basin area.

The following alterations are expected to occur in the Development Management Units during the planning period:

- Maintenance dredging of authorized channel, possibly including dredging to increased depth.
- Maintenance dredging of the boat basin.
- Flow lane disposal of dredge materials in the authorized channel from the boat basin.

The effects of these actions are considered as follows:

(i) SUB-TIDAL DREDGING: The effects of subtidal dredging on estuarine resources are expected to be fairly minor. Even with channel deepening, anadromous fish populations are not expected to be affected, provided that activities are timed to avoid periods of migration. The main effect would be the displacement of benthic organisms, possibly including some clam populations. However, these organisms are expected to recolonize the dredged areas from surrounding populations in a season or two.

(ii) INTERTIDAL DREDGING: New dredging (including new intertidal dredging)is a conditional use in Estuarine Development Management Units #1, #4 and #5. As shown in the Zoning Ordinance, all applications for new dredging are subject Policies F (dredge and fill), N (Dredge Material Disposal) and H (Mitigation). New dredging is also a conditional use in Conservation Management Unit 8 subject to Footnote 11 (". . .only permitted for new marinas without jetty or dredged channel"). These policies require that there be no upland alternative sites, that impacts be kept to a minimum, that all required local, state and federal permits be obtained, and that D.S.L. will require mitigation if the impacts are considered to be "significant". Thus, considering the size of the estuary, the overall effect of intertidal dredging will not be significant.

(iii) SUBTIDAL FILL: Filling for water-dependent development will cause permanent displacement of benthic organisms, possibly including clams. If allowed, this would require mitigation.

(iv) INTERTIDAL FILL: Intertidal fill can cause permanent displacement of benthic organisms. If the effects are determined to be significant by D.S.L., mitigation is required. Thus, these activities should not cause significant impacts.

(v) FLOW-LANE DISPOSAL: Flow-lane disposal of dredged materials from the Port of Bandon□s Boat Basin (Estuarine Mgmt. Unit #4) will disburse these materials in the main channel of the Coquille (Estuarine Mgmt. Unit 1) during periods of high winter runoff and outgoing tides. This project will be monitored according to Policy #R to "assure that estuarine sedimentation is consistent with the purposes of the affected Natural and Conservation Estuarine Management Units and that all necessary local, state and federal permits have been obtained and their requirements satisfied."

In addition to the uses/activities which are expected to occur, a number of others are to be permitted, should the need arise. These are mainly low—impact uses/activities like navigational structures/improvements, pilings/dolphins, docks/moorage, utilities and shoreline stabilization. Compared to dredge and fill, these uses would have insignificant effects on the estuary. Water dependent/related industrial, commercial (and in some cases recreational) uses are permitted in these Management Units, as appropriate. Again, the cumulative effects of these uses are expected to be minor compared to the dredge and fill activities needed to accommodate them. Note that mineral extraction (gravel) is a conditional use in #1. The effects of gravel extraction are expected to be minor because the resource is self—renewing over a period of time.

In cases where uses like docks and moorage occupy the water surface by means other than fill there is an obvious need to have direct access to the water, which upland sites will not fulfill adequately.

The Plan and its Policies fully address uses and the conditions required for those uses in the various Management Units. Compliance with the Goals is carried out through the Plan and its implementing document, the City's Zoning Ordinance.

AQUACULTURE: Raising, feeding, planting and harvesting fish and shellfish, and associated facilities necessary for the use.

AQUACULTURE AQUACULTUREDEFINITION: Raising, feeding, planting and harvesting fish and shellfish, and associated facilities necessary for the use.

AVULSION: A tearing away or separation by the force of water. Land which is separated from uplands or adjacent properties by the action of a stream or river cutting through the land to form a new stream bed. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BEACH: Gently sloping areas of loose material (e.g., sand, gravel, and cobbles) that extend landward from the low-water line to a point where there is a definite change in the material type or landform, or to the line of vegetation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BENTHIC: Living on or within the bottom sediments in water bodies. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BRIDGE CROSSING SUPPORT STRUCTURES: Pilings, pillars, bulkheads and similar structures used in bridge construction.

BRIDGE CROSSING SUPPORT STRUCTURES: Piers, piling, and similar structures necessary to support a bridge span but not including fill for causeways or approaches. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BRIDGE CROSSINGS: The portion of a bridge spanning a waterway not including supporting structures or fill located in the waterway or adjacent wetlands. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

BULKHEAD: An upright retaining wall of wood, concrete or masonry along a waterfront that separates uplands from aquatic areas.

CARRYING CAPACITY: Level of use which can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem and the quality of air, land, and water resources. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN INVOLVEMENT PROGRAM (CIP): A program established by a city or county to ensure the extensive, ongoing involvement of local citizens in planning. Such programs are required by Goal 1 , "Citizen Involvement," and contain or address the six components described in that goal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN ADVISORY COMMITTEE (CAC): A group of citizens organized to help develop and maintain a comprehensive plan and its land use regulations,. Local governments usually establish one such group for each neighborhood in a city or each district in a county. CAC's may also be known as neighborhood planning organizations, area advisory committees, or other local terms. CAC's convey their advice and concerns on planning issues to the planning commission or governing body. CAC's also convey information from local officials to neighborhood and district residents. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN: Any individual within the planning area; any public or private entity or association within the planning area, including corporations, governmental and private agencies, associations, firms, partnerships, joint stock companies and any group of citizens. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CITIZEN INVOLVEMENT ADVISORY COMMITTEE (CIAC): A state committee appointed by the Land Conservation and Development Commission to advise that commission on matters of citizen involvement, to promote public participation in the adoption and amendment of the goals and guidelines, and to assure widespread citizen involvement in all phases of the planning process. CIAC is established in accordance with ORS 197.160. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL ZONE: The area lying between the Washington border on the north to the California border on the south, bounded on the west by the extent of the state's jurisdiction, and in the east by the crest of the coastal mountain range., with the exception of (a) The Umpqua River basin, where the coastal zone shall extend to Scottsburg; (b) The Rogue River basin, where the coastal zone shall extend to Agness; (c) The Columbia River basin, where the coastal zone shall extend to the downstream end of Puget Island. (Formerly ORS 191.110) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL LAKES: Lakes in the coastal zone that are bordered by a dune formation or that have a direct hydrologic surface or subsurface connection with saltwater. COASTAL SHORELANDS: Those areas immediately adjacent to the ocean, all estuaries and associated wetlands, and all coastal lakes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL STREAM: Any stream within the coastal zone. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COASTAL WATERS: TERRITORIAL OCEAN WATERS OF THE CONTINENTAL SHELF; ESTUARIES; AND COASTAL LAKES.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

COMMERCIAL USES: : Privately-owned or operated facility or place of business open to the public for the sale of goods or services. Examples include: restaurants, taverns, hotels, motels, offices, personal services, and retail stores, Public facilities offering similar goods or services are also defined as commercial uses.

COMMITTEE FOR CITIZEN INVOLVEMENT (CCI): A local group appointed by a governing body for these purposes: assisting the governing body with the development of a program that promotes and enhances citizen involvement in land use planning; assisting in the implementation of the citizen involvement program; and evaluating the process being used for citizen involvement. A CCI differs from a citizen advisory committee (CAC) in that the former advised the local government only on matters pertaining to citizen involvement and Goal 1. A CAC, on the other hand, may deal with a broad range of planning and land use issues. Each city or county has only one CCI, whereas there may be several CAC's. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONSERVATION: The act of conserving the environment. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONSERVE: To manage in a manner which avoids wasteful or destructive uses and provides for future availability. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

CONTINENTAL SHELF: The area seaward from the ocean shore to the distance when the ocean depth is 200 meters, or where the ocean floor slopes more steeply to the deep ocean floor. The area beyond the state's jurisdiction is the OUTER Continental Shelf. DEFLATION PLAIN: The broad interdune area which is wind-scoured to the level of the summer water table. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DEVELOP: To bring about growth or availability; to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of land, to divide land into parcels, or to create or terminate rights to access. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DEVELOPMENT: The act, process or result of developing. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DIKES: : Structures designed and built to prevent inundation of a parcel of land by water. A dike is considered new when placed on an area which:

(i) has never been diked, or;
(ii) has previously been diked, but all or a substantial part of the area is subject to daily inundation and tidal marsh has been re- established.

Maintenance and repair refer to:

(i) existing serviceable dikes (including those that allow some seasonal inundation), and,

(ii) those that have been damaged by flooding, erosion, tidegate failure, etc., but where reversion to tidal marsh has not yet occurred, except in drainage ways.

Repair/maintenance of existing dikes is considered a Shoreland Activity even where erosion has created additional aquatic area.

DIVERSITY: The variety of natural, environmental, economic, and social resources, values, benefits, and activities. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DOCKS AND MOORAGE: A pier or secured float or floats for boat tie-up or other water use, often associated with a specific land use on the adjacent shoreland, such as a residence or a group of residences, but not exceeding 5 berths. Small commercial moorages (less than 5 berths) with minimal shoreside services and no solid breakwater are included in this category. However, docks in conjunction with industrial uses are included under the definition of “industrial” Floathouses, which are used for boat storage, net-drying and similar purposes are also included in this category.

DRAINAGE (INCLUDING TIDEGATING): : The construction and maintenance of drainage channels

including the disposal of resulting dredged material, construction and maintenance of tidegates, tideboxes, pumphouses and associated structures.

DREDGED MATERIAL DISPOSAL (DMD): : The deposition of dredged material in aquatic or upland areas. Methods of disposal include in—water disposal, beach and land disposal., flow—lane and ocean disposal.

In-Water Disposal is the deposition of dredged materials in a body of water

Ocean Disposal is the deposition of dredged materials in the Ocean.

Beach Disposal is the deposition of dredged materials in beachfront areas west of the foredunes or vegetation line.

Land Disposal is the deposition of dredged materials landward of the line of non -.aquatic vegetation, in "upland" areas.

Flow-Lane Disposal is the transporting of dredged materials to the main channel of a river via a pipeline during strong flows and outgoing tides whereby the materials are transported to the ocean and disbursed.

DUNE STABILIZATION MEASURES: The use of vegetative materials, structures or other means, to prevent movement of unstable dune forms.

DUNE, OLDER STABILIZED: A dune that is stable from wind erosion, and that has significant soil development and that may include diverse forest cover. They include older foredunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE COMPLEX: Various patterns of small dunes with partially stabilized intervening areas. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE: A hill or ridge of sand built up by the wind along sandy coasts. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, CONDITIONALLY STABLE: A dune presently in a stable condition, but vulnerable to becoming active due to fragile vegetative cover. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, OPEN SAND: A collective term for active, unvegetated dune landforms. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, RECENTLY STABILIZED: A dune with sufficient vegetation to be stabilized from wind erosion, but with little, if any, development of soil or cohesion of the sand under the vegetation. Recently stabilized dunes include conditionally stable foredunes, conditionally stable dunes, dune complexes, and younger stabilized dunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE, ACTIVE: A dune that migrates, grows and diminishes from the effect of wind and supply of sand.

Active dunes include all open sand dunes, active hummocks, and active foredunes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNE COMPLEX: Various patterns of small dunes with partially stabilized intervening areas. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

DUNES, YOUNGER STABILIZED: A wind-stable dune with weakly developed soils and vegetation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ECOSYSTEM: The living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the energy systems in which they exist. All the components of an ecosystem are inter-related. ENCOURAGE: Stimulate; give help to; foster. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ECOSYSTEM: The living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the energy systems in which they exist. All the components of an ecosystem are inter-related. ENCOURAGE: Stimulate; give help to; foster. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ENHANCEMENT: An action which results in a long-term improvement of existing estuarine functional characteristics and processes that is not the result of a creation or restoration action. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ENHANCEMENT: An action which results in a long-term improvement of existing estuarine functional characteristics and processes that is not the result of a creation or restoration action. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ESTUARY: A body of water semi-enclosed by land, connected with the open ocean, and within which salt water is usually diluted by freshwater derived from the land. The estuary includes: (a) estuarine water; (b) tidelands; (c) tidal marshes; and (d) submerged lands. Estuaries extend upstream to the head of tidewater, except for the Columbia River Estuary, which by definition is considered to extend to the western edge of Puget Island. ESTUARINE [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

ESTUARY: A body of water semi-enclosed by land, connected with the open ocean, and within which salt water is usually diluted by freshwater derived from the land. The estuary includes: (a) estuarine water; (b) tidelands; (c) tidal marshes; and (d) submerged lands. Estuaries extend upstream to the head of tidewater, except for the Columbia River Estuary, which by definition is considered to extend to the western edge of Puget Island. ESTUARINE [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FILL: The placement by man of sand, sediment, or other material, usually in submerged lands or wetlands, to create new uplands or raise the elevation of land.

FLOODFRINGE: The area of the floodplain lying outside of the f1oodway, but subject to periodic inundation from flooding. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOOD, REGIONAL (100-YEAR): A standard statistical calculation used by engineers to determine the probability of severe flooding. It represents the largest flood which has a one-percent chance of occurring in anyone year in an area as a result of periods of higher-than-normal

rainfall or streamflows, extremely high tides, high winds, rapid snowmelt, natural stream blockages, tsunamis, or combinations thereof. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOOD, REGIONAL (100-YEAR): A standard statistical calculation used by engineers to determine the probability of severe flooding. It represents the largest flood which has a one-percent chance of occurring in anyone year in an area as a result of periods of higher-than-normal rainfall or streamflows, extremely high tides, high winds, rapid snowmelt, natural stream blockages, tsunamis, or combinations thereof. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOODPLAIN: The area adjoining a stream, tidal estuary or coast that is subject to regional flooding. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FLOODWA Y: The normal stream channel and that adjoining area of the natural floodplain needed to convey the waters of a regional flood while causing less than one foot increase in upstream flood elevations. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREDUNE, CONDITIONALLY STABLE: An active foredune that has ceased growing in height and that has become conditionally stable with regard to wind erosion. FOREDUNE, OLDER: A conditionally stable foredune that has become wind stabilized by diverse vegetation and soil development. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREDUNE, ACTIVE: An unstable barrier ridge of sand paralleling the beach and subject to wind erosion, water erosion, and growth from new sand deposits. Active foredunes may include areas with beach grass, and occur in sand spits and at river mouths as well as elsewhere. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

FOREST LANDS: See definition of commercial forest lands and uses in the Oregon Forest Practices Act and the Forest Lands Goal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

GEOLOGIC: Relating to the occurrence and properties of earth. Geologic hazards include faults, land and mudslides, and earthquakes. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HEADLANDS: Bluff, promontories or points of high shoreland jutting out into the ocean, generally sloping abruptly into the water. Oregon headlands are generally identified in the report on Visual Resource Analysis of the Oregon Coastal Zone, OCCDC, 1974. HISTORICAL RESOURCES: Those districts, sites, buildings, structures, and artifacts which have a relationship to events or conditions of the human past. (See Archaeological Resources definition.) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HUMMOCK, ACTIVE: Partially vegetated (usually with beach grass), circular, and elevated mounds of sand which are actively growing in size. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDRAULIC: Related to the movement or pressure of water. Hydraulic hazards are those associated with erosion or sedimentation caused by the action of water flowing in a river or streambed, or oceanic currents and waves. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDRAULIC PROCESSES: Actions resulting from the effect of moving water or water pressure on the bed, banks, and shorelands of water bodies (oceans, estuaries, streams, lakes, and rivers). [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDROGRAPHY: The study, description and mapping of oceans, estuaries, rivers and lakes.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

HYDROLOGIC: Relating to the occurrence and properties of water. Hydrologic hazards include flooding (the rise of water) as well as hydraulic hazards associated with the movement of water. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

IMPACT: The consequences of a course of action; effect of a goal, guideline, plan or decision. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INDUSTRIAL USES: : Public or private use of land or structures for manufacturing, processing and energy-generating facilities. Port development and docking facilities associated with industrial uses (other than marina sand docks and moorage, which are defined elsewhere) are also included in this category.

INSURE: Guarantee; make sure or certain something will happen. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTEGRITY: The quality or state of being complete and functionally unimpaired; the wholeness or entirety of a body or system, including its parts, materials, and processes. The integrity of an ecosystem emphasizes the interrelatedness of all parts and the unity of its whole. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTERDUNE AREA: Low-lying areas between higher sand landforms and which are generally under water during part of the year (See also Deflation Plain.) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

INTERTIDAL: Between the levels of mean lower low tide (MLL T) and mean higher high tide (MHHT) [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

KEY FACILITIES: Basic facilities that are primarily planned for by local government but which also may be provided by private enterprise and are essential to the support of more intensive development, including public schools, transportation, water supply, sewage and solid waste disposal. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LCDC: Land Conservation and Development Commission of the State of Oregon. Seven lay citizens, non-salaried, appointed by the Governor, confirmed by the Oregon Senate; at least one commissioner from each Congressional District; no more than two from Multnomah County. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LITTORAL DRIFT: The material moved, such as sand or gravel, in the littoral (shallow water near shore zone) under the influence of waves and currents. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

LOG STORAGE/SORTING YARD (DRY LAND): : An area where logs are gathered from surrounding harvest areas, weighed, sorted for species, size and quality, and store until ready for transfer to water storage areas or to market.

LOG STORAGE (IN WATER): : The use of water surface area to store commercial logs prior to or during processing. Water areas used for log dumping or removal are included in this definition.

MAINTAIN: Support, keep, and continue in an existing state or condition without decline.
MANAGEMENT UNIT: A discrete geographic area, defined by biophysical characteristics and features, within which particular uses and activities are promoted, encouraged, protected, or enhanced, and others are discouraged, restricted, or prohibited.
MINOR NAVIGATIONAL IMPROVEMENTS: Alterations necessary to provide water access to existing or permitted uses in conservation management units, including dredging for access channels and for maintaining existing navigation but excluding fill and in-water navigational structures other than floating breakwaters or similar permeable wave barriers.
MITIGATION: The creation, restoration, or enhancement of an estuarine area to maintain the functional characteristics and processes of the estuary, such as its natural biological productivity, habitats, and species diversity, unique features and water quality (ORS 541.626). [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

MARINAS: Facilities which provide moorage, launching, storage, supplies and a variety of services for recreational, commercial fishing and charter fishing vessels. They are differentiated from docks/moorage by a marina's larger scale (greater than 5 berths), the provision of significant landside services and may include a solid breakwater (rock, bulkheading, etc.).

MINING/MINERAL EXTRACTION: : The removal for economic use of minerals, petroleum resources, sands, gravel or other naturally-occurring materials from the shorelands and/or a bed within an aquatic area.

MITIGATION/RESTORATIONMITIGATION: is the creation, enhancement or restoration of an estuarine area to compensate for the biological losses of an intertidal dredge or fill action. (See following definition of "restoration and "enhancement"). Also, as used by certain federal agencies, any action taken to compensate for biological impacts of estuary or shorelands projects as a condition of permit issuance, and not required by Coal #16, but authorized by federal laws or agency policy.

Restoration is the replacing or restoring of original attributes or amenities such as natural biological productivity and aesthetic or cultural resources which have been diminished or lost by past alterations, activities or catastrophic events.

Active restoration involves the use of specific remedial actions such as removing dikes or fills, installing water treatment facilities, or-rebuilding or removing deteriorated urban waterfront areas.
Passive is the use of natural processes, sequences or timing to bring about restoration after the removal or reduction of adverse stresses.

Enhancement is the improvement of conditions in an area which remains under estuarine influence, but has experienced past degradation or reduction in productivity due to obstruction of flow, sedimentation, log debris, etc.

NATURAL RESOURCES: Air, land and water and the elements thereof which are valued for their

existing and potential usefulness to man. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

NATURAL AREAS: Includes land and water that has substantially retained its natural character, which is an important habitat for plant, animal, or marine life. Such areas are not necessarily completely natural or undisturbed, but can be significant for the study of natural, historical, scientific, or paleontological features, or for the appreciation of natural features. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

NAVIGATIONAL STRUCTURES: Pile dikes, groins, fills, jetties and breakwaters that are installed to help maintain navigation channels, control erosion or protect marinas and harbors by controlling water flow, wave action and sand movement.

NAVIGATIONAL AIDS: Beacons, buoys and similar floating, anchored structures requiring no alteration of the estuary.

NOTE: see below for definition of "minor navigational improvement" and "navigational aids".

Minor Navigational Improvements: Removal of obstructions from a channel used for commercial or recreational navigation, whether the authorized channel or a natural channel. This shall include removal of snags, sunken logs and other debris, and shall also include minor dredging for the purpose of "scalping" shoaled areas where necessary to permit commercial or recreational navigation.

Navigational Aids: Beacons, buoys and similar floating, anchored structures requiring no alteration of the estuary.

OCCDC: Oregon Coastal Conservation and Development Commission, created by ors 191; existed from 1971 to 1975. its work is continued by LCDC.: [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

OCEAN FLOODING: The flooding of lowland areas by salt water owing to tidal action, storm surge, or tsunamis (seismic sea waves). land forms subject to ocean flooding include beaches, marshes, coastal lowlands, and low-lying interdune areas. Areas of ocean flooding are mapped by the Federal Emergency Management Agency (FEMA). Ocean flooding includes areas of velocity flooding and associated shallow marine flooding.

PLANNING AREA: The air, land and water resources within the jurisdiction of a governmental agency. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PILING/DOLPHIN INSTALLATION: The driving of wood, concrete or steel piling into the bottom in aquatic areas to support piers or docks, structures, moored floating structures, vessels, log rafts or floating structures.

POLLUTION: The violation or threatened violation of applicable state of federal environmental quality statutes, rules and standards. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PRESERVE: To save from change or loss and reserve for a special purpose. PROGRAM: Proposed or desired plan or course of proceedings and actions. PROTECT: Save or shield from loss, destruction, or injury or for future intended use. PROVIDE: Prepare, plan for, and supply

what is needed. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PUBLIC FACILITIES AND SERVICES: Projects, activities and facilities which the planning agency determines to be necessary for the public health, safety and welfare. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

PUBLIC GAIN: The net gain from combined economic, social, and environmental effects which accrue to the public because of a use of activity and its subsequent resulting effects. QUALITY: The degree of excellence or relative goodness. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RECREATION: Things like boat ramps, toilet and camping or picnic facilities and related improvements? that promote and are used in conjunction with recreational activities. Low-intensity recreation facilities include boat ramps with minimal toilet facilities and similar improvements that are low-intensity in nature. High intensity recreation facilities may include the same types of facilities as low-intensity recreation facilities but are generally more intense in nature and may include large improved parking lots or highly developed picnic or camping areas. High-intensity facilities can include small docks that provide temporary, day-use only, transient boat tie-ups when in conjunction with approved boat ramps.

RECREATION: Any experience voluntarily engaged in largely during leisure (discretionary time) from which the individual derives satisfaction. Coastal Recreation occurs in offshore ocean waters, estuaries, and streams, along beaches and bluffs, and in adjacent shorelands. It includes a variety of activities, from swimming, scuba diving, boating, fishing, hunting, and use of dune buggies, shell collecting, painting, wildlife observation, and sightseeing, to coastal resorts and water-oriented restaurants. Low-Intensity Recreation does not require developed facilities and can be accommodated without change to the area or resource. For example, boating, hunting, hiking, wildlife photography, and beach or shore activities can be low-intensity recreation. High-Intensity Recreation uses specially built facilities, or occurs in such density or form that it requires or results in a modification of the area of resource. Campgrounds, golf courses, public beaches, and marinas are examples of high-intensity recreation. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RESEARCH AND EDUCATIONAL OBSERVATION: Activities such as sampling of water and vegetation, surveying, inventorying, trapping or taking of fish, birds or other animals for the purposes of scientific research or education.

RESIDENTIAL USES: Development of land and structures for human occupancy as living quarters. This category includes conventional single-family dwellings, mobile homes and two-family/multi-family dwellings as permitted by the zoning ordinance.

RESTORE: Revitalizing, returning, or replacing original attributes and amenities, such as natural biological productivity, aesthetic and cultural resources, which have been diminished or lost by past alterations, activities, or catastrophic events. For the purposes of Goal 16 estuarine restoration means to revitalize or reestablish functional characteristics and processes of the estuary diminished or lost by past alterations, activities, or catastrophic events. A restored area must be a shallow subtidal or an intertidal or tidal marsh area after alteration work is performed, and may not have been a functioning part of the estuarine

system when alteration work began. Active Restoration involves the use of specific positive remedial actions, such as removing fills, installing water treatment facilities, or rebuilding deteriorated urban waterfront areas. Passive Restoration is the use of natural processes, sequences, and timing which occurs after the removal or reduction of adverse stresses without other specific positive remedial action.

RIPARIAN: Of, pertaining to, or situated on the edge of the bank of a river or other body of water. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RIP-RAP: A layer, facing or protective mount of stones, concrete rubble, or other hard materials, etc., randomly placed to prevent erosion, scour or sloughing of a structure or embankment.

RIPRAP: A layer, facing, or protective mound of stones randomly placed to prevent erosion, scour or sloughing of a structure or embankment; also, the stone so used. In local usage, the similar use of other hard material, such as concrete rubble, is also frequently included as riprap. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

RURAL LAND: Rural lands are those which are outside the urban growth boundary and are: (a) Non-urban agricultural, forest or open space lands or; (b) Other lands suitable for sparse settlement, small farms or acreage homesites with no or hardly any public services, and which are not suitable, necessary or intended for urban use. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SEDENTARY: Attached firmly to the bottom, generally incapable of movement. SHORELINE: The boundary line between a body of water and the land, measured on tidal waters at mean higher high water, and on non-tidal waterways at the ordinary high-water mark. [Ord. 1472, 1-22-02, Adopted as Chapter 14, Amendments and Definitions]

SHORELINE STABILIZATION: : The protection of the banks of tidal or non-tidal streams, rivers or estuarine waters by non-structural (vegetative) or structural means (rip-rap, bulkheading) (see above for definition of rip-rap,bulkheading).

INDEX

(Ord. 1326 3-94), 143
(Ord.1326, 3-94)., 64
Accretion
  Seasonal, 209
Agriculture, 87, 114, 119, 122
Air, Land And Water Quality, 162
Alaska Earthquake, 171, 251
Amending The Comprehensive Plan, 253
Annexation Configurations, 34
Annexation Ordinance, 36
Annexation Priorities, 36
Annexations
  Comprehensive Plan And Zoning, 36
  Creating County Islands, 35
  Fiscal Impact, 35
  Sewer Connection Requirements, 36
  Street Paving, 35
  Sufficiency Of Infrastructure Systems, 35
  Timing Of, 35
Areas Subject To Natural Disasters, 19
Authority Of Other Agencies, 44, 276, 285
Bandon Bluff, 19
Bandon Cemetery, 217
Bandon Cheese Factory, 119
Bandon Fire, 209, 219
Bandon Fisheries, 66, 115, 119, 160, 162, 195, 199, 207, 217, 218, 219, 220, 294, 298, 303, 308
Bandon Heights, 59, 62, 64, 65, 73, 74, 75, 78, 217
Bandon Heights School, 59, 65, 73, 217
Bandon Lighthouse, 209
Bandon Ocean Wayside, 225
Bandon School District #54, 56
Bandon School District 54, 98
Beach Access, 65, 83, 90, 147, 225, 226
Beach And Dune Erosion, 39, 271, 280
Beach Loop Road, 63, 66, 73, 77, 83, 90, 137, 138, 140, 142, 143, 144, 146, 205, 226
Beach Sand, 165, 209, 223
Beaches And Dunes, 39, 40, 185, 193, 199, 238, 271, 272, 280, 281, 288, 298, 308
Black Oyster Catchers, 169
Blacklock Soils, 114, 147
Blueschist, 86, 165, 222, 224, 225
Bluff, 147, 165, 189, 205, 222, 225, 292
Breakwater Addition, 165, 205, 222, 223
Brewer Building, 54
Buildable Commercial Land In The City, 140
Buildable Industrial Land In The City, 140
Buildable Lands Report, 137
Buildable Residential Lands In The City, 138
Building Trends, 59
Bullards Beach State Park, 66, 72, 158, 208
Bullards Bridge, 66, 74, 114
Bulletin 87, 160, 161, 195, 294, 303
Cable Tv, 98
California Grey Whale, 168, 241
Cape Arago, 208
Capital Improvement Program, 26
Catholic Cemetery, 217
Chapter Ix, 185
Chapter Viii
  Coastal Resources, 163
Chinook Salmon, 107
Citizen Involvement Program, 5, 6, 8
City Parks, 95
City Water Front, 217
City Waterfront, 208
Clatsop Silty Clay Loam, 215
Coaledo Formation, 86
Coast Guard Building, 220
Coastal Erosion Of Headlands, 92
Coastal Headlands, 189, 194, 292, 293, 302
Coastal Resources, 14, 16, 163, 204
Coastal Resources Inventory, 218
Coastal Shorelands, 40, 46, 185, 189, 193, 194, 195, 200, 272, 277, 281, 286, 288, 292, 293, 294, 299, 301, 302, 303, 309
Coastal Shorelands Boundary
  Identification, 194, 293, 302
Coastal Shorelands Boundary
  Identification, 292
  Identification, 189
Coho Salmon, 107
Commercial Activity, 9
Commercial Areas, 62, 68, 69
Commercial Development, 74, 75, 76, 77, 83, 84
Commercial Fishing And Seafood Processing, 115
Commercial Fishinq And Seafood Processing, 119
Commercial Land, 140, 142
Committee For Citizen Involvement, 186, 288

Communication Services, 98
Community Development Block Grant Funds, 66
Conservation Management Units, 196, 198, 295, 297, 304, 306
Continental Shelf, 205, 239, 240
Controlled Development, 68, 71, 83, 138, 140, 142, 145, 147, 165, 200, 222, 299, 308, 309
Controlled Development Area, 71, 83
Controlled Development Areas, 68
Coos County Planning Department, 56, 130, 131, 238
Coos-Curry Council Of Governments, 52, 56, 124, 126, 238
Coos-Curry-Douglas Economic Improvement Association, 56
Coquille Estuary, 197, 211, 215, 216, 217, 218, 241, 296, 305
Coquille Estuary, 159, 188, 267, 268, 269, 270, 291
Coquille Peaty Silt Loam, 215
Coquille Point, 56, 65, 78, 120, 195, 223, 225, 294, 303
Coquille River, 52, 53, 54, 65, 66, 71, 85, 90, 92, 115, 116, 119, 140, 158, 162, 185, 186, 187, 189, 195, 196, 205, 208, 209, 210, 211, 212, 213, 214, 215, 216, 222, 224, 239, 288, 289, 290, 292, 294, 295, 303, 304
Coquille River Estuary, 186, 289
Cormorants, 168
Cranberry Production, 119, 144, 160
Dairying, 115
Department Of Commerce, 57
Department Of Environmental Quality, 56, 57, 162, 241
Department Of Housing And Urban Development, 56, 165, 189, 204, 223, 240, 292
Department Of Transportation, 56, 57
Development On Foredunes, 39, 271, 280
Developments In Steep Slope Areas, 92
Disused Pilings And Snags, 187, 290
Division Of State Lands, 57
Docks And Piers, 44, 276, 285
Dogami, 160, 161
Dollar Steamship Company, 53
Douglas Fir, 121
Douglas Pacific Veneer, 114
Downtown-Woodland Addition, 75
Dredged Material Disposal, 200
Dredged Material Disposal, 46, 277, 278, 286, 287, 299, 309
Earthquakes, 92
Earthquakes, 205
Ecologically And Scientifically Significant Natural Areas, 158
Economic Characteristics, 114
Economic Development, 57
Economic Development, 24
Economic Prospects, 120
Economic Trends And Planning Considerations, 107, 118
Effects Of Dredging, 187, 290
Electric Department, 96
Electricity, 99
Enhancement, 159, 187, 290
Environmental Quality, 57, 71, 162, 223
Erosion
  Seasonal, 209
Erosion, 92, 186, 289
Erosion And Flooding, 43, 275, 284
Estuarine Beaches, 39, 271, 280
Estuarine Fill And Removal, 42, 274, 283
Estuarine Management Units, 196, 197, 201, 202, 295, 296, 300, 301, 304, 305, 309, 311
Estuarine Management Units, 41, 273, 282
Estuarine Mgmt. Unit #4, 202, 301, 311
Estuarine Mitigation, 43, 275, 284
Estuarine Resources, 40, 44, 185, 193, 197, 271, 275, 280, 284, 288, 296, 305
  Analysis Of Compliance (Goal 16), 295
  Analysis Of Compliance (Goal 16), 196
  Analysis Of Compliance (Goal 16), 304
Estuary Classification, 41, 272, 281
Estuary Linkage, 185, 288
Estuary Management, 185, 193, 288
Estuary Physical Description, 205, 210
Estuary Tideflat, 208
Eswd, 45, 70, 195, 199, 200, 201, 276, 277, 285, 286, 294, 298, 299, 300, 303, 308, 309, 310
Face Rock, 60, 65, 225
Findings, 145
Fire, 53
Fire Protection, 98
Fish And Wildlife Habitats, 159
Fish Hatchery, 160
Fisheries, 162, 195, 205, 294, 303
Fishing, 115, 187, 205, 223, 290
Flood Plain, 90, 92, 195, 294, 303
Flooding, 186, 205, 289
Flooding Of Low Lying Areas, 92
Flooding Of The Low Lying Areas, 92
Floodproofing, 137
Flow-Lane Disposal, 202, 301, 311
Foredune, 208, 209, 226
Forest Products, 120
Gar Cemetery, 217
Geiger Creek, 159, 160
General Commercial, 68, 69, 70, 74, 75, 76
General Services, 96

Geographic Setting, 85
Geological Characteristics, 86
Geology Of The Bluff, 224
Goal #16, 193, 196, 197, 295, 296, 304, 305
Goal 16, 40, 140, 146, 201, 271, 280, 300, 310
Goal 17, 40, 189, 199, 272, 281, 292, 298, 308
Goal 18, 163
Goal Statements, 185, 186, 288
Ground Water Programs Or Investigations, 160
Health Services, 98
Heavy Industrial, 68, 70, 74, 76, 77, 200, 299, 308
Heceta Fine Sand, 216
Historical And Archaeological Preservation, 12
Housing, 61, 131
Hurricane Force Winds, 92
Implementation-City Of Bandon, 57
Implementation-Coos County, 57
Implementation-State And Federal, 57
Industrial Areas, 64, 68, 70
Industrial Development, 74, 75, 76, 77
Industrial Land, 135, 140, 143
Inter-Governmental Relations Division (Formerly Local Government Relations, 56
International Cedar Company, 54
Intertidal Dredging, 201, 300, 310
Intertidal Fill, 202, 301, 311
Inventories, 52, 185, 288
Inventory Of Point Sources, 161
Inventory Sections, 185, 288
Jetties And Channel Entrance, 186, 289
Johnson Creek, 63, 83, 90, 92, 189, 196, 225, 292, 295, 304
Juan De Fuca Plate, 169
Justification Of Shorelands Uses/Activities Matrix, 200
Justification Of Shorelands Uses/Activities Matrix, 299, 309
Kronenberg, 65, 225
Land Use, 56, 130, 138, 185, 288
Land Use, 68, 73
Land Use By Area, 73
Lcdc Extensions And Plan Evaluation, 56
Leach's Storm Petrals, 168
Library, 97
Light Industrial, 68, 70, 75, 76, 77
Limitations On Development, 89
Littoral Drift, 170
Longshore Currents, 170
Lord Bennett, 60, 217
Lumber And Wood Products, 114, 118
Management Unit # 1, 199, 200, 298, 299, 308, 309
Management Unit # 10n, 197, 296, 305
Management Unit # 3
Bandon Waterfront, 199, 298, 308
Management Unit # 8
Moore Mill, 200, 299, 308
Management Unit #2c, 196, 295, 304
Management Unit #4d, 196, 201, 295, 300, 304, 310
Management Unit #5c, 196, 295, 304
Management Unit #6c, 196, 295, 304
Management Unit #8c, 196, 295, 304
Management Units # 9 & 10
North Jetty, 200, 299, 308
Management Units #2, #4, #5, #6 & # 17
Shoreland, 200, 299, 309
Marine Activity Areas, 68, 77
Marine And Stream Terraces, 86
Marine Birds, 168, 205
Marine Commercial, 68, 70, 199, 298, 308
Marine Mammals, 168, 205, 270
Masonic Viewpoint, 65, 225
Mitigation/Restoration Sites, 188, 291
Mobile Home Residential, 68, 69, 76, 77, 139
Moore Mill, 54, 217
Moore Mill And Lumber Company, 53
Moore Mill's Truck Shop, 54
Multi-Family Housing, 62
Municipal Court, 98
Natural Estuarine Management Units, 41, 273, 282
Natural Management Units, 197, 199, 296, 298, 305, 307
Natural Resource Areas, 68, 71, 72
Non-City Public Facilities And Services, 98
North American Plate, 169, 224, 251
North Jetty, 208, 209, 210, 212
North Jetty Site, 205, 208, 210
Northern Elephant Seals, 168
Ocean Beach, 65, 137, 165, 223
Ocean Beaches, 39, 271, 280
Ocean Currents, 169, 205
Ocean Fisheries, 107
Ocean Flooding, 89, 137, 194, 293, 302
Ocean Flooding, 170
Oceanview Care Center, 225
Old Town, 62, 63, 66, 69, 90, 115, 136, 140, 219, 221
Open Space, 68, 71, 74, 75, 78, 83, 158, 159
Ord. 1335, 78
Oregon Coast Hiking And Bike Trail, 66
Oregon Islands National Wildlife Refuge, 65, 78, 158, 225, 240
Oregon Natural Heritage Program, 216
Oregon State Highway Division/Department Of Transportation Army Corps Of Engineers, 56
Oregon Wildlife Commission, 56
Oriental Hall, 54

Otter Point Formation, 86
Park And Recreational Facilities, 64, 66
Parks Commission, 65
Pc/Cci, 160
Peregrine Falcons, 168
Periodic Review. *See*
Placenamecoquille Placetyperiver, 189, 292, 301
Plan Implementation, 57
Plan Policies, 185, 288
Planned Residential, 68, 69, 75, 84
Police, 97
Policy Statement Framework, 185, 288
Population, 53, 101, 107, 110, 111, 112, 115
Population Projections, 112, 124, 127
Port Of Bandon, 56, 66, 115, 119, 159, 165, 185, 187, 200, 202, 217, 218, 219, 220, 221, 238, 288, 290, 299, 301, 309, 311
Post-Plan, 56
Potential Annexation Areas, 84
Problem And Opportunity Statements, 185, 288
Prosper, 53
Public Access, 47, 278, 287
Public And Environmental Areas, 68, 71
Public Beach Access Points, 65, 147
Public Facilities, 66, 68, 71, 143, 159, 161, 199, 200, 298, 299, 308
Public Facilities, 94
Public Facilities Planning, 143
Public Services, 96
Quality Of The Economy, 116
Quaternary Alluvium, 86
Reckleff Rock, 53
Recreational, 64, 66, 187, 290
Recreational Needs, 66
Redevelopment Of Waterfront Areas, 47, 278, 287
Research Needs, 188, 291
Residential Areas, 59, 68
Residential Development, 138
Residential Development, 73, 75, 76, 77, 83, 84
Residential Land, 142
Resource Capability, 42, 273, 282
Resource Land Considerations, 144
Resource-Based, 107
Restoration
  Active, 291, 296, 305
  Active, 197
Retail Service Center, 9
Riparian, 71, 194, 195, 277, 286, 293
Riparian, 188, 189, 291, 292
Riparian, 264, 322
Riparian Vegetation, 34, 188, 291
River And The Estuary, 205, 208
Riverine, 186, 188, 289, 291
Riverside Drive, 66, 73, 74, 89, 92, 140, 158, 161, 162, 189, 196, 214, 216, 217, 292, 295, 304
Robertson Concrete Products, 54
Robertson's Concrete, 165, 222
Rogge Lumber, 74, 114
Sanderlings, 169
Sanitary Sewer Facilities, 94
Schools, 98
Seabird Lane, 63, 90, 140, 142, 144, 147
Seaborne Transportation, 205
Sedimentation And Shoaling, 186, 289
Shore Land Management Units
  Designations, 199, 200, 298, 299, 308, 309
Shoreland Overlay, 200, 299, 309
Shorepine, 144, 147, 159, 208, 216, 226
Socio-Economic Analysis, 101
Soil Characteristics In Bandon Area, 89
Soil Limitations And Urban Development, 86
Soil Limitations Map For The Bandon Area, 87
Solid Waste Disposal, 98
South Bandon, 73, 84, 165, 225
South Jetty, 65, 137, 165, 187, 189, 199, 205, 222, 225, 289, 292, 298, 308
South Jetty And The Bluff, 167
South Jetty And The Bluff, 205, 222
Southeast Bandon, 73, 74, 75, 77
Southern Coos Hospital District, 56
Spruce, 159
State Health Division, 56
State Marine Board, 57
Statewide Planning Goals, 5, 41, 43, 47, 185, 198, 273, 274, 278, 282, 283, 287, 288, 297, 306
Steep Slopes, 92
Storm Drainage, 95
Storm Surge, 171
Straight—Line"Projections, 145
Streets, 95
Subtidal Fill, 202, 301, 310
Sunset Motel, 60, 225
Temporary Alterations, 43, 274, 283
The Jetty, 39, 199, 271, 280, 298, 308
The Ocean And Its Influence, 167
The Wind, 92
Tidal Flats, 215
Tidal Influence
  Coquille River, 210
Tides, 205
Timmons Waterfront, 217
Tourism, 115, 120, 121, 187, 290
Tourism And Recreation, 120
Tourist Commercial, 68, 69, 83
Tourist-Based Economy, 107
Trade And Services, 120

Tsunami, 165, 171
Tufted Puffins, 168
Tupper Rock, 53, 165, 222, 224, 225
Turnstones, 169
U.S. Army Corps Of Engineers, 159, 208, 212, 213, 240
United States Fish And Wildlife Service, 158, 218, 225
Urban Growth Area, 130, 140, 142, 143, 144, 145, 147, 199, 298, 308
Urban Residential, 68, 73, 75, 77, 83
Urbanizable, 45, 87, 276
Urbanizable, 201
Urbanizable, 265
Urbanization, 84, 144
Urbanization, 94, 142, 143
Urbanization, 33, 123
Vertical Upwelling, 170
Water Facilities, 95
Water Quality, 186, 211, 289
Water Quality, 186, 289
Water Resources Department, 57
Water Rights, 119, 160
Water—Dependent, 70, 189, 201, 292, 300, 310
Waterfowl Habitat, 187, 290
Waterfront, 54
Water-Related Uses, 189, 194, 197, 199, 292, 293, 296, 298, 302, 305, 308
Watersheds And Groundwater, 159
West Bandon, 54, 64, 73, 77
Wildlife And Scenic Waterways, 162
Wildlife Refuge, 78
Wind, 92, 209, 226
Windborne Currents, 169
Winter Storms, 209
Woodland Heights, 63, 73, 76, 115