

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON

In the Matter of Amending the Columbia County)
Comprehensive Plan and Zoning Ordinance Under)
Periodic Review Work Program Task IV, Goal 5) ORDINANCE NO. 2003-5
Sensitive Lands)

The Board of County Commissioners for Columbia County, Oregon, ordains as follows:

SECTION 1. TITLE.

This Ordinance shall be known as Ordinance No. 2003-5.

SECTION 2. AUTHORITY.

This Ordinance is adopted pursuant to ORS 203.035, ORS 197.628 through 197.646, and OAR Chapter 660, Division 23.

SECTION 3. PURPOSE.

The purpose of this Ordinance is to comply with Periodic Review Work Task IV, Goal 5 Sensitive Lands to revise wetland and riparian protection measures to comply with state "safe harbor" rules, as well as to adopt updated resource maps, and update provisions for threatened and endangered species, sensitive plants, and natural areas.

SECTION 4. HISTORY

In 2001, the Department of Land Conservation and Development approved Columbia County's Amended Periodic Review Work Program for Goal 5 "Sensitive Lands and Habitat". Work Task IV required the County to address five particular areas, as follows: 1) Develop "safe harbor" provisions for Riparian Corridors pursuant to OAR 660-023-090; 2) Develop "safe harbor" provisions for wetlands pursuant to OAR 660-023-100; 3) Review and update Comprehensive Plan Policies and Zoning Ordinance provisions regarding threatened and endangered species; 4) Review and update Comprehensive Plan Policies and Zoning Ordinance provisions regarding sensitive plants, and 5) review and update Comprehensive Plan policies and Zoning Ordinance provisions regarding natural areas.

In response to the Work Program, the County sent proposed text amendments to all of the County Citizen Planning Advisory Commissions. A Technical Advisory Committee was also established to help create the proposed draft amendments. The Committee included agency representatives as well as local citizens. After the draft amendments were finalized by the Committee, Measure 56 notice was mailed on March 14, 2003 and April 27, 2003 to all property owners entitled to Measure 56 notice. The Columbia County Planning Commission held public workshops on April 8, 2003, and May 5, 2003, and held a public hearing in the matter on May

19, 2003. After deliberating in the matter, the Planning Commission recommended approval of the proposed amendments. Commission Chair, Jeff VanNatta, signed Final Order No. TA 03-02, on July 7, 2003.

Notice of Public Hearings before the Columbia County Board of Commissioners was mailed to property owners on June 19, 2003. Notice was also sent to newspapers in St. Helens, Scappoose, Clatskanie, Vernonia, and Longview, Washington. The Board of County Commissioners held public hearings in Clatskanie, Vernonia and St. Helens on July 16, 2003, July 22, 2003 and July 23, 2003, respectively.

SECTION 5. FINDINGS AND CONCLUSIONS

The Board of County Commissioners adopts the findings of fact and conclusions of law in the Revised Staff Report dated June 20, 2003, which is attached hereto as Attachment A, and is incorporated herein by this reference, with the exception of findings # 13, 14, 20, 20, 27-29 and 39.

SECTION 6. AMENDMENT AND AUTHORIZATION.

- A. The Columbia County Comprehensive Plan is amended as shown in Attachment B, which is attached hereto and is incorporated herein by this reference.
- B. The Columbia County Zoning Ordinance is amended as shown in Attachment C, which is attached hereto and is incorporated herein by this reference.
- C. The Columbia County Comprehensive Plan is amended by adding Technical Appendix Part XVI, Article IX, Natural Areas; Article X(A), Wetlands; and Article X(B) Riparian Areas, which are attached hereto as Attachments D, E, and F, respectively, and are incorporated herein by this reference.

DATED this 17th day of September, 2003.

Approved as to Form

By: Sarah Fox
Office of County Counsel

Recording Secretary
By: Jan Greenhalgh
Jan Greenhalgh, Recording Secretary

First Reading: 9-3-2003
Second Reading: 9-17-2003
Effective Date: 12-15-2003

BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON

By: not present
Joe Corsiglia, Chair

By: Rita M. Bernhard
Rita Bernhard, Commissioner

By: Anthony Hyde
Anthony Hyde, Commissioner

ATTACHMENT B

COLUMBIA COUNTY
Goal 5 Periodic Review Worktask
Amendments to the Comprehensive Plan

ADDITIONS ARE IN BOLD
DELETIONS ARE STRICKEN

- Part XVI Goal 5: Open Space, Scenic and Historic Areas, and Natural Areas Resources
- Article I. Purpose of Plan
- Article II. Goal 5 Requirements
- Article III. Overall Goal 5 Policy Statement Concerning Forest Operations
- Article IV. Maps and Attachments
- Article V. Open Space
- Article VI. Surface Mining
- Article VII. Energy
- Article VIII. Fish and Wildlife Habitat
- A. **Big Game Habitat**
 - B. **Columbia White-Tail Deer Habitat**
 - C. **Fish Habitat**
 - D. **Furbearer Habitat**
 - E. **Waterfowl Habitat**
 - F. **Non-Game Wildlife Habitat**
 - G. **Upland Game Habitat**
 - H. **Fish and Wildlife Goals and Policies**
- Article IX. Natural Areas
- Article X. Water Resources
- A. **Wetlands**
 - B. **Riparian Areas**
 - C. **Lakes**
 - D. **Reservoirs**
 - E. **Water Resources Goals and Policies**
- Article XI. Historic and Cultural Areas
- A. **Historic**
 - B. **Cultural Areas**
 - C. **Historic and Cultural Areas Goals and Policies**
- Article XII. Recreational Trails
- Article XIII. Scenic Resources
- Article XIX. Scenic Waterways

ARTICLE I. PURPOSE OF PLAN:

To conserve open space and protect the identified natural and scenic resources in Columbia County as defined by Statewide Planning Goal Five and the related

example, a jurisdiction may choose to identify "significant" riparian corridors using the "safe harbor" criteria under OAR 660-23-090(5) rather than follow the general requirements for determining "significance" in the standard Goal 5 process under OAR 660-23-030(4).

~~The rule~~ **OAR 660, Division 23, explains how Columbia County** must apply Goal 5 when conducting periodic review and amending the Columbia County Comprehensive Plan and land use regulations affecting Goal 5 resources in the County. Columbia County's adopted 1998 revised periodic review work program includes amendments to the Columbia County Comprehensive Plan and implementing ordinances addressing mineral and aggregate resources and sensitive lands and habitats. All amendments to the plan map or zoning map affecting Goal 5 resources shall comply with the following OAR 660, Division 23 procedures, **as follows:** ~~as codified in the Columbia County Zoning Ordinance.~~

1. Inventory the Goal 5 resource using the following steps, as applicable. The nature and extent of the inventory process will depend on the type of Goal 5 resource and the scope of a particular post acknowledgment plan amendment (PAPA) or periodic review work task:
 - a. ~~A.~~ Collect information
 - b. B. Determine the adequacy of information.
 - c. ~~C.~~ Determine significance of the resources.
 - d. ~~D.~~ Adopt a list of significant resource sites into the comprehensive plan consistent with OAR 660-23-030, Comprehensive Plan Administrative Procedures, Policy 5; and Citizen Involvement, Policy 4.

2. Develop a program to achieve Goal 5 for all resources determined to be significant based on **the following:** ~~an analysis of economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit conflicting uses, including the following steps~~
 - a. "safe harbor" provisions (where available); or
 - b. **An analysis of economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit conflicting use using**

3. Promote conservation of soils, wetlands, beaches, or tidal marshes;
4. Conserve landscaped areas, such as public or private golf courses, that reduce air pollution and enhance the value of abutting or neighboring property;
5. Enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries, or other open space;
6. Promote orderly urban development.

An open space system may be developed as a base for land use to preserve natural features and resource land, eliminate waste and pollution, and make more useful and valuable those spaces involving development and building.

B. INVENTORY:

The borders of Columbia County stretch from the low mountainous Coast Range in the southern and western sections of the County, over rolling hills and fingers of river valleys, to the reaches of the Columbia River on its northern and eastern edges. Approximately ninety (90) percent of the **Six hundred and seventy-six (676)** square miles contained within this area is comprised of lands in forest, farm, recreational, or other open space use. About thirty (30) square miles are covered by water.

C. POTENTIAL CONFLICTING USES:

The major conflicting uses affecting the open space value of forest and agricultural land are the expansion of rural residential, commercial, and industrial development. These uses convert valuable resource land for other purposes. They also impact and degrade adjacent resource lands and the ability of these lands to protect water quality, conserve soils, and perform other functions.

Specific open space resources, such as wetlands, **riparian corridors**, the Willamette River Greenway, natural areas, scenic features and parks, which exist in the County, are addressed in other sections of **Part XVI of the Comprehensive Plan** ~~this report~~. A discussion of conflicting uses and measures for their resolution can be found in the section pertaining to each particular resource.

D. ECONOMIC, SOCIAL, ENVIRONMENTAL, AND ENERGY CONSEQUENCES:

1. Economically, limiting conflicting uses for open space values is beneficial. Forest and farm uses are significant contributors to the

residential resource areas.

OPEN SPACE

F. OPEN SPACE GOALS AND POLICIES

GOAL:

To conserve open space in Columbia County.

POLICIES: It is the policy of the County to:

1. Recognize the economic and aesthetic value of open space as it relates to planning for agriculture, forestry, wetlands, and other open space resources.
2. Encourage the design of residential development to include park areas and corridors of open space along streams, waterways, cliffs, and other special features by using clustering and other development techniques.
3. Recognize the need for public access to the Columbia River and other scenic and recreational features. The County will work with commercial, industrial, and residential developers to promote public use and provide public access to these features whenever possible.

ARTICLE VI. SURFACE MINING

ARTICLE VII. ENERGY

ARTICLE VIII. FISH AND WILDLIFE HABITAT

C. FISH HABITAT

1. DEFINITION-PROTECTED FISH:

Three groups of fish have been identified in the for Fish and Wildlife Protection for in Columbia County by the Oregon Department of Fish and Wildlife. These are:

- a. 1-Anadromous fish - fish which begin life in freshwater, rear to maturity in saltwater, and return to freshwater to spawn. Anadromous fish include coho and fall chinook salmon, winter steelhead trout, and sea-run cutthroat trout.
- b. 2-Resident trout - freshwater fish including rainbow and

- f. ~~6.~~ Mining and filling practices which change the structure of the stream channel may destroy spawning and rearing habitat in streams and rivers.

7. SUMMARY:

Habitat for fish exists in the lakes, rivers, and streams of Columbia County. **All streams designated by the Oregon Department of Forestry as “fish-bearing” and all lakes identified in “Lakes of Columbia County” are significant for purposes of Goal 5. In addition, all riparian areas listed in Article X(B) of Comprehensive Plan, Part XVI are significant fish habitat.** Potential conflicting uses affect habitat quality in a number of ways: by removing vegetation, introducing pollutants, creating obstructions to fish passage, reducing streamflow levels, ~~or by~~ **destroying spawning and rearing habitat, or by reducing water quality by increased temperatures and sediments.** The consequences of these conflicting uses have been determined in the Riparian Area portion of this report.

Many of the activities that affect a stream or lake and reduce fish habitat are subject to state and federal regulations. The County will rely on implementation of these programs to protect fish habitat. **In addition, the County will adopt “safe harbor” provisions within the Columbia County Zoning Ordinance (CCZO), Riparian Corridor Overlay Zone and Wetlands Overlay Zone to provide protection for additional significant habitat, including streams, wetlands and lakes, thereby providing protection for all significant fish habitat.** ~~In addition, the County will adopt a program to limit conflicting uses and protect riparian and wetland vegetation.~~ Policies will be adopted to encourage the acquisition of access both to and along rivers, streams, and lakes for the release of fish and recreational enjoyment of County residents.

D. FURBEARER HABITAT

1. LOCATION:

Furbearers include both aquatic forms of wildlife such as beaver, muskrat, mink, and otter, and terrestrial forms such as skunk, fox, and bobcat. **They Furbearers** require the open space associated with forest, agriculture, and other resource lands **uses.** However, their important habitat areas ~~include~~ **are** wetlands, ponds, lakes, swamps, streams, and riparian vegetation associated with these water bodies.

Waterfowl habitat areas have been identified in Columbia County by the Oregon Department of Fish and Wildlife, **as shown on the 1995 Beak Consultants Map entitled, "Wildlife Game Habitat"**. These areas lie near the Columbia River and hold standing or slowly moving water **during** at least part of the year. ~~They~~ **The areas** provide ideal nesting, feeding, and resting habitat for waterfowl. Wet agricultural areas are also important waterfowl habitat. ~~Often these farmlands~~ **agricultural areas** are flooded in the fall and winter and attract large numbers of migrating birds.

2. QUALITY:

The numerous wetlands, sloughs, rivers, and agricultural lands in Columbia County provide excellent habitat for waterfowl. During late fall and early winter, thousands of migrating birds ~~transcend~~ **visit** on the Columbia River flood plain and Sauvie Island. Crops planted in managed game areas and on private agricultural lands feed this waterfowl population and the intricate network of sloughs and drainage ditches provides provide refuge.

3. QUANTITY:

The majority of that land ~~once~~ within the natural flood plain of the Columbia River is ~~considered~~ habitat for waterfowl.

4. POTENTIAL CONFLICTING USES:

Areas identified as waterfowl habitat are primarily zoned for agricultural use. In addition, the north end of the Scappoose Bay ~~area~~ contains valuable gravel deposits and **are zoned for surface mining**. ~~has been placed in a surface mining reserve zone~~. Port Westward, a designated industrial area because of its deep-water access on the Columbia **River**, is also within the area identified as habitat for waterfowl.

Activities that are potential conflicts with waterfowl are:

- a. ~~1:~~Filling, draining, or tilling of wetlands;
- b. ~~2:~~Removal of riparian vegetation or other vegetation that serves as nesting, feeding, or resting habitat;
- c. ~~3:~~Conversions of sloughs, flood plains, and swamp areas to other uses;
- d. ~~4:~~Springtime **waterfowl** damage to pasture and grain fields. ~~by waterfowl.~~

Multnomah Channel in T4N, R1W, SE 1/4 of the NE 1/4 of Sec. 20. The property is owned by Oregon State and the site was discovered in 1983.

2. ii. Nest is located in a Douglas Fir tree, on a bluff opposite the downstream end of Walker Island in T8N, R3W, SE 1/4 of the NW 1/4 of Sec. 28 near Mayger, Oregon. The property is in private ownership.
 3. iii. Two nest trees are located on a timbered hill overlooking Hwy. 30 in SE 1/4 of the SE 1/4 of Sec. 1, R5W, T7N. The property is in private ownership.
 - iv. **Any additional nests identified by ODFW in the future, or listed on the Bald Eagle Nest Survey conducted by the Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University, Frank Isaacs & Bob Anthony, as amended.**
- b. Blue Heron Nest Rookery:
4. i. Rookery is located on Deer Island along Deer Island Slough in NW 1/4 of the NE 1/4 of Sec. 30, T6N, R1W. The property is in private ownership.
 - ii. **Any additional nest rookeries identified by ODFW in the future.**
- c. Northern Spotted Owl Nests:
4. i. Nest area is located along Cedar Creek in Sec. 1, T4N, R3W on BLM land.
 2. ii. Nest area is located along Cedar Creek in Sec. 7, T4N, R2W on BLM land.
 - iii. **Any additional nest areas identified by ODFW in the future.**

2. QUALITY:

The Northern Bald Eagle and the Northern Spotted Owl are both ~~considered~~ **listed** as threatened species by the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife Service. A threatened species is defined as a species that is likely to become endangered within the foreseeable future through all or a significant portion of its range. ~~Since~~ **Because** the nest and the area adjacent to the nest are

these animals are on forest and agricultural lands where a diversity of vegetation and land features can be found. The County will adopt a program to limit conflicting uses in ~~critical~~ **significant** habitat areas. In addition, specific **significant** nesting and roosting sites were identified by the Oregon Department of Fish and Wildlife within Columbia County for the Bald Eagle, Great Blue Heron, and Northern Spotted Owl. Some of these sites are located on forest lands and are threatened by forest practices. The County will rely on the Cooperative Agreement between the Board of Forestry and the Oregon State Fish and Wildlife Commission and on coordination provided by the Forest Practices Act to resolve conflicts for sensitive nesting habitat on forest land from forest operations. For ~~sensitive~~ **significant** nesting habitat on forestland used for ~~non-forest~~ other purposes, and for the other ~~future~~ identified nest sites **the County will apply the Sensitive Bird Habitat Overlay Zone. In addition, the County will apply, when appropriate, Goal 5 “safe harbor” provisions for riparian corridors and wetlands as adopted in the Riparian Corridor and Wetland Overlay Zones of the Columbia County Zoning Ordinance. Development and projects for which permits or other land use decisions are required within the Sensitive Bird Overlay Zone shall be coordinated with ODFW. The County shall periodically consult annually with ODFW to obtain the most current inventory of Non-Game Wildlife Habitat**, ~~adopt measures to limit conflicting uses and protect the resources.~~

G. UPLAND GAME HABITAT

1. LOCATION:

- a. Upland game birds in Columbia County are found on forest and agricultural lands. Their optimum habitat contains a diverse mixture of vegetation that provides nesting, feeding, resting, and escape areas.
- b. According to the Fish and Wildlife Protection Plan for Columbia County created by ODFW, there are two types of upland game birds, 1) those that require forest lands; and 2) those that utilize agricultural lands. The forest species includes band-tailed pigeons, blue grouse, ruffed grouse, and mountain quail. Optimum habitats for these birds are patchworks of clear cuts, fields, timber, brush, and water. Species found in agricultural areas include valley quail, morning dove, and ring-necked pheasant. These birds often use brushy edges, fencerows, ditches, and wood lots adjacent to grain producing areas or old fields of seed-producing grasses and herbs.

of the **identified** springs.

3. ECONOMIC, SOCIAL, ENVIRONMENTAL, AND ENERGY CONSEQUENCES:

Positive social and environmental consequences will result from restricting conflicting uses in upland game habitat areas. Birds, such as the band-tailed pigeon, will continue to nest, breed, and feed in the County and provide sport for hunters and other outdoor enthusiasts. However, if certain farming, forest, and residential practices are restricted, property owners may experience economic and/or social hardship because of lost opportunities.

4. FINDINGS:

Potential conflicts could reduce the amount of habitat **available** for upland game birds in Columbia County, if not restricted. However, restrictions must be applied carefully to have minimal impact on existing land use practices. Therefore, the County will adopt programs to limit conflicting uses in **critical significant** habitat areas including the identified pigeon mineral springs **by applying the Sensitive Bird Habitat Overlay Zone, where appropriate.**

H. FISH AND WILDLIFE HABITAT GOALS AND POLICIES

GOAL:

To protect and maintain important habitat areas for fish and wildlife in Columbia County.

POLICIES: It is the policy of the County to:

1. Encourage the provision and acquisition of public access both to and along rivers, streams, and lakes for the release of fish and recreational enjoyment of County residents.
2. Protect significant nesting habitat from the adverse effect of logging and other land use practices.
3. Manage its spraying programs to minimize adverse effects on water quality and fish and wildlife habitat.
4. Support preferential taxation methods and density transfers to encourage retention of riparian habitat, brushy fencerows, and wetlands on private lands.

uses:

- ~~B. Limiting development in major and peripheral habitat areas to a density recommended by the Oregon Department of Fish and Wildlife. Where densities of 1 unit per 38 acres in major habitat, or 1 unit per 19 acres in peripheral habitat, are allowed, dwellings shall be sited using clustering technique. Clustering incorporates all of the following, as applicable to the situation:~~
- ~~1) Locating dwellings and structures near each other and existing roads;~~
 - ~~2) Locating dwellings and structures to avoid habitat conflicts and utilize least valuable habitat areas; and~~
 - ~~3) Minimize road development to that necessary to support the residential use.~~
- ~~C. Requiring that areas disturbed for residential use in critical habitat areas be re-vegetated with natural plantings within a reasonable time after vegetation removal.~~
- ~~D. Limiting non-forest and non-farm dwellings within major and peripheral habitat areas to individual lots or parcels where it can be shown that:~~
- ~~1. The dwelling shall be located to avoid habitat conflicts and utilize least valuable habitat areas;~~
 - ~~2. The site shall be limited in size to that area suitable and appropriate for residential use; and~~
 - ~~3. Road development shall be the minimum necessary to support residential use.~~
 - ~~4. Dwelling density shall not exceed that defined in (B.) above.~~
- *****
- 12.** ~~13:~~ Designate as impacted those "built and committed" areas which, because of existing levels of land use, are no longer considered viable big game habitat. Areas zoned Rural Residential have densities exceeding the Oregon Department of Fish and Wildlife acceptable density standards and are considered impacted.
- 13.** ~~14:~~ Require the Owner or occupant of a dwelling sited in major or peripheral habitat to assume the responsibility for protecting the property from wildlife damage.

have been identified as being significant in this Comprehensive Plan. The Oregon State Register of Natural Heritage Resources is attached hereto in the Technical Appendix Part XVI, Article IX, and is incorporated into the Comprehensive Plan by this reference. The two Natural Area ecosystems listed in the State Register that are in Columbia County are the Coast Range and Willamette Valley Ecosystems.

According to the Oregon State Register of Natural Heritage Resources, there are currently four (4) public Natural Areas located partially or wholly within Columbia County. They are listed below. However, the Oregon State Register of Natural Heritage Resources is a dynamic document that is amended regularly. While a list of current sites is provided below, the official inventory of significant public Natural Areas shall be the Oregon State Register of Natural Heritage Resources, as amended. In other words, the proper course of action when determining whether a public site is a significant Natural Area is to refer to the Register list in affect at the time the question is posed. Significant privately owned Natural Areas in Columbia County can be identified by contacting the Nature Conservancy.

~~In 1976, The Nature Conservancy conducted an inventory of potential ecologically significant natural features in Columbia County. This information was acquired with the intention of gaining protection of these resources through tools such as land acquisition, land use planning, and the dedication of preserves. This resource information has recently been reviewed and reworked by the Nature Conservancy and Columbia County. Sites have been determined (1A), (1B), or (1C) based on this more recent information. The following sites, shown on Map 46, have been found to be ecologically significant natural areas in Columbia County and are classified (1C):~~

1. Prescott and Carr Sloughs

Location: T7N, R2W, S35 and 26

Quality: Sloughs comprise a large Wapato marsh and provide a natural contrast to the manicured grounds of the Trojan Nuclear Plant. Wapato is a rare plant that was once an important food source for the Native American Indians. At one time, Wapato was widespread and common in lakes, ponds, and sloughs of the Columbia and tributaries, but dikes, fills, agriculture, and grazing have decimated its habitat. This is one of only a few known riparian sites with good populations of Wapato. All other Oregon sites, for which information is available, have very small populations, heavy disturbance, or both. This Wapato wetland provides an opportunity to study native wetland habitat in conjunction with similar altered

3. Wallace Island
4. Big Eddy Park
5. Grims Island
6. Conyers Creek Pigeon Springs
7. Glatskanie Pigeon Springs
8. Dutch Canyon Pigeon Springs
9. Anunde Island

The remaining inventory of the Inventory List of Natural Areas in Columbia County, as defined by the Oregon Natural Heritage Program, are adopted as (1B) sites. Information pertaining to their natural character is presently unavailable to determine their natural significance.

C. POTENTIAL CONFLICTING USES:

Three of the four sites listed above are found to be ecologically significant natural areas in Columbia County are zoned Primary Agriculture (PA- 38). In addition, Prescott and Carr Sloughs, the Scappoose Bay Inlet, and "Millionaire Lake" are considered Significant Wetland Areas and covered by the Wetland Area (WA) ~~overlay zone~~ **Overlay Zone**. Millionaire Lake is within the Sauvie Island Wildlife Management Area and is zoned Community Service Recreation. Potential conflicting uses for natural areas **Natural Areas** are uses which convert the natural area **Natural Areas** for other purpose uses, or otherwise disturb those site conditions necessary to support the significant resource. Potential conflicts include agricultural practices, such as livestock grazing and crop production, draining and filling of wetlands, and other activities which alter vegetation in the natural area.

D. ECONOMIC, SOCIAL, ENVIRONMENTAL, AND ENERGY CONSEQUENCES:

1. Economic: If agricultural practices in and surrounding natural areas in Columbia County were severely limited, negative consequences would result. The County depends on these practices both for tax revenue and for job opportunities. Maintaining efficient operations is a high priority for the County. However, job opportunity and income are also received from protecting these sites as educational and recreational resources and must not be overlooked.
2. Social: If conflicting uses are allowed in natural areas, the

POLICIES: It shall be the policy of the County to:

1. **Protect ecologically significant natural features and areas by restricting land use activities which may degrade their unique characteristics** ~~Protect the significant character of identified natural areas~~ and direct incompatible land uses away from **such sensitive areas**.
2. Cooperate and coordinate with public and private agencies, such as The Nature Conservancy, to advise land owners of the natural area's value and secure their cooperation in applying the appropriate strategy for its protection.
3. Apply the most appropriate program for protecting the unique characteristics of an area including the use of techniques such as fee acquisition, land trades, conservation easements, and management agreements.
4. Coordinate with citizens and public and private agencies to **identify inventory-potentially significant Natural Areas in Columbia County which might have been overlooked by the Oregon State Register of Natural Heritage Resources or the Nature Conservancy and advocate for their inclusion as a significant natural area.** ~~particularly those sites presently identified as (1B) sites, and protect the unique features of these sites through application of the Goal 5 rule:~~
5. Notify The Nature Conservancy and other appropriate reviewing bodies of actions proposed within natural areas. ~~so that they may determine the potential impact upon the site.~~

ARTICLE X. WETLANDS-WATER RESOURCES

A. WETLANDS

1. DEFINITION:

Wetlands are primarily lowlands covered by shallow and sometimes temporary or intermittent waters. Often they are referred to as marshes, bogs, swamps, wet meadows, sloughs, and overflow lands. Plant and animal communities in wetlands are dependent on at least periodic saturation by water.

~~For the purpose of this report Comprehensive Plan, a significant wetland in Columbia County is defined as follows:~~

A significant wetland is **typically** an area that is inundated or

wetlands are defined under the County's definition of riparian areas as adjacent shrub, forested, or emergent wetlands.

~~3. Areas outside of the identified wetland areas containing minor, isolated wetlands:~~

~~These wetlands have been inventoried on maps as part of the National Wetland Inventory but no other information pertaining to their quality or quantity is presently available to determine their significance. These wetlands have been determined (1B) sites:~~

3. QUALITY:

Wetlands in the Identified Wetland inventories Areas were have **historically been** found to be of good or excellent wetland quality by the Oregon Department of Fish and Wildlife. The quality of wetlands adjacent to or found in conjunction with rivers and lakes is addressed in the analysis of riparian vegetation, **below**. ~~found later in this goal five report.~~

4. QUANTITY:

All wetlands identified in the SWI and/or LWIs are significant for the purposes of Goal 5.

5. POTENTIAL CONFLICTING USES:

Many significant wetlands in Columbia County are surrounded by lands zoned for forest, industrial, rural residential, surface mining, and primarily agricultural use. They serve as habitat for recreationally important waterfowl and wildlife, **act as** sites for groundwater aquifer recharge, provide flood control, and filter out pollutants. Generally, conflicts arise when wetlands are filled, drained, or otherwise altered in a manner that reduces their biological value. In Columbia County, potential conflicting uses for wetlands are the expansion of agricultural, industrial, surface mining, and residential activities into sensitive wetland areas. ~~Specifically, potential conflicting uses are identified within three of the Identified Wetland Areas: the proposed mining of aggregate resources in the Rest Lake Area, the expansion of industrial activities at Port Westward, and the development of industrial facilities in the Prescott area.~~

Significant wetlands adjacent to or found in conjunction with rivers, streams and lakes are protected using the "safe harbor" provisions of Goal 5 for riparian areas and wetlands. A more detailed analysis of these protection provisions can be found in Comprehensive Plan Article X(B) - Riparian Areas. ~~Other significant wetlands are addressed using the standard ESEE~~

but it will protect other functions of the wetland ecosystem as well. These sites act as areas for aquifer recharge and provide natural flood control by storing waters during winter months and releasing them in the summer when they are needed.

Loss of wetlands, through industrial or other land-use expansion, would have negative environmental consequences. Their activities would destroy vegetation and water quality now supporting waterfowl, fish, and many small animals.

Energy:

The regulation of development within and around wetlands will save energy resources in the County. Energy resources, which may have been used to fill, drain, transport materials, or otherwise develop wetlands, can be used more cost-effectively in other areas of the County.

7. Findings:

Columbia County contains abundant wetlands within its boundaries. Many of these **wetlands** lie along the Columbia River within the old flood plain area and are now surrounded by lands in agricultural use. It is often possible to protect these wetlands and to resolve potential conflicts with other land use activities. To ~~accomplish this objective~~ **protect these wetlands**, the County ~~will~~ **has** developed an overlay zone to protect the Identified Wetland Areas from filling, draining, or other alterations which would degrade their biological value. The majority of the areas containing wetlands are zoned for agricultural use. Activities allowed in this zone will be restricted so as to protect wetland values. ~~However, minor drainage improvements will be allowed.~~

~~Specific potential conflicting uses were identified for three of the Significant Wetland Areas defined by the Department of Fish and Wildlife. These are 1) the proposed mining for aggregate resources in the Rest Lake Area, 2) the expansion of industrial activities at Port Westward, and 3) the development of industrial facilities in the Prescott area. However, upon closer examination of those portions of the Identified Wetland Areas for which potential conflicts are proposed, no characteristics identifying a wetland as defined by this report have been found. Only those wetlands adjacent to or found in conjunction with rivers and lakes, and therefore protected as riparian vegetation, still exist on the conflict sites. It has also been found that allowing conflicting uses will have a positive impact on the economy in Columbia County. For these reasons, the sites will be excluded from the Identified Wetland Areas on the overlay zone, and those wetlands~~

south, and east.

SIZE: Approx. 2,000 acres ZONING: Agriculture, Rural Residential, Surface Mining

SITE DESCRIPTION: The majority of this area has been developed in the past for agricultural purposes. It contains one large lake, Rest Lake, and is crossed by Jackson Creek, Santosh Slough, Evans Slough, and small drainage ditches. The area also contains a string of wetland[s] near the City of Scappoose Sewage Treatment Plant. A healthy cover of emergent and forested wetland vegetation has developed within and adjacent to portions of these wetlands and encourages the use of many kinds of waterfowl and other wildlife.

Underlying the area is a large reserve of aggregate resources. Already a proposal to mine 700 acres within the area has been submitted for approval. Presently, the area to be mined is in agricultural use and contains no wetlands except those found in conjunction with streams and sloughs. Therefore, this portion of the 700-acre site has been excluded from the Wetland Area. Jackson Creek and Rest Lake, which lie to the east of the proposed aggregate site, have remained within the Wetland Area.

WETLAND AREA SITE 4

AREA: Santosh Slough

LOCATION: T4N, R1W, S20, 29, 30, 31, 32. The area is bordered on the east by the dike road next to Santosh Slough, to the west by the BN railroad, and on the south by Dike Road.

SIZE: 2,000 acres + ZONING: Agriculture

SITE DESCRIPTION: Here is the wettest portion of the Scappoose Wetland Area. It contains numerous shallow lakes and marshes, and is crossed by Scappoose Creek.

Much of this area remains inundated throughout the year and has developed a healthy emergent and forested wetland vegetation cover. This wetland area attracts migrating waterfowl and many other wildlife species. Activities which fill, drain, or otherwise alter wetland characteristics in this area are potential conflicting uses.

WETLAND AREA SITE 5

AREA: Deer Island

~~SITE DESCRIPTION: The majority of the site consists of agricultural bottomlands crossed by many sloughs and drainage ditches. Most of the wetlands in this area have been drained and filled in years past and are now in agricultural use. However, a number of birds and other wildlife animals are still attracted to the area. Today Palustrine forested and emergent vegetation is restricted primarily to the banks of the sloughs, ditches, and Columbia River. However, generally only areas along the Columbia River and major sloughs still contain tree growth.~~

~~The northern portion of the site is Port Westward, an industrial development operated by PGE. The reserved zone for future industrial development within this area is presently in agricultural use. The only present wetland habitat lies along the Columbia River.~~

~~WETLAND AREA SITE 8~~

~~AREA: Deer Island Pond~~

~~LOCATION: T5N, R1W, S6. Area is west of Hwy. 30, 1/2 mile north of Canaan Road.~~

~~SIZE: Approx. 10 acres ZONING: Agriculture~~

~~SITE DESCRIPTION: The pond is approximately ten acres in size. It is bordered on the west by agricultural land, Hwy. 30 on the east, and by wooded area on the south.~~

~~Riparian vegetation exists around much of the pond which attracts a variety of birds and other wildlife including the black-tailed deer.~~

~~WETLAND AREA SITE 9~~

~~AREA: Glatskanie Flats~~

~~LOCATION: T7N, R5W, S1-6 and T8N, R5W, S31-36. The area is bordered on the north by the Columbia River, on the south by U.S. Hwy. 30, east by Glatskanie Slough, and west by county line.~~

~~SIZE: Approx. 4,800 acres ZONING: Agriculture, Forest~~

~~SITE DESCRIPTION: The area contains very low lowlands, parts of which have been converted for agricultural use. It is crossed by many sloughs and ditches. This combination of wet agricultural lands and waterways has made the area attractive to migrating birds and other wildlife including the endangered white-tailed deer. Areas along sloughs and ditches are partially vegetated by stands of Cottonwood, willow, Ash, and Alder, but for the most part, tree cover remains only along the major sloughs, the Columbia River, and in patches of forested land. Activities which propose to fill, drain, or~~

except as identified in subsection (e) below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.

- c. Fish-Bearing and Non-Fish Bearing Streams (Greater than 1,000 cfs). Along all streams and rivers with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75-foot upland from the top-of-bank, except as identified in subsection (e) below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
- d. Other Rivers, Lakes, Streams and Sloughs. Along all other non-fish-bearing rivers, streams, sloughs, intermittent creeks, or other waterways, the riparian corridor shall be 25-foot upland from the top-of-bank, except as identified in subsection (e) below.
- e. Wetlands. Where the riparian corridor includes all or portions of a significant wetland, as identified in the State Wetlands Inventory and Local Wetlands Inventories, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland.

~~1. For all Class I rivers and streams, the riparian area shall extend 50 feet landward of the ordinary high water line except where shrub or forested wetlands are located adjacent to the river, then the riparian area shall be the entire area of shrub or forested wetland. Where emergent wetland vegetation exists adjacent to a river, the 50 feet shall be measured from the landward extent of the emergent vegetation.~~

~~2. For lakes and reservoirs, the area of riparian vegetation shall extend 50 feet from the ordinary high water line except where emergent wetland vegetation exists adjacent to a lake, then the 50 feet shall be measured from the landward extent of the emergent vegetation.~~

~~3. For all other rivers, streams, and sloughs, the area of riparian vegetation shall extend 25 feet landward of the ordinary high water line except where shrub and forested wetlands are located adjacent to the river, then the riparian area shall be the entire area of shrub or forested wetland. Where emergent wetland vegetation exists adjacent to a river, the 25 feet shall be measured from the landward extent of the emergent vegetation.~~

~~Class I rivers and streams are shown on Map 47 and defined as waters~~

degrade water quality; **shades water, reducing water temperature,** and it stores waters during high flows which might result in downstream flooding.

Sixty-five miles of river and stream banks in the County have moderate erosion problems. These include the Columbia, Nehalem and East Fork of the Nehalem River, Deep Creek, Deer Creek, Milton Creek, Clear Creek, North and South Scappoose Creek, and the Multnomah Channel.

5. QUANTITY:

Columbia County contains an abundance of **water bodies and their accompanying riparian corridors.** ~~riparian vegetation upon the banks of its many rivers, streams, lakes, wetlands, sloughs, and other water bodies.~~ **All riparian areas identified in Article X (B)(1) above are significant.**

6. BACKGROUND AND INFORMATION POTENTIAL CONFLICTING USES

- a. Three major land use activities which take place within and adjacent to riparian areas are potential conflicting uses. These **activities** are forest practices, agricultural practices, and the development of residential, commercial or industrial **sites activities:**
- i. Forest practices may impact the riparian area if **vegetation is removed during** ~~through~~ the harvest of timber, **or if toxic chemicals are introduced or road constructed.** ~~introduction of toxic chemicals, or construction of roads.~~
 - ii. Agricultural practices within this area may cause damage **if riparian areas are converted** ~~by converting riparian areas to~~ from crop production, **or damaged by** ~~through~~ improper **chemical application and/or** livestock grazing techniques.
 - iii. Residential, commercial, and industrial development may affect the riparian area in a number of ways, **if: riparian vegetation is removed;** ~~by removing riparian vegetation and~~ disturbing soils either within the riparian area or on adjacent slopes **are disturbed; adjacent lowlands are filled;** ~~by filling in adjacent lowlands, by~~

Energy

Limiting conflicting uses in the riparian area will also be beneficial **for energy purposes**. Less energy will be spent trying to rectify erosion and flooding damage caused by development within the riparian area.

7. Findings:

- a. Areas along rivers, streams, sloughs, lakes, and other water bodies in Columbia County serve a number of purposes which include providing fish and wildlife habitat, flood control, and bank stabilization. ~~They~~ **These areas** are also desired sites for residential, commercial, and industrial development and **are** affected by agricultural and forest practices.
- b. High amounts of sedimentation, debris accumulation, **poor water quality**, elevated water temperatures, and nuisance algae growth are problems ~~whose growth is~~ **which are** often directly related to the degradation of the riparian areas. ~~They~~ **The problems** are often caused by streambank erosion and the removal of riparian vegetation, and **are** compounded by each other. These problems, as shown in the Air, Land, and Water Quality section of the Plan, can affect a wide array of uses, including water supplies, irrigation, fish and aquatic species habitats, recreation, and aesthetics. ~~Negative economic, social, environmental, and energy consequences are associated with the loss and limitation of these uses.~~
- c. The majority of the potentially conflicting land use activities are regulated by state and federal agencies. For instance:
 - i. Reduced water quality related to non-point source pollution from agricultural practices is controlled by the State Soil and Water Conservation Commission.
 - ii. Maintenance of streamflow levels for fish productivity is the responsibility of the State Water Resources Department ~~that~~ **which** appropriates water rights. The Oregon Department of Fish and Wildlife has identified minimum levels of streamflow necessary for production of fish habitat.
 - iii. Forest practices which impact the riparian area are regulated under the Forest Practices Act by the Department of Forestry.

County shall be as published in the publication "Lakes of Oregon, Volume One, Clatsop, Columbia, and Tillamook Counties," prepared by the U.S. Department of the Interior, Geological Survey of 1973. ~~The This~~ **publication** inventory includes twenty-two (22) lakes in **Columbia County** ranging from Lindsey Lake, with a surface area of .5 acres and depth of up to 15 feet, to Sturgeon Lake, with a surface area of 3200 acres and an average depth of 2 feet. The ~~document~~ **publication** contains a description of each lake's location, size, and general characteristics, including water quality data and temperature. ~~lake locations are shown on Map 47.~~

2. **For purposes of the lake inventory, all lakes depicted on the map, "Lakes of Columbia County" publication are fish-bearing and significant. The riparian area setbacks established in Article X(B) - Riparian Areas shall be applied through the Riparian Corridor Overlay zone and the Wetland Overlay Zone.**

3. **BACKGROUND POTENTIAL CONFLICTING USES:**

In Columbia County, lakes are located in areas zoned for forest, agriculture, and community service recreation. Generally, the potential conflicting uses for lakes are the same as those for riparian habitat. Conflicts often occur from forest practices that remove riparian vegetation, disturb soils on adjacent uplands, and increase sedimentation. Agricultural practices cause conflicts when they convert riparian vegetation for crop production or employ improper live-stock grazing techniques. The lakes located in community service recreation areas are County or State Parks. Conflicts in these areas ~~arise from~~ **are** the construction of docks and floats, filling or dredging, removal of riparian vegetation, and chemical or biological water pollution. Conflicts also arise when houses are sited in the riparian area and/or disturb riparian vegetation.

~~ESEE CONSEQUENCES:~~

~~A determination of the ESEE consequences of these conflicting uses is provided in the Riparian Area section of this report. In addition, conflicting uses may have negative social consequences. They may affect water quality to an extent where enjoyment from swimming and other recreational activities is decreased.~~

4. **FINDINGS:**

Many of the identified conflicting uses are regulated by State agencies: The Army Corps of Engineers and Division of state Lands oversee filling, dredging, and construction activities; the Forest

2. Coordinate its actions with water quality planning and implementation activities carried out by ~~such~~ State agencies **as including** the Department of Environmental Quality, the Soil and Water Conservation Commission, the Department of Forestry, and the Department of Water Resources.
3. Protect areas significant for the recharge of groundwater resources such as wetlands and riparian areas.
4. Cooperate with appropriate State and Federal agencies to inventory and assess groundwater resources and their uses and establish standards to protect and maintain these natural resources.
5. Protect groundwater supplies in rural, agricultural, and forest areas through large minimum lot densities.
6. Cooperate with appropriate State and Federal agencies to monitor the quality and levels of groundwater resources in the County.
7. Work with appropriate State and Federal agencies to address the economic, social, environmental, and energy consequences of developing potential surface storage reservoirs in the County, including those sites ~~presently~~ **that are not presently protected determined 1(B)**. When information is available, the County shall apply **the Statewide Goal 5 rule** to potential sites and update zoning and other ordinances to address them when appropriate.
8. Encourage strict enforcement of the Forest Practices Act to protect riparian vegetation ~~along Class I streams and lakes and Class II streams affecting Class I streams~~ from potential adverse effects of forest practices.
9. Protect riparian vegetation along streams and lakes by requiring appropriate setbacks for nonwater-dependent uses and standards for removal of riparian vegetation.
10. Maintain rivers and streams in their natural state to the maximum extent practicable through sound land and water management practices. Consideration shall be given to natural, scenic, historic, economic, cultural, and recreational qualities of the rivers and adjacent lands.
11. Require that all development be planned, designed, constructed, and maintained so as to avoid the probability of accelerated erosion; pollution, contamination, or siltation of lakes, rivers, and streams; damage to vegetation; or injury to fish and wildlife habitats.
12. Minimize the removal of trees and other native vegetation that

Plan to recognize the trail.

2. **Support efforts to extend the Banks-Vernonia Linear Trail, primarily along the Crown Zellerbach Logging Road right-of-way, from Vernonia to Scappoose and the Multnomah Channel.**

~~2. Columbia County does not believe the Northwest Oregon Loop Bicycle Trail, as it currently exists in Columbia County, is appropriate because of the potential for conflicts between motor vehicles and bicycle traffic. However, Columbia County will cooperate with the Oregon Department of Transportation toward completing a bicycle trail that is safe and appropriate for the area and toward the protection and continuation of that trail.~~

ARTICLE XIII. SCENIC RESOURCES

A. DEFINITION:

Scenic areas are defined in the Statewide Goals and Guidelines as "lands that are valued for their aesthetic appearance". However, ~~this~~ **such definitions are is** a very broad definition that ~~and~~ could be applied to many resources in the County. These resources include: lands used for agricultural or forest use that are defined as open space; ecologically or scientifically significant natural areas; water areas and wetlands; historic structures; potential and approved federal wild and scenic waterways and State scenic waterways; and certain fish and wildlife areas and habitat. Many community recreational facilities in the County could also qualify as scenic areas under ~~this~~ **the** definition. Therefore, the ~~sites~~ inventoried **sites here listed below** are only those whose value is derived primarily from their aesthetic features rather than sites where scenic quality may only be part of its overall value.

B. LOCATION:

Generally, the open rural character of the land is of scenic value in Columbia County. Peaks, river valleys, falls, tidal flats, and other features form a diverse scenic landscape. Over eighty percent of the land is timbered. Farmlands stretch through these forested areas along the river valleys and create patches of pleasant pastoral settings. Centers of rural activity, which have remained for the most part unchanged in recent history, dot the County. Shallow lakes, marshes, and sloughs remain in the ancient flood plain of the Columbia River. Like a mosaic, these features contrast and compliment each other, creating a varied landscape that is visually attractive.

The County has taken a number of "built and committed" exceptions to the density level in certain areas, some of which fall along the identified scenic highways. The exceptions will allow a higher rural density in these areas than allowed on surrounding lands. While it is possible that this density increase may change the general scenic quality of the area, it is unlikely that it will degrade it. The areas are small in comparison to the large acreages of surrounding resource land which are zoned Primary Agriculture (PA-38), Primary Forest (PF-76), and Forest Agriculture (FA-19). If higher density development were not allowed in the areas, landowners may experience extreme economic and social hardships because of lost opportunities.

Most of the areas inventoried are on public property, but Carcus Creek Falls, Lava Creek Falls, and the Clatskanie River-Apiary Falls to Carcus Creek are presently undeveloped privately held scenic resources. There is no present public access to these areas. Consequently, their social value is limited. However, these scenic sites could potentially be made more accessible to the public in the future. For example, a trail system could be developed up Carcus Creek to Carcus Creek Falls and Lava Creek Falls, assuming an easement along the creeks can first be obtained from the landowners. Potential also exists to connect these scenic sites with a 280-acre tract of County-owned land situated within ½ mile of both falls. The falls are rare features whose value lies primarily in their aesthetic appearance. Allowing conflicting uses could have serious social and environmental consequences. However, negative economic consequences will be felt if current timber operations are severely restricted. In order to encourage private landowners to allow access to these sites, the County has chosen to place relatively few limits on conflicting uses. Thus, while the County has restricted residential development on these sites, it has not prohibited commercial forestry. Commercial forestry would impact the land surrounding the falls and river, but would not eliminate the scenic values of the falls and river themselves. The impact of commercial forestry will also be short term because of reforestation requirements.

E. FINDINGS:

These scenic features have been identified ~~and presented to alert~~ and citizens and officials **have been notified** of their significance. Protecting this view quality in the County is socially and possibly environmentally beneficial. However, views often encompass large amounts of land and general restrictions placed to preserve a certain view could have both negative economic and social consequences for the citizens of Columbia County. Therefore, measures **are needed** to address and protect certain qualities of the area. Scenic features in Columbia County generally lie within areas zoned for agricultural and forest uses. Scenic quality will be protected by retaining the general low density of the area. In addition, land use activities along Class I streams, including those identified as scenic sites, are restricted by the Riparian Area ~~overlay zone~~ **Overlay Zone** and the Forest Practices Act. Additional restrictions are unneeded and would

ATTACHMENT C
COLUMBIA COUNTY
GOAL 5 Periodic Review Worktask
Proposed Amendments to the Zoning Ordinance

ADDITIONS ARE IN BOLD
DELETIONS ARE STRICKEN

Section 100 GENERAL DEFINITIONS:

For the purpose of this ordinance, the following terms are hereby defined:

1. Access: The way or means by which pedestrians and vehicles enter and leave the property.
2. Accessory Structure or Use: A structure or use incidental and subordinate to the main use of the property and is located on the same lot or parcel with the main use and contributes to the comfort or convenience of persons occupying the property, but not including the keeping of livestock other than ordinary household pets.
3. Alley: A minor way which is used primarily for vehicular access to the back or side of properties otherwise abutting on a street.
4. Alteration: An "Alteration" may be a change in construction or a change in occupancy. Where the term "alteration" is applied to a change of construction, it is intended to apply to any change, addition or modification in construction. When the term is used in connection with a change in occupancy, it is intended to apply to changes of occupancy from one trade or use to another, or from one division of trade or use to another.
5. Alteration, Structural: Any change or repair which would tend to prolong the life of the supporting members of a building or structure, such as alteration of bearing walls, foundation, columns, beams, or girders. In addition, any change in the external dimensions of the building shall be considered a structural alteration.
6. Apartment: Any building or portion thereof which is designed, built, rented or leased, and occupied as a residence for 3 or more families living independently of each other and doing their own cooking in the same building.
7. Basement: A portion of the building which has more than 2 of its height measured from finished floor to finished ceiling above the average grade of the adjoining ground and not deemed a story, unless the ceiling is 6 feet or more above the average grade.

20. 15A Director: The Columbia County Planning Director or the Director of the Department of Land Development Services, or his delegate.
21. 16 Dormitory: A room for sleeping purposes for more than 4 persons, which is rented.
22. 17 Dwelling Unit: A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
23. 18 Dwelling, One-Family or Single Family: A structure designed for occupancy by 1 family.
24. 19 Dwelling, Duplex or Two-Family: A building designed exclusively for occupancy by 2 families living independently of each other.
25. 20 Dwelling, Apartment: A building, or portion thereof, designed for occupancy by 3 or more families living independently of each other.
26. 21 Emergent Wetland Vegetation: Plants which may be temporarily to permanently flooded at the base but do not tolerate prolonged inundation of the entire plant.
27. 22 Existence: State or fact of existing: something that exists, an entity, or a being.
28. 23 Family: An individual or two or more persons related by blood, adoption or marriage, or a group of not more than five persons (excluding servants) who need not be related by blood or marriage living together in a dwelling unit.
29. 24 Farm Use: The current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting, and selling crops, or by the feeding, breeding, management, and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees, or for dairying and the sale of dairy products, or any other agricultural or horticultural use or animal husbandry, or any combination thereof and includes the preparation and storage of products raised on such land for human use and animal use and disposal by marketing or otherwise.
30. 25 Fence, Sight Obscuring: A fence, consisting of wood, metal or masonry, or an evergreen hedge or other evergreen planting, arranged in such a way as to obstruct vision.
31. Fish Bearing Stream: A stream that fish use or have used in the past. See "Fish Use" below.

ground level.

- .42 .35 Historical Building: Any building or structure designated under a local government landmark or National Register of Historic Places, or listed in the Oregon State Inventory of historical sites, buildings, and properties approved for nomination in the National Register of Historic Places by the State of Oregon Advisory Committee on Historic Preservation.
- .43 .36 Horticulture: The cultivation of plants, garden crops, trees and/or nursery stock.
- .44 .37 Hotel: A building or portion thereof designed or used for occupancy of individuals who are lodged with or without meals.
- .45 **Impervious surface: means a hardened or compacted surface area that either prevents or retards the entry of water into the soil. Examples include, but are not limited to, structures, walkways, patios, driveways, carports, parking lots, or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, haul roads, and soil surface areas compacted by construction operations, and oiled or macadam surfaces.**
- .46 .38 Educational: A college or university supported by public or private funds, tuition, contributions, or endowments giving advanced academic instructions approved by a recognized accrediting agency, excluding elementary and high schools, and trade and commercial schools.
- .47 .39 Junk Yard: The use of more than 200 square feet of any lot or parcel for the dismantling or "wrecking", or for the storage or keeping, of junk including scrap metals or other scrap materials.
- .48 .40 Kennel: Any lot or parcel or premises on which 4 or more dogs or cats of more than 6 months of age are kept commercially for board, propagation, or sale.
- .49 **Lawn: is grass or similar plant material maintained as a ground cover of less than 6 inches in height. For purposes of this ordinance, lawn is not considered native vegetation regardless of the species used.**
- .50 .41 Loading Space: An off-street area used for the temporary parking of a vehicle while loading or unloading persons, merchandise, or materials.
- .51 .42 Lot: A unit of land that is created by a subdivision of land. Lots are created from and are located in subdivision plats. Parcels are created from partitioning and are located in partition plats.
- .52 .43 Lot or Parcel Area: The total horizontal area enclosed within the property

- iv. **Reducing or eliminating the impact over time by preservation and maintenance operation during the life of the development action by monitoring and taking appropriate corrective measures.**
 - v. **Compensating for the impact by replacing, relocating or providing comparable substitute resources or environments.**
- .61 **-.54 Mobile Home:** A detached single-family dwelling unit with the following characteristics: 1) a factory-built home designed to be transported after fabrication on its own wheels or detachable wheels; and 2) is designed for long term occupancy once the mobile home is installed on the site.
- .62 **-.55 Mobile Home Park:** Land designated for the permanent location of 4 or more mobile homes. This land is commonly held in one ownership and mobile home spaces are rented to the owner of mobile homes.
- .63 **-.56 Modular Home:** A permanent structure consisting of one or more modules assembled in a factory in accordance with a building code, and qualified to be financed and taxed as real property when placed upon a permanent foundation. (Sectionalized housing is a form of single family modular housing.)
- .64 **-.57 Motel:** One or more buildings designed or used as temporary living quarters.
- .65 **Natural Resource Feature:** A natural feature of the land, typically not man-made, that is protected to ensure its continued proper functioning condition. Examples include but are not limited to, streams, lakes, wetlands, significant wildlife sites, bird nests, endangered species areas, steep cliffs, waterfalls, and identified natural areas.
- .66 **Net Loss:** means a permanent loss of habitat units or habitat value resulting from a development action despite mitigation measures having been taken.
- .67 **Noxious Weeds.** Plant species listed by the Oregon Department of Agriculture, as amended, as being noxious.
- .68 **-.58 Non-Conforming Use:** A use or structure lawfully existing at the time this Ordinance became effective and which does not conform with the use regulations of the district in which it is located.
- .69 **Off-site Mitigation:** means habitat mitigation measures undertaken in areas distant from a development action, and which are intended to

ten feet in length and running parallel to, and at a maximum distance from, the front property line.

- .84** Property Line, Side: Any property line not designated a front or rear property line.
- .85** ~~.69~~ Public Water: Water which is provided off site, serves 4 or more dwellings, and meets the State of Oregon requirements.
- .86** Riparian Area: is the area adjacent to a river, lake, stream or wetland, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem. Where a Riparian Corridor has been established to protect a significant Goal 5 resource, the riparian area includes the entire area within the corridor, regardless of the location of the transition area.
- .87** Riparian Corridor : is a fixed distance adjacent to a river, lake, stream or wetland, usually established for protective purposes.
- .88** Riparian Vegetation: is all vegetation located within a riparian area or located within a riparian corridor.
- .89** ~~.70~~ Road, Public County: Every dedicated public way, thoroughfare, road, street, or easement within the county used or intended for use by the general public for vehicular travel, but excluding private driveways.
- .90** ~~.71~~ Rooming House: Same as "Boarding House".
- .91** ~~.72~~ School, Primary, Elementary, or High: Includes private or parochial but not nursery school, kindergarten, or day nursery, except when operated in conjunction with a school.
- .92** ~~.72A~~ Setbacks: The minimum distance allowed between the property line of a lot or parcel and the building line of a permitted structure. Unless otherwise specified, the front, side, and rear yard setbacks are given for each of the zoning districts within the zoning ordinance.
- .93** ~~.73~~ Shall: As used in this ordinance SHALL is mandatory and MAY is permissive.
- .94** ~~.74~~ Sign: A publicly displayed board or placard, etc. displaying information or advertising.
- .95** ~~.75~~ Sign Area: The greatest width multiplied by the greatest height of the display portion of a sign (one side).
- .96** ~~.76~~ Sign, Public: A non-commercial sign erected by a public officer or

- .a Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions, or
 - .b Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.
- .103 ~~-.84~~ Timber Growing, Commercial Timber Production: The growing of trees for the production of timber.
 - .104 Top-of-Bank: means the stage or elevation at which water overflows the natural banks of streams or other waters of the state and begins to inundate upland areas. In areas where the top-of-bank is not clearly delineated, the riparian corridor boundary shall be measured from the ordinary high water level, or the line of non-aquatic vegetation, whichever is most landward.
 - .105 ~~-.82~~ Tourist Court: See "Motel".
 - .106 ~~-.83~~ Travel Trailer: A mobile shelter, usually smaller than a mobile home, used for camping and outings rather than as a permanent dwelling which carries a highway license but does not need a transport permit.
 - .107 ~~-.84~~ Trailer Park: Land designed or used for the temporary parking of 4 or more trailers or vehicles used for human habitation.
 - .108 ~~-.85~~ Yard: An open space on a lot or parcel with a building and bounded on 1 or more sides by such building, such space being unoccupied and unobstructed from 30 inches above the ground upward.
 - .109 ~~-.86~~ Yard, Front: A yard extending across the lot or parcel, the depth of which is the minimum horizontal distance between the front property line and a line parallel thereto on the lot or parcel.
 - .110 ~~-.87~~ Yard, Rear: A yard extending across the full width of the lot or parcel between the most rear building and the rear property line; the depth of the required rear yard shall be measured horizontally from the nearest point of the rear property line toward the nearest part of the main building. When there is no rear property line, the depth of the rear yard shall be the distance from a 10 foot line parallel to the front property line, measured from one side line to the other.
 - .111 ~~-.88~~ Yard, Side: A yard between any building and the side property line; the width of the required side yard shall be measured horizontally from the nearest point of the side property line toward the nearest part of the building.

Multi-Family Residential	MFR	Multi-Family Residential
Mobile Home Residential	MH	Mobile Home Residential
Marine Commercial	C-2	Marine Commercial
General Commercial	C-3	General Commercial
Neighborhood Commercial	C-4	Neighborhood Commercial
Highway Commercial	C-5	Highway Commercial
Heavy Industrial	M-1	Heavy Industrial
Light Industrial	M-2	Light Industrial
Industrial Park	M-3	Industrial Park
Airport Industrial	AI	Airport Industrial

Special Districts, Overlay ~~Zones~~ Districts, and Special Provisions

Community Service- Institutional	CS-I	Community Service / Institutions
Community Service- Utility	CS-U	Community Service / Utilities
Community Service- Recreation	CS-R	Community Service / Recreation
Surface Mining	SM	Surface Mining
Flood Hazard Overlay	FH	Flood Hazard
Sensitive Bird Habitat	SBH	Sensitive Bird Habitat
Historic Overlay	H	Historic Overlay
Greenway Overlay	GW	Willamette River Greenway
Aircraft Landing Field	ALF	Aircraft Landing Field.
Water Quality, Stream- bank, Fish & Wildlife	WQ	Water & Riparian Areas

- 1121 Purpose: The purpose of the Sensitive Bird Habitat Overlay Zone is to insure that habitat areas identified as **being** critical for the survival of the Northern Bald Eagle, Great Blue Heron, and Band-tailed pigeon, **Northern Spotted Owl** and any other type of bird listed or included as sensitive in the Columbia County Comprehensive Plan, **Part XVI, Article VIII(F), Non-game Wildlife Habitat, and Article VIII(G), Upland Game Habitat** that are protected from the effects of conflicting uses or activities. This **objective purpose will** be achieved through the development of site specific management plans that are developed to insure that proposed uses and activities will neither destroy nor result in the abandonment of sensitive bird habitat areas.
- 1122 Definition of Habitat Sites: Sensitive Bird Habitat consists of all sites which are habitat for ~~All~~ Northern Bald Eagle nests and roosts; Great Blue Heron rookeries, and Band-tailed pigeon mineral springs, **Northern Spotted Owl nest sites** or other sensitive bird sites identified in the Columbia County Comprehensive Plan. **Such sites** shall be subject to the requirements of the Sensitive Bird Habitat Overlay Zone. ~~When additional sites are identified by the Oregon Department of Fish and Wildlife, they shall be added to the Comprehensive Plan map #42 titled Wetland Areas and Sensitive Bird Habitat Sites of Columbia County and become subject to the requirements of the Sensitive Bird Habitat Overlay Zone.~~
- 1123 Permitted Uses: Uses permitted or **conditionally permitted** in the underlying zone(s) are **also** permitted or conditionally permitted in the Sensitive Bird Habitat Overlay Zone **subject provided, however, that to the additional procedure and requirements of Section 1124, of the Sensitive Bird Habitat Overlay Zone shall apply.**
- 1124 Development Standards: The following review procedure and criteria shall apply to **development within the Sensitive Bird Habitat Overlay Zone, if such development will affect Sensitive Bird Habitat, or has the potential to affect Sensitive Bird Habitat, as described below:**
- ~~1~~ The review procedure is initiated when: Columbia County receives a request for a development permit that may affect a sensitive bird habitat.
 - ~~2~~ 1. A proposed use or activity is considered to have the potential for affecting a sensitive bird habitat if it is located within a quarter mile of an eagle nest or roosting site, or it is within six hundred (600) feet of a heron rookery, or Band-tailed pigeon mineral spring. **Development has the potential to affect Sensitive Bird Habitat if the site is located within a quarter mile of a Northern Bald Eagle nest or roosting site, and/or it is within six hundred (600) feet of a Great**

- ~~6. If the Oregon Department of Fish and Wildlife determines that the sensitive habitat area will not be affected, Columbia County may proceed with the processing of the permit application.~~
- ~~7. If the Oregon Department of Fish and Wildlife determines that the site would be affected, the Oregon Department of Fish and Wildlife shall work with the affected property owner in the development of a site specific habitat protection plan. The plan shall consider nesting trees, critical nesting periods, roosting sites, and buffer areas.~~

regulate protected lands, water, wetland or habitat areas. In addition to the restrictions and requirements of this Section, all proposed development activities within any wetland area may be subject to applicable state and federal agency standards, permits and approval. The applicant shall be responsible for contacting the appropriate state or federal agencies to determine whether all applicable development requirements have been met.

1172 Riparian Corridor Standards:

- A. The inventory of Columbia County streams contained in the Oregon Department of Forestry Stream Classification Maps specifies which streams and lakes are fish-bearing. Fish-bearing lakes are identified on the map entitled, "Lakes of Columbia County." A copy of the most current Stream Classification Maps is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B) for reference. The map, "Lakes of Columbia County" is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B), and is incorporated therein. Based upon the stream and lake inventories, the following riparian corridor boundaries shall be established:
1. Lakes. Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.
 2. Fish-Bearing Streams, Rivers and Sloughs (Less than 1,000 cfs). Along all fish-bearing streams, rivers, and sloughs with an average annual stream flow of less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
 3. Fish-Bearing and Non-Fish-Bearing Streams, Rivers and Sloughs (Greater than 1,000 cfs). Along all streams, rivers, and sloughs with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75-feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
 4. Other rivers, lakes, streams, and sloughs. Along all other rivers, streams, and sloughs, the riparian corridor

forestry is regulated by the Oregon Department of Forestry. The use of land for standard farm practices are regulated by the Oregon Department of Agriculture, with riparian area and water quality issues governed specifically by ORS 568.210 to ORS 568.805.

1175 Permitted Uses and Activities. Notwithstanding the prohibitions set forth in Subsection 1173 above, the following activities are allowed within the riparian corridor boundary:

A. The following riparian vegetation may be removed within the riparian corridor boundary:

- 1. Non-native vegetation, invasive species, and noxious weeds if replaced with native plant species. The replacement vegetation shall cover, at a minimum, the area from which vegetation was removed, and shall provide for maximum soil retention and shade cover. Replacement vegetation shall, upon maturity, maintain 75%-100% canopy and ground cover.**
- 2. Vegetation which is necessarily removed for the development of approved water-related or water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water-dependent and water-related use.**
- 3. Trees and vegetation in danger of falling and/or posing a hazard to life or property. If no hazard will be created, such trees or other vegetation, once felled, shall be left in place in the riparian area.**

B. The following development is allowed within the riparian corridor boundary.

- 1. Streets, roads, and driveways, if:**
 - a. If it is not possible to locate the street, road or driveway outside of the riparian corridor boundary; and**
 - b. The street, road or driveway is designed to minimize intrusion into the riparian corridor boundary.**
- 2. Pedestrian walkways, paths and trails.**

the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing the use or activity.

- B. For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.

1178 Variance Provisions

- A. In cases where encroachment into the riparian corridor boundary by activities and development not otherwise allowed by Sub-section 1175, or 1176 cannot be avoided, a property owner may request a Variance to the riparian corridor boundary prohibition. In addition to the criteria found in Section 1504, and the requirements in Sub-section 1177, a variance to the riparian corridor boundary prohibitions shall not be granted unless all of the following criteria are met:
1. The proposed development requires deviation from the riparian corridor standards;
 2. Strict adherence to the riparian setback and other applicable standards would effectively preclude a use of the parcel that could be reasonably expected to occur in the zone;
 3. Removal of vegetation within the original riparian setback is the minimum necessary to allow the use. Any vegetation removed shall be replaced with native plant species;
 4. The encroachment shall not occupy more than 50% of the width of the riparian corridor measured from the upland edge of the corridor;
 5. The proposed use shall provide equal or better protection of riparian resources than the current condition.

~~.1 Riparian areas in Columbia County are defined as follows:~~

- ~~A. For all Class 1 rivers and streams, the area of riparian vegetation shall extend 50 feet landward of the ordinary highwater line except where shrub or forested wetlands are located adjacent to the river, then the riparian area shall be the entire area of shrub or forested wetland. Where emergent wetland vegetation exists adjacent to a river, the 50 feet shall be measured from the landward extent of the emergent vegetation.~~
- ~~B. For lakes and reservoirs, the area of riparian vegetation shall extend 50 feet from the ordinary high water line except where emergent wetland vegetation exists adjacent to a lake, then the 50 feet shall be measured from the landward extent of the emergent vegetation.~~
- ~~C. For all other rivers, streams, and sloughs, the area of riparian vegetation shall extend 25 feet landward of the ordinary highwater line except where shrub and forested wetlands are located adjacent to the river, then the riparian area shall be the entire area of shrub or forested wetland. Where emergent wetland vegetation exists adjacent to a river, the 25 feet shall be measured from the landward extent of the emergent vegetation.~~

~~.2 No structure other than a fence or sign shall be located within the areas listed in (.1) above. A lesser setback may only be allowed if:~~

- ~~A. The Department of Fish and Wildlife is consulted by the Department at least 10 days prior to issuing a permit for a structure; and~~
- ~~B. The riparian vegetation does not actually extend all the way into the riparian area to the location of the proposed structure and the riparian vegetation has not been removed in violation of the below riparian vegetation maintenance standards; or~~
- ~~C. An application for a variance to the above setback standard has been approved pursuant to Article 1504 of the Zoning Ordinance with finds of compliance to the comprehensive plan policies for the protection of streams, lakes, wetland, and riparian vegetation.~~

~~.3 The following standards shall apply for the maintenance, removal, and replacement of riparian vegetation along all rivers, streams, lakes, and sloughs designated for riparian vegetation protection by the comprehensive plan:~~

- ~~A. No more of a tract's existing vegetation shall be cleared from the~~

- 1176 Purpose: The purpose of this overlay ~~distict~~ **zone** is to promote the production of wood fiber on land which has resource value, but which is not suited for primary forest use because of small lots which are distributed in multiple ownerships thus making it impracticable to apply the primary forest designation to such land.
- 1177 Application and Criteria for Approval of a Woodlot Overlay District: To have the Overlay ~~District~~ **Zone** applied to ~~in~~ a Primary Forest -76 (PF-76) or Forest Agriculture (FA-19) **Zone** area, the applicant shall provide sufficient information to show, and findings shall be made, that the request complies with the following criteria:
- A. ~~.1~~ The land is in a Primary Forest -76 (PF-76) or Forest Agriculture (FA-19) Zone.
 - B. ~~.2~~ The land will separate and buffer nearby primary forest and forest agriculture districts from adjacent or nearby rural residential, residential, or urban districts.
 - C. ~~.3~~ The land consists of at least 50 acres of subdivided lots: (a) more than one-half of which are smaller than one acre in size, and (b) which are under multiple noncontiguous ownerships averaging less than 10 acres.
 - D. ~~.4~~ Production of wood fiber can be enhanced substantially by application of the overlay zone to the land when compared with either lot of record development or with leaving the property in the underlying zone designation.
 - ~~.5~~ ~~The land is not subject to the special districts or overlay districts set forth in Sections 1100 (Flood Hazard Overlay), 1120 (Sensitive Bird Habitat Overlay), 1130 (Historic Overlay), 1140 (Greenway Overlay), 1180 (Wetland Overlay), and 1190 (Natural Area Overlay).~~
 - E. A goal exception for the land under ORS 197.732 and the regulations thereunder is approved either prior to or as part of the overlay district approval process. The exception findings and reasons shall contain a condition of approval that any consent to the County to a change in any covenant, which is designed to implement any provision of this ~~buffer woodlot overlay district~~ **Buffer Woodlot Overlay Zone**, and which is to be placed on any subject property within the land covered by the ~~overlay district~~, **Overlay Zone** shall be deemed a plan amendment and **shall be** subject to the post-acknowledgment **plan amendment** process.

vacation of any vacatable rights-of-way, water and septic tank advantages, vegetation, location and size of the property as a whole. The site plan for the subject property shall specify and include an annotated map of the subject property drawn to a usable scale, or an aerial photograph when available, showing the following: (a) accurately drawn property lines clearly indicating the size and location of the subject property; (b) location of existing and proposed structures, roads, and other improvements; (c) drainage, topography, physical constraints such as steep grades or streams, and soils; (d) the area covered by any forest management plan, and (e) township, range, section, tax lot number(s), vacated and unvacated rights of way, size in acres, assessor's code, and other contiguous properties under the same or family ownership.

3. ~~C.~~ A true copy of the certificate from the state forester that at least 10 acres of the subject property meets the standards of the Western Oregon Small Tract Optional Tax, together with a copy of the management plan, if any, which was found acceptable by the state forester.
4. ~~D.~~ A true copy of a recorded declaration stating:

"Declarant and declarant's successors, heirs, legal representatives, assigns, and lessees hereby acknowledge and agree to accept, by the placement of this covenant, or the acceptance and recording of this instrument, that the property herein described is situated on or near forest land, and as such may be subject to common, customary, and accepted forest practices which ordinarily and necessarily produce log truck and heavy machinery traffic, noise pollution which declarant accepts as normal and necessary forest management practices, and as part of the risk of purchasing, constructing, or placing a residential structure in this zone. The county shall be deemed a beneficiary of this declaration, which cannot be removed or modified without written consent of the County."
5. ~~E.~~ The application shall be accompanied by a statement acknowledged by or on behalf of the applicant and the applicant's successors-in-interest that failure to maintain eligibility for classification under the Western Oregon Small Timber Option Tax Program or a wood fiber production management plan on at least 10 acres of the subject property, as determined by the Oregon State Foresters, constitutes a zoning violation under Oregon law and is subject to remedies

1176 and this section.

2. ~~B~~: Preapplication Conference: Prior to submitting a plan map and zoning map change application, the applicant shall confer with the Planning Director regarding the proposal and the requisites of the applications.
3. ~~C~~: Review: Permitted use approvals under Section 1178 shall be reviewed as provided in ORS 197.825(4)(a).

1184 Development Standards: ~~Uses that are not water-dependent or water-related shall be setback to the extent of riparian vegetation identified in the Comprehensive Plan. Riparian vegetation shall be protected in accordance with Section 1170.~~

A. Riparian Corridor Standards for Wetlands. For the purposes of this Section, "Fish-bearing streams" shall mean all streams identified as being fish-bearing, by the Oregon Department Forestry in the Stream Classification Maps, as amended, and "Fish-bearing lakes" shall mean those streams identified in "Lakes of Columbia County". The current Oregon Department of Forestry Stream Classification Map is attached to the Comprehensive Plan, Technical Appendix, Part XVI, Article X(B), for reference. The Map, "Lakes of Columbia County" is also attached to the Comprehensive Plan, Technical Appendix, Part XVI, Article X(B), and is incorporated therein. Significant Wetlands are identified on the State Wetlands Inventory (SWI), and Local Wetlands Inventories (LWI's). The SWI is attached to the Comprehensive Plan, Part XVI, Article X(A), for reference.

1. Fish-Bearing Lakes. Along all wetlands associated with fish-bearing lakes, the riparian corridor boundary shall be 50 feet from the upland edge of the wetland.
2. Streams, Rivers, and Sloughs (Greater than 1,000 cfs). Along all wetlands associated with all fish-bearing rivers, streams and sloughs, with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75 feet from the upland edge of the wetland. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
3. Fish-Bearing Streams, Rivers and Sloughs (Less than 1,000 cfs). Along all wetlands associated with fish bearing streams, rivers, and sloughs, with an average annual stream flow less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50 feet from the upland edge of the wetland. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
4. Other Rivers and Streams, or Sloughs. For all other wetlands associated with streams, rivers, or sloughs, the riparian corridor boundary shall be 25 feet from the upland edge of the wetland.

- 1. The following wetland riparian vegetation may be removed:**
 - a. Non-native vegetation, invasive species, and noxious weeds, if replaced with native plant species. The replacement vegetation shall cover, at a minimum, the area from which vegetation was removed, and shall provide for maximum soil retention and shade cover. Replacement vegetation shall, upon maturity, maintain 75%-100% canopy and ground cover.**
 - b. Vegetation which is necessarily removed for the development of water related and water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water dependent and/or water related use.**
 - c. Trees and vegetation in danger of falling and/or posing a hazard to life or property. If no hazard will be created, the trees, once felled, shall be left in place in the riparian area.**

- 2. The following development is allowed within the riparian corridor boundary:**
 - a. Streets, roads, and driveways, if:**
 - i. It is not possible to locate the street, road or driveway outside of the riparian corridor boundary; and**
 - ii. The street, road or driveway is designed to minimize intrusion into the riparian corridor boundary;**
 - b. Pedestrian walkways, paths and trails;**
 - c. Fencing and signs, not including billboards.;**
 - d. Drainage facilities, utilities and irrigation pumps.**
 - e. Water-related and water-dependent uses.**
 - f. New or expanded shoreline stabilization and flood**

2. For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.

H. Variance Provisions

1. In cases where encroachment into the riparian corridor boundary by activities and development not otherwise allowed by Sub-section 1184(E), or 1184(F) cannot be avoided, a property owner may request a Variance to the riparian corridor boundary prohibition . In addition to the criteria found in Section 1504, and the requirements in Sub-section 1184(G), a variance to the riparian corridor boundary prohibitions shall not be granted unless all of the following criteria are met:
 - a. The proposed development requires deviation from the riparian corridor standards;
 - b. Strict adherence to the riparian setback and other applicable standards would effectively preclude a use of the parcel that could be reasonably expected to occur in the zone;
 - c. Removal of vegetation within the original riparian setback is the minimum necessary to allow the use. Any vegetation removed shall be replaced with native plant species;
 - d. The encroachment shall not occupy more than 50% of the width of the riparian corridor measured from the upland edge of the corridor;
 - e. The proposed use shall provide equal or better protection of riparian resources than the current condition;
 - f. The riparian setback must exceed any other setback on the parcel, and the riparian setback, when combined with other required setbacks, shall result in a building

- 1186 Purpose: To protect ecologically significant natural features and areas in Columbia County by restricting land use activities which may degrade their the land's unique characteristics.
- 1187 Application: **The Natural Area Overlay zone applies to all public land areas that are identified as being significant Natural Areas in the Oregon State Registry of National Heritage Resources, Natural Areas owned by The Nature Conservancy, and to areas which are identified as being significant Natural Areas in the Comprehensive Plan. The Oregon State Registry of National Heritage Resources is attached to the Comprehensive Plan in the Technical Appendix, Part XVI, Article IX.**
- 1188 Permitted Uses: ~~Development Standards~~
- A. All uses and development permitted in the underlying zone either outright or conditionally shall be permitted in the **Natural Area Overlay if such use or development** ~~they will not result in development or alteration which will disturb or destroy disturbance or destruction of~~ the sensitive, fragile, or otherwise unique characteristics of the site.
- B. For uses which disturb or destroy the sensitive, fragile or otherwise unique characteristics of a ~~Natural Area~~ natural area, approval may nonetheless ~~shall not be granted unless provided that the applicant can show~~ establishes the following: ~~findings of fact~~:
1. The identified Natural Area must be disturbed for reasonable use of the site, **and if the Natural Area is not** ~~if not disturbed~~ the applicant would be substantially damaged.
 2. The use or development proposed is a benefit to the community and meets a substantial public need or provides for a public good which clearly outweighs retention of the unique characteristics of the natural area.
 3. The proposed use or development would not result in the loss of a rare, irretrievable, or irreplaceable natural feature or scientific opportunity, or in the disturbance of a substantially unaltered natural feature or area in or adjacent to the proposed site, unless the benefit to the public from the proposed use ~~clearing~~ clearly outweighs the public good from retaining the

Section 1550 SITE DESIGN REVIEW.

The Site Design Review process shall apply to all new development, redevelopment, expansion, or improvement of all community, governmental, institutional, commercial, industrial and multi-family residential (4 or more units) uses in the County.

1551 ~~1~~ Types of Site Design Review:

A. Type 1: Projects, developments and building expansions which meet any of the following criteria:

1. ~~A:~~ are less than 5,000 sq.ft., and are less than 10% of the square footage of an existing structure.
2. ~~B:~~ Increase the number of dwelling units in a multi-family project.
3. ~~C:~~ Increase the height of an existing building.

B. Type 2: Projects, developments and building expansions which meet any of the following criteria:

1. ~~A:~~ have an area of 5,000 sq.ft. or more, or are 10% or more of the square footage of an existing structure.
2. ~~B:~~ Change the category of use (e.g., commercial to industrial, etc.).
3. ~~C:~~ New off-site advertising signs or billboards.
4. ~~D:~~ Any project meeting any of the Type 2 criteria shall be deemed a Type 2 Design Review application.

1552 ~~2~~ Design Review Process: The Planning Director shall review and decide all Type 1 Site Design Review applications. The Planning Commission shall review all Type 2 Design Review applications. Applications shall be processed in accordance with Sections 1600 and 1700 of this ordinance.

1553 ~~3~~ Pre-application Conference: A pre-application conference is required for all projects applying for a Site Design Review, unless the Director or his/her designate determines it is unnecessary. The submittal requirements for each application are as defined in this section and the standards of the applicable zone, and will be determined and explained to the applicant at the pre-application conference.

Planning Commission. A staff report shall be prepared and sent to the applicant, the Planning Commission, and any interested party requesting a copy.

- 1557** ~~.7~~ Planning Director Review: All Type 1 design review applications will be processed by the Planning Director or designate according to Sections 1601, 1602 and 1609 of this ordinance. If the Director determines that the proposed development meets the provisions of this ordinance, the director may approve the project and may attach any reasonable conditions.
- 1558** ~~.8~~ Planning Commission Review: The Planning Commission shall hold a public hearing for all Type 2 Design Review applications according to Sections 1603, 1604 and 1608 of this ordinance. If the Planning Commission determines that the proposed development meets the provisions of this ordinance, it may approve the project. The Planning Commission may attach any reasonable conditions to its approval of a site plan.
- 1559** ~~.9~~ Compliance: Conditions placed upon the development of a site are also placed upon any building permits issued for the same site. These conditions shall be met by the developer prior to an occupancy permit being issued by the Building Official, or as an alternative, a bond shall be posted equal to 125% of the estimated cost of the unfinished work, to ensure completion within 1 year of occupancy. If all improvements are not completed within the 1-year bond period, the County may use the bond to complete the work.
- 1560** ~~.10~~ Existing Site Plan: The degree of detail in the existing site plan shall be appropriate to the scale of the proposal, or to special site features requiring careful design. An existing site plan shall include the following, unless it is determined by the Planning Director that the information is not applicable or is not necessary to determine compliance with County and State standards, and a short explanation will be given for each item so determined:
- A. A vicinity map showing location of the property in relation to adjacent properties, roads, pedestrianways and bikeways, and utility access. Site features, manmade or natural, which cross property boundaries are to be shown.
 - B. A site description map at a suitable scale (i.e. 1"=100'; 1"=50'; or 1"=20') showing parcel boundaries and gross area, including the following elements, when applicable:
 - 1. Contour lines at the following minimum intervals:
 - a. 2 foot intervals for slopes 0-20%;
 - b. 5 or 10 foot intervals for slopes exceeding 20%;

5. Location, dimensions and names of all existing or platted roads or other public ways, easements, and railroad rights-of-way on or adjacent to the property, city limits, section lines and corners, and monuments.
6. Location and dimensions of all existing structures, improvements, or utilities to remain, and structures to be removed, all drawn to scale.
7. Historic structures, as designated in the Comprehensive Plan.
8. Approximate location and size of storm water retention or detention facilities and storm drains.
9. Location and exterior dimensions of all proposed structures and impervious surfaces.
10. Location and dimension of parking and loading areas, pedestrian and bicycle circulation, and related access ways. Individual parking spaces shall be shown.
11. Orientation of structures, showing entrances and exits.
12. All exterior lighting, showing type, height, wattage, and hours of use.
13. Drainage, **Stormwater and Erosion Control**, including possible adverse effects on adjacent lands.
14. Service areas for waste disposal and recycling.
15. Noise sources, with estimated hours of operation and decibel levels at the property boundaries.
16. **Goal 5 Resource Protection Plans. Indicate how project will protect streams, wetlands, riparian areas, natural areas, and fish and wildlife habitat from negative impacts.**
17. ~~16~~-A landscaping plan which includes, if applicable:
 - a. Location and height of fences, buffers, and screening;
 - b. Location of terraces, decks, shelters, play areas, and common open spaces;
 - c. Location, type, size, and species of existing and proposed shrubs and trees; and
 - d. A narrative which addresses soil conditions and erosion

1. Buffering and/or screening are required to reduce the impacts on adjacent uses which are of a different type. When different uses are separated by a right of way, buffering, but not screening, may be required.
2. A buffer consists of an area within a required setback adjacent to a property line, having a width of up to 10 feet, except where the Planning Commission requires a greater width, and a length equal to the length of the property line adjacent to the abutting use or uses.
3. Buffer areas shall be limited to utilities, screening, pedestrian and bicycle paths, and landscaping. No buildings, roads, or parking areas shall be allowed in a buffer area.
4. The minimum improvements within a buffer area shall include:
 - a. One row of trees, or groupings of trees equivalent to one row of trees. At the time of planting, these trees shall not be less than 10 feet high for deciduous trees and 5 feet high for evergreen trees, measured from the ground to the top of the tree after planting. Spacing of trees at maturity shall be sufficient to provide a year-round buffer.
 - b. In addition, at least one 5-gallon shrub shall be planted for each 100 square feet of required buffer area.
 - c. The remaining area shall be planted in grass or ground cover, or spread with bark mulch or other appropriate ground cover (e.g. round rock). Pedestrian and bicycle paths are permitted in buffer areas.

C. Screening Requirements:

1. Where screening is required, the following standards shall apply in addition to those required for buffering:
 - a. A hedge of evergreen shrubs shall be planted which will form a four-foot high continuous screen within two years of planting; or,
 - b. An earthen berm planted with evergreen plant materials shall be provided which will form a continuous screen six feet in height within two years. The unplanted portion of the berm shall be planted in lawn, ground cover or bark mulch; or,
 - c. A five foot or taller fence or wall shall be constructed to

COLUMBIA COUNTY PLANNING COMMISSION

REVISED STAFF REPORT
JUNE 20, 2003Comprehensive Plan & Zoning Ordinance Text AmendmentsHEARING DATE: May 19, 2003
DELIBERATION: June 30, 2003

FILE NUMBER: TA 03-02

APPLICANT: Columbia County Department of Land Development Services

REQUEST: A Post Acknowledgment Plan Amendment (PAPA) regarding Big Game Habitat and the County Historical Resources Inventory and Amendments to the Columbia County Comprehensive Plan pursuant to Periodic Review Work Task IV regarding "Sensitive Lands and Habitats" under State Planning Goal 5. The Comprehensive Plan Amendments include text changes and/or updated inventories of the following resources: Open Space, Fish and Wildlife Habitat, Natural Areas, Water Resources, and Recreational Trails. The Zoning Ordinance Amendments include text changes to the following Sections: General Definitions, Districts, Sensitive Bird Habitat, Protection of Riparian Corridors..., Buffer Woodlot Overlay, Wetland Area Overlay, Natural Area Overlay, Big Game Range Overlay, and Site Design Review.

BACKGROUND:

The State of Oregon Department of Land Conservation and Development (DLCD) approved Columbia County's Amended Periodic Review Work Program which included Work Task IV titled "Sensitive Lands and Habitats" based upon State Planning Goal 5. Work Task IV addresses five particular areas as follows: (1) Develop Safe Harbor Provisions for Riparian Corridors (OAR 660-23-090); (2) Develop Safe Harbor Provisions for Wetlands (OAR 660-23-100); (3) Review/Update Plan and Code Policies regarding Threatened and Endangered Species; (4) Review/Update Plan and Code Policies regarding Sensitive Plants; and (5) Review/Update Plan and Code Policies regarding Natural Areas.

Columbia County contacted DLCD and was informed that our Goal 5 Amendments package was a periodic review item and would not require a DLCD 45 day notice. After further review, DLCD informed the County that the Big Game Habitat and Historical Resources amendments were not included in the original Periodic Review Work Task and therefore must be considered as a separate PAPA application.

It was the Counties opinion that the Fish and Wildlife section and the Historical Section of the comprehensive plan are considered Goal 5 resources. Thus the County felt it was appropriate to

- Article V. Open Space
- Article VI. Surface Mining
- Article VII. Energy
- Article VIII. Fish and Wildlife Habitat
 - A. Big Game Habitat
 - B. Columbia White-Tail Deer Habitat
 - C. Fish Habitat
 - D. Furbearer Habitat
 - E. Waterfowl Habitat
 - F. Non-Game Wildlife Habitat
 - G. Upland Game Habitat
 - H. Fish and Wildlife Goals and Policies
- Article IX. Natural Areas
- Article X. Water Resources
 - A. Wetlands
 - B. Riparian Areas
 - C. Lakes
 - D. Reservoirs
 - E. Water Resources Goals and Policies
- Article XI. Historic and Cultural Areas
 - A. Historic
 - B. Cultural Areas
 - C. Historic and Cultural Areas Goals and Policies
- Article XII. Recreational Trails
- Article XIII. Scenic Resources

Columbia County Zoning Ordinance

- Section 100 General Definitions
- Section 202 Districts
- Section 1120 Sensitive Bird Habitat Overlay
- Section 1170 Protection of Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat
- Section 1175 Buffer Woodlot Overlay Zone
- Section 1180 Wetland Area Overlay
- Section 1185 Natural Area Overlay
- Section 1190 Big Game Range Overlay
- Section 1550 Site Design Review

REVIEW CRITERIA:

This request is being processed under Sections 1606, 1607 and 1611 of the Columbia County Zoning Ordinance, and Parts I, II, III, and XVI of the Comprehensive Plan. The following sections of the Zoning Ordinance are applicable to this application:

Planning Commission. The Planning Commission has held a public hearing and will make a recommendation to the Board of Commissioners. The Board will hold a public hearing and make a final decision regarding the adoption of the proposed amendments. Notice to the Planning Commission and the Board of Commissioners hearings will meet the requirements of Section 1611.

COLUMBIA COUNTY COMPREHENSIVE PLAN

Part I Administrative Procedures

It is essential the citizens of Columbia County be provided with a comprehensive plan that will accommodate the changing needs of the communities in which they live, work and play. While this plan is the result of considerable public input, study and analysis of existing physical, economic, environmental, and social conditions, and a projection of what future conditions are likely to be, it recognizes the importance of providing a framework for changing the plan periodically or as the need arises.

Goals:

1. To assure the goals and policies of this plan are implemented.
2. To provide review and revision procedures which include provisions for participation by citizens and affected interest groups.
3. To provide an understandable framework for reviewing and revising this plan.

Policies:

4. Formally update the Comprehensive Plan every five (5) years.
5. Provide a framework by which the Comprehensive Plan may be reviewed, revised and amended. Amendments to the Comprehensive Plan and its implementing ordinance(s) shall be in accordance with the following procedures and guidelines:
 - A. Amendments may be initiated by the Board of Commissioners, the Planning Commission, the Planning Director or the owner(s) of the affected property.
 - B. A Citizen Planning Advisory Committee may, upon a majority vote of its members, formally request either the Board of commissioners or the Planning Commission initiate an amendment.
 - C. Revisions or amendments will follow the same process as initial adoption - CPAC review, Planning Commission public hearing and recommendation, and Board hearing and adoption of revisions or amendments.
 - D. For quasi-judicial amendments, all property owners within two hundred and fifty (250) of the affected area shall be notified of the hearing date and the requested amendment at least ten (10) calendar days prior to the first scheduled public hearing.

Part II Citizen Involvement

It is Columbia County's policy to MAINTAIN A CITIZEN PLANNING ADVISORY COMMITTEE SYSTEM to offer opportunities for citizens to be involved in all phases of the land use planning process, and in addition, to provide:

1. Assistance through the distribution of planning information.
2. Coordination of public involvement.
3. A framework for public involvement in the development of land use plans and policies.

Goals:

1. To assure broad-based, county-wide citizen involvement in the planning process to include formulation of the plans and ordinances, development of goals and objectives and input into everyday planning functions.
2. To increase the citizen's awareness of planning programs at both the county and state level.
3. To provide methods by which county citizens, organizations and interest groups have opportunities to be informed and participate in all phases of the planning process.
4. To provide a means for broad-based dissemination and availability to the public of technical information and other relevant planning documents, ordinances, plans, maps and correspondence.
5. To assure county support for the Citizen Involvement programs (CPAC's) in the form of human, financial, information and technical assistance.
6. To insure continued citizen participation in the planning process and periodic re-evaluation of the Citizen Involvement Program.

Finding 5: The proposed text amendments were sent to all of the County Citizen Planning Advisory Committee's (CPAC). A Technical Advisory Committee (TAC) was also established to help create the proposed draft amendments. The TAC included agency representatives as well as local citizens. In addition, a Measure 56 notice was sent to all property owners in the County. The Measure 56 Postcard notice was mailed on April 27, 2003 and March 14, 2003. Furthermore, two informational public workshops were held, one on April 8, 2002 and one on May 5, 2003. The proposed amendments were published in the local news media on April 30, 2003 and May 7, 2003. The proposed Goal 5 amendments to the comprehensive plan and zoning ordinance have been reviewed at an open public hearing by the Planning Commission on May 19, 2003. The Planning Commission recommendation will be forwarded to the County Board of Commissioners who will review and decide the matter in an open public hearing format. The goal of citizen involvement will be met in processing this text amendment application.

To conserve open space and protect the identified natural and scenic resources in Columbia County as defined by Statewide Planning Goal Five and the related administrative rule.

Finding 7: No changes were made to this Article.

Continuing with the Comprehensive Plan Part XVI; Goal 5:

ARTICLE II. GOAL FIVE REQUIREMENTS:

All Goal 5 resources except wilderness areas, Oregon Recreational trails, **critical groundwater areas**, and federal **state** wild and scenic waterways are found within Columbia County. Therefore, in order to meet the requirements of the State Goal, the following resources must be evaluated according to the Goal 5 process referred to below:

1. Land needed for open space;
2. Mineral and aggregate resources;
3. Energy sources;
4. Fish and wildlife areas and habitat
5. Ecologically and scientifically significant natural areas;
6. Outstanding scenic views and sites;
7. Water areas, wetlands, watersheds, and ground water resources;
8. Historic areas, sites, structures, and objects;
9. Cultural areas;
10. Potential and approved Oregon Recreational trails;
11. Potential and approved federal wild and scenic waterways and state scenic waterways;

Procedures, criteria and definitions necessary to inventory and evaluate Goal 5 resources and to develop land use programs to conserve and protect significant Goal 5 resources are specified in Oregon Administrative Rule (OAR) 660, Division 23 which became effective in September 1996. OAR 660, Division 23 provides standard procedures and requirements for all Goal 5 resource categories, including optional "safe harbor" provisions meeting certain requirements under the standard process and

The program shall consist of plan provisions and land use regulations which address the degree of protection for the significant resource site by adopting measures to be applied to conflicting uses.

Finding 8: The proposed amendments for Article II are primarily Coordination Language with OAR Chapter 660, Division 23, specifically 660-023-090(5) regarding the "Safe Harbor" option. Columbia County has chosen to follow the Safe Harbor standards established by the State of Oregon instead of following the Standard Goal 5 process. In general, the Safe Harbor option can be considered the minimum allowable goal 5 protection program.

Continuing with the Comprehensive Plan Part XVI; Goal 5:

ARTICLE III. OVERALL GOAL 5 POLICY STATEMENT CONCERNING FOREST OPERATIONS:

1. Columbia County recognizes that forest operations for which notification is required by ORS 527.670(2) shall be governed by the Forest Practices Act.
2. Columbia County shall rely upon the Forest Practices Act and any supplemental agreements between Fish and Wildlife Commission and the Board of Forestry to protect critical wildlife habitat sites; and
3. Columbia County shall not apply the provisions of Sections 1120, 1180, 1185, and 1190 of the Zoning Ordinance to commercial forest operations covered by ORS 527.670(2).

Finding 9: No changes were made to this Article other than adding the words "Concerning Forest Operations" to the title.

Continuing with the Comprehensive Plan Part XVI; Goal 5:

ARTICLE IV. RELATIONSHIP OF MAPS AND ATTACHMENTS:

Maps, attachments and appendices referenced within the Goal 5 section of the Columbia County Comprehensive Plan (CCCP) are hereby incorporated into the Comprehensive Plan including, but not limited to, the 1995 Beak Consultants Maps, the National Wetlands Inventory, the State Wetlands Inventory and individual cities Local Wetlands Inventories for their urban growth areas.

Finding 10: This Article was amended to include the inventory maps of the Goal 5 resources. Specifically the County will use the Beak Consultants maps for Wildlife Game Habitat, Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas. The County will use the State Wetlands Inventory for identifying significant wetlands. The State Wetlands Inventory Includes the National Wetlands Inventory maps and any Local Wetland Inventories produced by local jurisdictions. Staff finds that this section should also refer to the Oregon Department of Forestry Stream Classification Maps that are used as the stream Inventory and that identify fish bearing streams. Staff also finds that this section should refer to the newly created Technical Appendix to the

Specific open space resources, such as wetlands, riparian corridors, the Willamette River Greenway, natural areas, scenic features and parks, which exist in the County, are addressed in other sections of this report. A discussion of conflicting uses and measures for their resolution can be found in the section pertaining to each particular resource.

D. Economic, Social, Environmental, and Energy Consequences:

Economically, limiting conflicting uses for open space values is beneficial. Forest and farm uses are significant contributors to the local economy. They provide job opportunities, generate tax revenue, and support a number of related industries in the community. In addition, the combination of lands for farm, forest, and natural uses makes Columbia County an attractive place to live and visit. An abundance of game and waterfowl are supported by these open spaces and attract fishermen, hunters, and other recreators to the County. The income generated from these forms of recreation adds substantially to County coffers.

Socially, protecting open space values is a positive use of the land. It promotes a quality of life that balances urban growth with preservation of lands used for farming or other extractive purposes, for viewing, parks, wildlife, and for conservation.

Environmentally, limiting conflicting uses protects those characteristics of the land, which serve naturally. These characteristics provide fish and wildlife habitat and reduce water and air pollution, flooding, soil erosion, and other problems related to man-induced and naturally caused changes in the environment.

Limiting conflicting uses for open space also has positive energy consequences. It encourages the clustering of residential development and restricts major developments to rural centers and urban growth boundaries. Thus, resources which otherwise might be wasted providing roads and services to scattered areas throughout the County can be used more efficiently.

E. Findings:

Almost all of the County's forest and agricultural lands are zoned Primary Forest (PF-76), Forest-Agriculture (FA-19), and Primary Agriculture (PA-38). While the primary intent of this zoning is to conserve resource lands for resource uses, the zones protect the land's open space values as well. Conflicting uses with open space values are minimized in these resource zones. Conflicts may exist for some areas of open space in the County, which are built and committed to non-resource use. However, the extent of existing development in these areas has already reduced their open space value. The County has taken exceptions to exclude these areas from resource zones because of this rural residential development.

To conserve areas of open space, the County has adopted policies and implementing measures to protect its sensitive resources, including hazard areas, flood plains,

A. BIG GAME HABITAT

Location:

Three types of big game habitat have been identified in Columbia County by the Oregon Department of Fish and Wildlife. ~~See Map 44 for general location of big game range. For detailed analysis see~~ The location of big game habitat is depicted in the 1995 Beak Consultants maps titled "Wildlife Game Habitat" found in the Technical Appendix Part XVI, Article VIIIA, and are shown on Map 44, Big Game Range.

In Columbia County, these habitat types are defined as:

Major - That portion of the County which supports the majority of big game. These areas provide forage and cover for game during most of the year.

Peripheral - Lands also important for sustaining big game populations. These areas are generally lower elevations and serve as critical habitat during severe winter months. Areas in Columbia County are:

1. Clatskanie River Drainage
2. Nehalem River Drainage
3. Rock Creek Drainage
4. Tide Creek Drainage
5. Merrill Creek Drainage
6. Milton Creek Drainage
7. Scappoose Creek Drainage
8. Clear Creek Drainage
9. Woodson Upland Area
10. Mayger Area

Impacted - Areas of the County which have had an acknowledged "built and committed" exception taken to them, which, because of existing levels of land use, are no longer considered resource land and/or viable big game habitat. These "built and committed" areas are typically urban areas or lands that have been zoned Rural Residential or Rural Community. However, While not considered protected big game habitat, these areas frequently contain populations of big game.

Peripheral Habitat - 1 unit per 19 acres using clustering techniques:

The majority of the areas designated in Columbia County as either Major or Peripheral Big Game Range are zoned Primary Forest (PF-38 80), Forest-Agriculture (FA-19 80), and Primary Agriculture (PA-38 80). Activities permitted within these zones are generally considered compatible with big game habitat. In fact, agricultural and forest practices often unintentionally enhance game habitat by providing feed for animals. However, game can conflict with these land uses when they browse young planted trees and/or destroy and eat crops intended for livestock.

Portions of the Major and Peripheral Big Game Range have been found "built and committed" and are zoned rural-residential because of previous residential impact. This zone allows residential development at densities higher than those recommended by the Oregon Department of Fish and Wildlife. Lands within this zone correspond with those areas recognized and mapped as "impacted" by the Oregon Department of Fish and Wildlife. Substantial conflicts between big game and residential use already exist in these areas. Because of this, little additional impact for big game is expected in areas zoned for rural residential use. Notwithstanding the lack of detail on the Wildlife Overlay Impact Map (Map 44), all All exception areas shall be considered impacted and exempt from the development siting standards found in the Big Game Range Overlay District. of the Wildlife Overlay District.

Other non-resource uses have been identified which could permanently alter big game habitat areas. These uses often have the same general characteristics:

- 1) the introduction of people to habitat areas on a year-round basis;
- 2) the permanent introduction of groups of people on a seasonal or weekly basis; or
- 3) the use of land in a manner which necessitates the removal of large amounts of vegetative cover.

The major problems associated with the introduction of people to habitat areas are dog harassment, poaching, traffic harassment, and lost forage and cover areas.

5. Economic, Social, Environmental, and Energy Consequences:

Economic:

The loss of big game habitat and subsequent reduction in big game population could have negative economic consequences to revenue generated from big game recreation. According to the Fish and Wildlife Protection Plan for Columbia County, big game recreation brought approximately \$870,000 into Columbia County in 1976. This figure has probably increased since then. Development within habitat areas could also prove costly to the County if it must provide services to these remote forested areas.

Negative consequences would also result from not allowing further development within

impacted by previous residential development.

In big game habitat areas, new uses in forest and farm zones ~~non-forest and non-farm dwellings~~ shall follow development siting standards to mitigate their impact upon big game habitat. These standards require any new use to be located to avoid habitat conflicts and utilize least valuable habitat areas. In addition, road development shall be the minimal amount necessary to support residential use. Areas for which "built and committed" exceptions have been taken shall be considered impacted and zoned for rural residential use. Because of existing conflicts in these areas, no additional standards to protect big game ~~in urban areas, rural residential, and rural community~~ zones are proposed.

7. Program to Protect Big Game Habitat

- A.** Any resource zoned property that is not eligible for a new use, based upon the criteria found in the Oregon State Administrative Rules, shall be protected Big Game Habitat.
- B.** Any resource zoned property that is eligible for a new use, based upon the criteria found in the Oregon State Administrative Rules, shall minimize the negative impacts to big game by observing the Columbia County development siting standards for big game habitat areas.
- C.** All new development located in Major and Peripheral Big Game Habitat shall implement the following siting standards:
 - 1.** Dwellings and structures shall be located as near each other and existing developed areas as possible considering topography, water features, required setbacks, and firebreaks.
 - 2.** Dwellings and structures shall be located to avoid habitat conflicts and utilize least valuable habitat areas.
 - 3.** Road Development shall be minimized to that necessary to support the proposed use and shall utilize existing roads as much as possible.
 - 4.** The owner/occupant of the resource parcel assumes responsibility for protection from damage by wildlife.
 - 5.** Riparian and Wetland areas shall be protected in accordance with Sections 1170 and 1180.
 - 6.** Columbia County shall notify the Oregon Department of Fish and Wildlife (ODFW) of all proposed uses or activities that have the potential to adversely affect big game habitat. If it is determined that big game habitat will be affected, the property owner will be required to coordinate with odfw and

get an approval to site a new home.

A third problem with the current method of employing the dwelling density calculation is that it counts dwellings in non-resource zoned lands. Therefore, land that does not have to follow big game habitat criteria and dwelling density rules is directly affecting land that does have to follow the rules. Once again this also pushes development away from impacted areas and into higher quality habitat areas.

A fourth problem with the current method of employing the dwelling density calculation is that it is not equitable and that it actually promotes development in forest land. Specifically, in a section that has not reached the maximum density, there is a race between property owners to get the last available permits. This makes people develop there land before they are actually ready in order not to lose the right to develop a homesite. In addition, once the density is reached, those that did not get a permit are prohibited from developing their property. In essence you can have two identical properties where one is allowed a building permit and one is not based on big game habitat concerns. In this scenario, two identical properties with the same habitat characteristics are treated differently, which is not fair to the citizens of Columbia County and is typically a situation the County tries to avoid.

It is the County's position that the state's Template option, which provides for the bulk of new development in forest zones, effectively limits new development in big game habitat areas. The template test fails once property sizes go up and pre-1993 developed houses goes down. This leaves the vast majority of forest land in the County unable to pass a template test. Staff finds the areas that will not pass the template test are typically large blocks of commercial timberland that offer very high quality habitat. Thus, since these large blocks of timberland cannot pass the template test, they cannot be developed. Consequently, much of the forest land in Columbia County is protected as big game habitat.

what about lot of record? large lot?

Staff also notes the minimum parcel size in the Primary Forest zone and the Forest Agriculture zone is 80 acres. These large 80 acre lot sizes are consistent with the ODFW recommended big game habitat densities. By maintaining large 80 acre parcel sizes in resources zones the number of new sites that could potentially be developed is further reduced. Thus, big game habitat is protected again by the 80 acre minimum parcel sizes for resource zones in Columbia County.

With these proposed amendments to the Big Game Habitat rules, staff attempts to find a balance between environmental concerns for big game habitat and social concerns for peoples ability to live on their own land. Staff attempts to achieve this balance by proposing to eliminate the dwelling density calculation, by identifying all non-resource zoned land as impacted habitat and by establishing siting standard for new development in big game habitat areas. The proposed siting standards are designed to try and minimize the impact of any new development by siting it on that portion of the property that is least valuable as big game habitat. It does this by siting new structures close to existing developed areas and by minimizing road building.

In addition, ODFW will be notified of all new proposed development in designated big game habitat areas. Testimony has been received by ODFW and property owners asking for clarification of the coordination process as it relates to final decision making authority; the time required for ODFW coordination; the requirement for management plans and how ODFW determines adverse effects. Revisions to the 3/26/2003 draft have eliminated the management plan requirement and ODFW

Islands) have not been identified as habitat for the Columbian white-tailed deer by the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife Service. In 2002, an estimated 100-150 Columbian white-tailed deer were present in Columbia County. The area identified by the U.S. Fish and Wildlife Service and the Oregon Department of Fish and Wildlife as habitat for these deer includes approximately 10,000 acres. In addition, Lord and Walker Islands have been identified as potential habitat for transplanting white-tailed deer.

4. Potential Conflicting Uses:

Lands within the Columbian white-tailed deer habitat area are zoned Primary Agriculture (PA-3880). Generally, practices allowed within this zone are those that enhance the deer habitat. White-tails often prefer to feed on pastureland, especially those kept short by cattle grazing or haying. However, the deer also require brushy vegetation for hiding and thermal cover. Columbian white-tailed deer will often feed on open pasture lands and find cover in the thickly vegetated riparian areas.

Potential conflicting uses for Columbian white-tails include: 1) the removal of brushy, vital Columbian white-tailed deer habitat for creating and improving pasture and agricultural lands, and 2) the draining, filling, and tilling of wetlands. The introduction of residential development **AND OTHER NON-RESIDENTIAL DEVELOPMENT SUCH AS SURFACE MINING** into native riparian habitat could be a potential conflict, but considering current zoning and other circumstances, the conflict should be very limited.

The intrusion of residential development will be limited somewhat by the 3880 acre minimum lot size and the restrictions placed by the zoning ordinance on farm and non-farm dwellings. In addition, the extent of residential development is limited because much of the area is unsuitable as a construction site for residences. Much of the land in the area has standing water for parts of the year. Thus, even if the number of 3880-acre lots increased, there would be a very limited increase in residential development because many of the lots would contain little or no land suitable for a construction site. Residential development will also be restricted by the limited availability of drinking water in the area. The County's zoning regulations requiring clustering of dwellings will further limit residential development.

Conflicts will also be reduced because of the impacts of the County's wetlands, **natural area and riparian area overlay zones**. The entire **majority of the main** habitat is in either the riparian overlay or the wetlands overlay zones. The impact of these zones will be to substantially limit residential development in a manner that will protect the habitat for the deer. In particular, **each zone limits impact on the natural environment**, including both zones limit the removal of vegetation and filling or draining of wetlands.

The U.S. Fish and Wildlife Service has approved a recovery plan to restore the Columbian white-tailed deer to a minimum population of 400-600 deer, distributed in suitable secure habitat throughout their former range in at least 4-5 viable sub-populations. In February 1979, there were an estimated 300-400 of these animals along the Columbian River. A plan to re-establish and/or maintain habitat for Columbian white-tailed deer is one adopted approach for bringing about this recovery. This includes protecting and enhancing habitat on off-refuge land and applies to the

areas of the County.

6. Findings:

Potential conflicting uses for Columbian white-tailed deer habitat exist in the Clatskanie Flats area. The County has adopted an overlay zone to protect habitat for Columbian white-tailed deer by limiting conflicting uses. The County shall adopt an 80 acre minimum parcel size for all new parcels in resource zoned land located in Columbian white-tailed deer habitat areas. Within the Columbian white-tailed deer range, non-forest and non-farm dwellings shall be located to avoid habitat conflicts and utilize least valuable habitat areas. A maximum dwelling density of one (1) dwelling per 38 acres will be allowed with clustering as required by the County's zoning ordinance. To minimize adverse habitat impacts, siting standards for forest and farm dwellings will be applied to dwelling placement on all new and existing parcels within the Columbia white-tailed deer habitat. Measures protecting riparian and wetland habitat for Columbian white-tailed deer will also be implemented in the area. Taken together, these measures will adequately protect the habitat without unreasonably impacting the economy of the area.

Finding 14: The amendments to the Columbian White-Tailed Deer habitat closely follow the proposed amendments to the big game habitat section of the comprehensive plan. New development is required to meet siting standards in coordination with USFW. Staff finds these amendments adequate to protect Columbian White-tailed Deer.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article VIII. Fish and Wildlife Habitat

C. FISH HABITAT

1. Definition:

Three groups of fish have been identified in the Fish and Wildlife Protection for Columbia County by the Oregon Department of Fish and Wildlife. These are:

- a. Anadromous fish - fish which begin life in freshwater, rear to maturity in saltwater, and return to freshwater to spawn. Anadromous fish include coho and fall chinook salmon, winter steelhead trout, and sea-run cutthroat trout.
- b. Resident trout - freshwater fish including rainbow and cutthroat trout.
- c. Warm-water game fish - a group which includes bullhead catfish, crappie, bluegill, largemouth bass, and yellow perch.

2. Location:

No fewer than thirty waterways in Columbia County provide spawning and rearing habitat for anadromous fish. The major spawning, rearing, and migrating areas are the Columbia, Nehalem,

and activities include, but are not limited to:

- a. Limited available access to rivers and streams because of private land ownership may restrict the release of fish stock and recreational enjoyment of fish resources.
- b. Obstructions to fish passage may be created for other land use purposes. Obstructions, which hinder migration, include dams, culverts, tide gates, and logging practices.
- c. Streamflow levels may be reduced below acceptable levels when waters are diverted for residential, industrial, agricultural, or other purposes.
- d. Pollutants introduced into the water because of land use actions may reduce water quality.
- e. Removal of riparian and wetland vegetation may destroy fish habitat in rivers, streams, wetlands, and other water bodies by elevating water temperatures and stream sedimentation.
- f. Mining and filling practices which change the structure of the stream channel may destroy spawning and rearing habitat in streams and rivers.

6. Summary:

Habitat for fish exists in the lakes, rivers, and streams of Columbia County. All streams designated by the Oregon Department of Fish and Wildlife as "fish-bearing" are considered significant for purposes of Goal 5. Potential conflicting uses affect habitat quality in a number of ways: by removing vegetation, introducing pollutants, creating obstructions to fish passage, reducing streamflow levels, or by destroying spawning and rearing habitat. **OR REDUCING WATER QUALITY BY INCREASED TEMPERATURES AND SEDIMENTS.** The consequences of these conflicting uses have been determined in the Riparian Area portion of this report.

Many of the activities that affect a stream or lake and reduce fish habitat are subject to state and federal regulations. The County will rely on implementation of these programs to protect fish habitat. In addition, the County will adopt "safe harbor" provisions within the Columbia County Zoning Ordinance (CCZO) Riparian Corridor overlay zone and Wetlands overlay zone to provide protection for significant streams, wetlands and lakes, thus providing protection for significant fish habitat. In addition, the County will adopt a program to limit conflicting uses and protect riparian and wetland vegetation. Policies will be adopted to encourage the acquisition of access both to and along rivers, streams, and lakes for the release of fish and recreational enjoyment of County residents.

Finding 15: Amendments to the Fish Habitat section of the Comprehensive Plan include updating the inventory information by citing the most recent Oregon Department of Forestry Stream Classification maps that indicate fish bearing streams in Columbia County. The Fish Habitat section is closely aligned with the provisions for riparian areas found in Article X(B) of the Comprehensive

The important habitat areas for furbearers have been identified as wetlands, ponds, lakes, swamps, streams, and associated riparian vegetation. The identified potential conflicting uses for furbearers are all related to the expansion of development into these areas. Limited protection for these habitats is provided by adopting and applying "safe harbor" provisions for riparian corridor protections and wetlands protection. See Comprehensive Plan Section X(A) - Wetlands and Section X(B) - Riparian Areas. Since the economic, social, environmental, and energy consequences of allowing or restricting this type of development have already been addressed in the Riparian, Wetland, and Big Game Habitat sections of this report, they are not again determined here. However, based on an analysis of these ESEE consequences for identified conflicting uses in important habitat areas, the County will adopt a program to limit conflicting uses and protect furbearer habitat.

Finding 16: Amendments to the Furbearer Habitat section of the Comprehensive Plan include coordination with the provisions for riparian areas found in Article X(B) of the Comprehensive Plan. Furbearer habitat has limited protections, primarily by the Riparian Protection Overlay zone found in Section 1170 of the Zoning Ordinance, which is based upon the Goal 5 Safe harbor provisions in OAR 660-023-090(5), and the Wetlands Area Overlay zone found in Section 1180 of the Zoning Ordinance. The riparian overlay regulations protect furbearer habitat by limiting uses within riparian corridors adjacent to streams. The Wetlands Area Overlay zone protect furbearer habitat by limiting uses within wetland areas. Staff finds the proposed amendments will adequately protect some types of furbearer habitat.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article VIII. Fish and Wildlife Habitat

E. WATERFOWL HABITAT

1. Location:

Waterfowl habitat areas have been identified in Columbia County by the Oregon Department of Fish and Wildlife. These areas lie near the Columbia River and hold standing or slowly moving water at least part of the year. They provide ideal nesting, feeding, and resting habitat for waterfowl. Wet agricultural areas are also important waterfowl habitat. Often these farmlands are flooded in the fall and winter and attract large numbers of migrating birds.

2. Quality:

The numerous wetlands, sloughs, rivers, and agricultural lands in Columbia County provide excellent habitat for waterfowl. During late fall and early winter, thousands of migrating birds transcend on the Columbia River flood plain and Sauvie Island. Crops planted in managed game areas and on private agricultural lands feed this waterfowl population and the intricate network of sloughs and drainage ditches provides refuge.

3. Quantity:

OAR 660-023-090(5), and the Wetlands Area Overlay zone found in Section 1180 of the Zoning Ordinance. The riparian and wetland area overlay regulations protect waterfowl habitat by limiting uses within riparian corridors adjacent to streams and by limiting uses within wetland areas. New development is also required to be coordinated with ODFW.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article VIII. Fish and Wildlife Habitat

F. NON-GAME WILDLIFE HABITAT

1. Location:

Non-game wildlife require a diversified habitat that provides both cover and food. Lands in forest and agricultural use are the primary non-game habitat areas in Columbia County. The riparian area, which contains a diversity of vegetation, supports a large number of non-game species. Specifically, the Oregon Department of Fish and Wildlife has identified nesting sites for Bald Eagles, Northern Spotted Owls, and Great Blue Herons, three important non-game species in Columbia County. Other important non-game wildlife include, but are not limited to, bats, turtles, frogs, martins and any other non-game species identified by ODFW. These sites are shown on Map 45 and described below:

The following sites shall remain in the County inventory and shall be presumed valid unless proven otherwise and confirmed by ODFW.

a. Bald Eagle Nest Sites:

1. Nest is located in a large Cottonwood tree beside Multnomah Channel in T4N, R1W, SE 1/4 of the NE 1/4 of Sec. 20. The property is owned by Oregon State and the site was discovered in 1983.
2. Nest is located in a Douglas Fir tree, on a bluff opposite the downstream end of Walker Island in T8N, R3W, SE 1/4 of the NW 1/4 of Sec. 28 near Mayger, Oregon. The property is in private ownership.
3. Two nest trees are located on a timbered hill overlooking Hwy. 30 in SE 1/4 of the SE 1/4 of Sec. 1, R5W, T7N. The property is in private ownership.
4. Any additional nests identified by ODFW or listed on the most current Bald Eagle Nest Survey conducted by the Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University, Frank Isaacs & Bob Anthony contained in Technical Appendix Part XVI, Article VIII(F) and incorporated herein by reference.

b. Blue Heron Nest Rookery:

Social:

The positive consequences of preserving non-game habitat, particularly the identified eagle, heron, and spotted owl nest sites, would be for bird watchers and other outdoor enthusiasts. These tourists also add to the local economy. The negative consequence of preserving habitat for non-game would be for landowners unable to build or conduct certain other activities within specified areas.

Environmental:

Allowing logging activities or other conflicting uses within habitat areas could cause non-game animal populations to decrease. Both the Northern Bald Eagle and Northern Spotted Owl are presently classified as threatened. The destruction of their nesting, breeding, and feeding habitat would further endanger their survival

Energy:

No significant consequences have been identified.

5. Findings:

Potential conflicting uses exist for non-game animals. Habitats for these animals are on forest and agricultural lands where a diversity of vegetation and land features can be found. The County will adopt a program to limit conflicting uses in critical habitat areas.

In addition, specific nesting and roosting sites were identified by the Oregon Department of Fish and Wildlife within Columbia County for the Bald Eagle, Great Blue Heron, and Northern Spotted Owl. Some of these sites are located on forest lands and are threatened by forest practices. The County will rely on the Cooperative Agreement between the Board of Forestry and the Oregon State Fish and Wildlife Commission and on coordination provided by the Forest Practices Act to resolve conflicts for sensitive nesting habitat on forest land from forest operations. For sensitive nesting habitat on forestland used for other purposes, and for the other identified nest sites, the County will apply the Sensitive Bird Habitat overlay zone. In addition, the County will apply, when appropriate, Goal 5 'safe harbor' provisions for riparian corridors and wetlands as adopted in the Riparian Corridor and Wetland overlay zones of the Columbia County Zoning Ordinance. See Comprehensive Plan Article X(A) - Wetlands and Article X(B) - Riparian Areas. Development and projects that affect or appear to affect non-game wildlife habitat shall be coordinated with ODFW. The County shall consult annually with ODFW and ODF to update the Fish-bearing Stream map with current data relating to nesting and roosting sites for Bald Eagles, Great Blue Herons, Northern Spotted Owls and any other species nesting sites that ODFW has specifically listed. adopt measures to limit conflicting uses and protect the resources.

Finding 18: Amendments to the Non-Game Wildlife Habitat section of the Comprehensive Plan include citing the most recent ODFW surveys as the inventory of significant habitat locations and the Oregon State University list of Bald Eagle sites. Other Changes include coordination with the

a. Conyers Creek Pigeon Springs

Location: T7N, R4W, S 19, NE1/4

Quality: Mineral springs located in a sparsely populated area. The area is presently in agricultural use.

Quantity: 68 acres

b. Clatskanie Pigeon Springs

Location: T7N, R4W, S 27, NE1/4

Quality: Mineral springs are located in an agricultural area, on private property, and are attractive to the band-tailed pigeon.

Quantity: 20 acres

c. Dutch Canyon Pigeon Springs

Location: T3N, R2W, S17

Quality: Mineral springs have been impacted by residential development.

Quantity: 1 acre

2. Potential Conflicting Uses:

Important habitat areas for upland game are located on lands zoned for forest, agriculture, and rural residential use. Generally, conflicts result when farming and forest practices reduce vegetative diversity by removing fencerows and streamside cover, or apply intensive amounts of pesticides. Conflicts may result for the band-tailed pigeon when land use activities are introduced into an area within 600 feet of the springs.

3. Economic, Social, Environmental, and Energy Consequences:

Positive social and environmental consequences will result from restricting conflicting uses in upland game habitat areas. Birds, such as the band-tailed pigeon, will continue to nest, breed, and feed in the County and provide sport for hunters and other outdoor enthusiasts. However, if certain farming, forest, and residential practices are restricted, property owners may experience economic and/or social hardship because of lost opportunities.

4. Findings:

Potential conflicts could reduce the amount of habitat for upland game birds in Columbia County if not restricted. However, restrictions must be applied carefully to have minimal impact on existing land use practices. Therefore, the County will adopt programs to limit conflicting uses in critical habitat areas including the identified pigeon mineral springs. In addition, the County will apply the Sensitive Bird Habitat overlay zone, where appropriate.

Finding 19: Staff finds minor changes made to the Upland Game Habitat section of the Comprehensive Plan. Proposed amendments mention confirming sites with ODFW and coordinating

9. Encourage the use of nonstructural methods of bank stabilization in areas experiencing accelerated soil loss.
10. Prohibit diversion or impoundment of stream courses, which adversely impact fish and wildlife habitat.
11. Notify the Oregon Department of Fish and Wildlife (ODFW) and U.S. Fish and Wildlife (USFW) of all proposed uses ~~or activities that have the potential to adversely affect habitat and recovery of the Columbian white-tailed deer~~ **WITHIN INVENTORIED HABITAT AREAS AND GIVE CONSIDERATION TO COMMENTS PROVIDED PRIOR TO A FINAL DECISION CONCERNING THE PROPOSED USES OR ACTIVITIES. If it is determined that habitat and recovery will be affected, the property owner shall work with ODFW and USFW to develop a management plan to protect the deer.**
12. Cooperate with the Oregon Department of Fish and Wildlife to ensure that future development does not unduly conflict with major and peripheral big game range by:
 - A. **Limiting potential conflicting uses by designating major and peripheral big game habitat in resources zones.**
 - B. **Limiting new parcel creation in resources zones by enacting an 80 acre minimum parcel size.**
 - C. **Minimizing impacts to big game habitat by requiring all new development in major and peripheral big game habitat to follow development siting standards such as:**
 1. **Dwellings and structures shall be located as near each other and existing developed areas as possible considering topography, water features, required setbacks, and firebreaks.**
 2. **Dwellings and structures shall be located to avoid habitat conflicts and utilize least valuable habitat areas.**
 3. **Road Development shall be minimized to that necessary to support the proposed use and shall utilize existing roads as much as possible.**
 4. **The owner/occupant of the resource parcel assumes responsibility for protection from damage by wildlife.**
 5. **Riparian and Wetland areas shall be protected in accordance with Sections 1170 and 1180.**
 6. **Columbia County shall notify the Oregon Department of Fish and Wildlife (ODFW) of all proposed uses or activities ~~That have the potential to adversely affect big game habitat~~ if it is determined that big game habitat will be**

3. Road development shall be the minimum necessary to support residential use.

4. Dwelling density shall not exceed that defined in (B.) above.

5. Designate as impacted those "built and committed" areas which, because of existing levels of land use, are no longer considered viable big game habitat. Areas zoned Rural Residential have densities exceeding the Oregon Department of Fish and Wildlife acceptable density standards and are considered impacted.
14. Require the owner or occupant of a dwelling sited in major or peripheral habitat to assume the responsibility for protecting the property from wildlife damage.
15. Protect significant streams, lakes and wetlands from the adverse affects of development and other land use practices.
16. Cooperate with the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife to ensure that future development does not unduly conflict with riparian area protection.
17. Limit development along significant water bodies by adopting "safe harbor" provisions for riparian areas and wetlands.
18. Development or projects that affect Fish and Wildlife habitat shall be coordinated with ODFW.

Finding 20: Staff finds that the overall Fish and Wildlife Goals and Policies do accurately reflect what the County is trying to accomplish in this section of the comprehensive plan. Staff finds that details of how the County and its citizens are to coordinate with the Oregon Department of Fish and Wildlife (ODFW) should be clarified in the amendments. It should be made clear that ODFW is giving a recommendation and the County will try and implement their recommendations as much as possible, however, the County has the ultimate decision making authority. Staff finds that the requirement to develop a habitat management is too onerous as applied to every development or activity in inventoried habitat areas and that it should be eliminated. Should ODFW have recommendations for protection measures they should be included in their comments. If no response is received, the County will move on without the ODFW recommendation. In summary, staff finds the goals and policies of the Fish and Wildlife section of the comprehensive plan reasonable and appropriate, however, language should be added to clearly spell out how the coordination efforts with ODFW are to be accomplished.

Continuing with the Comprehensive Plan Part XVI; Goal 5:

ARTICLE IX. NATURAL AREAS

A. Definition:

Natural areas have been defined by The Nature Conservancy as the following:

Location: T7N, R2W, S35 and 26

Quality: Sloughs comprise a large Wapato marsh and provide a natural contrast to the manicured grounds of the Trojan Nuclear Plant. Wapato is a rare plant that was once an important food source for the Native American Indians. At one time, Wapato was widespread and common in lakes, ponds, and sloughs of the Columbia and tributaries, but dikes, fills, agriculture, and grazing have decimated its habitat. This is one of only a few known riparian sites with good populations of Wapato. All other Oregon sites, for which information is available, have very small populations, heavy disturbance, or both. This Wapato wetland provides an opportunity to study native wetland habitat in conjunction with similar altered habitat at the nearby Trojan Nuclear site.

Quantity: 239 acres

2. Scappoose Bay Inlet

Location: T4N, R1W, S8, 9, 16, 17, 19, 20, 21, 29, 30, 31

Quality: The wetlands in this area are part of a diverse set of aquatic, wetland, and upland habitats that include a large stand of Wapato. The area supports emergent and forest vegetation that provide habitat for wildlife.

Quantity: 355 acres

3. Sandy Island

Location: T6N, R1W, S7 and 18

Quality: A long, forested alluvial island in the Columbia River covered by a riparian cottonwood and willow forest. Beaver, deer, small mammals, and various waterfowl constitute a rich assortment of riverine wildlife. This island is a good example of a potential riparian and riverine environment and may provide valuable study in the future.

Quantity: 350 acres

4. Wapato Marsh "Millionaire Lake"

Location: T4N, R1W, S10, 15, and 16

Quality: The marsh at the north end of Sauvie Island is part of the Sauvie Island Wildlife Area and is an excellent example of the lower Columbia River wapato-sedge-marsh/willow-ash ecosystem. Because of its remoteness and marshy ground, it is unsuitable for farming and valuable as an ecosystem for study.

D. Economic, Social, Environmental, and Energy Consequences:

Economic:

agricultural practices in and surrounding natural areas in Columbia County were severely limited, negative consequences would result. The County depends on these practices both for tax revenue and for job opportunities. Maintaining efficient operations is a high priority for the County. However, job opportunity and income are also received from protecting these sites as educational and recreational resources and must not be overlooked.

Social:

If conflicting uses are allowed in natural areas, the educational, recreational, historical, and scenic values of the resource may be lost to the community and the State. Natural areas near residential areas can provide valuable recreational and educational opportunities for area residents. They are outdoor classrooms for learning, and recreational sites for those with a naturalist bent. They also are often historically significant resources. For example, the rare Wapato plant links us with past cultures that depended on this plant for food. If conflicting uses are restricted, property owners and workers may experience personal loss from lost opportunity.

Environmental:

If conflicting uses in the identified natural areas are restricted, positive environmental consequences will result. These areas have been identified as such because their natural diversities have remained relatively undisturbed. Columbia County contains very few naturally significant resources because it was one of the first settled areas in the State. The area contains no remaining stands of old growth timber and most sensitive plant life has been destroyed by conflicting land usage in the past. If conflicting uses are not restricted, the remaining natural areas may also be encroached upon and destroyed.

E. Findings:

This inventory of ecologically and scientifically critical lands defined by the Oregon Natural Heritage Program is not a selective inventory. Lands have not been rated and categorized on a priority scale. The reason for this is that protecting one unit of land will change the priority for protecting other lands. Also, often the individuals and opportunities at hand will dictate the appropriate strategy for applying protection. These natural areas have been identified and presented to alert citizens and officials of their significance. The County will adopt measures to protect the significant character of these features and direct incompatible land uses away from sensitive areas. Both the Wetland and Riparian Area Overlay zones, as well as measures particular to natural areas, will apply protection for these features. In addition, the County

ARTICLE X. WATER RESOURCES

WETLANDS

1. Definition:

Wetlands are primarily lowlands covered by shallow and sometimes temporary or intermittent waters. Often they are referred to as marshes, bogs, swamps, wet meadows, sloughs, and overflow lands. Plant and animal communities in wetlands are dependent on at least periodic saturation by water.

~~For the purpose of this report, a significant wetland in Columbia County is defined as follows:~~

A significant wetland is typically an area where the water table is at, above, or below the land surface long enough so the area supports predominantly hydrophytic vegetation, has soils indicative of wet conditions, and is large enough to be of biological value. In case of dispute over whether an area is of biological value and should be considered a wetland, ~~a determination by the Oregon Division of State Lands the recommendation of the Oregon Department of Fish and Wildlife and the Columbia County Soil and Water Conservation District shall be relied upon.~~

2. Inventory and Significance:

~~Columbia County will utilize the "safe harbor" provisions of Goal 5 to determine wetland significance. The adopted inventory of wetlands for Columbia County is the National Wetlands Inventory (NWI) contained in the Technical Appendix Part XVI, Article X(A) and is incorporated by reference herein. All wetlands inventoried on the NWI or any more detailed inventories such as the State Wetland Inventory (SWI) or Local Wetlands Inventories (LWI) produced by individual cities are considered significant for the purposes of Goal 5. The wetland overlay zone is consistent with the locations of wetlands as shown on the NWI, SWI or LWI. However, a wetland not inventoried in the NWI may still be protected by relevant Oregon Administrative Rules (OAR) and policies set forth by the Oregon Division of State Lands. It is the responsibility of individual landowners to verify the existence or nonexistence of wetlands on any property prior to any development activity or other impact.~~

LOCATION:

~~Wetlands in Columbia County are found in the three following areas:~~

~~1. The identified wetland areas as identified by the Oregon Department of Fish and Wildlife and Columbia County and generally shown on Map 45. These sites are specifically described and shown in this section. These areas are located along the Columbia River. Once, before dams and dikes were built, they were annually inundated and reshaped by floods. Today, they contain the majority of the remaining wetlands along the Columbia River in the County. These sites are determined (1C) sites and will be addressed in the Goal 5~~

Economic:

As recreational resources, wetlands contribute to the economy of Columbia County. They provide habitat for the waterfowl, fish, and wildlife populations which attracts numerous recreational uses to the area each year. Because of the County's proximity to the Portland Metropolitan area and Longview, the recreational value of these sites will likely increase in the future. Already some wetlands in the County have been leased to private hunting clubs for significant sums of money and have become a secondary source of income for landowners. The value of such wetlands may increase and help diversify the economy in Columbia County's future. By regulating activities within wetland areas, the County can protect these resources for future use.

Measures protecting wetlands could have a negative impact on the County if they stopped the development of income-generating land use activities. Not only could measures hinder property owners from reaping the benefits of their land, but potential tax revenue and employment opportunities could be lost to the community. However, most of the wetlands located in the path of industrial, residential, or agricultural expansion have been filled, drained, and developed in years past. This is true in the three areas where specific potential conflicting uses were identified. Remaining wetland characteristics in these areas are located along sloughs, rivers, and their associated riparian areas and will be protected under the Riparian Overlay zone. Landowners in Columbia County should not suffer severe economic hardship because of adopted regulations which protect wetland areas. Remaining wetlands are generally located in rural areas where little pressure exists for development.

Social:

Regulations imposed around wetland resources will be recreationally beneficial to the County. They will protect a population of wildlife enjoyed by County residents and visitors. However, regulations imposed to wetlands could cause negative consequences for County residents if they prohibit the development of personal property for personal benefit.

Environmental:

Protecting the quality of significant wetlands in Columbia County through regulation will have positive environmental consequences. Not only will such regulation ensure the availability of quality habitat, but it will protect other functions of the wetland ecosystem as well. These sites act as areas for aquifer recharge and provide natural flood control by storing waters during winter months and releasing them in the summer when they are needed.

Loss of wetlands, through industrial or other land use expansion, would have negative environmental consequences. Their activities would destroy vegetation and water quality now supporting waterfowl, fish, and many small animals.

Energy:

AREA: Round Lake

LOCATION: T3N, R1W, S7, 17, 18, and 19. An area southeast of Scappoose, north and west of Dike Road, and south of Honeyman Road.

SIZE: Approx. 1,000 acres ZONING: Agriculture, Rural Residential, Industrial

SITE DESCRIPTION: This area is characterized by agricultural lowlands intersected by Johnson Creek and drainage channels with many wetlands. The largest wetland in this area is Round Lake. Wetlands are surrounded by pasture and crop plantings attracting abundant waterfowl and other wildlife to the area. Many of these wetlands dry up by mid-July, at which time they are planted and farmed. Then, in the fall, they are flooded and leased to commercial gun clubs for hunting. Wetlands in this area contain emergent vegetation including cattails, sedges, rushes, canary grass, and smartweed. A potential conflict exists in this area between the protection of wetlands and the expansion of agricultural practices:

WETLAND AREA SITE 3

AREA: Rest Lake

LOCATION: T3N, R1W, S4, 5, 6, 7, 8 and 9. Area is located northwest [northeast] of Scappoose, and bordered by Honeyman Road on the west, south, and east.

SIZE: Approx. 2,000 acres ZONING: Agriculture, Rural Residential, Surface Mining

SITE DESCRIPTION: The majority of this area has been developed in the past for agricultural purposes. It contains one large lake, Rest Lake, and is crossed by Jackson Creek, Santosh Slough, Evans Slough, and small drainage ditches. The area also contains a string of wetland[s] near the City of Scappoose Sewage Treatment Plant. A healthy cover of emergent and forested wetland vegetation has developed within and adjacent to portions of these wetlands and encourages the use of many kinds of waterfowl and other wildlife:

Underlying the area is a large reserve of aggregate resources. Already a proposal to mine 700 acres within the area has been submitted for approval. Presently, the area to be mined is in agricultural use and contains no wetlands except those found in conjunction with streams and sloughs. Therefore, this portion of the 700-acre site has been excluded from the Wetland Area. Jackson Creek and Rest Lake, which lie to the east of the proposed aggregate site, have remained within the Wetland Area:

WETLAND AREA SITE 4

AREA: Santosh Slough

LOCATION: T4N, R1W, S20, 29, 30, 31, 32. The area is bordered on the east by the dike road next to Santosh Slough, to the west by the BN railroad, and on the south by

wetlands, and has been removed from the Wetland Area.

WETLAND AREA SITE 7

AREA: Port Westward

LOCATION: T7N, R4W, S4-6 and T8N, R4W, S15, 16, 20-23, 27-34. Area is located between the railway line on the south and the Columbia River on the north.

SIZE: Approx. 5,000 acres ZONING: Agriculture and Industrial

SITE DESCRIPTION: The majority of the site consists of agricultural bottomlands crossed by many sloughs and drainage ditches. Most of the wetlands in this area have been drained and filled in years past and are now in agricultural use. However, a number of birds and other wildlife animals are still attracted to the area. Today Palustrine forested and emergent vegetation is restricted primarily to the banks of the sloughs, ditches, and Columbia River. However, generally only areas along the Columbia River and major sloughs still contain tree growth.

The northern portion of the site is Port Westward, an industrial development operated by PGE. The reserved zone for future industrial development within this area is presently in agricultural use. The only present wetland habitat lies along the Columbia River.

WETLAND AREA SITE 8

AREA: Deer Island Pond

LOCATION: T5N, R1W, S6. Area is west of Hwy. 30, 1/2 mile north of Canaan Road.

SIZE: Approx. 10 acres ZONING: Agriculture

SITE DESCRIPTION: The pond is approximately ten acres in size. It is bordered on the west by agricultural land, Hwy. 30 on the east, and by wooded area on the south. Riparian vegetation exists around much of the pond which attracts a variety of birds and other wildlife including the black-tailed deer.

WETLAND AREA SITE 9

AREA: Glatskanie Flats

LOCATION: T7N, R5W, S1-6 and T8N, R5W, S31-36. The area is bordered on the north by the Columbia River, on the south by U.S. Hwy. 30, east by Glatskanie Slough, and west by county line.

Overall, staff finds the proposed amendments are consistent with the purpose of Goal 5 and will adequately protect wetland areas in Columbia County by restricting uses inside of known wetland areas.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article X. Water Resources

B. RIPARIAN AREAS

1. Definition:

Riparian areas in Columbia County are defined as follows:

- a. **Lakes:** Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as identified in (e) below.
- b. **Small and Medium Fish-Bearing Streams:** Along all fish-bearing streams with an average annual stream flow of less than 1,000 cubic feet per second (cfs), as identified in the Comprehensive Plan, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as identified in (e) below.
- c. **Large Streams:** Along all streams, including non-fish-bearing streams, with an average annual stream flow greater than 1,000 cfs, the riparian corridor boundary shall be 75-feet upland from the top-of-bank, except as identified in (e) below.
- d. **For all other fish-bearing and non-fish bearing rivers, streams, sloughs, intermittent creeks, or other waterways,** the riparian corridor shall be 25-feet upland from the top-of-bank, except as identified in (e) below.
- e. **Wetlands:** Where the riparian corridor includes all or portions of a significant wetland, as identified in the Comprehensive Plan, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland. To clarify, the riparian corridor boundary begins at the upland edge of the wetland and extends either 50-feet¹ or 75-feet² further upland, resulting in a buffer around the wetland.

4. For all Class I rivers and streams, the riparian area shall extend 50 feet landward of the ordinary high water line except where shrub or forested wetlands are located adjacent to the river, then the riparian area shall be the entire area of shrub or forested wetland. Where emergent wetland vegetation exists adjacent to a river, the 50 feet shall be measured from the landward extent of the emergent vegetation.

¹ 50 foot setback for streams <1000 cfs.

² 75 foot setback for streams >1000 cfs.

Columbia County contains an abundance of riparian vegetation upon the banks of its many rivers, streams, lakes, wetlands, sloughs, and other water bodies. All riparian areas identified Article X (B)(1) above are considered significant.

6. Background and Information

Three major land use activities which take place within and adjacent to riparian areas are potential conflicting uses. These are forest practices, agricultural practices, and the development of residential, commercial or industrial activities.

- Forest practices may impact the riparian area by removing vegetation during through the harvest of timber, introduction of toxic chemicals, or construction of roads.
- Agricultural practices within this area may cause damage by converting riparian areas to from crop production, or through improper chemical application and/or livestock grazing techniques.
- Residential, commercial, and industrial development may affect the riparian area in a number of ways: by removing riparian vegetation and disturbing soils either within the riparian area or on adjacent slopes, by filling in adjacent lowlands, by removing resources from the area, or by introducing structural improvements which alter channel structure.

Conflicting uses that reduce or degrade riparian vegetation may have important economic consequences. Many individuals and businesses in the County profit from commercial and sport fishing and sport hunting. If habitat is reduced or degraded, fish and game populations will decline, and less income will be produced.

Activities which cause streambank erosion and subsequent flooding also have economic consequences. These events destroy valuable resource lands and can also destroy bridges, roads, and other areas lying along their path. The cleanup and restoration needed because of this destruction may be expensive.

When conflicting uses are restricted within riparian areas, important social consequences may result. Often land in such areas is valued highly, due to river frontage and view, and sought after for residential, commercial, and industrial development. A property owner unable to build on such lands may experience financial and personal hardship because of the loss. This is particularly true in areas where surrounding development has previously occurred within the riparian area.

However, the riparian area is valued partially because of its recreational and aesthetic qualities. By limiting development within the area and conserving its vegetation, a community can reduce the potential hazards associated with development and protect the riparian area's recreational and social value.

Limiting conflicting uses in the riparian area will have positive environmental consequences. Stream structure will improve, become more stable, and produce better habitat for fish and wildlife. In

~~riparian vegetation from activities within the area and on adjacent lands.~~

The riparian corridor overlay zone and standards shall apply to lands between urban growth boundaries and city limits, as well as to other County lands, to protect riparian resources during the transition from rural to urban land use. The County has adopted the Comprehensive Plans of the six incorporated cities and will apply them to these unincorporated areas as appropriate. Proposed policies and measures encourage planned development so as to avoid accelerated erosion, pollution, damage to riparian vegetation, or injury to fish and wildlife habitats.

Finding 23: The proposed amendments for Article X(B), Riparian Areas, of the Comprehensive Plan have been designed to closely follow the Goal 5 "Safe Harbor" rules found in OAR Chapter 660, Division 23, specifically 660-023-090(5) regarding standard setback distances. Columbia County has chosen to follow the Safe Harbor standards established by the State of Oregon instead of following the Standard Goal 5 process. In general, the Safe Harbor option can be considered the minimum allowable goal 5 protection program allowed under state law. The County will use the most recent Oregon Department of Forestry Stream Classification map as the inventory that will determine what streams apply and whether they are fish bearing. Staff finds the proposed amendments will protect streams and riparian areas by limiting uses within specified riparian corridors. Implementing the Safe Harbor standard setback distances, creates a protective buffer along waterways. The riparian corridor created by limiting development near streams is generally high quality fish and wildlife habitat. Therefore, protecting these areas from development is consistent with the purpose of State Planning Goal 5. Riparian areas are protected by implementing the standard setback requirements in Section 1170 of the Zoning Ordinance.

Staff recommends no changes to the proposed amendments and finds the proposed amendments will sufficiently protect riparian areas in Columbia County consistent with the purpose of Goal 5 and the Safe Harbor rules found in OAR 660-023-090.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article X. Water Resources

C. LAKES

A. Location, Significance, Quality, and Quantity:

The lakes of Columbia County are included in the inventory of riparian areas contained in the Technical Appendix Part XVI, Article X(C) incorporated herein by reference. This list is taken from the inventory of lakes in Columbia County shall be as published in the publication "Lakes of Oregon, Volume One, Clatsop, Columbia, and Tillamook Counties," prepared by the U.S. Department of the Interior, Geological Survey of 1973. This publication inventory includes twenty-two (22) lakes ranging from Lindsey Lake, with a surface area of .5 acres and depth of up to 15 feet, to Sturgeon Lake, with a surface area of 3200 acres and an average depth of 2 feet. The document contains a description of each lake's location, size, and general characteristics, including water quality data and temperature. General lake locations are shown on Map 47.

RESERVOIRS

Twenty-two (22) potential reservoir sites have been identified in Columbia County. These sites appear based on preliminary investigations as discussed in USDA report on "Water and Related Land Resources for North Coast Drainage Basin and Lower Willamette River Basin", dated 1966 and 1963, and the State Water Resources Board "Freshwater Resources of the Oregon Coastal Zone", 1975. While there is adequate precipitation in Columbia County, only a portion of this water is currently being utilized for domestic, irrigation, and recreational purposes. It is believed that the only feasible means by which the County's long-range water needs can be met is through development of surface storage reservoirs.

Of the numerous sites investigated, only three appear initially to be economically feasible for development as surface storage reservoirs. The three suitable sites are located on Rock Creek, the Clatskanie River, and Deep Creek II. However, information is presently unavailable to determine the actual suitability and related impacts of developing these sites. Therefore, for the purposes of Goal 5, these reservoir sites are ~~not protected at this time~~ considered "4B-sites".

The County will rely primarily on State and Federal recommended procedures to address the economic, social, environmental, and energy consequences of developing these surface storage reservoirs.

Finding 25: No significant changes were made to the Reservoirs section of the comprehensive plan. An outdated reference was removed and replaced with clarifying language.

E. WATER RESOURCES GOALS AND POLICIES

A. GOAL:

To protect and maintain the quality of water resources in Columbia County.

B. POLICIES: It shall be the policy of Columbia County to:

1. Cooperate and coordinate with State and Federal agencies in assuring the maximum beneficial use of all water areas in the County.
2. Coordinate its actions with water quality planning and implementation activities carried out by such State agencies as the Department of Environmental Quality, the Soil and Water Conservation Commission, the Department of Forestry, and the Department of Water Resources.

15. Support appropriate State and Federal agencies in their efforts to inventory wetland resources in the County. The County shall determine the significance of newly found resources and up-date zoning and other implementing ordinances to protect them when appropriate.

16. Protect municipal water supplies and the quality of water resources in general, by zoning undeveloped resource lands for resource use.

17. Protect water quality by applying riparian corridor and wetland overlay zones that discourage development in sensitive areas that affect the water resource.

18. Apply the standards and requirements of the Columbia County Stormwater and Erosion Control Ordinance to all new development.

19. The Oregon Division of State Lands shall be notified whenever there is an application for development permits or other land use decisions affecting wetlands on the inventory.

Finding 26: Staff finds the proposed Water Resource Goals and Policies adequate to protect Goal 5 water resources and consistent with OAR 660-023. Staff notes the proposed riparian setbacks are the minimum setback standards allowable under the State Safe Harbor rules and that scientific reports found in the document "Metro's Technical Report for Goal 5" dated January 2002, recommend much larger riparian protection areas. In addition, staff recommends adding policy language regarding wetland mitigation following DSL rules.

Continuing with the Comprehensive Plan Part XVI; Goal 5:

ARTICLE XI. HISTORIC AND CULTURAL AREAS

A. HISTORIC AREAS

1. Definition:

Historic areas are defined in the Statewide Goals and Guidelines as "lands with sites, structures, and objects that have local, regional, statewide, or national historical significance".

2. Location:

The following locations have been identified as significant historic resources in Columbia County. Detailed information regarding each site can be found by referring to the document "Columbia County Intensive-Level Historic Survey", Cultural Resources Management, Ann Fulton, Ph.D., 2002 contained in the Technical Appendix Part XVI, Article XI(A) incorporated herein by reference. A copy of this document is also on file with the Oregon State Historic Preservation Office.

Mist Birkenfeld Area

1. Melis Farm
(T.6N, R.5W, Sec.14, Tax Lot 00400)

- 16 Frakes-Bernet Barn
(T.3N, R.1W, Sec.17, Tax Lot 00302)
- 17 Yankton School
(T.5N, R.2W, Sec.36 - 030, Tax Lot 00400)
- 18 Thomas McKay Grave Site
(T.4N, R.1W, Sec.31 - 040, Tax Lot 01400)
- 19 Dutch Canyon School - South Scappoose Grange
(T.3N, R.2W, Sec.16, Tax Lot 00200)
- 20 Warrior Point
(T.4N, R.1W, Sec.10, Tax Lot 00100)
- 21 Warrior Rock Lighthouse
(T.4N, R.1W, Sec.10, Tax Lot 00400)
- 22 Heimüller House and Farm
(T.3N, R.2W, Sec.11 - 040, Tax Lot 00302)
- 23 Bethany Lutheran Church
(T.4N, R.1W, Sec.17 - 012, Tax Lot 01500)
- 24 Bachelor Flat School
(T.4N, R.2W, Sec.12 - 014, Tax Lot 00600)
- 25 Dangerfield Apple House
(T.3N, R.2W, Sec.01 - 010, Tax Lot 00300)

Vernonia Area

- 26 Keasey Farmhouse
(T.5N, R.5W, Sec.26, Tax Lot 01100)
- 27 Big Eddy Park
(T.5N, R.4W, Sec.10, Tax Lot 00390)
- 28 McDaniel Barn
(T.5N, R.4W, Sec.34, Tax Lot 00501)

Deer Island, Goble, Rainier Area

- 29 Zwingli-Anliker Farmhouse and Barn
(T.6N, R.2W, Sec.32, Tax Lot 00600)
- 30 Coffin Rock

classified (1A). Information pertaining to the location, quality, and quantity of sites 5, 6, and 13 is insufficient to determine their significance. These sites have been classified (1B) and will be addressed further when information related to their significance becomes available:

The general location, quality, and quantity of other sites having potential historic importance have been identified in the County Inventory Document. Yet, specific information describing the character of these sites is presently lacking. Because this information is unavailable, these sites have been determined to be (1B) sites. They too will be addressed in the future when more information becomes available:

Sites 2, 4, 8, 9, 10, 11, and 12 are classified (1C) because of available information, are shown on Map 46, and further described below:

WARRIOR ROCK

Location: T4N, R1W, S10, TL #00400

Quality: Warrior Rock is located at the northernmost tip of Sauvie Island. This rock is known as a point encountered by Lieutenant Robert Broughton in 1792. Here Broughton was met by 150 Indian warriors, thus the name Warrior Rock. The site falls within the Sauvie Island Wildlife Management Area and the Willamette River Greenway. It has been designated Community Service Recreation by the County. This designation should protect the significance of the site and limit conflicting uses:

Quantity: 2 acres

COFFIN ROCK

Location: T6N, R2W, S1, TL #00199

Quality: Near the city of Prescott, the rock obtained its name when a group of early explorers found an Indian burial ground on the site. The rock is on land presently owned by Portland General Electric and is part of the Trojan Nuclear Power complex. While the rock is inaccessible to the public, information and relics from Indian settlements on the site are on view in the plant-visiting center. No conflicting uses are identified for the site:

Quantity: 1 acre

NATAL GRANGE

Location: T6N, R4W, S29, TL #1600

Quality: The Grange is located along Hwy. 47 in what used to be Natal, Oregon. It was founded in 1901 and served the social and fraternal needs of the residents of this section of the Nehalem River Valley. The Grange is still an active center for community events. A one-story woodframed building, it was recorded as being in fair condition in 1976 in the Oregon Inventory. The Grange is zoned Community Service Institution. This designation should limit conflicting uses with the building's historical significance:

Quantity: 1/4 acre

NATAL SCHOOL

minimal because of the rural, scattered locations of the sites. No significant environmental or energy consequences of allowing conflicting uses or activities have been identified.

Findings:

It is the goal of Columbia County to encourage the preservation and maintenance of historical sites and to identify and preserve new sites. To accomplish this objective, the County shall establish an Ad Hoc Historical Sites Committee to review the identified sites and structures and make recommendations as to whether or not they should be designated historical and protected. The County shall also implement an Historic Overlay (HO) District, which is intended to allow opportunities to preserve sites of historical significance within the County. Initially, the Overlay District will apply only to those sites determined to be significant and described in this report.

Finding 27: The proposed amendments to the Historic Resources Inventory of Columbia County are considered a separate Post Acknowledgment Plan Amendment (PAPA) application and are not included within the periodic review work task. Columbia County put out a request for proposals for a Historic Context Statement and 60 site inventories on April 1, 1998. Portland State University historian, Ann Fulton, PhD. and her company Cultural Resources Management were contracted to provide the service on April 17, 1998. Broad public notice was provided in the local news media and public meeting regarding this historical project were held on June 15, July 13, August 17, September 14, October 19, 1998 and February 17, 1999. Dr. Fulton then produced a Historical Context Statement for Columbia County and surveyed the 60 chosen sites. A final slide show presentation titled "Historic Treasures of Columbia County" was held at an open public meeting on November 12, 2002. At the November meeting it was decided by the attendees to add 33 of the 60 sites to the Comprehensive Plan to be identified as significant historic resources.

Since that time, the owners of the Mayger Church have requested to be removed from the historical resources list. Since the historic resources preservation project is a voluntary effort, staff recommends removing the Mayger Church from the inventory as allowed under OAR 660-023-200(6). Staff notes that by removing the site from the list, the owners will not be eligible for historical resources preservation grant funding that may be available from the State of Oregon.

In addition, staff recommends Section 1130, Historic Overlay, of the zoning ordinance be amended to include a 120 day waiting period prior to issuing a demolition permit as written in OAR 660-023-200(9).

In summary, staff finds the proposed PAPA to update the Columbia County Historical Resources Inventory is adequate to protect historical sites in the county pursuant to Goal 5.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article XI Historic and Cultural Areas

B. CULTURAL AREAS

1. Definition:

"Before the County grants approval for a mining operation, the site shall be investigated for archeological excavation, timber harvesting, or other first-use activities, and other non-renewable resource conflicts resolved before mining begins.

The policy is implemented through the zoning ordinance as a standard for operation in a Surface Mining zone. In addition, the County shall support the State Historic Preservation Office in their efforts to conduct systematic surveys of archeological sites in the County.

In addition, to encourage the preservation of archeological sites, the County has also restricted activities in other zones through its zoning ordinance.

Finding 28: No changes were made to the Cultural Areas section of the comprehensive plan.

Continuing with the Comprehensive Plan Part XVI; Goal 5:
Article XI Historic and Cultural Areas

C. HISTORIC AND CULTURAL AREAS GOALS AND POLICIES

GOAL:

To encourage the preservation and maintenance of cultural and historical sites, and to identify and preserve new sites.

POLICIES: It is the policy of the County to:

1. Recommend the establishment of an Ad Hoc Historical Sites Committee to review the historical sites and structures in the County and make recommendations as to whether or not the sites should be designated as such and protected. The County shall encourage the committee to seek ways to provide historic markers to identify the designated sites and literature to explain and describe them.
2. Support the State Historic Preservation Office in their efforts to conduct systematic surveys of ~~historic and~~ archeological sites in the County.
3. Apply an Historic Overlay District to sites and structures in the County of historical significance. Initially, the Overlay District shall apply only to sites determined ~~(1C) significant~~ and described in the Plan. Other potentially significant historical sites, including those determined ~~(1B)~~, ~~may exist and~~ shall be inventoried ~~during periodic review of the plan~~. Upon completion of this study, the County shall proceed through the Goal 5 process for new found areas and up-date zoning and other implementing ordinances to accommodate them.
4. ~~Support efforts to preserve, protect, and enhance the historic and cultural resources of the County.~~

scenic waterways; and certain fish and wildlife areas and habitat. Many community recreational facilities in the County could also qualify as scenic areas under this definition. Therefore, the sites inventoried here are only those whose value is derived primarily from their aesthetic features rather than sites where scenic quality may only be part of its overall value.

2. Location:

Generally, the open rural character of the land is of scenic value in Columbia County. Peaks, river valleys, falls, tidal flats, and other features form a diverse scenic landscape. Over eighty percent of the land is timbered. Farmlands stretch through these forested areas along the river valleys and create patches of pleasant pastoral settings. Centers of rural activity, which have remained for the most part unchanged in recent history, dot the County. Shallow lakes, marshes, and sloughs remain in the ancient flood plain of the Columbia River. Like a mosaic, these features contrast and compliment each other, creating a varied landscape that is visually attractive.

COUNTY SCENIC RESOURCES:

SCENIC SITES

1. BEAVER CREEK FALLS

Location: T7N, R4W, S12, SE1/4
Quality: Beautiful natural falls in narrow creek valley
Quantity: 1 acre
Plan Designation: Forest-conservation

2. CARCUS CREEK FALLS

Location: T6N, R3W, S20, SW1/4
Quality: A scenic 105 foot falls in a wild stream surrounded by privately owned timber lands of second growth alder, fir, cedar, and maple.
Quantity: 1 acre
Plan Designation: Forest-conservation

3. LAVA CREEK FALLS

Location: T6N, R4W, S24, NE1/4
Quality: Falls on Lava Creek over 100 feet high, this site is surrounded by privately owned timber lands. No road access is presently available to the falls.
Quantity: 1 acre
Plan Designation: Forest-conservation

4. CLATSKANIE RIVER - APIARY FALLS TO CARCUS CREEK

Location: T6N, R3W, S4, 5, and 9 and T7N, R3W, S32

The County has taken a number of "built and committed" exceptions to the density level in certain areas, some of which fall along the identified scenic highways. The exceptions will allow a higher general density in these areas than allowed on surrounding lands. While it is possible that this density increase may change the general scenic quality of the area, it is unlikely that it will degrade it. The areas are small in comparison to the large acreages of surrounding resource land which are zoned Primary Agriculture (PA-38), Primary Forest (PF-76), and Forest Agriculture (FA-19). If higher density development were not allowed in the areas, landowners may experience extreme economic and social hardships because of lost opportunities.

Most of the areas inventoried are on public property, but Carcus Creek Falls, Lava Creek Falls, and the Clatskanie River-Apiary Falls to Carcus Creek are presently undeveloped privately-held scenic resources. There is no present public access to these areas. Consequently, their social value is limited. However, these scenic sites could potentially be made more accessible to the public in the future. For example, a trail system could be developed up Carcus Creek to Carcus Creek Falls and Lava Creek Falls, assuming an easement along the creeks can first be obtained from the landowners. Potential also exists to connect these scenic sites with a 280-acre tract of County-owned land situated within ½ mile of both falls. The falls are rare features whose value lies primarily in their aesthetic appearance. Allowing conflicting uses could have serious social and environmental consequences. However, negative economic consequences will be felt if current timber operations are severely restricted. In order to encourage private landowners to allow access to these sites, the County has chosen to place relatively few limits on conflicting uses. Thus, while the County has restricted residential development on these sites, it has not prohibited commercial forestry. Commercial forestry would impact the land surrounding the falls and river, but would not eliminate the scenic values of the falls and river themselves. The impact of commercial forestry will also be short term because of reforestation requirements.

5. Findings:

These scenic features have been identified and presented to alert citizens and officials of their significance. Protecting this view quality in the County is socially and possibly environmentally beneficial. However, views often encompass large amounts of land and general restrictions placed to preserve a certain view could have both negative economic and social consequences for the citizens of Columbia County. Therefore, measures need to address and protect certain qualities of the area. Scenic features in Columbia County generally lie within areas zoned for agricultural and forest uses. Scenic quality will be protected by retaining the general low density of the area. In addition, land use activities along Class I streams, including those identified as scenic sites, are restricted by the Riparian Area overlay zone and the Forest Practices Act. Additional restrictions are unneeded and would be counterproductive because the landowner might react by further limiting public access or refusing to grant public access.

Finding 31: No changes were made to the Scenic Resources section of the comprehensive plan.

COLUMBIA COUNTY ZONING ORDINANCE:

Buffer (Landscape): A landscaped area that provides visual separation between commercial/industrial uses and residential uses.

Buffer (Riparian): Land space adjacent to a surface water feature that is managed to retain natural functions and values relative to the water feature.

- .11 Building: Any structure used or intended for supporting or sheltering any use or occupancy
- .12 Building Envelope: means the land area on a particular property that is available for construction of a primary structure, not considering the required setbacks
- .13 Building Height: The vertical distance above grade as defined herein to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped roof. The measurement may be taken from the highest adjoining sidewalk or ground surface within a 5 foot horizontal distance of the exterior wall of the building, when such walkway or found surface is not more than 10 feet above grade. The height of a stepped or terraced building is the maximum height of any segment of the building.
- .14 Building Line: A horizontal line that coincides with the front side of the main building.
- .15 Commission: The Planning Commission of Columbia County, Oregon.
- .16 Common Open Space: An area within a development designed and intended for the use or enjoyment of all residents of the development or for the use and enjoyment of the public in general.
- .17 Court: An open unoccupied space, other than a yard, on the same lot or parcel with a building and bounded on 2 or more sides by such building.
- .18 Director: The Columbia County Planning Director or the Director of the Department of Land Development Services, or his delegate.
- .19 Dormitory: A room for sleeping purposes for more than 4 persons, which is rented.
- .20 Dwelling Unit: A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
- .21 Dwelling, One-Family or Single Family: A structure designed for occupancy by 1 family.

values compatible with these uses; and (7) grazing land for livestock.

- .33 Frontage: All the property fronting on one side of a street between intersecting or intercepting streets, or between a street and a right-of-way, waterway and/or dead-end street, or county boundary, measured along the street line. An intercepting street shall determine only the boundary of the frontage of the side of the street which it intercepts.
- .34 Garden: Tilling of soil and raising of produce or flowers in a manner that is clearly incidental to the residential use.
- .35 Grade (Adjacent Ground Level): The lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line, or when the property line is more than 5 feet from the building, between the building and a line 5 feet from the building.
- .36 Grandfather: Use or condition existing prior to the adoption of this ordinance.
- .37 Grazing: The use of land for pasture or horses, cattle, sheep, goats, and/or other domestic herbivorous animals, alone or in conjunction with agricultural pursuits.
- .38 Highway, State: Any road or highway designated as such by law or by the Oregon Transportation Commission and includes both primary and secondary state highways.
- .39 Hedge, Sight Obscuring: A planting which is at least 80 percent opaque when viewed horizontally from between 2 and 8 feet above the average ground level.
- .40 Historical Building: Any building or structure designated under a local government landmark or National Register of Historic Places, or listed in the Oregon State Inventory of historical sites, buildings, and properties approved for nomination in the National Register of Historic Places by the State of Oregon Advisory Committee on Historic Preservation.
- .41 Horticulture: The cultivation of plants, garden crops, trees and/or nursery stock.
- .42 Hotel: A building or portion thereof designed or used for occupancy of individuals who are lodged with or without meals.
- 43 Impervious surface: means a hardened or compacted surface area that either prevents or retards the entry of water into the soil. Examples include, but are not limited to, structures, walkways, patios, driveways, carports, parking lots, or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, haul roads, and soil surface areas compacted by construction operations, and oiled or macadam surfaces.

right angles to the lot or parcel depth at a point midway between the front and rear property lines.

- .55 Lot Width, Average: The average horizontal distance between the side property lines.
- .56 May: As used in this ordinance, MAY is permissive and SHALL is mandatory.
- .57 Mining Exploration: The search for mineral deposits by geological surveys, geophysical prospecting, bore holes and test pits and surface or underground heading, drifts, or tunnels.
- .58 Mitigation: means taking one or more of the following actions listed in order of priority:
- (a) Avoiding the impact altogether by not taking certain development action or parts of that action.
 - (b) Minimizing impacts by limiting the degree or magnitude of the development action and its implementation.
 - (c) Rectifying the impact by repairing, rehareshoring the affected environment.
 - (d) Reducing or eliminating the impact over time by preservation and maintenance operation during the life of the development action by monitoring and taking appropriate corrective measures.
 - (e) Compensating for the impact by replacing, relocating or providing comparable substitute resources or environments.
- .59 Mobile Home: A detached single-family dwelling unit with the following characteristics: 1) a factory-built home designed to be transported after fabrication on its own wheels or detachable wheels; and 2) is designed for long term occupancy once the mobile home is installed on the site.
- .60 Mobile Home Park: Land designated for the permanent location of 4 or more mobile homes. This land is commonly held in one ownership and mobile home spaces are rented to the owner of mobile homes.
- .61 Modular Home: A permanent structure consisting of one or more modules assembled in a factory in accordance with a building code, and qualified to be financed and taxed as real property when placed upon a permanent foundation. (Sectionalized housing is a form of single family modular housing.)
- .62 Motel: One or more buildings designed or used as temporary living quarters.
- .63 Natural Resource Feature: A natural feature of the land, typically not man-made.

- .77 Principal Use: The main use to which the premises are devoted and the primary purpose for which the premises exist.
- .78 Professional Office: An office containing activities such as those offered by a physician, surgeon, dentist, lawyer, architect, engineer, accountant, artist, teacher, real estate sales, or insurance sales.
- .79 Property Line: A common boundary line between two properties.
- .80 Property Line, Rear: That property line of a four-sided lot or parcel opposite the front property line. For a triangular or more than four-sided (irregular) lot or parcel, a line within the lot or parcel not less than ten feet in length and running parallel to, and at a maximum distance from, the front property line.
- .81 Property Line, Side: Any property line not designated a front or rear property line.
- .82 Public Water: Water which is provided off site, serves 4 or more dwellings, and meets the State of Oregon requirements.
- .83 Riparian Area: is the area adjacent to a river, lake, stream or wetland, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem. Where a Riparian Corridor has been established to protect a significant goal 5 resource, the riparian area includes the entire area within the corridor, regardless of the location of the transition area.
- .84 Riparian Corridor: is a fixed distance adjacent to a river, lake, stream or wetland, usually established for protective purposes.
- .85 Riparian Vegetation: is all vegetation located within a riparian area or located within a riparian corridor.
- .86 Road, County: Every dedicated public way, thoroughfare, road, street, or easement within the county used or intended for use by the general public for vehicular travel but excluding private driveways.
- .87 Rooming House: Same as "Boarding House".
- .88 School, Primary, Elementary, or High: Includes private or parochial but not nursery school, kindergarten, or day nursery, except when operated in conjunction with a school.
- .89 Setbacks: The minimum distance allowed between the property line of a lot or parcel and the building line of a permitted structure. Unless otherwise specified, the front, side, and rear yard setbacks are given for each of the zoning districts within the zoning ordinance.

- (a) Before the improvement or repair is started, or
- (b) If the structure has been damaged and is being restored, before the damage occurred. For the purpose of this definition, Substantial Improvement is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

- (c) Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions, or
- (d) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

- .100 Timber Growing, Commercial Timber Production: The growing of trees for the production of timber.
- .101 Top of Bank: means the stage or elevation at which water overflows the natural banks of streams or other waters of the state and begins to inundate upland areas. In areas where the top-of-bank is not clearly defined, the riparian corridor boundary shall be measured from the ordinary high water level, or the line of non-aquatic vegetation, whichever is most landward.
- .102 Tourist Court: See "Motel".
- .103 Travel Trailer: A mobile shelter, usually smaller than a mobile home, used for camping and outings rather than as a permanent dwelling which carries a highway license but does not need a transport permit.
- .104 Trailer Park: Land designed or used for the temporary parking of 4 or more trailers or vehicles used for human habitation.
- .105 Yard: An open space on a lot or parcel with a building and bounded on 1 or more sides by such building, such space being unoccupied and unobstructed from 30 inches above the ground upward.
- .106 Yard, Front: A yard extending across the lot or parcel, the depth of which is the minimum horizontal distance between the front property line and a line parallel thereto on the lot or parcel.
- .107 Yard, Rear: A yard extending across the full width of the lot or parcel between the most rear building and the rear property line; the depth of the required rear

commercial uses.

Rural Industrial-
Planned Development

RIPD

Resource related industrial use on rural
land.

Suburban Districts

Single-Family Residential

R-10

Single Family Residential district with a
minimum lot or parcel size of 10,000 sq.ft.

Single-Family and
Two-Family Residential

R-7

Single and Two-Family Residential
with a minimum lot or parcel size of 7,000 sq.ft.

Multi-Family Residential

MFR

Multi-Family Residential

Mobile Home Residential

MH

Mobile Home Residential

Marine Commercial

C-2

Marine Commercial

General Commercial

C-3

General Commercial

Neighborhood Commercial

C-4

Neighborhood Commercial

Highway Commercial

C-5

Highway Commercial

Heavy Industrial

M-1

Heavy Industrial

Light Industrial

M-2

Light Industrial

Industrial Park

M-3

Industrial Park

Airport Industrial

AI

Airport Industrial

Special Districts, Overlay Districts, and Special Provisions

Community Service-
Institutional

CS-I

Community Service / Institutions

Community Service-
Utility

CS-U

Community Service / Utilities

Community Service-
Recreation

CS-R

Community Service / Recreation

Surface Mining

SM

Surface Mining

rookeries, and Band-tailed pigeon mineral springs, or other sensitive bird sites identified in the Columbia County Comprehensive Plan shall be subject to the requirements of the Sensitive Bird Habitat Overlay zone. When additional sites are identified by the Oregon Department of Fish and Wildlife, they shall be added to the Comprehensive Plan map #42 titled the Technical Appendix Part XVI, Article VIII(F) incorporated herein by reference and become subject to the requirements of the Sensitive Bird Habitat Overlay Zone.

1123 Permitted Uses: Uses permitted in the underlying zone(s) are permitted or conditionally permitted in the Sensitive Bird Habitat Overlay Zone subject to the additional procedure and requirements of Section 1124.

1124 Development Standards: The following review procedure and criteria shall apply:

- .1 The review procedure is initiated when: Columbia County receives a request for a development permit that may affect a sensitive bird habitat.
- .2 A proposed use or activity is considered to have the potential for affecting a sensitive bird habitat if it is located within a quarter mile of an eagle nest or roosting site, or it is within six hundred (600) feet of a heron rookery, or Band-tailed pigeon mineral spring or other sensitive bird sites identified in the Columbia County Comprehensive Plan.
- .3 A sensitive bird habitat will be considered affected by a use or activity if it is located within 660 feet of an eagle site or within 300 feet of a heron rookery, or pigeon mineral spring, or other sensitive bird sites identified in the Columbia County Comprehensive Plan. However, the Oregon Department of Fish and Wildlife may determine that uses and activities located further from the sensitive habitat also will affect the site because of unique site conditions such as topography. The basis for such a finding shall be spelled out in the Oregon Department of Fish and Wildlife's determination of impact.
- .4 If a proposed use or activity meets the locational criteria of subsection 1124.2; **SUBSECTION 1124.3 OR SUBSECTION 1124.4**, Columbia County shall notify the Oregon Department of Fish and Wildlife.
- .5 Upon notification, the Oregon Department of Fish and Wildlife(ODFW) shall review the proposed use or activity and make a determination of whether the use or activity has the potential for adversely affecting a sensitive bird habitat area. In making this review and determination, the Oregon Department of Fish and Wildlife shall consult with the affected landowner(s) and appropriate state agencies **AND PROVIDE COMMENTS AND RECOMMENDATIONS TO THE COUNTY CONCERNING MEASURES TO PROTECT BIRD HABITAT BASED ON IDENTIFIED IMPACTS OF THE PROPOSED USE OR ACTIVITY, IF ANY. THE COUNTY WILL CONSIDER THE COMMENTS AND RECOMMENDATIONS OF ODFW BEFORE MAKING A**

- B.** This section attempts to meet the above goals by excluding structures and other development from riparian areas around fish-bearing lakes, streams and associated wetlands, and by prohibiting vegetation removal or other alterations in riparian corridors. For cases of hardship, the section provides a procedure to reduce the riparian buffer. Alteration of the riparian area in such cases shall be offset by appropriate restoration or mitigation, as stipulated in the ordinance.
- C.** For the purposes of this section, development means buildings and any other development requiring a building permit, or any alteration in the riparian corridor by grading, the placement of fill material, or construction of an impervious surface, including paved or gravel parking areas or paths and any land clearing activity such as removal of trees or other vegetation.
- D.** This section is not intended to apply to commercial forestry operations or standard farm practices, both of which are exempt from these riparian corridor protection standards. Commercial forestry is regulated by the Oregon Department of Forestry. Farm practices are regulated by the Oregon Department of Agriculture, with riparian area and water quality issues governed specifically by 1993 Senate Bill 1010.
- E.** The provisions of this riparian protection overlay zone do not exempt persons or property from state or federal laws that regulate protected lands, water, wetland or habitat areas. In addition to the restrictions and requirements of this Section, all proposed development activities within any wetland area may be subject to applicable state and federal agency standards, permits and approval.

2. Riparian Corridor Standards

- A.** The inventory of riparian corridors contained in Part XVI, Article x(B) of the Technical Appendix to the Comprehensive Plan specifies which streams and lakes are fish-bearing, and the stream-size category. Based on the classification contained in this inventory, the following riparian corridors shall be established:
- (i)** Lakes. Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank.
 - (ii)** Small and Medium Fish-Bearing Streams. Along all fish-bearing streams with an average annual stream flow of less than 1,000 cubic feet per second (cfs), as identified in the Comprehensive Plan, the riparian corridor boundary shall be 50-feet from the top-of-bank.
 - (iii)** Large Streams. Along all streams, including non-fish-bearing streams, with an average annual stream flow greater than 1,000 cfs, the riparian corridor boundary shall be 75-feet upland from the top-of-bank.

The following activities are not required to meet the standards of this section:

- A. Commercial forest practices regulated by the Oregon Forest Practices Act.
- B. Normal and accepted farming practices other than buildings and structures occurring on land zoned for exclusive farm use and existing in the riparian corridor since prior to the date of adoption of this ordinance.

5. **Activities Allowed Within The Riparian Corridor Overlay**

A. ~~The following developments and uses are allowed with a sensitive lands development permit, reviewed pursuant to section 1601 of this ordinance:~~

- A. Streets, roads, driveways, and paths.
- B. **PEDESTRIAN WALKWAYS, PATHS, AND TRAILS.**
- C. Fencing and signs, not including billboards.
- D. Drainage facilities, utilities and irrigation pumps.
- E. Water-related and water-dependent uses.
- F. **NEW OR EXPANDED SHORELINE STABILIZATION AND FLOOD CONTROL GRADING AND STRUCTURES.**
- G. **RECREATIONAL AREAS, FURNITURE, AND OUTDOOR EQUIPMENT FOR THE PRIVATE USE OF THE PROPERTY OWNER/RESIDENT.**
- H. The following riparian vegetation removal is allowed:
 - (i) Removal of non-native vegetation, invasive species, and noxious weeds⁽³⁾ and replacement with native plant species. The replacement vegetation shall cover, at a minimum, the area from which vegetation was removed, and shall provide for maximum soil retention and shade cover. Replacement vegetation shall upon maturity maintain 75-100% canopy and ground cover.
 - (ii) Removal of vegetation necessary for the development of approved water-related or water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water-dependent and water-related use.

(3) See Oregon Department of Agriculture List of Noxious Weeds

- (iii) Trees and vegetation in danger of falling and/or posing a hazard to life or property may be removed. If no hazard will be created, the Director recommends these trees, once felled, to be left in place in the riparian area.

I. The following existing conditions are allowed to continue without a sensitive lands development permit: —

- (i) Replacement of existing structures with structures in the same location and in the same footprint that do not disturb additional riparian surface area
- (ii) Structures or other non-conforming alterations existing fully or partially within the riparian corridor may be expanded provided the expansion does not occur within the riparian corridor. If the pre-existing structure is completely within the riparian corridor, expansion is allowed only on the side opposite the water resource. Substantial improvement of a non-conforming structure in the riparian corridor shall require compliance with the standards of this ordinance.
- (iii) Existing lawn within the riparian corridor may be continued, but not expanded within the riparian corridor. Development activities on the property shall not justify replacement of riparian area with lawn.
- (iv) Existing shoreline stabilization and flood control structures may be maintained. Any expansion of existing structures or development of new structures shall be evaluated by the director and appropriate natural resource agency staff. Such alteration of the riparian area shall be approved only if less-invasive or nonstructural methods will not adequately meet the stabilization or flood control needs.

**6. SENSITIVE LAND DEVELOPMENT PERMIT STANDARDS
STANDARDS FOR NEW USES AND ACTIVITIES ALLOWED IN THE RIPARIAN
CORRIDOR**

A. THE USES IDENTIFIED IN SECTION 1170(5) ABOVE ARE ALLOWED, SUBJECT TO THE FOLLOWING STANDARDS, if the following exception criteria are met:

- (i) ALL APPLICABLE PERMITS FROM STATE AGENCIES, SUCH AS THE DIVISION OF STATE LANDS AND OREGON DEPARTMENT OF FISH AND WILDLIFE(ODFW) MUST BE OBTAINED PRIOR TO COMMENCING THE USE OR ACTIVITY, AND,
- B. FOR USES AND ACTIVITIES ALLOWED WITHIN THE RIPARIAN CORRIDOR WHICH REQUIRE A BUILDING PERMIT, GRADING PERMIT OR STORMWATER/EROSION CONTROL PERMIT, THE COUNTY SHALL PROVIDE NOTIFICATION TO ODFW AND PROVIDE A 14 DAY PERIOD FROM DATE OF NOTIFICATION FOR COMMENTS AND RECOMMENDATIONS. THE COUNTY SHALL CONSIDER THE

- (a) A plot plan showing top-of-bank, existing streams and wetlands and other significant site features;
- (b) The extent of development within the riparian setback;
- (c) Uses that will occur within the riparian setback;
- ~~(D) — Potential impacts of proposed uses;~~
- (d) The extent of proposed vegetation removal;
- (e) Characteristics of the existing vegetation (types, density, location);
- (f) Any proposed alterations of topography or drainage patterns;
- (g) Existing uses on the property;
- ~~(f) — Impact of existing uses on riparian resources.~~
- (h) An erosion control plan

~~B. — Any permanent alteration of the riparian corridor by placement of structures or impervious surfaces may be allowed subject to the following procedures, and the requirements of Section (6) and/or (7) of this ordinance.~~

~~(f) — Proposals for development activities within the riparian corridor shall be reviewed by the Oregon Department of Fish and Wildlife (ODFW), as per OAR 635-415 fish and wildlife habitat mitigation policy. A mitigation recommendation shall be obtained by ODFW. For purposes of implementation of Goal 5, the goal is no net loss of protected resources; correspondingly, for purposes of designing appropriate mitigation, sites should be considered at least in "Habitat category 2" (OAR 635-415-030), which strives for no net loss of habitat values. Approval of the development proposal shall be conditional, requiring compliance with the mitigation recommendation of ODFW.~~

(vi) Qualifying Lots.

(a) Lots on which the riparian setback required by this ordinance exceeds any other setbacks in a particular yard, and which, when combined with other required yard setbacks results in a building area depth of 30 feet or less or a building envelope of 800 square feet or less.

(vii) Setback Reduction Procedure.

- ~~.3 The following standards shall apply for the maintenance, removal, and replacement of riparian vegetation along all rivers, streams, lakes, and sloughs designated for riparian vegetation protection by the comprehensive plan:~~
- ~~A. No more of a tract's existing vegetation shall be cleared from the setback and adjacent area than is necessary for a permitted use, accessory buildings, necessary access, septic requirements, and fire safety requirements.~~
 - ~~B. Construction activities in and adjacent to the riparian area shall occur in such a manner so as to avoid unnecessary excavation and/or removal of existing vegetation beyond that required for the facilities indicated in (A) above. Where vegetation removal beyond that allowed in (A) above cannot be avoided, the site shall be replanted during the next replanting season to avoid water sedimentation. The vegetation shall be of indigenous species in order to maintain the natural character of the area.~~
 - ~~C. A maximum of 25% of existing natural vegetation may be removed from the riparian area.~~
 - ~~D. The following uses and activities are excepted from the above standards:
 - ~~.1 Commercial forest practices regulated by the Oregon Forest Practices Act.~~
 - ~~.2 Vegetation removal necessary to provide water access for a water dependent use.~~
 - ~~.3 Removal of dead or diseased vegetation that poses a safety or health hazard.~~
 - ~~.4 Removal of vegetation necessary for the maintenance or placement of structural shoreline stabilization.~~~~

Finding 35: The proposed amendments for Section 1170, Riparian Corridors, of the zoning ordinance have been designed to closely follow Article X(B) of the Comprehensive Plan and the Goal 5 "Safe Harbor" rules found in OAR Chapter 660, Division 23, specifically 660-023-090(5) regarding standard setback distances. Columbia County has chosen to follow the Safe Harbor standards established by the State of Oregon instead of following the Standard Goal 5 process. In general, the Safe Harbor option can be considered the minimum allowable goal 5 protection program allowed under state law. The County will use the most recent Oregon Department of Forestry Stream Classification map as the inventory that will determine what streams apply and whether they are fish bearing. Staff finds the proposed amendments will protect streams and riparian areas by limiting uses within specified riparian corridors. Implementing the Safe Harbor standard setback distances, creates a protective buffer along waterways. The riparian corridor created by limiting development near streams is generally high quality fish and wildlife habitat. Therefore, protecting these areas from development is consistent with the purpose of State Planning Goal 5. Riparian areas are protected

overlay zone to the land when compared with either lot of record development or with leaving the property in the underlying zone designation.

~~.5 The land is not subject to the special districts or overlay districts set forth in Sections 1100 (Flood Hazard Overlay), 1120 (Sensitive Bird Habitat Overlay), 1130 (Historic Overlay), 1140 (Greenway Overlay), 1180 (Wetland Overlay), and 1190 (Natural Area Overlay).~~

5 A goal exception for the land under ORS 197.732 and the regulations thereunder is approved either prior to or as part of the overlay district approval process. The exception findings and reasons shall contain a condition of approval that any consent to the County to a change in any covenant, which is designed to implement any provision of this buffer woodlot overlay district and which is to be placed on any subject property within the land covered by the overlay district, shall be deemed a plan amendment and subject to the post-acknowledgment process.

1178 Permitted Uses:

- .1 The propagation and harvesting of wood fiber.
- .2 Barkers, chippers, portable sawmills, and other accessory equipment used in managing, growing, and harvesting forest products on the subject property or contiguous property.
- .3 Fish and wildlife management not requiring developed facilities or structures.
- .4 Excavation, removal and processing of sand, gravel, loam, stone, dirt or other natural materials when accessory to another permitted use in this district. Such materials must be used on the subject property or contiguous properties.
- .5 Buildings, other than dwellings, customarily provided in conjunction with forest use.
- .6 Mobile home or recreation vehicle used during the harvesting of wood fiber.
- .7 Fire prevention, detection and suppression facilities.
- .8 One single family detached dwelling on a parcel within the overlay zone of not less than 12 acres in size, when the dwelling is in conjunction with forest use, provided that the Building Official, prior to issuance of a building permit or mobile home siting permit, determines that the following standards have been met:
 - A. A certificate, with documentation attached, has been provided by the applicant stating either that all property lines between contiguous lots within the subject property have been vacated or that the subject property is otherwise subject to a covenant binding all of the parcels within the subject property together as one for the benefit of the property in

under Oregon law and is subject to remedies set forth in zoning laws of the state.

- .9 Utility facilities necessary for public service in conjunction with permitted or approved conditional uses, but not including substations, treatment plants, storage plants, hydro-electric or other power generating facilities except as provided below. Maximum utilization of existing easements and rights-of-way shall be made.
- .10 Small scale energy production facilities in conjunction with permitted uses.

1179 Implementation of the Overlay District and Procedure:

- .1 Implementation. The buffer woodlot overlay zone may be applied to any primary forest-76 (PF-76) district or any forest agriculture (FA-19) district by complying with the standards contained herein. Application of the Overlay District to specific land is accomplished through a Major Map Amendment with Section 1502.1. Approval of a Major Map Amendment for the buffer woodlot overlay zone signifies that the affected property is suitable for the uses specified in Section 1178, but does not authorize uses for which specific permits must be obtained.
 - A. The zone applicable to the property preceding the change will be retained on the Comprehensive Plan and Zoning Maps.
 - B. Permitted development pursuant to these buffer woodlot overlay district sections shall be reviewed and approved based upon the provisions of these sections rather than the provisions of the underlying zone or zones or of any special or overlay district or zone.
 - C. A proposed change from buffer woodlot overlay district to a zone or zones other than the underlying zone, as retained on the Comprehensive Plan and Zoning Maps, shall be evaluated as a change from such underlying zone.
- .2 Procedure:
 - A. Plan and Zone Change: An amendment to the Plan Map and Zoning Map to apply the buffer woodlot overlay district may be initiated by the Board of County Commissioners or by application of a property owner in the area. After initial adoption of this ordinance, the procedure shall be as provided in Section 1502.1 but the matters to be included in an application and considered on review and the criteria for approval of the change shall be only as set forth in Sections 1176 and this section.
 - B. Preapplication Conference: Prior to submitting a plan map and zoning map change application, the applicant shall confer with the Planning

- A. WETLANDS ASSOCIATED WITH FISH BEARING STREAMS THAT FLOW GREATER THAN 1000 CUBIC FEET PER SECOND (CFS) WILL BE PROTECTED BY A 75 FOOT RIPARIAN CORRIDOR BOUNDARY.
- B. WETLANDS ASSOCIATED WITH FISH BEARING STREAMS THAT FLOW LESS THAN 1000 CFS WILL BE PROTECTED BY A 50 FOOT RIPARIAN CORRIDOR BOUNDARY.
- C. WETLANDS ASSOCIATED WITH NON-FISH BEARING STREAMS SHALL BE PROTECTED BY A 25 FOOT RIPARIAN CORRIDOR BOUNDARY.
- D. WETLANDS NOT ASSOCIATED WITH A STREAM DO NOT HAVE A PROTECTIVE RIPARIAN CORRIDOR BOUNDARY. DEVELOPMENT IS PROHIBITED FROM ENCRANCHING WITHIN THE DELINEATED WETLAND BOUNDARY.

2. DISTANCE MEASUREMENT.

- A. THE RIPARIAN CORRIDOR BOUNDARY BEGINS AT THE UPLAND EDGE OF THE WETLAND AND IS MEASURED OUTWARD, FURTHER UPLAND, THE REQUIRED SETBACK DISTANCE.

3. ACTIVITIES PROHIBITED WITHIN THE RIPARIAN CORRIDOR.

IN ADDITION TO THE REQUIREMENTS OF THE UNDERLYING ZONE, THE FOLLOWING ACTIVITIES ARE PROHIBITED IN WETLAND RIPARIAN CORRIDORS, EXCEPT AS PROVIDED FOR IN SECTIONS 1184(4) AND (5) OF THIS ORDINANCE.

- A. EXCEPT AS OTHERWISE PROVIDED, THE ALTERATION OF THE RIPARIAN CORRIDOR BY GRADING OR BY THE PLACEMENT OF STRUCTURES, FILL MATERIAL, AND/OR IMPERVIOUS SURFACES IS PROHIBITED.
- B. THE REMOVAL OF RIPARIAN VEGETATION IS PROHIBITED, EXCEPT AS PROVIDED IN SECTION 1180(4)(C) OF THIS ORDINANCE.

4. EXEMPTED ACTIVITIES.

THE FOLLOWING ACTIVITIES ARE NOT REQUIRED TO MEET THE STANDARDS OF THIS SECTION.

- A. COMMERCIAL FOREST PRACTICES REGULATED BY THE OREGON FOREST PRACTICES ACT.

(III) TREES AND VEGETATION IN DANGER OF FALLING AND/OR POSING A HAZARD TO LIFE OR PROPERTY MAY BE REMOVED. IF NO HAZARD WILL BE CREATED, THE DIRECTOR RECOMMENDS THESE TREES, ONCE FELLED, TO BE LEFT IN PLACE IN THE RIPARIAN AREA.

I THE FOLLOWING EXISTING CONDITIONS ARE ALLOWED TO CONTINUE:

(I) REPLACEMENT OF EXISTING STRUCTURES WITH STRUCTURES IN THE SAME LOCATION AND IN THE SAME FOOTPRINT THAT DO NOT DISTURB ADDITIONAL RIPARIAN SURFACE AREA.

(II) STRUCTURES OR OTHER NON-CONFORMING ALTERATIONS EXISTING FULLY OR PARTIALLY WITHIN THE RIPARIAN CORRIDOR MAY BE EXPANDED PROVIDED THE EXPANSION DOES NOT OCCUR WITHIN THE RIPARIAN CORRIDOR. IF THE PRE-EXISTING STRUCTURE IS COMPLETELY WITHIN THE RIPARIAN CORRIDOR, EXPANSION IS ALLOWED ONLY ON THE SIDE OPPOSITE THE WATER RESOURCE. SUBSTANTIAL IMPROVEMENT OF A NON-CONFORMING STRUCTURE IN THE RIPARIAN CORRIDOR SHALL REQUIRE COMPLIANCE WITH THE STANDARDS OF THIS ORDINANCE.

(III) EXISTING LAWN WITHIN THE RIPARIAN CORRIDOR MAY BE CONTINUED, BUT NOT EXPANDED WITHIN THE RIPARIAN CORRIDOR. DEVELOPMENT ACTIVITIES ON THE PROPERTY SHALL NOT JUSTIFY REPLACEMENT OF RIPARIAN AREA WITH LAWN.

(IV) EXISTING SHORELINE STABILIZATION AND FLOOD CONTROL STRUCTURES MAY BE MAINTAINED.

6. STANDARDS FOR NEW USES ALLOWED IN THE WETLAND RIPARIAN CORRIDOR

A THE USES IDENTIFIED IN SECTION 1184(5) ABOVE ARE ALLOWED, SUBJECT TO THE FOLLOWING STANDARDS:

(I) ALL APPLICABLE PERMITS FROM STATE AGENCIES, SUCH AS THE DIVISION OF STATE LANDS AND OREGON DEPARTMENT OF FISH AND WILDLIFE (ODFW) MUST BE OBTAINED PRIOR TO COMMENCING THE USE OR ACTIVITY, AND,

CORRIDOR; AND

(V) THE APPLICANT HAS PROVIDED SUFFICIENT INFORMATION REGARDING THE PROPOSED DEVELOPMENT AND ITS RELATIONSHIP TO WETLAND RIPARIAN RESOURCES TO ALLOW STAFF, IN CONSULTATION WITH ODFW, TO DETERMINE WHETHER THE PROPOSAL WILL PROVIDE EQUAL OR BETTER PROTECTION OF WETLAND RIPARIAN RESOURCES THAN THE CURRENT CONDITION. THE APPLICANT SHALL SUBMIT, AT MINIMUM:

- (A) A PLOT PLAN SHOWING TOP-OF-BANK, EXISTING STREAMS AND WETLANDS AND OTHER SIGNIFICANT SITE FEATURES;**
- (B) THE EXTENT OF DEVELOPMENT WITHIN THE WETLAND RIPARIAN SETBACK;**
- (C) USES THAT WILL OCCUR WITHIN THE WETLAND RIPARIAN SETBACK;**
- (D) THE EXTENT OF PROPOSED VEGETATION REMOVAL;**
- (E) CHARACTERISTICS OF THE EXISTING VEGETATION (TYPES, DENSITY, LOCATION);**
- (F) ANY PROPOSED ALTERATIONS OF TOPOGRAPHY OR DRAINAGE PATTERNS;**
- (G) EXISTING USES ON THE PROPERTY;**
- (H) AN EROSION CONTROL PLAN**

(VI) QUALIFYING LOTS.

- (A) LOTS ON WHICH THE WETLAND RIPARIAN SETBACK REQUIRED BY THIS ORDINANCE EXCEEDS ANY OTHER SETBACKS IN A PARTICULAR YARD, AND WHICH, WHEN COMBINED WITH OTHER REQUIRED YARD SETBACKS RESULTS IN A BUILDING AREA DEPTH OF 30 FEET OR LESS OR A BUILDING ENVELOPE OF 800 SQUARE FEET OR LESS.**

(VII) SETBACK REDUCTION PROCEDURE.

1188 Permitted Uses: All uses permitted in the underlying zone either outright or conditionally shall be permitted if they will not result in development or alteration which will disturb or destroy the sensitive, fragile, or otherwise unique characteristics of the site.

For uses which disturb the Natural Area, approval shall not be granted unless the applicant can show the following findings of fact:

- .1 The identified natural area must be disturbed for reasonable use of the site; if not disturbed the applicant would be substantially damaged.
- .2 The use proposed is a benefit to the community and meets a substantial public need or provides for a public good which clearly outweighs retention of the unique characteristics of the natural area.
- .3 The proposed development would not result in the loss of a rare, irretrievable, or irreplaceable natural feature or scientific opportunity, or the disturbance of a substantially unaltered natural feature or area in or adjacent to the proposed site, unless the benefit to the public from the proposed use clearing outweighs the public good from retaining the feature or area.

1189 Development Standards: In the Natural Area Overlay Zone, the Following standards shall apply:

- .1 Columbia County shall notify The Nature Conservancy and/or other appropriate reviewing bodies of actions proposed within the identified natural area so that they may determine the potential impact upon the site. If it is determined that the proposed uses or activities will disturb or destroy the unique characteristics of the natural area, the property owner or applicant shall work with the County and appropriate agencies to develop a management plan that will allow for both resource preservation and development to occur.

Finding 38: Staff finds that a minor change has been made to the Natural Areas section of the zoning ordinance in order to facilitate better coordination with the inventory listed in the comprehensive plan.

Continuing with the Columbia County Zoning Ordinance:

Section 1190 BIG GAME RANGE OVERLAY BGR

1191 Purpose: To protect sensitive habitat areas for the Columbian white-tailed deer and other Big Game by limiting uses that conflict with maintenance of the areas. This section shall apply to all areas identified in the Comprehensive Plan, as a major and peripheral big game range or Columbian white-tailed deer range. [See Comprehensive Plan Technical Appendix Part XVI, Article VIII(A) And VIII(B) which contains the 1995 Beak Consultants maps titled "Wildlife Game Habitat". The major habitat designation is

~~with usfw and develop a management plan to protect the affected wildlife. LOCATED WITHIN THE COLUMBIAN WHITE-TAILED DEER HABITAT. THE COUNTY WILL CONSIDER THE COMMENTS AND RECOMMENDATIONS OF ODFW AND USFW BEFORE MAKING A DECISION CONCERNING THE REQUESTED USE OR ACTIVITY~~

~~.1 Big game habitat density standards:~~

~~A. Major habitat - 1 dwelling unit per 38 acres with clustering:~~

~~B. Peripheral habitat - 1 dwelling unit per 19 acres with clustering:~~

~~(Clustering means all of the following as applicable to the situation:~~

~~1. Locating dwellings and structures near each other and existing roads;~~

~~2. Locating dwellings and structures to avoid habitat conflicts and utilize least valuable habitat areas; and~~

~~3. Minimize road development to that necessary to support the residential use.~~

~~If clustering is not feasible, then the ODFW recommended density standard per section shall be applied.)~~

~~C. Columbian white-tailed deer habitat - 1 dwelling unit per 38 acres with clustering:~~

~~.2 Non-forest and non-farm dwellings shall be limited to individual lots or parcels where it can be shown that:~~

~~A. The proposed dwelling shall be located to avoid habitat conflicts and utilize least valuable habitat areas;~~

~~B. The site shall be limited in size to that area suitable and appropriate for residential use.~~

~~C. Road development shall be the minimum necessary to support residential use.~~

~~D. Dwelling densities shall not exceed the maximum standards defined in Section 1193.1.~~

~~.4 Riparian and Wetland areas shall be protected in accordance with Sections 1170~~

dwelling density calculation in non-resource zoned lands. Therefore, land that does not have to follow big game habitat criteria and dwelling density rules is directly affecting land that does have to follow the rules. Once again this also pushes development away from impacted areas and into higher quality habitat areas.

A fourth problem with the current method of employing the dwelling density calculation is that it is not equitable and that it actually promotes development in forest land. Specifically, in a section that has not reached the maximum density, there is a race between property owners to get the last available permits. This makes people develop their land before they are actually ready, in order not to lose the right to develop a homesite. In addition, once the density is reached, those that did not get a permit are prohibited from developing their property. In essence you can have two identical properties where one is allowed a building permit and one is not based on big game habitat concerns. In this scenario, two identical properties with the same habitat characteristics are treated differently, which is not fair to the citizens of Columbia County and is typically a situation the County tries to avoid.

It is the County's position that the state's Template option, which provides for the bulk of new development in forest zones, effectively limits new development in big game habitat areas to those areas where the habitat has already been diminished. The template test fails once property sizes go up and pre-1993 developed houses go down. This leaves the vast majority of forest land in the County unable to pass a template test. Staff finds the areas that will not pass the template test are typically large blocks of commercial timberland that offer very high quality habitat. Thus, since these large blocks of timberland cannot pass the template test, they cannot be developed. Consequently, much of the forest land in Columbia County is protected as big game habitat.

Staff also notes the minimum parcel size in the Primary Forest zone and the Forest Agriculture zone is 80 acres. These large 80 acre lot sizes are consistent with the ODFW recommended big game habitat densities. By maintaining large 80 acre parcel sizes in resource zones the number of new sites that could potentially be developed is further reduced. Thus, big game habitat is protected again by the 80 acre minimum parcel sizes for resource zones in Columbia County.

With these proposed amendments to the Big Game Habitat rules, staff attempts to find a balance between environmental concerns for big game habitat and social concerns for people's ability to live on their own land. Staff attempts to achieve this balance by proposing to eliminate the dwelling density calculation, by identifying all non-resource zoned land as impacted habitat and by establishing siting standards for new development in big game habitat areas.

The proposed siting standards are designed to try and minimize the impact of any new development by siting it on that portion of the property that is least valuable as big game habitat. It does this by siting new structures close to existing developed areas and by minimizing road building.

In addition, ODFW will be notified of all new proposed development in **designated** big game habitat areas. Testimony has been received by ODFW and property owners asking for clarification of the coordination process as it relates to final decision making authority; the time required for ODFW coordination; the requirement for management plans and how ODFW determines adverse effects. Revisions to the 3/26/2003 draft have eliminated the management plan requirement. Coordination has been simplified by use of notification and opportunity to comment after which the county would

it is unnecessary. The submittal requirements for each application are as defined in this section and the standards of the applicable zone, and will be determined and explained to the applicant at the pre-application conference.

.4 Pre-application Conference Committee: The committee shall be appointed by the Planning Director and shall consist of at least the following officials, or their designated staff members. Only affected officials need to be present at each pre-application conference.

- a) The County Planning Director.
- b) The County Director of Public Works.
- c) The Fire Marshal of the appropriate Rural Fire District.
- d) The County Building Official.
- e) The County Sanitarian.
- f) A city representative, for projects inside Urban Growth Boundaries.
- g) Other appointees by the Planning Director, such as an Architect, Landscape Architect, real estate agent, appropriate officials, etc.

.5 Submittal documents: The following documents, when applicable, are required for a Site Design Review. The scope of the drawings and documents to be included will be determined at the pre-application conference by the Pre-application Conference Committee, and a Site Design Review Submittal Checklist will be given to the applicant, documenting which items are deemed not applicable or not necessary to determine compliance with County and State standards, with a short explanation given for each item so determined.

- A. History.
- B. Project narrative.
- C. Existing site plan.
- D. Proposed site plan.
- E. Grading plan.
- F. Drainage plan.
- G. ~~Wetland mitigation plan.~~ Goal 5 Resource Protection Plans (streams, wetlands, riparian areas, natural areas, fish and wildlife habitat)
- H. Landscaping plan.
- I. Architectural plans.
- J. Sign drawings.
- K. Access, parking and circulation plan.
- L. Impact assessment.
- M. Site Design Review Submittal Checklist.

.6 Site Plan Submittal and Analysis: The applicant shall submit an application and any necessary supplemental information as required by this ordinance to the Land Development Services Department. The Planning Director or designate shall review the application and check its completeness and conformance with this ordinance.

- c. Identification of areas exceeding 35% slope.
2. In special areas, a detailed slope analysis may be required. Sources for slope analysis include maps located at the U.S. Natural Resources Conservation Service office.
3. Potential natural hazard areas, including potential flood or high ground water, landslide, erosion, and drainage ways. An engineering geologic study may be required.
4. Wetland areas, springs, wildlife habitat areas, wooded areas, and surface features such as mounds and large rock outcroppings.
5. Streams and stream corridors.
6. Location, species and size of existing trees proposed to be removed.
7. Significant noise sources.
8. Existing structures, improvements, utilities, easements and other development.
9. Adjacent property structures and/or uses.

.11 **Proposed Site Plan:** A complete application for design review shall be submitted, including the following plans, which may be combined, as appropriate, onto one or more drawings, unless it is determined by the Planning Director that the information is not applicable or is not necessary to determine compliance with County and State standards, and a short explanation will be given for each item so determined:

- A. **Site Plan:** The site plan shall be drawn at a suitable scale (i.e. 1"=100', 1"=50', or 1"=20') and shall include the following:
 1. The applicant's entire property and the surrounding area to a distance sufficient to determine the relationships between the applicant's property and proposed development and adjacent properties and developments.
 2. Boundary lines and dimensions of the property and all proposed property lines. Future buildings in phased development shall be indicated.
 3. Identification information, including names and addresses of project designers.
 4. Natural features which will be utilized in the site plan.
 5. Location, dimensions and names of all existing or platted roads or other public ways, easements, and railroad rights-of-way on or adjacent to the

grading will take place, including general contour lines, slope ratios, slope stabilization proposals, and natural resource protection proposals.

C. Architectural Drawings:

1. Building elevations and sections;
2. Building materials (color and type);
3. Floor plan.

D. Signs: (see also Zoning Ordinance Section 1300)

1. Freestanding sign:

- a. Location of sign on site plan;
- b. Elevation of sign (indicate size, total height, height between bottom of sign and ground, color, materials, and means of illumination).

2. On-Building Sign:

- a. Building elevation with location of sign (indicate size, color, materials and means of illumination);
- b. Plot plan showing location of signs on building in relation to adjoining property.

.12 Landscaping: Buffering, Screening and Fencing:

A. General Provisions:

1. Existing plant materials on a site shall be protected to prevent erosion. Existing trees and shrubs may be used to meet landscaping requirements if no cutting or filling takes place within the dripline of the trees or shrubs.
2. All wooded areas, significant clumps or groves of trees, and specimen conifers, oaks or other large deciduous trees, shall be preserved or replaced by new plantings of similar size or character.

B. Buffering Requirements:

1. Buffering and/or screening are required to reduce the impacts on adjacent uses which are of a different type. When different uses are

material. Chain link fences with slats may be used if combined with a continuous evergreen hedge.

2. When the new use is downhill from the adjoining zone or use being protected, the prescribed heights of required fences, walls, or landscape screening along the common property line shall be measured from the actual grade of the adjoining property at the common property line. This requirement may be waived by the adjacent property owner.
3. If four or more off-street parking spaces are required, off-street parking adjacent to a public road shall provide a minimum of four square feet of landscaping for each lineal foot of street frontage. Such landscaping shall consist of landscaped berms or shrubbery at least 4 feet in total height at maturity. Additionally, one tree shall be provided for each 50 lineal feet of street frontage or fraction thereof.
4. Landscaped parking areas may include special design features such as landscaped berms, decorative walls, and raised planters.
5. Loading areas, outside storage, and service facilities must be screened from adjoining properties.

D. Fences and Walls:

1. Fences, walls or combinations of earthen berms and fences or walls up to four feet in height may be constructed within a required front yard. Rear and side yard fences, or berm/fence combinations behind the required front yard setback may be up to six feet in height.
2. The prescribed heights of required fences, walls, or landscaping shall be measured from the lowest of the adjoining levels of finished grade.
3. Fences and walls shall be constructed of any materials commonly used in the construction of fences and walls such as wood, brick, or other materials approved by the Director. Corrugated metal is not an acceptable fencing material. Chain link fences with slats may be used if combined with a continuous evergreen hedge.

- E. Re-vegetation: Where natural vegetation or topsoil has been removed in areas not occupied by structures or landscaping, such areas shall be replanted to prevent erosion.

.13 Standards for Approval:

The Planning Commission or Director shall make a finding with respect to each of the following criteria when approving, approving with conditions, or denying an application:

Protection Overlay. Generally speaking, standards for development in Big Game habitat areas have been relaxed to achieve a greater balance between conflicting uses and the protection of habitat values. Riparian setbacks have been proposed that follow the State of Oregon "Safe Harbor" rules which are the minimum allowable setbacks from a stream.

The revisions to the Planning Commission Hearing draft address testimony received expressing concerns about the ODFW coordination process and requirements; vague and discretionary review criteria; and the time and cost of the review process for uses and activities proposed within the wetland and riparian corridors.

Based on the findings found in the above report (TA 03-02), Staff recommends APPROVAL of the Post Acknowledgment Plan Amendment (PAPA) regarding Big Game Habitat and Historical Resources. Staff also recommends APPROVAL of Periodic Review Work Task IV Sensitive Lands and Habitat.

Attachments:

Attachment 1: Summary of Testimony w/Staff Response.

Attachment 2: Summary of Recommended Amendments-June 20, 2003

CC: Planning Commission
File (TA 03-02)

ATTACHMENT D

**COLUMBIA COUNTY
COMPREHENSIVE
PLAN**

TECHNICAL APPENDIX

**PART XVI
OPEN SPACE, SCENIC, HISTORICAL
AND NATURAL RESOURCES**

**ARTICLE IX
NATURAL AREAS**

1998
Oregon Natural
Heritage Plan

Natural Heritage Advisory Council
to the State Land Board



State Land Board

Phil Keisling
Secretary of State

John A. Kitzhaber
Governor

Jim Hill
State Treasurer

Natural Heritage Advisory Council

Voting Members

Jennifer Budhabhatti
Blair Csuti
Ray Erickson

Stephen Anderson, Chair
Gary Fowles
Jerry Hall

Jane Kertis
Carrie Stilwell
Floyd Vandervelden

Ex-Officio Members

Agriculture Director: Bruce Andrews, represented by Robert Meinke
Fish and Wildlife Director: Jim Greer, represented by Claire Puchy
Forestry Director: Jim Brown, represented by Logan Jones
Higher Education Chancellor: Joseph W. Cox
Parks and Recreation Director: Robert Meinen, represented by Kathy Schutt
State Lands Director: Paul R. Cleary, represented by Jenifer Robison
Transportation Director: Grace Crunican, represented by Nick Testa and Margie Willis

The Oregon Natural Heritage Plan, first published in 1981 and revised in 1988 and 1993, has again been revised and updated by the Natural Heritage Advisory Council and by the staff of The Oregon Natural Heritage Program:

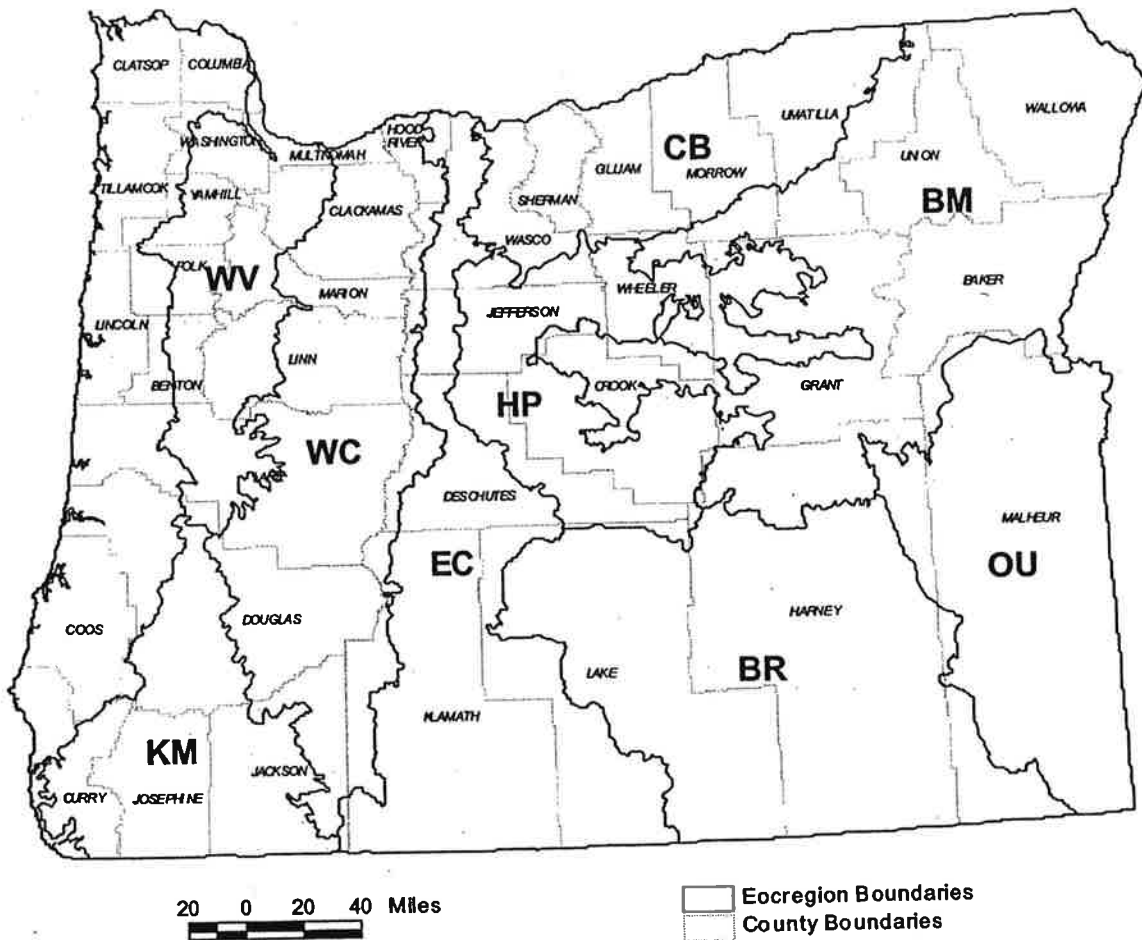
Jimmy Kagan - Director/Ecologist
Connie Levesque - Data Services Assistant/NHAC Support
John Christy - Wetlands Ecologist
Dick Vander Schaaf - Ecologist
Mark Stern - Zoology Program Manager
Susan Vrilakas - Botanist/Data Manager
Eleanor Gaines - GIS/Zoology Data Manager
John Hak - GIS Program Manager
Mary Finnerty - GIS Technician
Jon Titus - Ecologist

Cover photograph of the Metolius River © Harold E. Malde

State Land Board
775 Summer Street NE
Salem, Oregon 97310

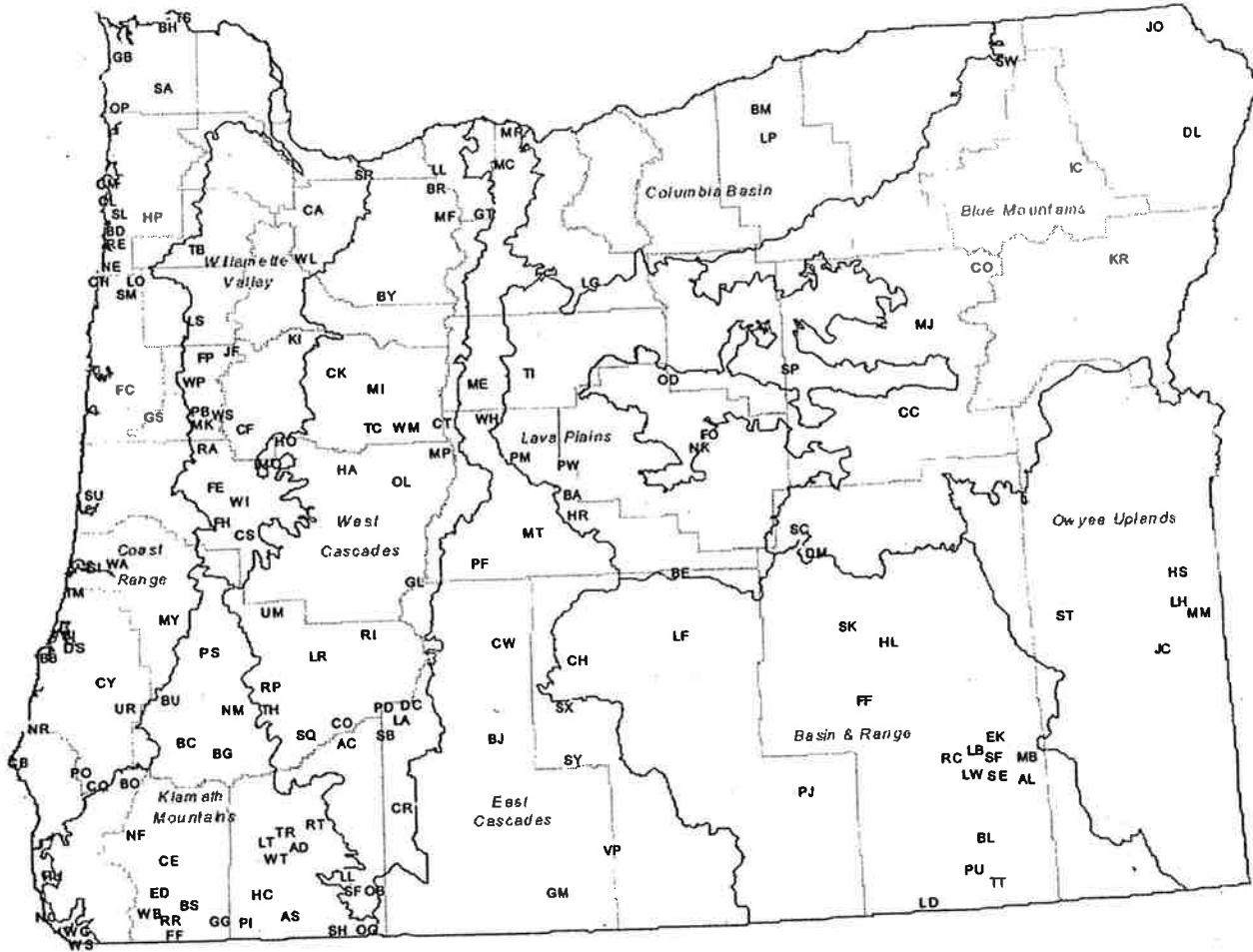
1998

Figure 2. Map of Oregon Ecoregions



- | | | | |
|----------------------------|-----------|-------------------------|-----------|
| Coast Range | CR | Blue Mountains | BM |
| Willamette Valley | WV | Basin and Range | BR |
| Klamath Mountains | KM | High Lava Plains | HP |
| West Slope Cascades | WC | Owyhee Uplands | OU |
| East Slope Cascades | EC | Columbia Basin | CB |

Appendix B. Established Natural Areas of Oregon



Symbol	Name	Ecoregion	Ownership	Area (ha*)
AC	Abbott Creek RNA	WC	USFS	1077
AD	Agate Desert Preserve	KM	TNC	20
AL	Alvord Desert ACEC	BR	BLM	6755
AS	Ashland RNA	KM	USFS	570
BA	Badlands ACEC	HP	BLM	6826
BY	Bagby RNA	WC	USFS	227
BB	Bastendorf Bog Preserve	CR	TNC	4
BG	Bear Gulch RNA	KM	BLM	134
BC	Beatty Creek RNA	KM	BLM	294
BE	Benjamin RNA	HP	BLM	260
BD	Blind Slough Swamp Preserve	CR	TNC	91
BJ	Blue Jay RNA	EC	USFS	325
BM	Boardman RNA	CB	DOD	1923
BO	Bobby Creek RNA	KM	BLM	689
BL	Borax Lake Preserve/ACEC	BR	TNC/BLM	130/210

Symbol	Name	Ecoregion	Ownership	Area (ha)
BD	Bradley Bog Preserve	CR	TNC	19
BS	Brewer Spruce RNA	KM	BLM	645
BI	Bull Island NHCA	CR	DSL	173
BR	Bull Run RNA	WC	USFS	146
BU	Bushnell-Irwin Rocks ACEC	KM	BLM	388
CT	Cache Mountain RNA	EC	USFS	596
CS	Camas Swale RNA	WV	BLM	113
CA	Camassia Preserve	WV	TNC	10
CW	Cannon Well RNA	EC	USFS	270
CC	Canyon Creek RNA	BM	USFS	283
CB	Cape Blanco NHCA	CR	OPRD	124
CL	Cape Lookout/Netarts Sand Spit NHCA	CR	OPRD	221
CM	Cape Meares RNA/NHCA	CR	FWS/OPRD	55
CH	Cascade Head Preserve	CR	TNC	109
CE	Cedar Log Flat RNA	KM	USFS	166
CR	Cherry Basin RNA	EC	USFS	3900
CY	Cherry Creek RNA	CR	BLM	239
DL	Clear Lake Ridge Preserve	BM	TNC	1410
CF	Cogswell-Foster Preserve	WV	TNC	36
CR	Coquille River Falls RNA	CR	USFS	202
CO	Cougar Butte RNA	WC	USFS	1047
CI	Cox Island Preserve	CR	TNC	76
CT	Crabtree-Shafer Creek RNA	WC	BLM	389
DS	Davis Slough NHCA	CR	DSL	24
DC	Desert Creek RNA	WC	NPS	757
DM	Dry Mountain RNA	BM	BLM/USFS	844/893
EK	East Kiger Plateau RNA	BR	BLM	502
ED	Eight Dollar Mountain Preserve/ACEC	KM	TNC/BLM	14/504
FE	Fern Ridge RNA	WV	ACE	47
FC	Flynn Creek RNA	CR	USFS	271
FF	Foster Flat RNA	BR	BLM	1089
FO	Forest Creeks RNA	HP	BLM	164
FP	Forest Peak RNA	WV	BLM	54
FH	Fox Hollow RNA	WV	BLM	65
FR	French Flat ACEC	KM	BLM	266
GB	Gearhart Bog Preserve	CR	TNC	19
GL	Gold Lake Bog RNA	WC	USFS	188
GM	Goodlow Mountain RNA	EC	USFS	510
GG	Grayback Glade RNA	KM	BLM	433
GS	Grass Mountain RNA	CR	BLM	295
GT	Gumjuwac-Tolo RNA	EC	USFS	1440
HA	Hagan RNA	WC	USFS	456
HL	Harney Lake RNA	BR	FWS	12000
HP	High Peak-Moon Creek RNA	CR	BLM	618
HC	Holten Creek RNA	KM	BLM	171
HS	Honeycombs RNA	OU	BLM	4830
HR	Horse Ridge RNA	HP	BLM	243
HO	Horse Rock Ridge RNA	WC	BLM	153
HU	Hunter Creek Bog ACEC	KM	BLM	231
IC	Indian Creek RNA	BM	USFS	401
JF	Jackson Frazier Wetlands Preserve	WV	Benton Co.	53

Symbol	Name	Ecoregion	Ownership	Area (ha)
JC	Jordan Craters RNA	OU	BLM	12709
JO	Joseph Canyon ACEC	BM	BLM	1359
KI	Kingston Preserve	WV	TNC	52
KR	Keating Ripariain RNA	BM	BLM	75
LG	Lawrence Memorial Grassland Preserve	CB	TNC	150
LH	Leslie Gulch ACEC	OU	BLM	4714
LR	Limpy Rock RNA	WC	USFS	760
LP	Lindsay Prairie Preserve	CB	TNC	157
LB	Little Blitzen RNA	BR	BLM	1028
LS	Little Sink RNA	WV	BLM	32
LW	Little Wildhorse RNA	BR	BLM	97
LL	Llao Rock RNA	WC	NPS	176
LD	Long Draw RNA	BR	BLM	178
LF	Lost Forest RNA	BR	BLM	3628
LL	Lost Lake RNA	WC	BLM	155
LP	Lost Prairie ACEC	CR	BLM	23
LT	Lower Table Rock Preserve	KM	TNC	761
MM	Mahogany Ridge RNA	OU	BLM	130
MK	Maple Knoll RNA	WV	FWS	40
MR	McCall Preserve at Rowena	EC	TNC	93
MP	McKenzie Pass RNA	WC	USFS	480
MS	Metolius RNA	EC	USFS	533
ME	Metolius River Preserve	EC	TNC	12
MB	Mickey Basin RNA	BR	BLM	227
MJ	Middle Fork John Day River Preserve	BM	TNC	485
MI	Middle Santiam RNA	WC	USFS	463
MC	Mill Creek RNA/Mill Creek Ridge Preserve	EC	USFS/TNC	330/49
MO	Mohawk RNA	WV	BLM	119
MB	Mokst Butte RNA	EC	USFS	506
MF	Multorpor Fen Preserve	WC	TNC	36
MY	Myrtle Island RNA	KM	BLM	11
NB	Nesika Beach Preserve	CR	TNC	16
NE	Neskowin Crest RNA	CR	USFS	476
NR	New River ACEC	CR	BLM	356
NC	North Fork Chetco River ACEC	KM	BLM	243
NK	North Fork Crooked River ACEC	BM	BLM	2728
NF	North Fork Silver Creek RNA	KM	BLM	499
NM	North Myrtle Creek RNA	KM	BLM	288
OD	Ochoco Divide RNA	BM	USFS	777
OB	Old Baldy RNA	WC	BLM	211
OL	Ollalie Ridge RNA	WC	USFS	291
OP	Onion Peak Preserve	CR	TNC	17
OG	Oregon Gulch RNA	KM	BLM	424
PB	Pigeon Butte RNA	WV	FWS	28
PI	Pipe Fork RNA	KM	BLM	214
PJ	Poker Jim Ridge RNA	BR	FWS	259
PS	Popcorn Swale Preserve	KM	TNC	12
PO	Port Orford Cedar RNA	CR	USFS	454
PW	Powell Buttes RNA	HP	BLM	211
PF	Pringle Falls RNA	EC	USFS	545
PU	Pueblo Foothills RNA	BR	BLM	1020

Symbol	Name	Ecoregion	Ownership	Area (ha)
PD	Pumice Desert RNA	WC	NPS	1236
RA	Rattlesnake Butte Preserve	WV	TNC	20
RP	Red Ponds RNA	WC	BLM	54
RE	Reneke Creek RNA	CR	USFS	194
RI	Rigdon Point RNA	WC	USFS	185
RC	Rooster Comb RNA	BR	BLM	291
RR	Rough and Ready Creek Preserve/ACEC	KM	TNC/BLM	24/471
RT	Round Top Butte Preserve/RNA	KM	TNC/BLM	57/245
SA	Saddle Mountain NHCA	CR	OPRD	669
SM	Saddleback Mountain RNA	CR	BLM	55
SL	Sand Lake RNA	CR	USFS	97
SR	Sandy River Gorge Preserve/ACEC	WV	TNC/BLM	177/360
SH	Scotch Creek RNA	KM	BLM	728
SF	Sharon Lake Fen Preserve	KM	TNC	729
SP	Sheep Rock RNA	HP	NPS	372
SC	Silver Creek (BLM) RNA	BR	BLM	259
SX	Silver Lake Exclosure RNA	EC	USFS	119
SI	Smith Island NHCA	CR	DSL	5
SW	South Fork Walla-Walla River ACEC	BM	BLM	508
SF	South Fork Willow Creek RNA	BR	BLM	92
SB	Sphagnum Bog RNA	WC	NPS	69
SQ	Squaw Flat RNA	WC	USFS	226
SE	Steens Mountain ACEC	BR	BLM	20427
SS	Steens Mountain Summit NHCA	BR	DSL	191
SL	Stinking Lake RNA	BR	FWS	626
ST	Stockade Mountain RNA	OU	BLM	308
SU	Sutton Lake Preserve	CR	TNC	6
SY	Sycan Marsh Preserve	EC	TNC	9423
TR	Table Rocks ACEC	KM	BLM	502
TH	Tater Hill RNA	WC	BLM	181
TS	Tenasillahe Island RNA	CR	FWS	75
TM	Tenmile Creek RNA	CR	USFS	482
TB	The Butte RNA	WV	BLM	16
TI	The Island RNA	HP	BLM	101
TC	Three Creeks RNA	WC	USFS	280
TT	Tum Tum Lake RNA	BR	BLM	616
UM	Upper Elk Meadows RNA	WC	BLM	83
UR	Upper Rock Creek ACEC	CR	BLM	186
VP	Vee Pasture RNA	EC	USFS	300
WA	Wassen Creek ACEC	CR	BLM	1393
WC	Wheeler Creek RNA	CR	USFS	135
WT	Whetstone Savanna Preserve	KM	TNC	58
WM	Wildcat Mountain RNA	WC	USFS	405
WH	Wildhaven Preserve	EC	TNC	65
WL	Wilhoit Springs ACEC	WV	BLM	69
WF	Willamette Floodplain RNA	WV	FWS	210
WI	Willow Creek Preserve	WV	TNC	135
WS	Winchuck Slope NHCA	CR	DSL	78
WB	Woodcock Bog RNA	KM	BLM	112
WP	Wren Prairie Preserve	WV	TNC	4

* 1 hectare (ha) = 2.47 acres

Chapter 3: Coast Range Ecoregion

The Coast Range Ecoregion includes the entire Oregon coastline and the northern and central Oregon Coast Range Mountains, and extends north through the state of Washington to southwestern British Columbia on Vancouver Island, and south almost to Mendocino, California. Elevations in the Oregon Coast Range Ecoregion range from sea level to 4,000 feet, and the marine climate creates the most moderate and wettest habitats in the state. Average annual precipitation of 60 to 180 inches supports spectacular stands of temperate rainforests. Vegetation is characterized by forests of Sitka spruce, western hemlock, Douglas fir and red alder.

The Oregon coast has other unique ecological features. Sand deposits from coastal streams and rivers (primarily the Umpqua and Columbia Rivers) have created major coastal dune systems, the largest located at the Oregon Dunes National Recreation Area. In the north coast, steep headlands and cliffs are separated by stretches of flat coastal plain and large estuaries. The south coast includes the warmest areas, with rugged headlands and very mild winters, supporting local endemic species such as the coast redwood and Port Orford cedar.

Almost 40% of the region is in public ownership, primarily in National Forest and State Forest lands. Population is dispersed in many small towns, most located within a few miles of the ocean. Forest products, tourism and fisheries are the mainstays of the local economy.

The Coast Range Ecoregion includes all of Oregon's coastal resources, including all of the intertidal, marine and estuarine cells. These resources are currently not well represented in Oregon's system of natural areas. The publication of the *Territorial Sea Plan* (Oregon Ocean Policy Advisory Council, 1994) has created an excellent opportunity to better protect Oregon's marine and intertidal resources. Designations such as a) Marine Garden, b) Habitat Refuge, c) Research Reserve, d) Marine Shore, and e) Priority Rock and Reef Site have been applied to many of Oregon's most significant biological and ecological marine resources. In this plan, we have made an effort to match existing cell needs to these designations. However, more work is needed to define the ecological resources of the Oregon coastal shore and to establish the designations necessary to ensure they will survive.

COAST RANGE ECOSYSTEM CELLS (CR)

Agency	Priority	Cell Name	Present Representation
Sitka Spruce Zone			
	*	1. Sitka spruce/salal.	Cape Meares RNA/NHCA Cape Lookout PNHCA
	*	2. Sitka spruce/swordfern.	Neskowin Crest RNA Cape Lookout PNHCA
FS	H	3. Sitka spruce/oxalis, with devils club if possible.	
	*	4. Sitka spruce/salmonberry.	Cummins/Gwynn Creeks PRNA Reneke Creek RNA
FS	H	5. Sitka spruce/fool's huckleberry-red huckleberry.	Neskowin Crest RNA ♦
	*	6. Grand fir-Sitka spruce forest.	Nesika Beach (TNC)
FS	H	7. Sitka spruce-Port Orford cedar forest on sand.	<i>S. Horsefall Campground</i>
FS, BLM, PVT	H	8. Sitka spruce-western hemlock-Port Orford cedar forest on coastal terrace.	<i>Coos County Forest</i>
Redwood Zone			
	*	9. Redwood-Douglas fir forest with evergreen shrubs (tanoak, rhododendron, and evergreen huckleberry).	Wheeler Creek RNA
FS	H	10. Redwood/swordfern and tanoak-Douglas fir/evergreen shrub forests.	<i>Peavine Ridge</i> Winchuck Slope NHCA ♦
Port Orford Cedar Zone			
	*	11. Douglas fir-western hemlock-Port Orford cedar forest with wet shrubs and forbs.	Port Orford Cedar RNA Coquille River Falls RNA
	*	12. Port Orford cedar-Douglas fir-western hemlock forest with dry shrubs and forbs.	Port Orford Cedar RNA Coquille River Falls RNA
FS, BLM	H	13. Port Orford cedar forest types on ultramafic soils.	
Western Hemlock Zone			
	*	14. Western hemlock/swordfern.	Cummins/Gwynn Creek PRNA High Peak-Moon Creek RNA
	*	15. Western hemlock/oxalis.	Cherry Creek RNA

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COAST RANGE ECOSYSTEM CELLS (CR)

Agency	Priority	Cell Name	Present Representation
FS, BLM	H	16. Western hemlock/rhododendron/swordfern and western hemlock/rhododendron-salal communities.	
	*	17. Western hemlock/rhododendron-Oregon grape.	Cherry Creek RNA
FS, BLM	M	18. Western hemlock/devils club with or without grand fir.	<i>Bunker Hill</i>
	*	19. Western hemlock/vine maple with salmonberry and swordfern.	Flynn Creek RNA
FS	H	20. Western hemlock/salmonberry, with salal or California hazel if possible.	
FS, BLM	H	21. Western hemlock/evergreen huckleberry.	
	*	22. Western hemlock/vine maple-salal.	High Peak-Moon Creek RNA
FS, BLM	H	23. Western hemlock/salal.	
FS, BLM	H	24. Western hemlock/Oregon grape, with salal if possible.	
FS, BLM	M	25. Douglas fir/oceanspray-salal.	
	*	26. Noble fir-western hemlock forest.	Grass Mountain RNA Saddle Mountain NHCA
	*	27. Pacific silver fir-western hemlock forest.	Saddleback Mountain RNA Onion Peak (TNC)/NHCA
Coastal Dune Types			
	*	28. Coastal dune mosaic with tree islands and early successional stages.	Tenmile RNA
FS	H	29. Native stabilized dune grassland with red fescue and dune wildrye.	Tenmile RNA ♦
	*	30. Native unstabilized dune grassland with dune bluegrass and seaside lupine.	Sand Lake RNA
ACE	H	31. Unstabilized foredunes with dune bluegrass and American beachgrass.	<i>West Sand Island</i>
PVT, BLM PRD	H	32. Oceanfront herb-dominated dunes with cammisonia, knotweed and silvery phacelia.	Ophir Dunes PNHCA ♦

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COAST RANGE ECOSYSTEM CELLS (CR)

Agency	Priority	Cell Name	Present Representation
FS	H	33. Douglas fir/Rhododendron-evergreen huckleberry mature dune forest.	
Shore Pine Forests and Woodlands			
FS	L	34. Sitka spruce-shore pine/evergreen huckleberry community.	Tenmile Creek RNA ♦
FS	H	35. Shore pine/manzanita communities.	<i>Eel Creek</i>
FS, BLM, PRD	M	36. Shorepine/salal-evergreen huckleberry forest.	Blacklock Point PNHCA ♦ Cape Blanco NHCA ♦
	*	37. Pygmy shorepine forest on Blacklock soil.	Blacklock Point PNHCA
Special Types			
	*	38. Coastal headland grassland and herbaceous complex with red fescue dominant.	Cascade Head (TNC) Neskowin Crest RNA
FWS, PVT PRD	*	39. Coastal headland or oceanfront grassland with California oatgrass, red fescue, and Romer's fescue.	Cape Blanco NHCA ♦ <i>Crook Point</i>
	*	40. Coastal headland shrublands with salal, coastal sage or evergreen huckleberry.	Cape Lookout PNHCA Cascade Head (TNC)
	*	41. Oceanfront shrublands with crowberry and western azalea.	Blacklock Point PNHCA Cape Blanco NHCA
	*	42. Grass bald on Coast Range mountain.	Grass Mountain RNA Saddle Mountain NHCA
	*	43. Rock garden on Coast Range mountain.	Onion Peak (TNC)/NHCA Saddle Mountain NHCA
	*	44. Oregon myrtle/evergreen shrub riparian forest.	N. Fk. Chetco River ACEC
Marine Types			
DSL	U	45. Subtidal, high-relief rock bottom with <i>Nereocystis</i> kelp bed with little or no algal sub-canopy.	<i>Orford Reef RR</i> <i>Cape Foulweather</i>
DSL	U	46. Subtidal, high-relief rock bottom with <i>Macrocystis</i> kelp bed with little or no algal sub-canopy.	<i>North Cove</i> <i>Simpson Reef PRR/HR</i>

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Agency	Priority	Cell Name	Present Representation
DSL, PRD	U	47. Subtidal, high-relief rock bottom with dense algal sub-canopy under kelp bed.	<i>Humbug Mountain RR</i>
DSL, PRD	U	48. Subtidal, high-relief, unvegetated rock bottom.	
DSL, PRD	U	49. Subtidal, low-relief rock bottom with <i>Nereocystis</i> kelp bed and if possible with <i>Macrocystis</i> kelp bed.	<i>Pirate Cove RR</i>
DSL, PRD	U	50. Subtidal, low-relief rock bottom with dense algal sub-canopy under kelp.	<i>Nellies Cover HR</i>
DSL, PRD	U	51. Subtidal, low-relief, unvegetated rock bottom.	<i>Pirate Cove RR</i>
DSL, PRD	U	52. Subtidal, high-energy sandy bottom.	<i>Netarts Sand Spit NHCA</i>
DSL, PRD	U	53. Subtidal low-energy sandy bottom.	
DSL	U	54. Subtidal mud bottom.	
DSL	U	55. Subtidal gravel bottom	<i>Orford Reef PRR</i>
DSL	U	56. Subtidal hard bottoms with reef building animals.	<i>Norton Gulch (Gregory Point RR)</i>
DSL	U	57. Subtidal, aphotic zone with boulder or bedrock.	
DSL	U	58. Subtidal, aphotic zone with shale or shingle.	
DSL	U	59. Subtidal, aphotic zone sandy bottom.	
DSL, PRD	U	60. Intertidal, exposed bedrock, mussell beds.	<i>Yachats MG</i> <i>Boiler Bay RR</i>
DSL, PRD	U	61. Intertidal, exposed bedrock, algal dominated.	<i>North Cove Cape Arago HR/PRR</i>
DSL, PRD	U	62. Intertidal, exposed bedrock, mussell beds.	<i>Yachats MG</i> <i>Boiler Bay RR</i>
DSL, PRD	U	63. Intertidal, exposed bedrock, surfgrass beds.	<i>Otter Crest MG</i> <i>Boiler Bay RR</i>
DSL, PRD	U	64. Intertidal, exposed bedrock, surge channels.	
DSL, PRD	U	65. Intertidal, exposed bedrock/boulders subject to sand scour and periodic sand inundation.	<i>Ecola Point</i> <i>Seal Rock</i>
DSL, PRD	U	66. Intertidal, exposed boulder field, algal dominated.	<i>Cape Lookout</i>

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COAST RANGE ECOSYSTEM CELLS (CR)

Agency	Priority	Cell Name	Present Representation
DSL, PRD	U	67. Intertidal, exposed boulder field, not algal dominated.	<i>Humbug Mountain</i>
DSL, PRD	U	68. Intertidal, semi-protected, bedrock, surfgrass beds.	
DSL, PRD	U	69. Intertidal, semi-protected, bedrock, bedrock shelf.	<i>Chetco Cove</i>
DSL	U	70. Intertidal, semi-protected, boulder field.	<i>North Cove Cape Arago</i>
DSL, PRD	U	71. Intertidal sandy/gravelly beach.	
DSL, PRD	U	72. Intertidal, low exposure sandy beach.	<i>Netarts Sand Spit NHCA</i>
DSL, PRD	U	73. Intertidal, high exposure sandy beach.	
DSL, PRD	U	74. Highly erosive seacliffs.	<i>Cape Kiwanda Seal Rock</i>
DSL, PRD	U	75. Erosion resistant seacliffs, with caves if possible.	<i>Cascade Head Cape Lookout PNHCA</i>
DSL, FWS	U	76. Offshore rocks, awash at high tide.	<i>Rogue Reef Simpson Reef</i>
DSL, FWS	U	77. Offshore rocks, not awash at high tide, with soil and vegetation.	<i>Goat Island Three Arch Rocks</i>
DSL, FWS	U	78. Offshore rocks, not awash, unvegetated.	<i>Pillar Rock (Cape Meares)</i>
Estuarine Types			
DSL	U	79. Unvegetated fine (mud to sand) unconsolidated substrata in subtidal zone.	
DSL	U	80. Eelgrass beds, on fine (mud to sand) unconsolidated substrata in subtidal zone.	
	+	81. Unvegetated muds in intertidal zone, including <i>Abarenicola</i> in lower or middle estuary.	South Slough PNHCA
	+	82. Unvegetated muddy sands in intertidal zone, including <i>Mya arenia</i> in upper estuary.	South Slough PNHCA
DSL	U	83. Unvegetated sands in intertidal zone, including <i>Callinassa californionis</i> in lower or middle estuary.	

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COAST RANGE ECOSYSTEM CELLS (CR)

Agency	Priority	Cell Name	Present Representation
DSL	U	84. Intertidal, lower estuary, vegetated and unvegetated rocky surfaces, including macroalgal beds (<i>Enteromorpha</i> , <i>Ulva</i> , <i>Fucus</i> , <i>Polysiphonia</i> , and <i>Sargassum</i>).	
	+	85. Intertidal, lower estuary, vegetated fine, unconsolidated substrata, including eelgrass beds and macroalgal mats (<i>Enteromorpha</i> , <i>Ulva</i> , <i>Vaucheria</i> , and <i>Gracilaria</i>).	South Slough PNHCA
	*	86. Low elevation/high salinity intertidal marsh on sand (dominants including Lyngby sedge, saltgrass, glasswort, three-square bulrush, seacoast bulrush and arrow grass).	Netarts Sand Spit NHCA
	*	87. Low elevation/high salinity intertidal marsh on silt (dominants including Lyngby sedge, saltgrass, glasswort, three-square bulrush, seacoast bulrush and arrow grass).	Cox Island (TNC) Bull Island NHCA Smith Island NHCA
	*	88. High elevation/low salinity intertidal salt marsh (dominants including Douglas aster, Lyngby sedge, tufted hairgrass and silverweed).	South Slough PNHCA Davis Slough NHCA Smith Island NHCA
Lacustrine Wetlands			
	*	89. Dune-blocked lake with aquatic beds and marshy shore, surrounded by unconsolidated sands.	New River ACEC
PRD, PVT, FS, BLM	H	90. Dune or slump-blocked lakewith aquatic beds and marshy shore, surrounded by sedimentary or igneous formations.	
Palustrine Wetlands			
FS	U	91. Pond in active sand dune area.	
PRD, FS	U	92. Pond in stabilized sand dune area.	
	*	93. Pond at mid to high elevation, including slump ponds.	Wassen Creek ACEC
	*	94. Sparsely-vegetated deflation plain marsh, with Nevada rush, sickle-leaved rush and springbank clover.	Tenmile Creek RNA
	*	95. Deflation plain marsh, dominants including slough sedge and silverweed.	Tenmile Creek RNA
	+	96. Freshwater tidal marsh on lower Columbia River, with streams and mud flats (including Lyngby sedge, hardstem bulrush and narrow-leaved cattail).	Russian Island PRNA

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Agency	Priority	Cell Name	Present Representation
	*	97. Slough sedge-Sitka sedge fen.	Gearhart Bog (TNC)
	*	98. Mid to high elevation sedge fen, sphagnum bog and beaver marsh.	Lost Prairie ACEC
	*	99. Labrador tea/sphagnum mire on organic soils, without <i>Darlingtonia</i> , including associations with shore pine and western red cedar.	Gearhart Bog (TNC) Bradley Bog (TNC)
FS, PVT BLM	M	100. Labrador tea/sphagnum mire on organic soils, with <i>Darlingtonia</i> , including associations with shore pine and western red cedar.	Bradley Bog (TNC)♦ New River ACEC♦
PVT	H	101. Labrador tea/sphagnum mire on floating lake-fill mat.	
PVT	H	102. Labrador tea-sweet gale heath.	
	+	103. Bog blueberry/tufted hairgrass brush prairie.	Blacklock Point PNHCA
PVT, PRD	H	104. Willow-crabapple/slough sedge swamp with spiraea.	Sutton Lake (TNC)♦
FS, PRD	H	105. Shore pine/slough sedge seasonal swamp.	Heceta Dunes ACEC♦
		106. Cottonwood/willow-creek dogwood tideland swamp.	Tenasillahe RNA
	*	107. Sitka spruce/creek dogwood and willow/creek dogwood tideland swamps.	Blind Slough Swamp (TNC)
PRD, FS, PVT	H	108. Sitka spruce/skunk cabbage swamp (non-tidal).	
	*	109. Western red cedar-western hemlock/skunk cabbage.	Upper Rock Creek ACEC
	*	110. Low elevation pond with aquatic beds and marshy shore.	Port Orford Cedar RNA
PRD, PVT	H	111. Shallow lake on ancient deflation plain, with aquatic beds and marshy shore, surrounded by dunes.	
	*	112. Pacific reedgrass fen.	Cape Blanco NHCA
	*	113. Oregon ash-red alder swamp.	Port Orford Cedar RNA

Ecosystem Process Cells

FS	U	114. Fire in western hemlock zone with stand replacement and partial stand replacement areas.
----	---	-----------------------------------------------------------------------------------------------

PVT = Private DSL = Division of State Lands OFW = Oregon Fish and Wildlife PRD = Parks & Recreation FS = U.S. Forest Service
 ACE = Army Corps of Engineers FWS = US Fish & Wildlife Service BLM = Bureau of Land Management NPS = National Park Service
 P.. = Proposed... *Italics* = Recommended area not formally proposed WA = Wilderness Area (TNC) = Nature Conservancy Preserve
 NHCA = State Natural Heritage Conservation Area ACEC = Area of Critical Environmental Concern RNA = Research Natural Area
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 + = Adequately represented on proposed but not established area ♦ = Partially protected due to designation, size, or quality at this site

Chapter 4: Willamette Valley Ecoregion

The Willamette Valley Ecoregion is located between the Coast Range and the Western Cascades in northwestern Oregon and includes Oregon's largest river valley. From Oregon it extends north to include the Vancouver, Washington bottomlands. The valley is characterized by broad, alluvial flats and low basalt hills. Soils include deep alluvial silts from river deposits and dense heavy clays from pluvial deposits in the valley bottom's numerous oxbow lakes and ponds.

The abundant rainfall and fertile soils make the valley Oregon's most important agricultural region. This has been the case since the first settlers began arriving via the Oregon trail. As a result, the Willamette Valley is Oregon's most altered ecoregion.

Originally, the valley was a mosaic of gallery riparian forests and wetlands, open white oak savannas and prairie, with valley margins of oak, ponderosa pine and Douglas fir woodlands. Native Americans maintained the prairies, oak savannas and woodlands by regularly burning most of the

valley. With settlement, the prairies have been largely farmed and the open oak savannas and oak-conifer woodlands have been logged or become closed canopy forests.

The Willamette Valley is home to most Oregonians, with more than 70% of the state's population, the majority of its industry, and almost half of its farmland. It is also the fastest growing ecoregion, with the human population expected to double in the next 25 years (Gregory and Sedell 1994).

The Willamette Valley's location on the Pacific Flyway makes it an important area for migrating and wintering waterfowl. Geese and shorebirds benefit from flooded agricultural lands, and the Willamette River and its many tributaries support salmon and steelhead runs, mostly of hatchery origin due to the large number of dams in the system. The valley's few remaining fragments of native prairie support many special plant species and endemic invertebrates, while the remaining wetlands provide habitat to the Oregon chub, the western pond turtle and many other sensitive animal species.

WILLAMETTE VALLEY ECOSYSTEM CELLS (WV)

Agency	Priority	Cell Name	Present Representation
Conifer Forests			
	*	1. Douglas fir/salal/swordfern and Douglas fir/Oregon grape forest.	Fox Hollow RNA Camas Swale RNA
	*	2. Douglas fir/poison oak forest.	The Butte RNA Forest Peak RNA
	*	3. Douglas fir-western hemlock/Oregon grape and salal forests, with grand fir if possible.	Mohawk RNA Wilhoit Springs ACEC
BLM	H	4. Ponderosa pine-Douglas fir/California fescue woodland.	Fox Hollow RNA ♦ Ponderosa Pine PACEC ♦
	*	5. Douglas fir-grand fir/vine maple-salal.	Little Sink RNA
BLM	M	6. Western red cedar-western hemlock/hazel forest on alluvial terrace and slopes.	Sandy River (TNC) ♦ & ACEC ♦
Mixed Hardwood-Conifer Forests			
	*	7. Douglas fir-bigleaf maple forest with some grand fir if possible.	Forest Peak RNA ♦ Butte RNA
BLM	M	8. Madrone-Douglas fir-oak woodlands with poison oak and snowberry.	<i>McCully Mountain Fishermen's Bend Campground</i>
BLM, PVT	H	9. Oregon white oak-Douglas fir/snowberry woodland.	<i>McCully Mountain</i>
BLM	H	10. Ponderosa pine-Douglas fir-California black oak woodland.	Ponderosa Pine PACEC ♦ Fox Hollow RNA ♦
Hardwood Forests			
PVT, BLM FWS	H	11. Oregon white oak/grass savanna.	The Butte RNA ♦ Wren Prairie (TNC) ♦ <i>Basket Slough NWR</i>
	*	12. Oregon white oak/poison oak-snowberry/blue wildrye woodland.	Pigeon Butte RNA Maple Knoll RNA <i>Basket Slough NWR</i>
BLM	H	13. Oregon white oak-madrone/poison oak/bunchgrass woodland.	<i>Bald Hill Park</i>

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WILLAMETTE VALLEY ECOSYSTEM CELLS (WV)

Agency	Priority	Cell Name	Present Representation
Prairies			
ACE, PVT BLM	H	14. Romer fescue valley grassland.	Wren Prairie (TNC)♦ Kingston (TNC)♦ <i>Basket Slough NWR</i> <i>Dorena Prairie</i>
	*	15. Lemmon's needlegrass-moss bald.	Forest Peak RNA ♦ Rattlesnake Butte (TNC)
Riparian Woodlands			
BLM, PRD PVT, FWS	H	16. Oregon ash-bigleaf maple-Oregon white oak riparian forest.	Willamette Floodplain RNA ♦ <i>Mission Bottom</i>
PVT, PRD	M	17. White alder bottomland riparian forest.	
Lacustrine Cells			
PRD, PVT, FWS	H	18. Oxbow lake on Willamette River, with aquatic beds and marshy shore.	<i>Mission Bottom</i>
PRD, DSL, PVT, OFW	H	19. Shallow backwater lake on major river floodplain, with associated marsh and mudflats.	<i>Burlington Bottoms</i> <i>Sauvie Island</i>
Palustrine Cells			
	*	20. Slump pond at margin of valley, with aquatic beds and marshy shore.	Little Sink RNA
PVT	U	21. Low elevation vernal pool.	
PRD, FWS	U	22. Cold spring.	
OFW, PVT	M	23. Tidal marsh on major river, with associated mud flats (including spikerush, bulrush, burreed and wapato).	<i>Rooster Rock</i> <i>Scappose Bay</i>
PRD, PVT	M	24. Wapato marsh (including cutgrass, knotgrass and nodding beggars tick).	<i>Beggars Tick Marsh</i> ♦ <i>Sauvie Island</i>
	*	25. Slough sedge-one sided sedge marsh.	Fern Ridge RNA Willamette Floodplain RNA

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WILLAMETTE VALLEY ECOSYSTEM CELLS (WV)

Agency	Priority	Cell Name	Present Representation
	*	26. Tufted hairgrass valley bottomland prairie, with vernal pools and brush prairie (including Nootka rose, Douglas spiraea and dwarf blueberry).	Willamette Floodplain RNA Willow Creek (TNC) Fern Ridge RNA
	*	27. Tufted hairgrass-California oatgrass bottomland prairie.	Fern Ridge RNA Willow Creek (TNC)
	*	28. Nootka rose/water parsley shrub swamp.	Jackson-Frazier Wetland
PVT	H	29. Geyer willow-Hooker willow shrub swamp.	<i>Banks Swamp</i>
	*	30. Hooker willow-Sitka willow shrub swamp.	Camassia (TNC) <i>Beggars Tick Marsh</i>
PVT, OFW	M	31. Pacific willow shrub swamp.	<i>Luckiamute-Little Luckiamute Scappose Bay</i>
	*	32. Oregon ash/slough sedge woodland with snowberry.	Willamette Floodplain RNA
FWS, OFW	M	33. Oregon ash/Pacific willow woodland.	<i>Luckiamute River</i>
PRD	M	34. Riparian area dominated by river and Pacific willow.	
	+	35. Riparian area dominated by Oregon ash, black cottonwood and creek dogwood.	Gary, Flag and Chatham Islands PNHCA
PVT, PRD	H	36. Riparian area dominated by Oregon ash, black cottonwood and snowberry.	<i>Multnomah Channel (Sauvie Island) Mission Bottom Santiam Bar</i>
PVT	H	37. Western red cedar-western hemlock/skunk cabbage swamp.	

Ecosystem Process Cells

BLM, PVT USFWS	U	38. Fire, in conifer or mixed hardwood forests on valley margin, with underburns, partial and total stand replacement burns.
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**COLUMBIA COUNTY
COMPREHENSIVE
PLAN**

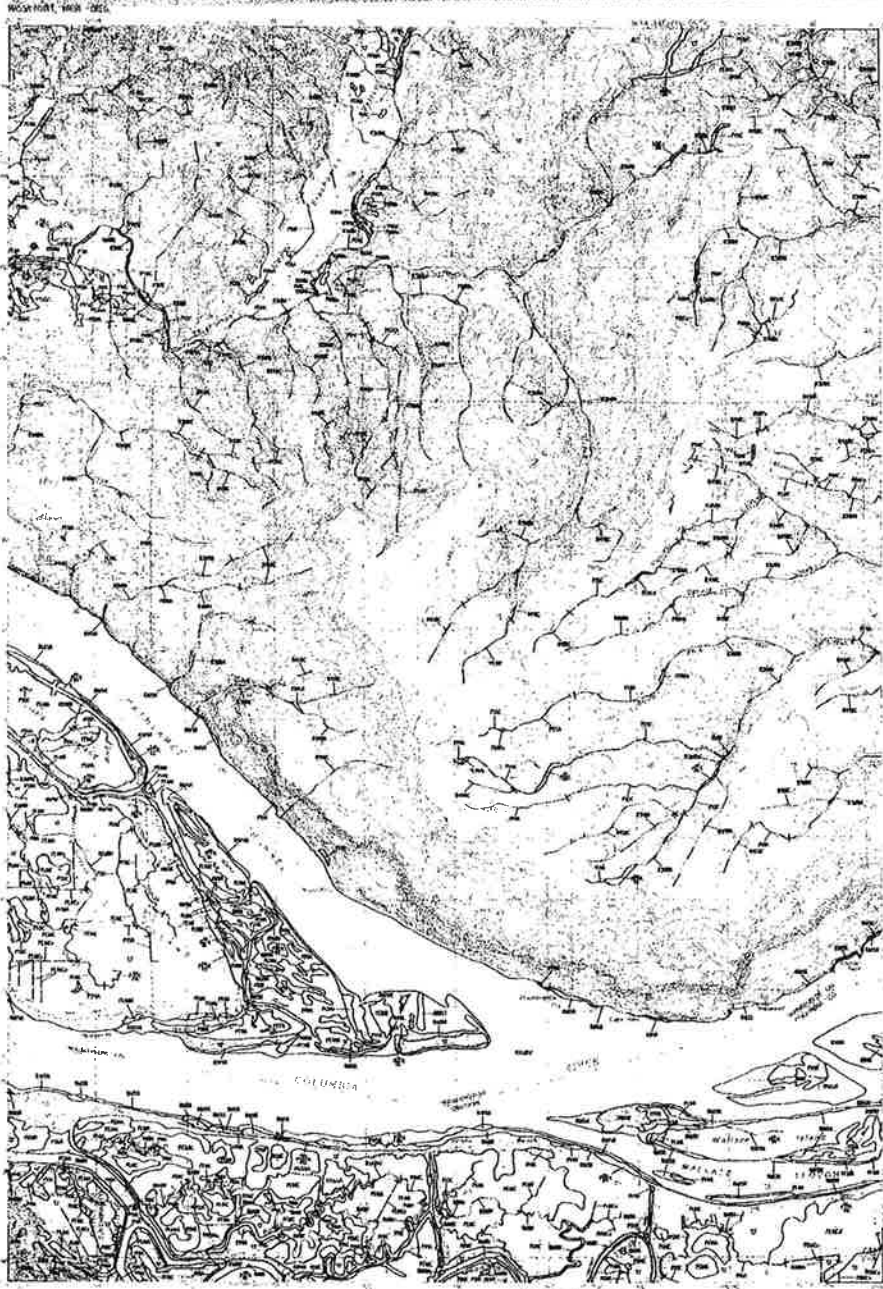
TECHNICAL APPENDIX

**PART XVI
OPEN SPACE, SCENIC, HISTORICAL
AND NATURAL RESOURCES**

**ARTICLE X
WATER RESOURCES**

A. WETLANDS

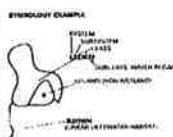
NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR



Thomas Brouder

SCALE 1:1000
 OTHER INFORMATION INCLUDING A REFERENCE REPORT DESCRIBING THE WETLANDS INVENTORY IS AVAILABLE ON REQUEST FROM THE NATIONAL WETLANDS INVENTORY, U.S. DEPARTMENT OF THE INTERIOR, WASHINGTON, D.C. 20540.
 1 cm = 100 m
 1 in = 1000 ft
 1:1000
 Other information including a reference report describing the wetland resources depicted on this document may be available for information contact:
 Regional Director (ARDC) Region I
 U. S. Fish and Wildlife Service
 1001 9th Street, Suite 1922
 500 N.E. Multnomah Street
 Portland, Oregon 97232

SPECIAL NOTE
 This document was prepared for information purposes only. It is not intended to be used as a legal document. The National Wetlands Inventory is a project of the U.S. Department of the Interior, U.S. Fish and Wildlife Service. The data shown on this map were collected during the years 1983 and 1984. It is possible that some of the wetlands shown on this map may have been altered or destroyed since that time. The National Wetlands Inventory is a project of the U.S. Department of the Interior, U.S. Fish and Wildlife Service. The data shown on this map were collected during the years 1983 and 1984. It is possible that some of the wetlands shown on this map may have been altered or destroyed since that time.



NOTES TO THE USER
 1. Wetlands shown on this map were determined from aerial photography and field data.
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 10. Wetlands shown on this map were determined from aerial photography and field data.



U.S. DEPARTMENT OF THE INTERIOR
 FISH AND WILDLIFE SERVICE
 Prepared by National Wetlands Inventory
 1989

AERIAL PHOTOGRAPHY

DATE: 8/1/83 SCALE: 1:1000
 DATE: 8/1/83 SCALE: 1:1000

SYSTEM	1 - TIDAL	2 - MARINE	3 - ESTUARINE	4 - COASTAL	5 - ESTUARINE	6 - ESTUARINE	7 - ESTUARINE	8 - ESTUARINE	9 - ESTUARINE	10 - ESTUARINE	11 - ESTUARINE	12 - ESTUARINE	13 - ESTUARINE	14 - ESTUARINE	15 - ESTUARINE	16 - ESTUARINE	17 - ESTUARINE	18 - ESTUARINE	19 - ESTUARINE	20 - ESTUARINE
WETLANDS	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10	1-11	1-12	1-13	1-14	1-15	1-16	1-17	1-18	1-19	1-20
WATER BODIES	1-21	1-22	1-23	1-24	1-25	1-26	1-27	1-28	1-29	1-30	1-31	1-32	1-33	1-34	1-35	1-36	1-37	1-38	1-39	1-40
WATERWAYS	1-41	1-42	1-43	1-44	1-45	1-46	1-47	1-48	1-49	1-50	1-51	1-52	1-53	1-54	1-55	1-56	1-57	1-58	1-59	1-60

*Wallace Slough
 Wetland*

2/20/78
E

<p>UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT</p>	<p>REPORT OF FIELD ACTIVITIES</p>	<p>DATE: 2/20/78</p>	<p>BY: [Name]</p>
<p>PROJECT: [Project Name]</p>	<p>LOCATION: [Location]</p>	<p>TIME: [Time]</p>	<p>WEATHER: [Weather]</p>
<p>OBJECTIVE: [Objective]</p>	<p>METHODS: [Methods]</p>	<p>RESULTS: [Results]</p>	<p>CONCLUSIONS: [Conclusions]</p>

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FIELD AND WILDLIFE SERVICES
PUBLISHED BY THE BUREAU OF LAND MANAGEMENT

ADDITIONAL PHOTOGRAPHS

1. [Description of photo 1]

2. [Description of photo 2]

ADDITIONAL DRAWINGS

1. [Description of drawing 1]

2. [Description of drawing 2]

ADDITIONAL NOTES

1. [Description of note 1]

2. [Description of note 2]



NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

Clayton Creek
Wetland No. 105

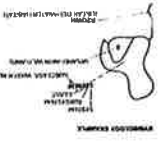
Meadland

4

SECTION	DATE	TIME	FLIGHT ALTITUDE	FLIGHT DIRECTION	FLIGHT SPEED	FLIGHT TYPE	FLIGHT STATUS	FLIGHT COMMENTS
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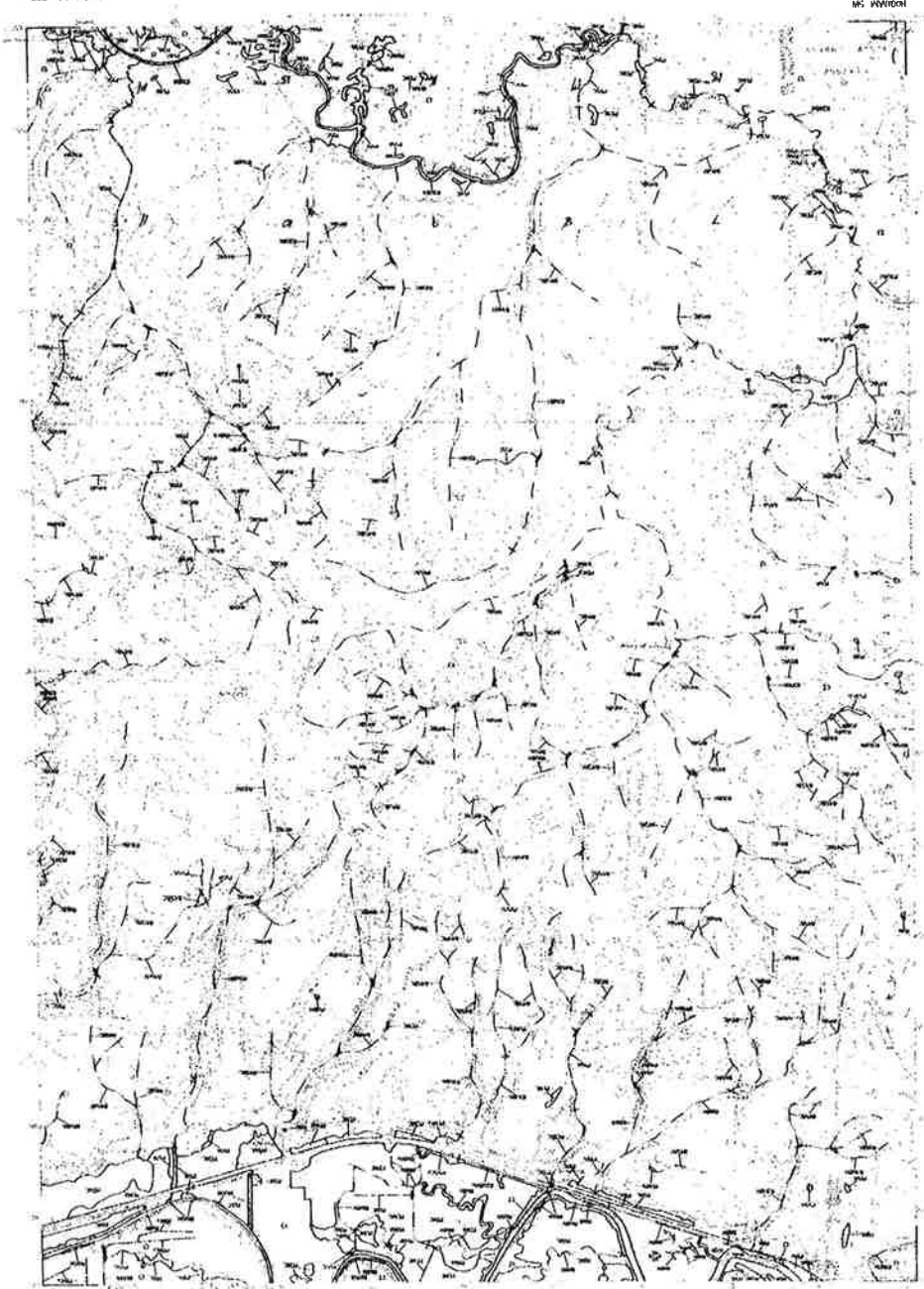
U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 WASHINGTON, D.C. 20250

AERIAL PHOTOGRAPHY
 This report contains information on the location, extent, and condition of wetlands as shown on the aerial photograph. The information is based on a visual inspection of the photograph and is not intended to be a substitute for a field survey. The information is for informational purposes only and should not be used for any other purpose.



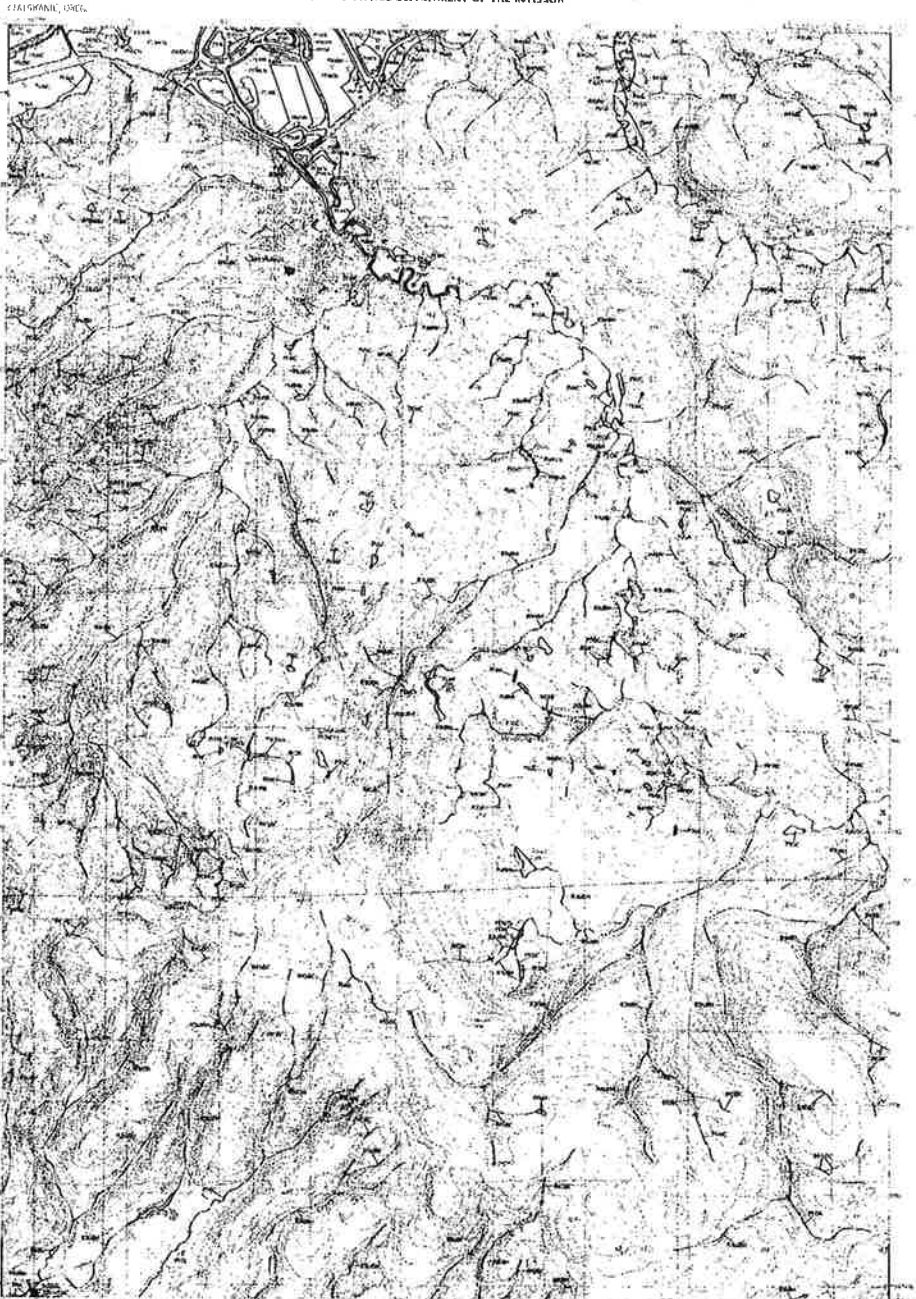
PROPOSED WETLANDS
 The proposed wetlands are shown on the aerial photograph. The wetlands are located in the central and eastern portions of the study area. The wetlands are primarily composed of open water, marsh, and emergent wetlands. The wetlands are located in the central and eastern portions of the study area.

WETLANDS
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NATIONAL WETLANDS INVENTORY
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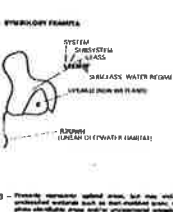
HOQUIAM SW ASTORIA
CLATSKAMIE, OREG.

SCALE
STATE 1:62,500
1 inch = 1 mile
10 miles
50 miles

Other information including a narrative report concerning the wetland resources depicted on this document may be available. For information, contact:

Regional Director (ARDE) Region I
U.S. Fish and Wildlife Service
1500 Bldg. Bldg. 1500
100 N.E. Aldermouth Lane
Portland, Oregon 97232.

SPECIAL NOTES
This inventory was prepared primarily by the interpretation of high altitude aerial photographs. Wetlands were identified on the photographic base or vegetation, water, and soil. It is not intended to be a substitute for field surveys. The National Wetlands Inventory is a cooperative effort of the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers. This inventory was prepared in accordance with the National Wetlands Inventory Manual, U.S. Fish and Wildlife Service, 1980. This inventory was prepared in accordance with the National Wetlands Inventory Manual, U.S. Fish and Wildlife Service, 1980. This inventory was prepared in accordance with the National Wetlands Inventory Manual, U.S. Fish and Wildlife Service, 1980.



NOTES TO THE USER

- Wetlands which have been identified as a minimum on this map are indicated by the symbols.
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AERIAL PHOTOGRAPHY
DATE: 1/1/80
SCALE: 1:62,500
TYPE: Aerial

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by National Wetlands Inventory
1980

SYSTEM	1 - SUBSYSTEM	2 - SUBSYSTEM	3 - SUBSYSTEM	4 - SUBSYSTEM	5 - SUBSYSTEM	6 - SUBSYSTEM	7 - SUBSYSTEM	8 - SUBSYSTEM	9 - SUBSYSTEM	10 - SUBSYSTEM	11 - SUBSYSTEM	12 - SUBSYSTEM	13 - SUBSYSTEM	14 - SUBSYSTEM	15 - SUBSYSTEM	16 - SUBSYSTEM	17 - SUBSYSTEM	18 - SUBSYSTEM	19 - SUBSYSTEM	20 - SUBSYSTEM
WATER
WETLAND

5
Clatskanie

Below
6

Section	1 - TOTAL	2 - WETLANDS	3 - UPLANDS	4 - OPEN WETLANDS	5 - OPEN WETLANDS	6 - OPEN WETLANDS	7 - OPEN WETLANDS	8 - OPEN WETLANDS	9 - OPEN WETLANDS	10 - OPEN WETLANDS
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UPLANDS	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000
OPEN WETLANDS	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
1963



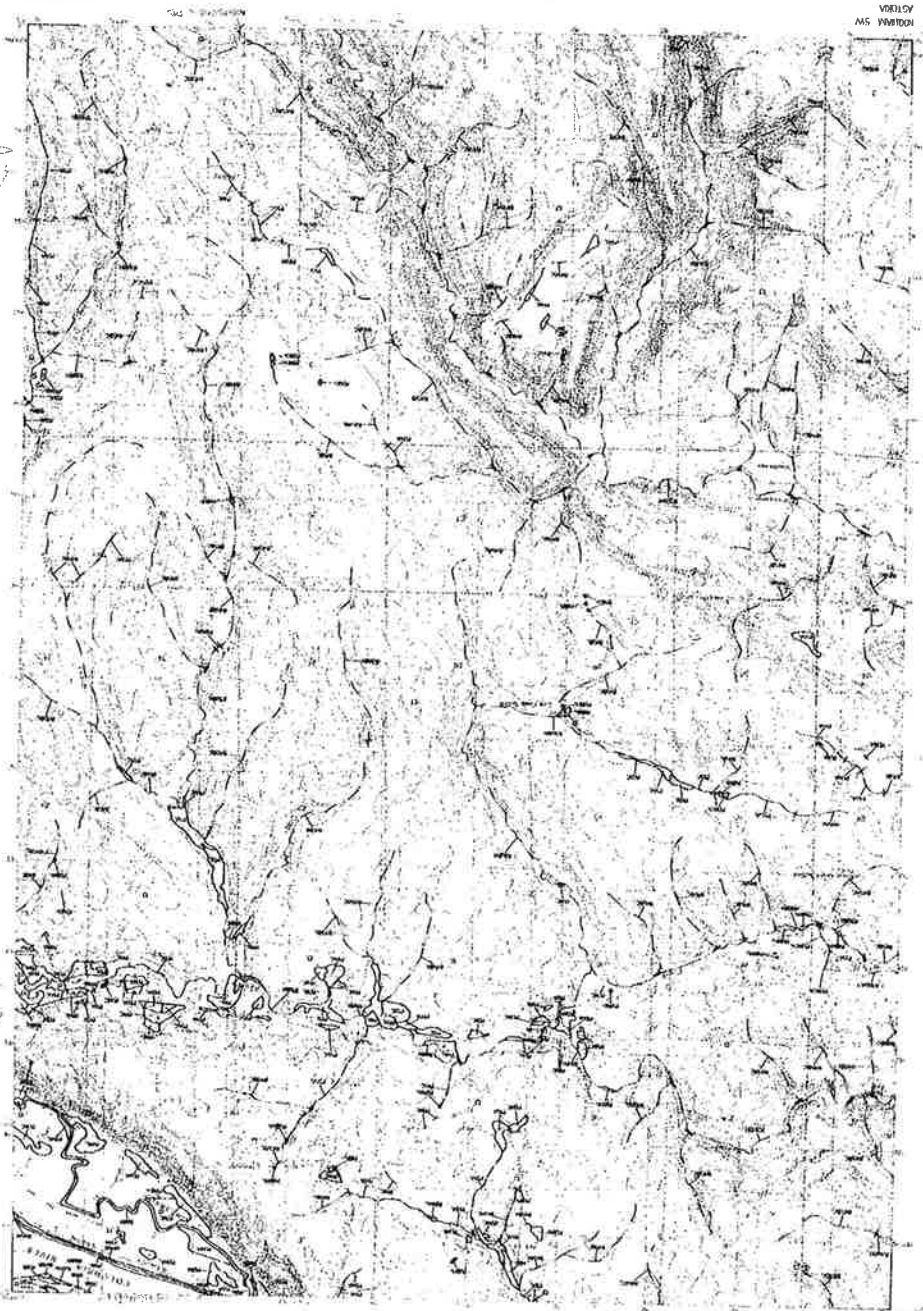
AERIAL PHOTOGRAPHY

DATE: 1963
SCALE: 1:50,000
MAGNIFICATION: 100%

PHOTOGRAPHIC INFORMATION: This photograph was taken by the U.S. Fish and Wildlife Service, Oregon District Office, on 10/15/63. The photograph was taken from an altitude of approximately 10,000 feet. The photograph was taken from a north-south orientation. The photograph was taken from a position approximately 10 miles north of the town of Astoria, Oregon.

GENERAL INFORMATION

Scale: 1:50,000
Projection: UTM
Datum: NAD 83
Zone: 18N
Easting: 650,000
Northing: 4,800,000

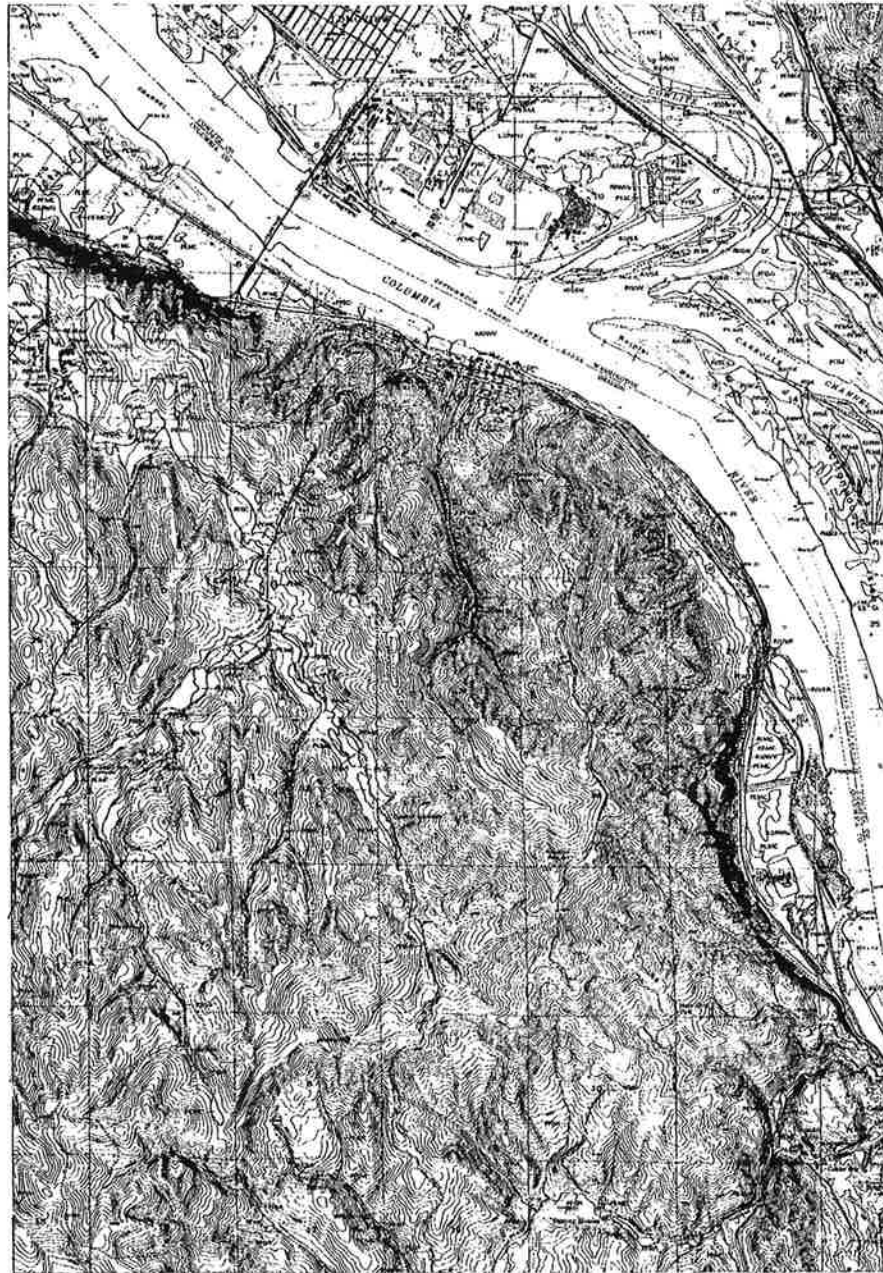


ARMY

RAILROAD
ROAD

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

RAINIER, WASH.



18141AM 5E
MOUNT SAINT HELENS

RAINIER, OREG - WASH



Other information including a checklist report concerning the wetland resources depicted on this sheet may be available for information contact:
Regional Director (R102) Region I
U.S. Fish and Wildlife Service
Mount Hood Bay, Suite 1002
600 N.E. Multnomah Street
Portland, Oregon 97222

SPECIAL NOTE
This map was prepared primarily to provide information on wetland resources. It is not intended as a guide for navigation or other purposes. The map is based on the best available information and is subject to change. The map is not a guarantee of accuracy and is not intended to be used as a basis for any legal action. The map is not a guarantee of accuracy and is not intended to be used as a basis for any legal action.



NOTES TO THE USER
1. Wetlands are defined as areas that are periodically flooded or saturated with water. Wetlands are important to the environment and provide many benefits. Wetlands are important to the environment and provide many benefits. Wetlands are important to the environment and provide many benefits.



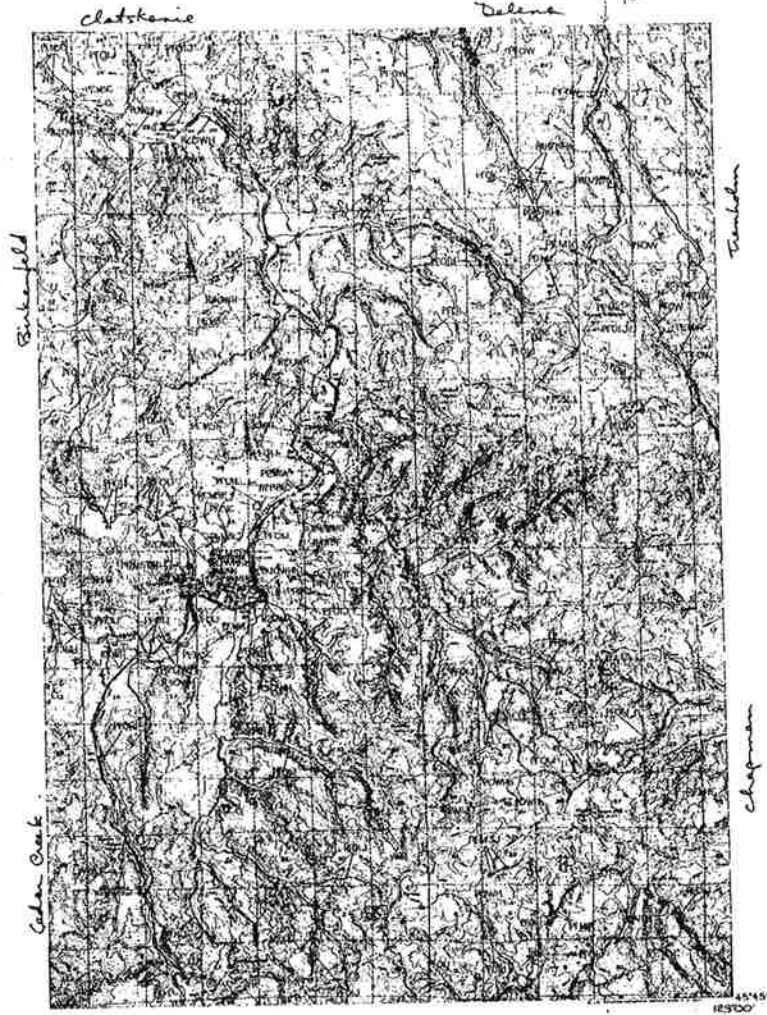
U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by National Wetlands Inventory

AERIAL PHOTOGRAPHY
DATE: 7/72
SCALE: 1:80,000
REF: R.W.
CLASS: A
MAP: 1:58,000
TYPE: CIR

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7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10

Rainier

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR



1/4 SECTION NW
N. W. 1/4 SECTION RIVER
VERNONIA RIVER
VERNONIA RIVER

1. This map was prepared for the National Wetlands Inventory by the National Wetlands Inventory, U.S. Department of the Interior, Bureau of Land Management, Washington, D.C. 20500.

2. This map was prepared for the National Wetlands Inventory by the National Wetlands Inventory, U.S. Department of the Interior, Bureau of Land Management, Washington, D.C. 20500.



3. This map was prepared for the National Wetlands Inventory by the National Wetlands Inventory, U.S. Department of the Interior, Bureau of Land Management, Washington, D.C. 20500.



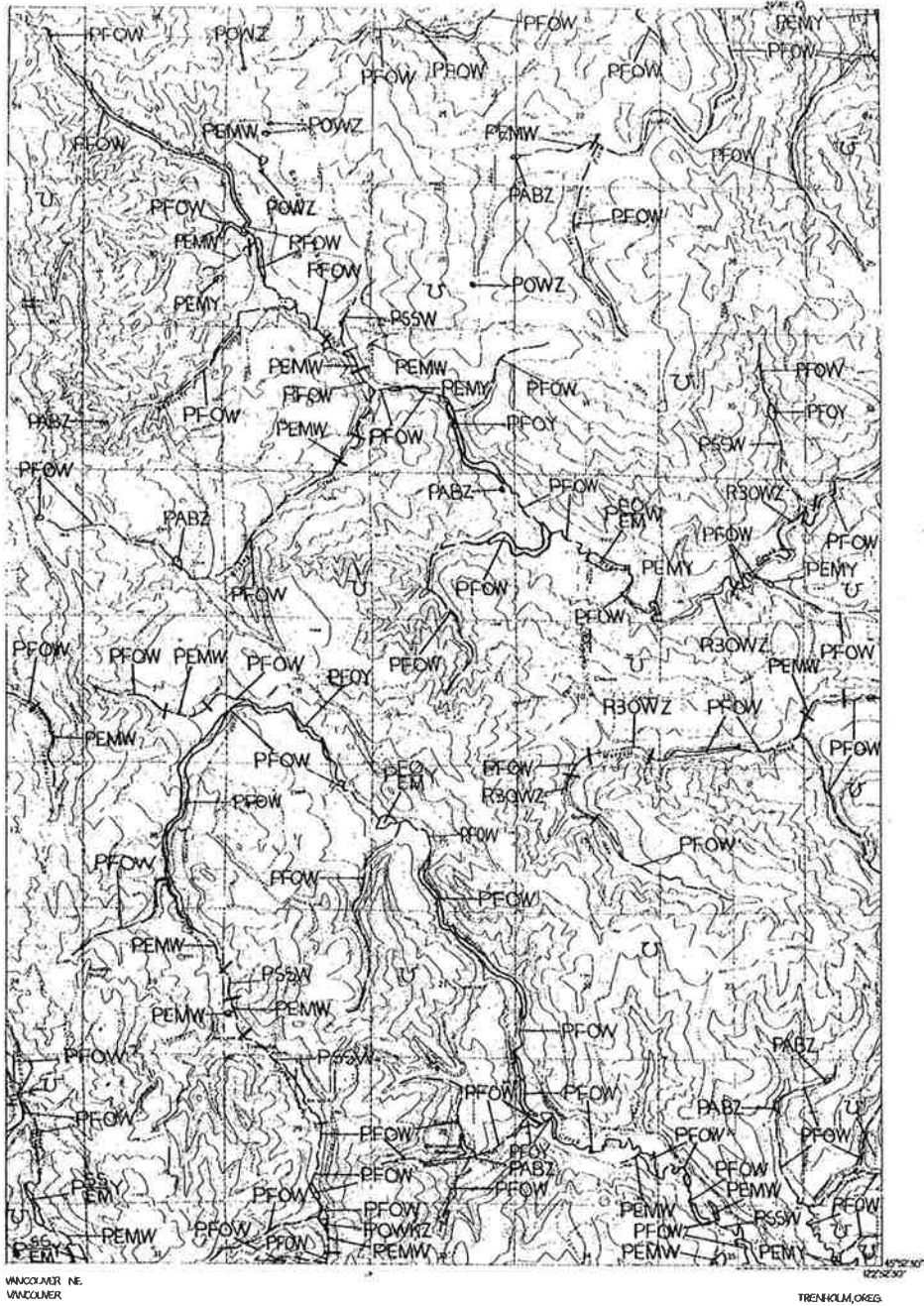
WETLAND LEGEND

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26	Wetland	[Symbol]
27	Wetland	[Symbol]
28	Wetland	[Symbol]
29	Wetland	[Symbol]
30	Wetland	[Symbol]
31	Wetland	[Symbol]
32	Wetland	[Symbol]
33	Wetland	[Symbol]
34	Wetland	[Symbol]
35	Wetland	[Symbol]
36	Wetland	[Symbol]
37	Wetland	[Symbol]
38	Wetland	[Symbol]
39	Wetland	[Symbol]
40	Wetland	[Symbol]
41	Wetland	[Symbol]
42	Wetland	[Symbol]
43	Wetland	[Symbol]
44	Wetland	[Symbol]
45	Wetland	[Symbol]
46	Wetland	[Symbol]
47	Wetland	[Symbol]
48	Wetland	[Symbol]
49	Wetland	[Symbol]
50	Wetland	[Symbol]

10

10
Vernonia

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR



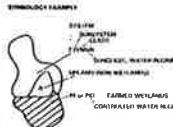
VANCOUVER NE
VANCOUVER

TRENHOLM, OREG.

Other information concerning the wetland inventory depicted on this document may be available. For information, contact:

Regional Director (ARDC) Region 1
U.S. Fish and Wildlife Service
Land Use Office, Suite 1022
380 N.E. Multnomah Street
Portland, Oregon 97222

WETLAND CODES
The wetland codes are printed generally by alphanumeric characters on the photograph based on vegetation, water, and other characteristics. The codes are based on the National Wetland Inventory Manual and the National Wetland Inventory Manual. The codes are based on the National Wetland Inventory Manual and the National Wetland Inventory Manual. The codes are based on the National Wetland Inventory Manual and the National Wetland Inventory Manual.



NOTICE TO THE USER
• Wetland areas have been field checked and selected for mapping as of 1/1/82.
• Wetland areas have been field checked and selected for mapping as of 1/1/82.
• Wetland areas have been field checked and selected for mapping as of 1/1/82.



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared for Office of Regional Services
for the National Wetlands Inventory

WETLAND LEGEND

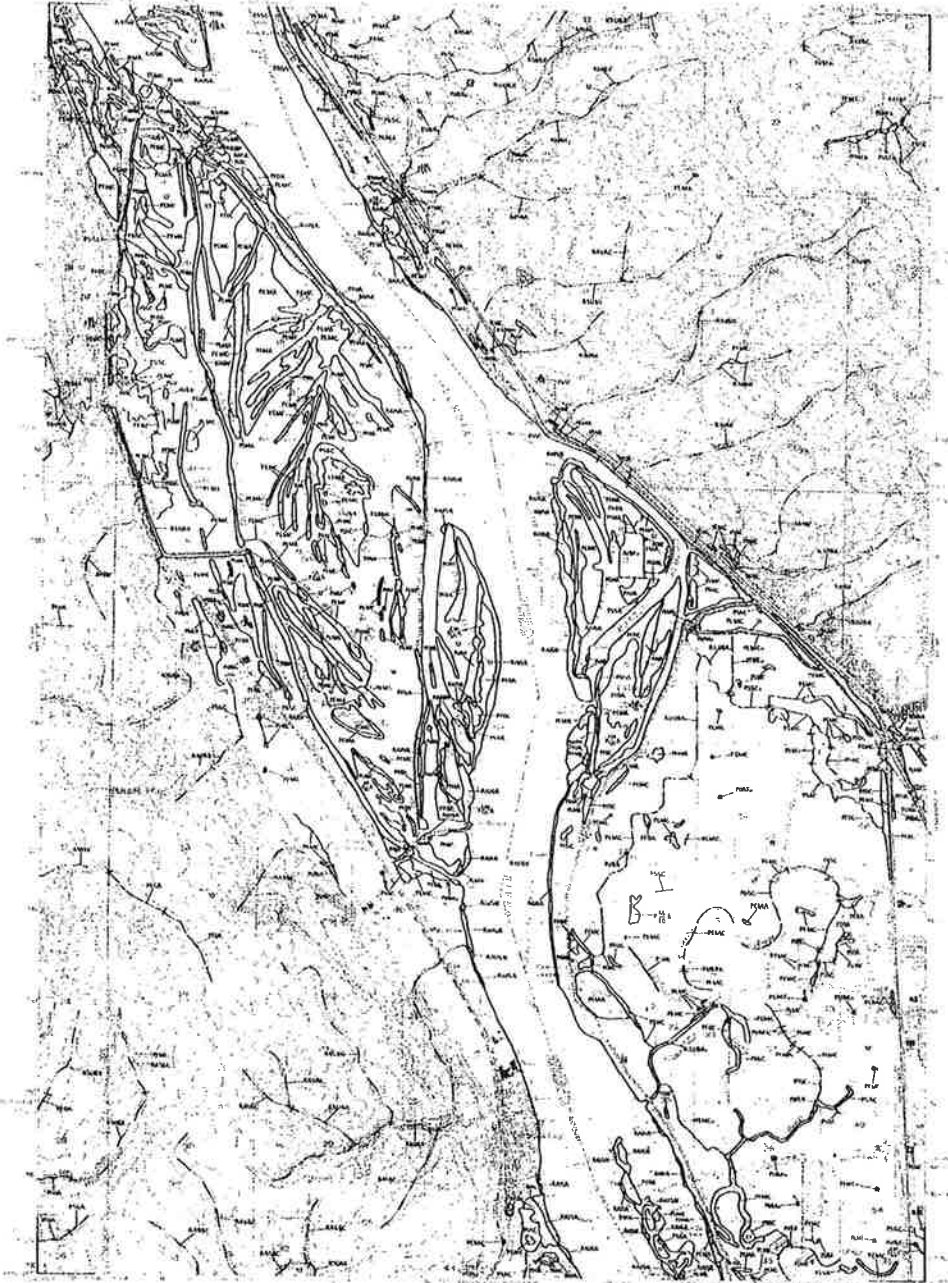
1. Primarily freshwater upland areas. List also include wetland areas with minor upland areas, non-photosynthetic areas, and upland areas with minor upland areas.

ECOLOGICAL SYSTEM	WETLAND CODE	WETLAND NAME	WETLAND DESCRIPTION	WETLAND CODE	WETLAND NAME	WETLAND DESCRIPTION
ECOLOGICAL SYSTEM	PFOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PABZ	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEMW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	POWZ	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PSSW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEMY	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEMY	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PFOY	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PFOY	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	R3OWZ	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	R3OWZ	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.
	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.	PEOW	PERMANENT OPEN WATER	Open water, permanent or nearly permanent, with a depth of at least 180 centimeters (60 inches) during the growing season.

Trenholm
Cannon
Shiloh Basin

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

DEER ISLAND, OREG.-WASH.



VANCOUVER NE
VANCOUVER

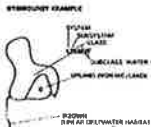
DEER ISLAND, OREG.-WASH.



Other information including a narrative report concerning the wetland resources depicted on the above sheet may be available. For information, contact:

Regional Director (ARDC) Region 1
U.S. Fish and Wildlife Service
1400 9th Ave., Suite 1902
600 N.E. Multnomah Street
Portland, Oregon 97232

SPECIAL NOTE
This document was prepared primarily for dissemination purposes of the aerial photography. Wetlands are identified on the photography based on vegetation, water, and other physical characteristics. The boundaries shown on this map are based on the aerial photography and are not necessarily the same as the boundaries shown on the ground. The boundaries shown on this map are based on the aerial photography and are not necessarily the same as the boundaries shown on the ground. The boundaries shown on this map are based on the aerial photography and are not necessarily the same as the boundaries shown on the ground.



NOTES TO THE USER
1. Wetlands which have been inventoried are indicated by the map to be an inventory.
2. Additional information on the wetlands inventory is available on this map as a separate sheet. Please contact the Regional Director for more information.
3. Aerial photography was used to determine the wetlands. The boundaries shown on this map are based on the aerial photography and are not necessarily the same as the boundaries shown on the ground.
4. Boundaries shown on this map are based on the aerial photography and are not necessarily the same as the boundaries shown on the ground.
5. The map is based on the Aerial Photography from 1980. The map is based on the Aerial Photography from 1980. The map is based on the Aerial Photography from 1980.



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by Wetland Inventory
1980

AERIAL PHOTOGRAPHY
DATE: 7/8/80
SCALE: 1:50,000
TYPE: CIR

SYSTEM	I - ESTUARIAL		II - INTERTIDAL		III - SUBTIDAL		IV - MARINE		SYSTEM
	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	
WETLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WETLAND
WATER	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WATER
UPLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	UPLAND

SYSTEM	I - ESTUARIAL		II - INTERTIDAL		III - SUBTIDAL		IV - MARINE		SYSTEM
	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	
WETLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WETLAND
WATER	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WATER
UPLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	UPLAND

SYSTEM	I - ESTUARIAL		II - INTERTIDAL		III - SUBTIDAL		IV - MARINE		SYSTEM
	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	
WETLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WETLAND
WATER	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	WATER
UPLAND	1 - ESTUARIAL	2 - INTERTIDAL	3 - SUBTIDAL	4 - MARINE	5 - ESTUARIAL	6 - INTERTIDAL	7 - SUBTIDAL	8 - MARINE	UPLAND

12
Deer Island

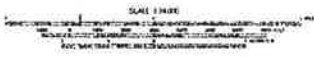
NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

ST. HELENS, OREG. - WASH.



VANCOUVER, NE
VANCOUVER

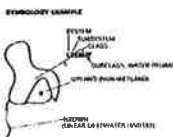
ST. HELENS, OREG. - WASH.



Other information including a narrative report concerning the wetland resources depicted on this document may be available. For information, contact:

Regional Director (ARRE) Program I
U.S. Fish and Wildlife Service
Loop 800 Mile, Suite 1882
600 P.E. McClellan Street
Portland, Oregon 97227

SPECIAL NOTE
This document was prepared primarily for identification of wetland resources. Wetlands are identified on the photograph based on vegetation, water, and other features. The National Wetlands Inventory is a project of the National Wetlands Inventory Act of 1985. The National Wetlands Inventory is a project of the National Wetlands Inventory Act of 1985. The National Wetlands Inventory is a project of the National Wetlands Inventory Act of 1985.



NOTE TO THE USER
- Wetlands which have been land converted are indicated by a solid black area.
- Wetlands which have been land converted are indicated by a solid black area.
- Wetlands which have been land converted are indicated by a solid black area.



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by National Wetlands Inventory
1988

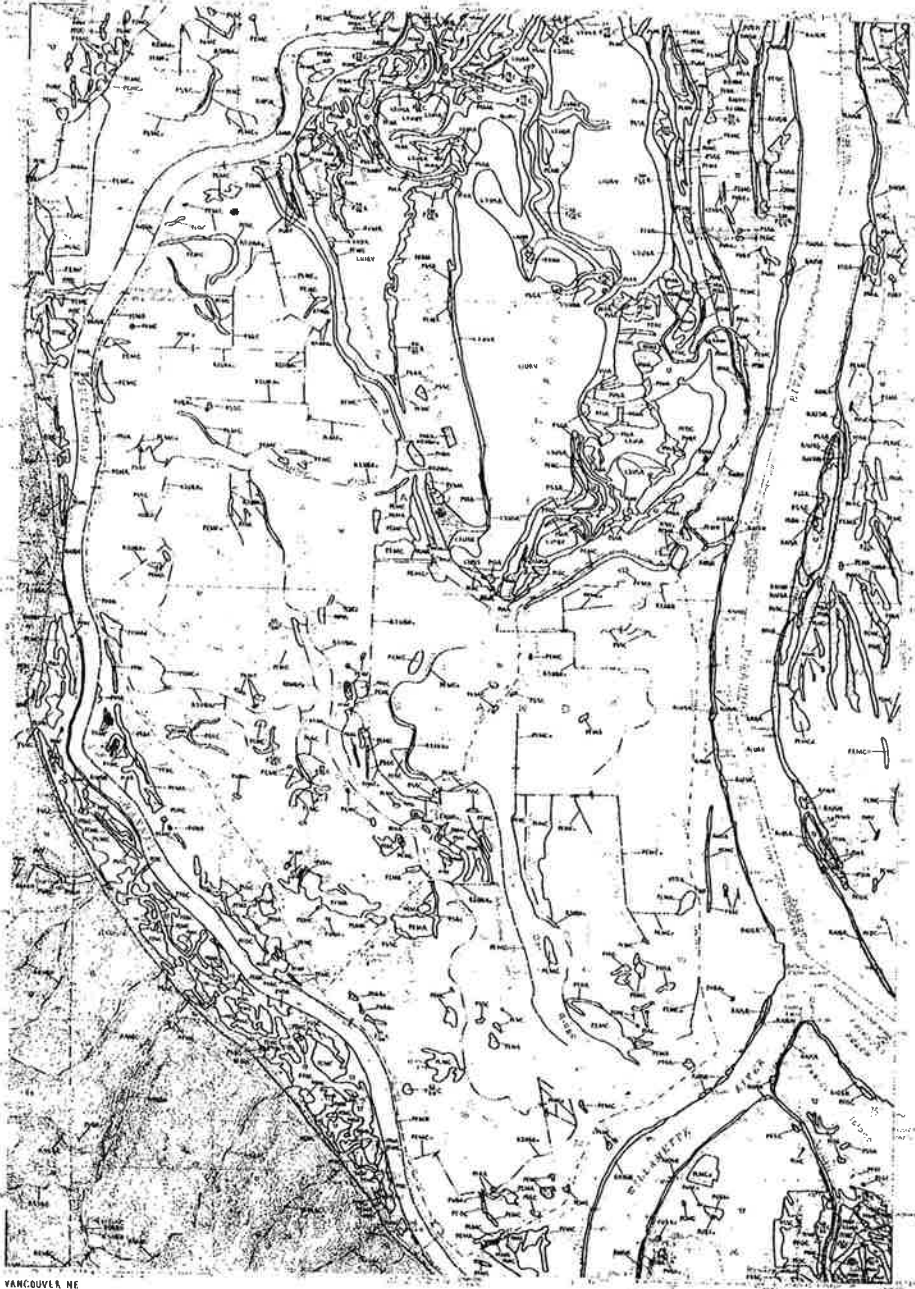
AERIAL PHOTOGRAPHY
DATE: 7/28/88
SCALE: 1:25,000
TYPE: CA

SYSTEM	1 - TROPICAL	2 - SUBTROPICAL	3 - TEMPERATE	4 - ESTUARINE	5 - COASTAL	6 - FRESHWATER	7 - UPLAND	8 - OTHER	9 - UNKNOWN	10 - UNCLASSIFIED
WETLAND	1.1 - Mangrove Forest	1.2 - Mangrove Scrub	1.3 - Mangrove Wetland	1.4 - Mangrove Wetland	1.5 - Mangrove Wetland	1.6 - Mangrove Wetland	1.7 - Mangrove Wetland	1.8 - Mangrove Wetland	1.9 - Mangrove Wetland	1.10 - Mangrove Wetland
WETLAND	2.1 - Mangrove Forest	2.2 - Mangrove Scrub	2.3 - Mangrove Wetland	2.4 - Mangrove Wetland	2.5 - Mangrove Wetland	2.6 - Mangrove Wetland	2.7 - Mangrove Wetland	2.8 - Mangrove Wetland	2.9 - Mangrove Wetland	2.10 - Mangrove Wetland
WETLAND	3.1 - Mangrove Forest	3.2 - Mangrove Scrub	3.3 - Mangrove Wetland	3.4 - Mangrove Wetland	3.5 - Mangrove Wetland	3.6 - Mangrove Wetland	3.7 - Mangrove Wetland	3.8 - Mangrove Wetland	3.9 - Mangrove Wetland	3.10 - Mangrove Wetland
WETLAND	4.1 - Mangrove Forest	4.2 - Mangrove Scrub	4.3 - Mangrove Wetland	4.4 - Mangrove Wetland	4.5 - Mangrove Wetland	4.6 - Mangrove Wetland	4.7 - Mangrove Wetland	4.8 - Mangrove Wetland	4.9 - Mangrove Wetland	4.10 - Mangrove Wetland
WETLAND	5.1 - Mangrove Forest	5.2 - Mangrove Scrub	5.3 - Mangrove Wetland	5.4 - Mangrove Wetland	5.5 - Mangrove Wetland	5.6 - Mangrove Wetland	5.7 - Mangrove Wetland	5.8 - Mangrove Wetland	5.9 - Mangrove Wetland	5.10 - Mangrove Wetland
WETLAND	6.1 - Mangrove Forest	6.2 - Mangrove Scrub	6.3 - Mangrove Wetland	6.4 - Mangrove Wetland	6.5 - Mangrove Wetland	6.6 - Mangrove Wetland	6.7 - Mangrove Wetland	6.8 - Mangrove Wetland	6.9 - Mangrove Wetland	6.10 - Mangrove Wetland
WETLAND	7.1 - Mangrove Forest	7.2 - Mangrove Scrub	7.3 - Mangrove Wetland	7.4 - Mangrove Wetland	7.5 - Mangrove Wetland	7.6 - Mangrove Wetland	7.7 - Mangrove Wetland	7.8 - Mangrove Wetland	7.9 - Mangrove Wetland	7.10 - Mangrove Wetland
WETLAND	8.1 - Mangrove Forest	8.2 - Mangrove Scrub	8.3 - Mangrove Wetland	8.4 - Mangrove Wetland	8.5 - Mangrove Wetland	8.6 - Mangrove Wetland	8.7 - Mangrove Wetland	8.8 - Mangrove Wetland	8.9 - Mangrove Wetland	8.10 - Mangrove Wetland
WETLAND	9.1 - Mangrove Forest	9.2 - Mangrove Scrub	9.3 - Mangrove Wetland	9.4 - Mangrove Wetland	9.5 - Mangrove Wetland	9.6 - Mangrove Wetland	9.7 - Mangrove Wetland	9.8 - Mangrove Wetland	9.9 - Mangrove Wetland	9.10 - Mangrove Wetland
WETLAND	10.1 - Mangrove Forest	10.2 - Mangrove Scrub	10.3 - Mangrove Wetland	10.4 - Mangrove Wetland	10.5 - Mangrove Wetland	10.6 - Mangrove Wetland	10.7 - Mangrove Wetland	10.8 - Mangrove Wetland	10.9 - Mangrove Wetland	10.10 - Mangrove Wetland

St. Helens

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

SAUVIE ISLAND, OREG. - WASH.



VANCOUVER NE
VANCOUVER

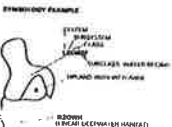
SAUVIE ISLAND, OREG. - WASH.



Other information including a narrative report concerning the specified resources listed on this document may be available. For information, contact:

Regional Director (R5C) Region 1
U.S. Fish and Wildlife Service
4000 5th Ave., Suite 1022
600 N.E. Multnomah Street
Portland, Oregon 97232

PRELIMINARY NOTES
This document was prepared solely for information purposes. It is not intended to be used as a legal document. It is based on aerial photography, field observations, and other available information. It is not intended to be used as a legal document. It is based on aerial photography, field observations, and other available information. It is not intended to be used as a legal document. It is based on aerial photography, field observations, and other available information.



NOTES TO THE USER
1. Wetlands shown on this map are based on a selected date. Wetlands shown on this map are based on a selected date. Wetlands shown on this map are based on a selected date. Wetlands shown on this map are based on a selected date.



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by National Wetlands Inventory
1982

AERIAL PHOTOGRAPHY

SYSTEM	1 - TIDAL	2 - LOWER PERIHALM	3 - UPPER PERIHALM	4 - ESTUARINE	5 - COASTAL MARSH	6 - SAVANNAH	7 - PRAIRIE	8 - RIVER	9 - WETLAND	10 - WETLAND	11 - WETLAND	12 - WETLAND	13 - WETLAND	14 - WETLAND	15 - WETLAND	16 - WETLAND	17 - WETLAND	18 - WETLAND	19 - WETLAND	20 - WETLAND
NAME																				
DATE																				
SCALE																				

16

Sauvie Island

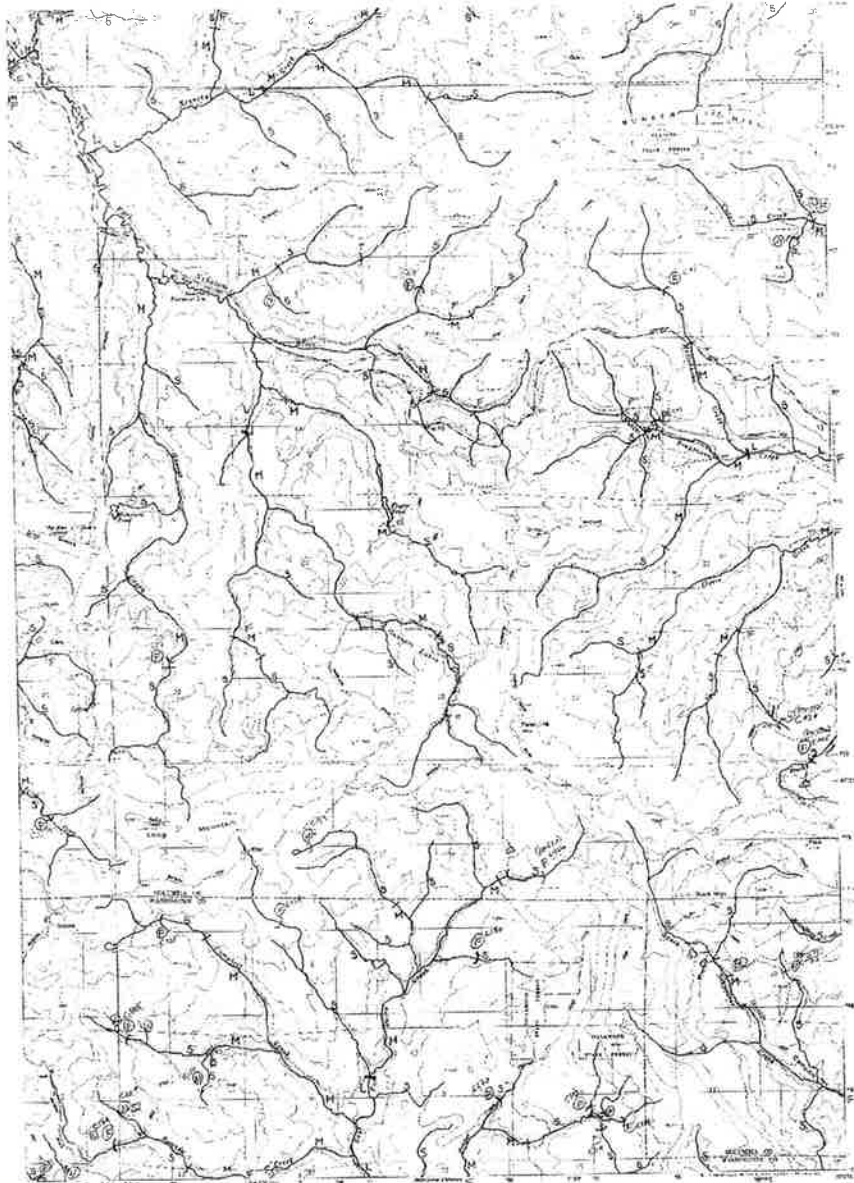
**COLUMBIA COUNTY
COMPREHENSIVE
PLAN**

TECHNICAL APPENDIX

**PART XVI
OPEN SPACE, SCENIC, HISTORICAL
AND NATURAL RESOURCES**

**ARTICLE X
WATER RESOURCES**

B. RIPARIAN AREAS



Map(s) added and published by the Geographic Survey
45-123 Sheet
G-1
 BACONA

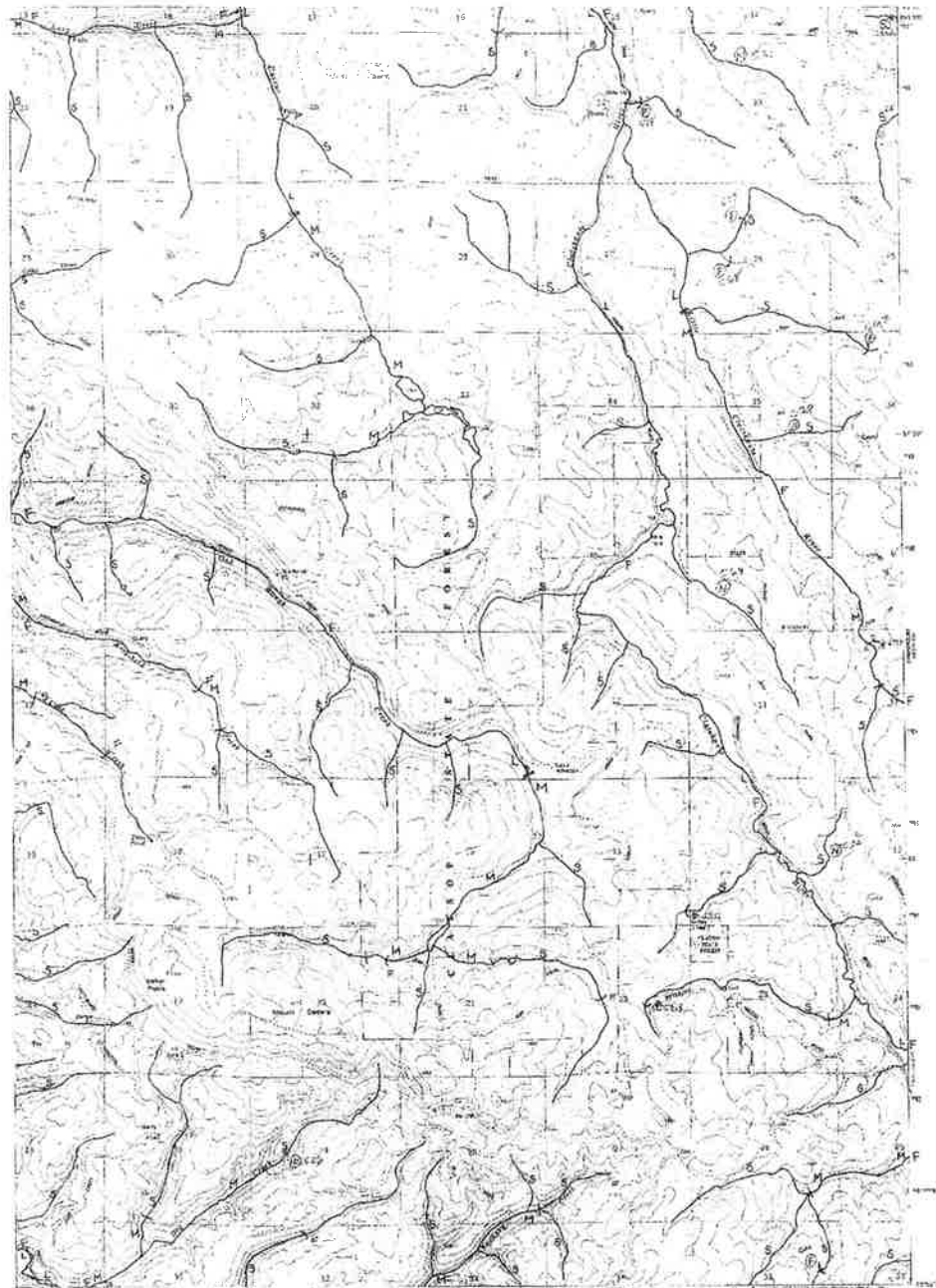
Scale 1:25,000
 Contour Interval 40 Feet
 NATIONAL BUREAU OF SURVEY
 U.S. GEOLOGICAL SURVEY
 1918
 THE U.S. GEOLOGICAL SURVEY HAS BEEN KINDLY ASSISTED BY THE OREGON DEPARTMENT OF FORESTRY IN THE PREPARATION OF THIS MAP.

ROAD CLASSIFICATION
 National Road
 State Road
 County Road
 Local Road
 BACONA, OREG.
 1918

OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE

1. This map is a stream classification map showing the upstream limit of fish run for various stream reaches. The stream reaches are classified as Small (S), Medium (M), or Large (L) based on their physical characteristics. The upstream limit of fish run is indicated by the letter F.

2. The stream reaches are classified based on their physical characteristics, including stream width, depth, velocity, and substrate. The upstream limit of fish run is determined by the physical characteristics of the stream reach.



Map made, drawn, and published by the Geological Survey

45-123 Sheet
H-1 1:25,000
BAKER POINT

Scale: 1:25,000
 Contour Interval: 30 Feet
 Horizontal Scale: 1 inch = 2000 feet

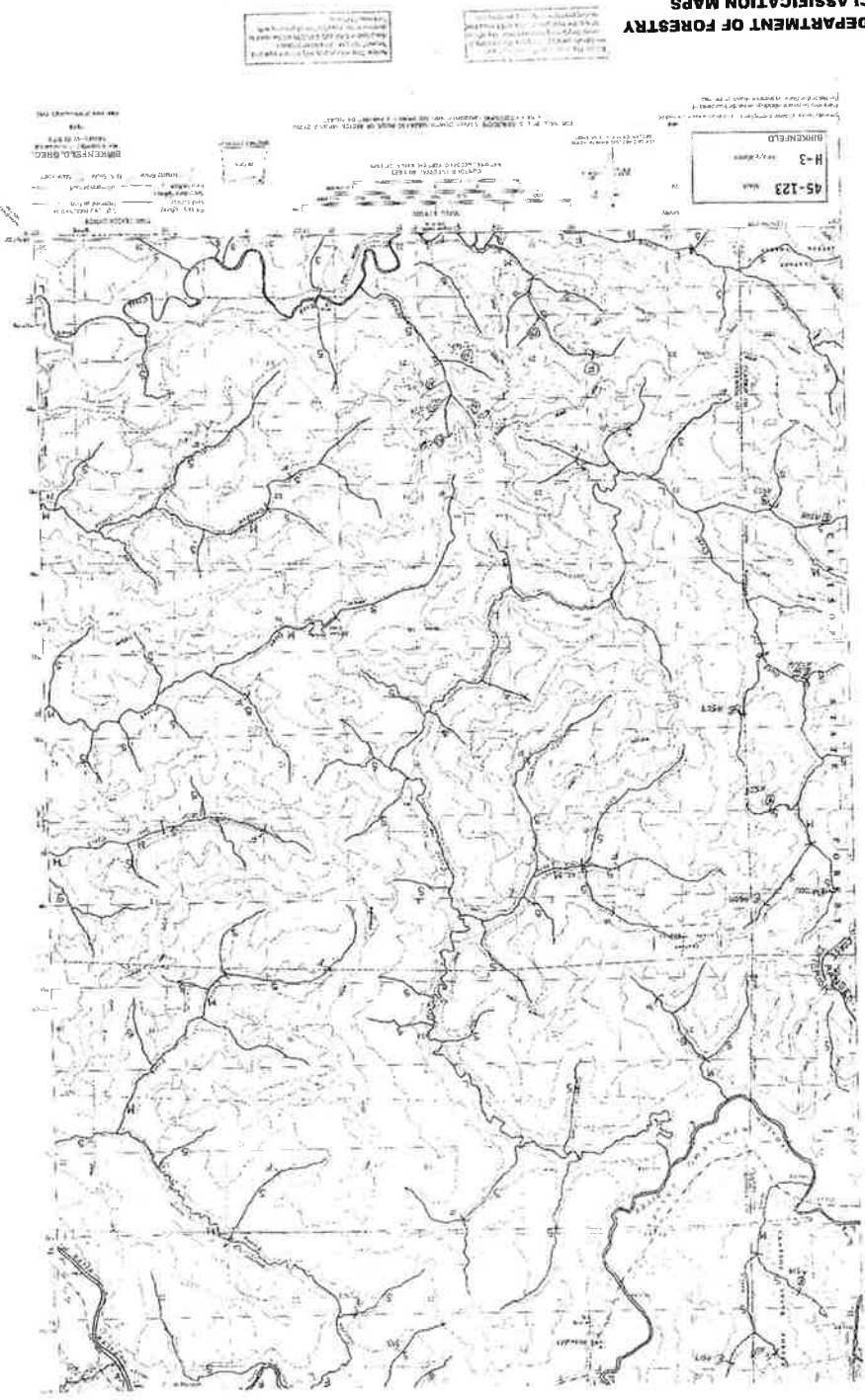
ROAD CLASSIFICATIONS
 Lightly used road or improved surface
 Unimproved road
 State Road

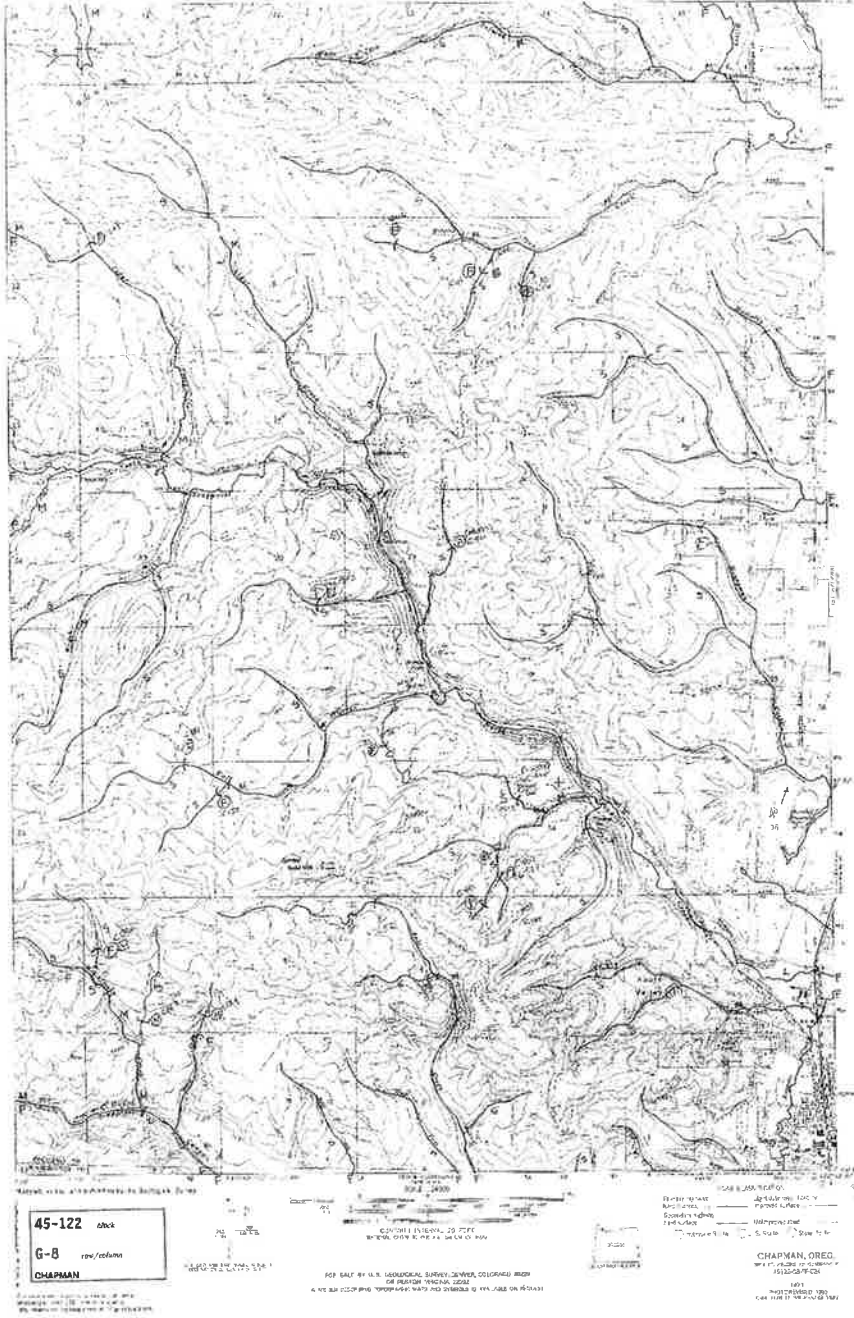
BAKER POINT, OREG.
 FOR NUMBER 47 (ROADS) SEE MAP 45-123-102
 1959
 (PUB. 107) U.S. GEOLOGICAL SURVEY

OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE

FOR SALE BY U.S. GEOLOGICAL SURVEY, 2025 COLORADO BLDG., OR RESTON, VIRGINIA 22092
 A 10-CENT ORDER FORM "ORDERING MAPS AND CHARTS" IS AVAILABLE ON REQUEST

**OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE**

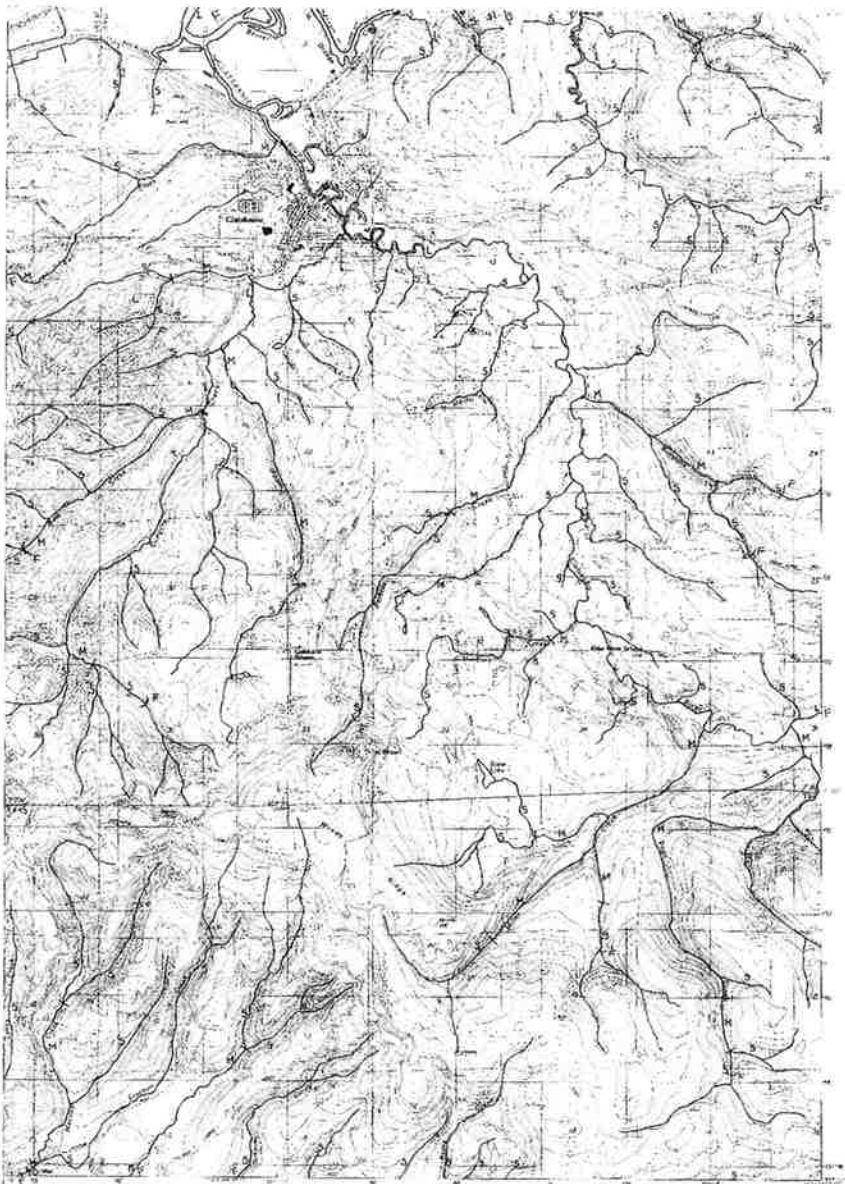




**OREGON DEPARTMENT OF FORESTRY
 STREAM CLASSIFICATION MAPS
 F = UPSTREAM LIMIT OF FISH RUN
 S = SMALL M = MEDIUM L = LARGE**

Map of Chapman, Oregon, showing stream classification. The map features contour lines, a grid, and stream networks. A legend in the bottom left corner identifies the map as '45-122' and 'G-8'. A legend in the bottom right corner defines the symbols for 'UPSTREAM LIMIT OF FISH RUN' (F), 'SMALL' (S), 'MEDIUM' (M), and 'LARGE' (L).

Map of Chapman, Oregon, showing stream classification. The map features contour lines, a grid, and stream networks. A legend in the bottom left corner identifies the map as '45-122' and 'G-8'. A legend in the bottom right corner defines the symbols for 'UPSTREAM LIMIT OF FISH RUN' (F), 'SMALL' (S), 'MEDIUM' (M), and 'LARGE' (L).



46-123 Nech
A-2 row/column
CLATSKANIE

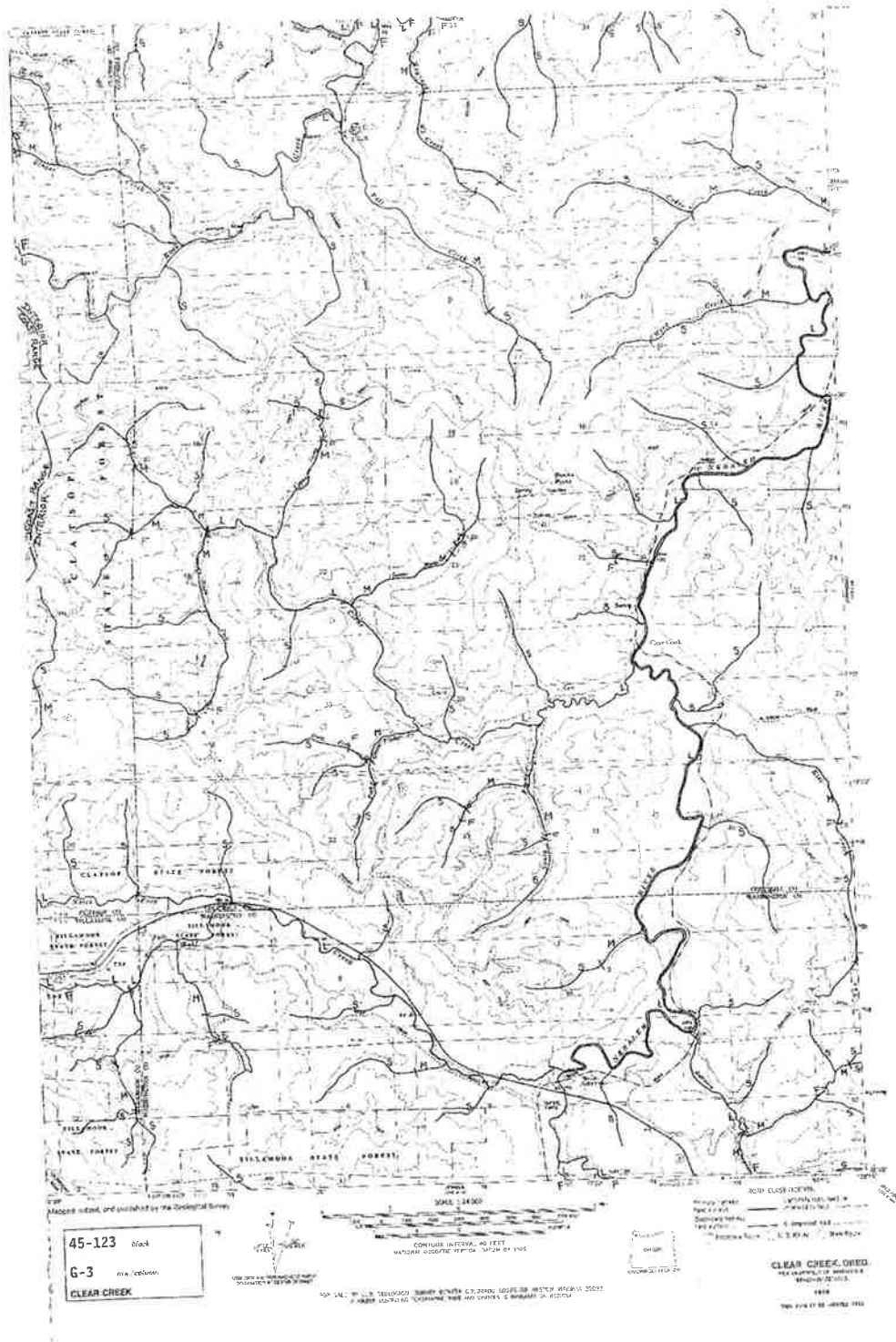
PROVISIONAL MAP
This map is a provisional map and should not be used for any purpose other than for general reference. It is subject to change without notice.

SCALE: 1:50,000

CLATSKANIE, OREG.
PROVISIONAL STREAM MAP
MAY 1968

**OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS**
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE

Spring This map shows only stream flow and does not show any other information. It is subject to change without notice.

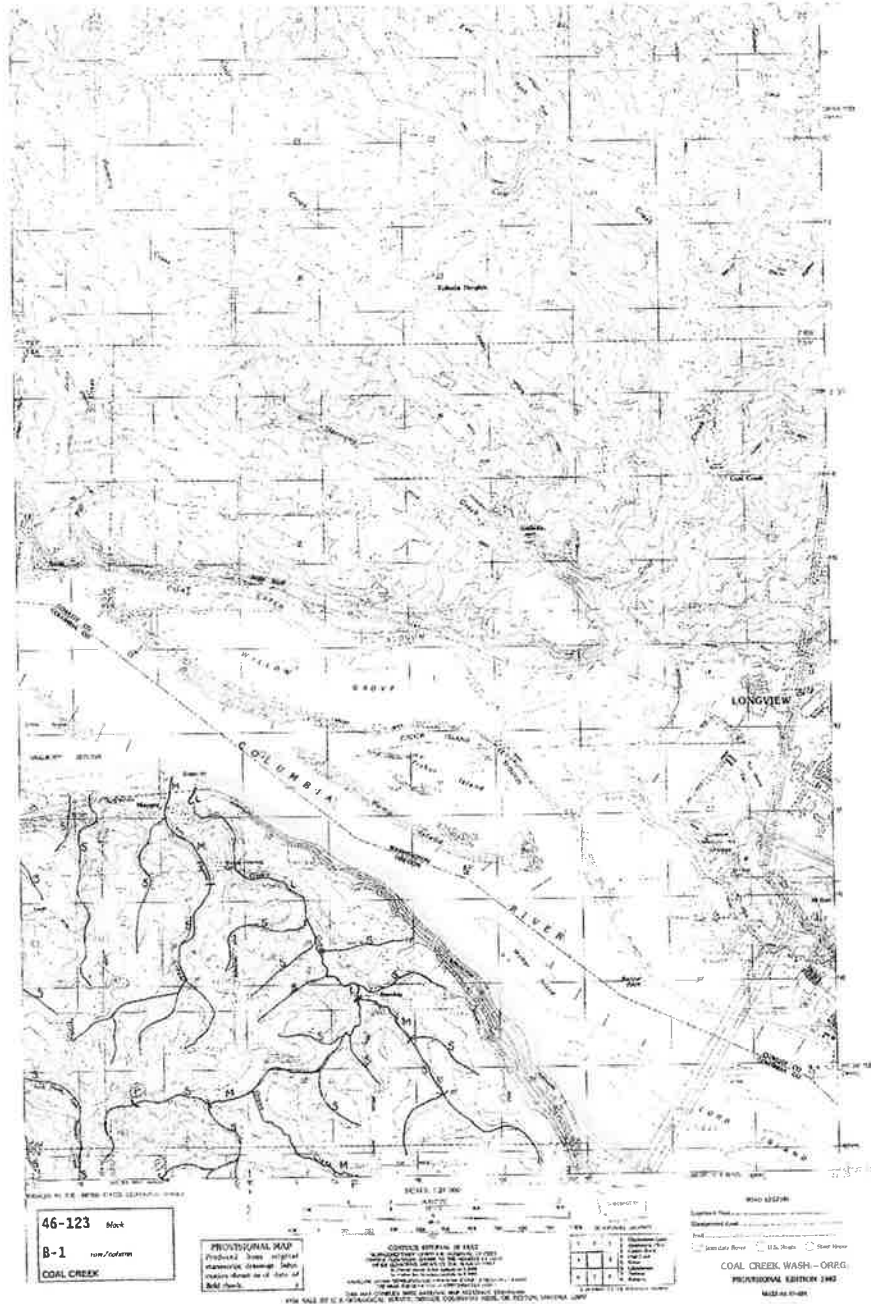


**OREGON DEPARTMENT OF FORESTRY
 STREAM CLASSIFICATION MAPS
 F = UPSTREAM LIMIT OF FISH RUN
 S = SMALL M = MEDIUM L = LARGE**

These maps are prepared by the Oregon Department of Forestry, Forest Management Division, and are intended to provide information on stream classification. The maps are not to be used for any other purpose without the permission of the Oregon Department of Forestry.

This map is prepared by the Oregon Department of Forestry, Forest Management Division, and is intended to provide information on stream classification. The map is not to be used for any other purpose without the permission of the Oregon Department of Forestry.

CLEAR CREEK, OREGON
 1948
 1:25,000



**OREGON DEPARTMENT OF FORESTRY
 STREAM CLASSIFICATION MAPS
 F = UPSTREAM LIMIT OF FISH RUN
 S = SMALL M = MEDIUM L = LARGE**

PROVISIONAL MAP
 Produced from original
 manuscript drawings. Subject
 matter shown as of date of
 field work.

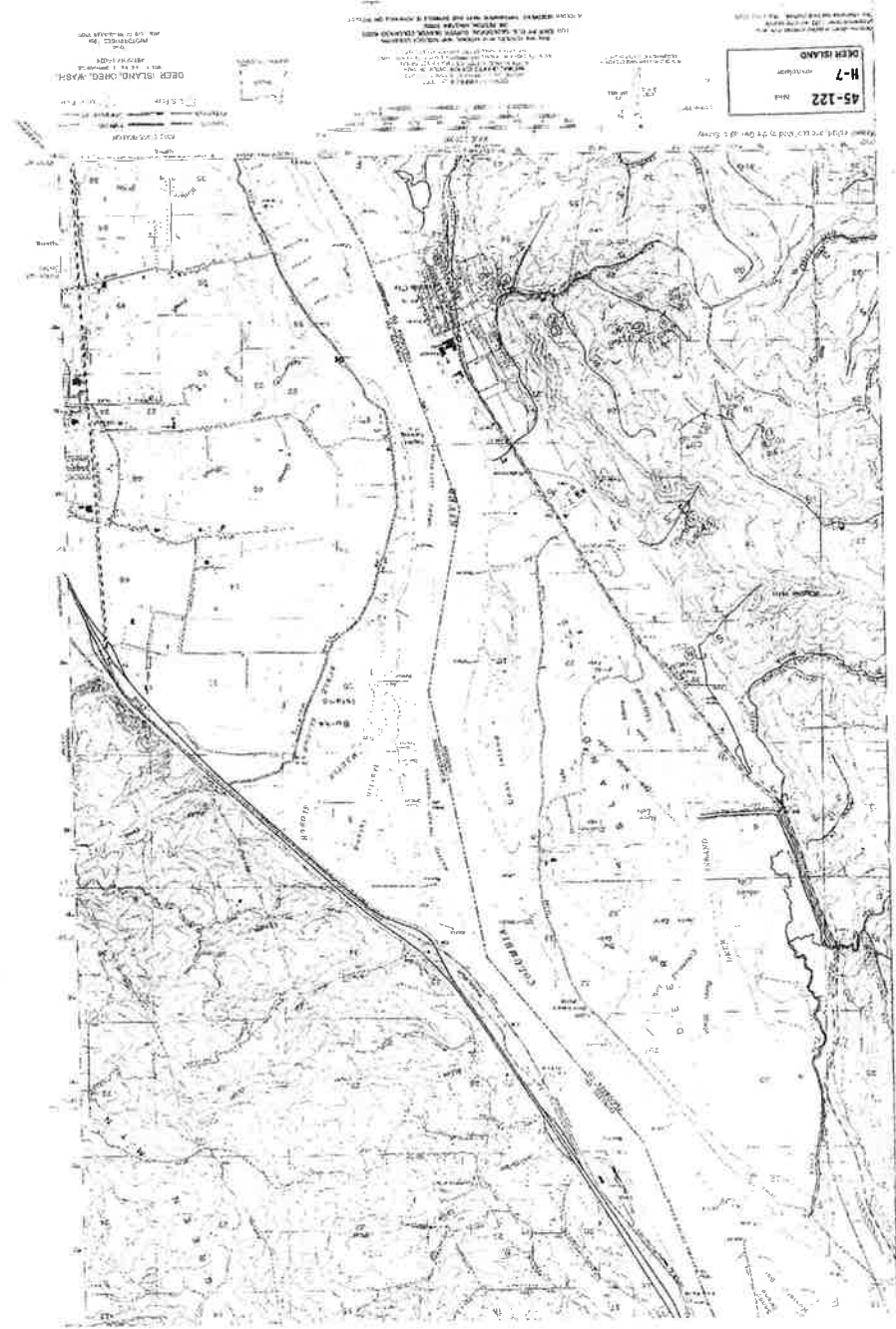
CONTROL SURVEYS BY FIELD
 SURVEYING PARTY (A) DATED 11/27/55
 CONTROL SURVEYS BY THE BUREAU OF
 LAND SURVEYING (B) DATED 11/27/55
 CONTROL SURVEYS BY THE BUREAU OF
 LAND SURVEYING (C) DATED 11/27/55

46-123 Block
 B-1 non/forest
 COAL CREEK

Scale 1:25,000
 0 100 200 300 400 500 Feet

COAL CREEK WASH - OREG
 PROVISIONAL EDITION 1965
 MADE AT OREGON

**OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE**

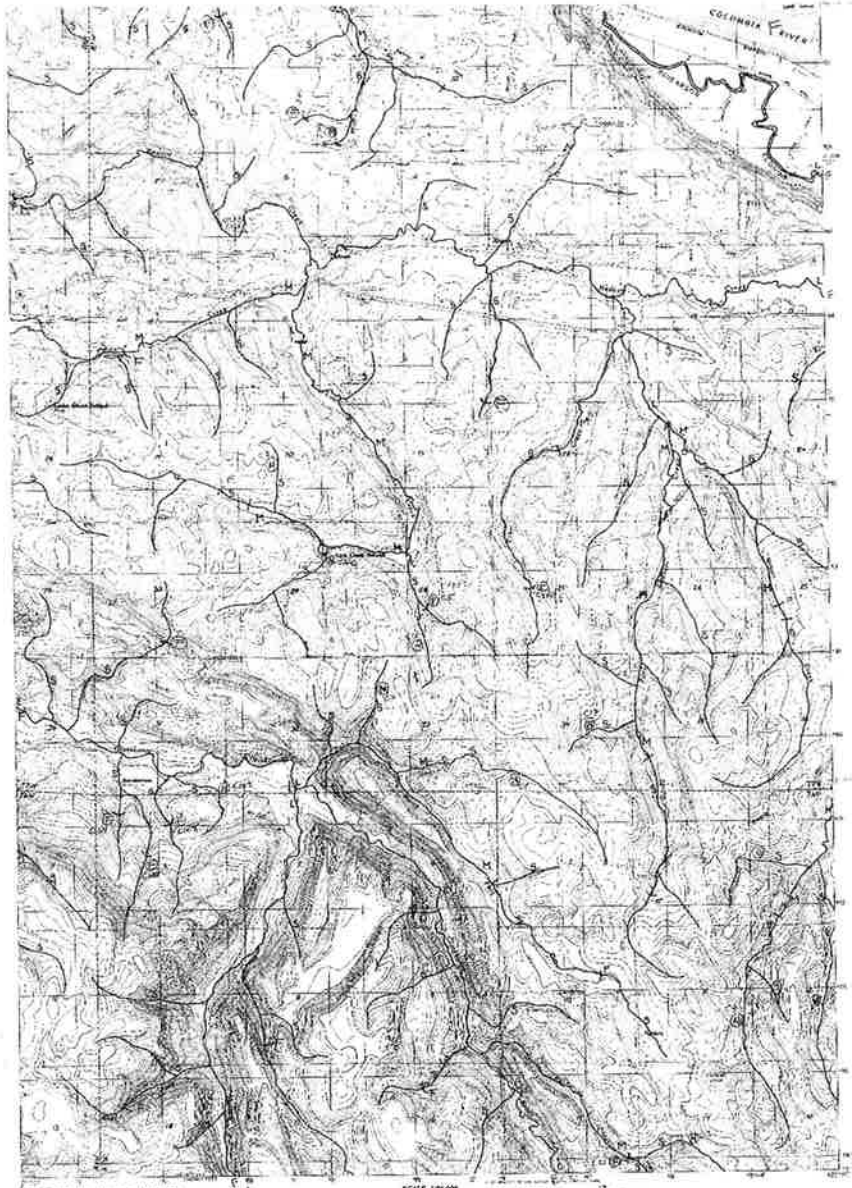


Scale: 1 inch = 1 mile
Vertical Exaggeration: 10x

Map Date: 1958
Map No.: 45-122 H-7

45-122
H-7
OREGON DEPARTMENT OF FORESTRY

DEER ISLAND, OREGON, WASH.
45-122 H-7
OREGON DEPARTMENT OF FORESTRY



46-123 Alack
A-1 row/column
DELENA

SCALE 1:50,000
PROFESSIONAL MAP
Produced from original
topographic, hydrologic, and
aerial photography as of date of
field check.

CENTRAL NATIONAL MAPS
12121 North Central Expressway, Suite 1412
P.O. Box 10000, Dallas, Texas 75210
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storage and retrieval system, without the
written permission of Central National Maps, Inc.

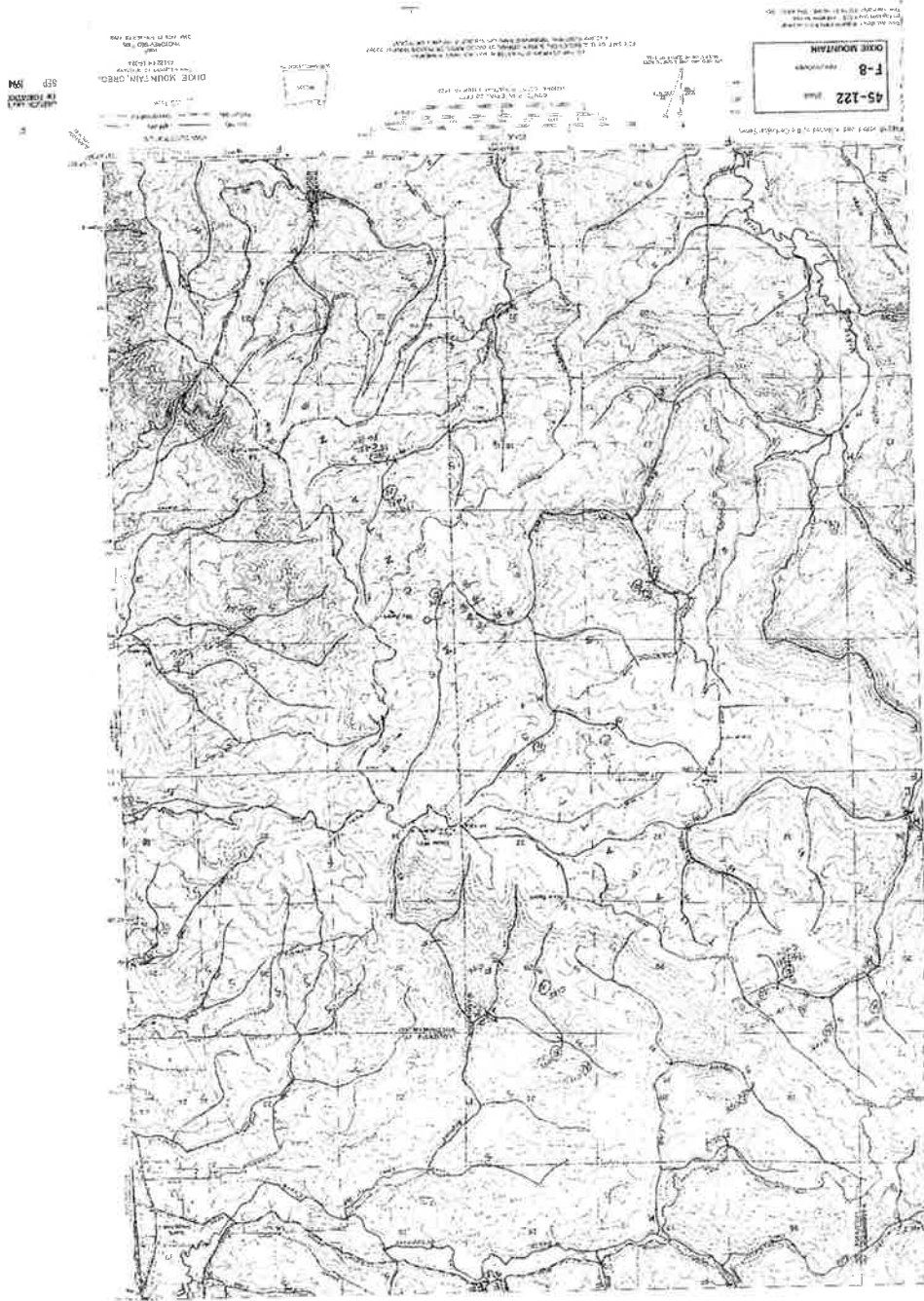
ROAD SYMBOLS
Proposed Road
Unimproved Road
Rail
Section Lines
U.S. Survey
New State
DELENA, OREG.
PROFESSIONAL SECTION 1983
AUG 24 1983

OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE

This map is a reproduction of the original map and is not a substitute for the original map. It is intended for use as a reference only.

NOTE: This map is a reproduction of the original map and is not a substitute for the original map. It is intended for use as a reference only.

**OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE**





46-123 stock
A-3 cow/calf
MARSHLAND

PROVISIONAL MAP
This map is a preliminary map of the stream classification. It is based on field observations and aerial photography. It is not a final map and should not be used for legal purposes.

GENERAL NOTES: 1. This map is a preliminary map of the stream classification. It is based on field observations and aerial photography. It is not a final map and should not be used for legal purposes. 2. The stream classification is based on the following criteria: a. Stream width b. Stream depth c. Stream velocity d. Stream substrate e. Stream bank composition f. Stream bank stability g. Stream bank erosion h. Stream bank accretion i. Stream bank deposition j. Stream bank migration k. Stream bank stability l. Stream bank erosion m. Stream bank accretion n. Stream bank deposition o. Stream bank migration p. Stream bank stability q. Stream bank erosion r. Stream bank accretion s. Stream bank deposition t. Stream bank migration u. Stream bank stability v. Stream bank erosion w. Stream bank accretion x. Stream bank deposition y. Stream bank migration z. Stream bank stability

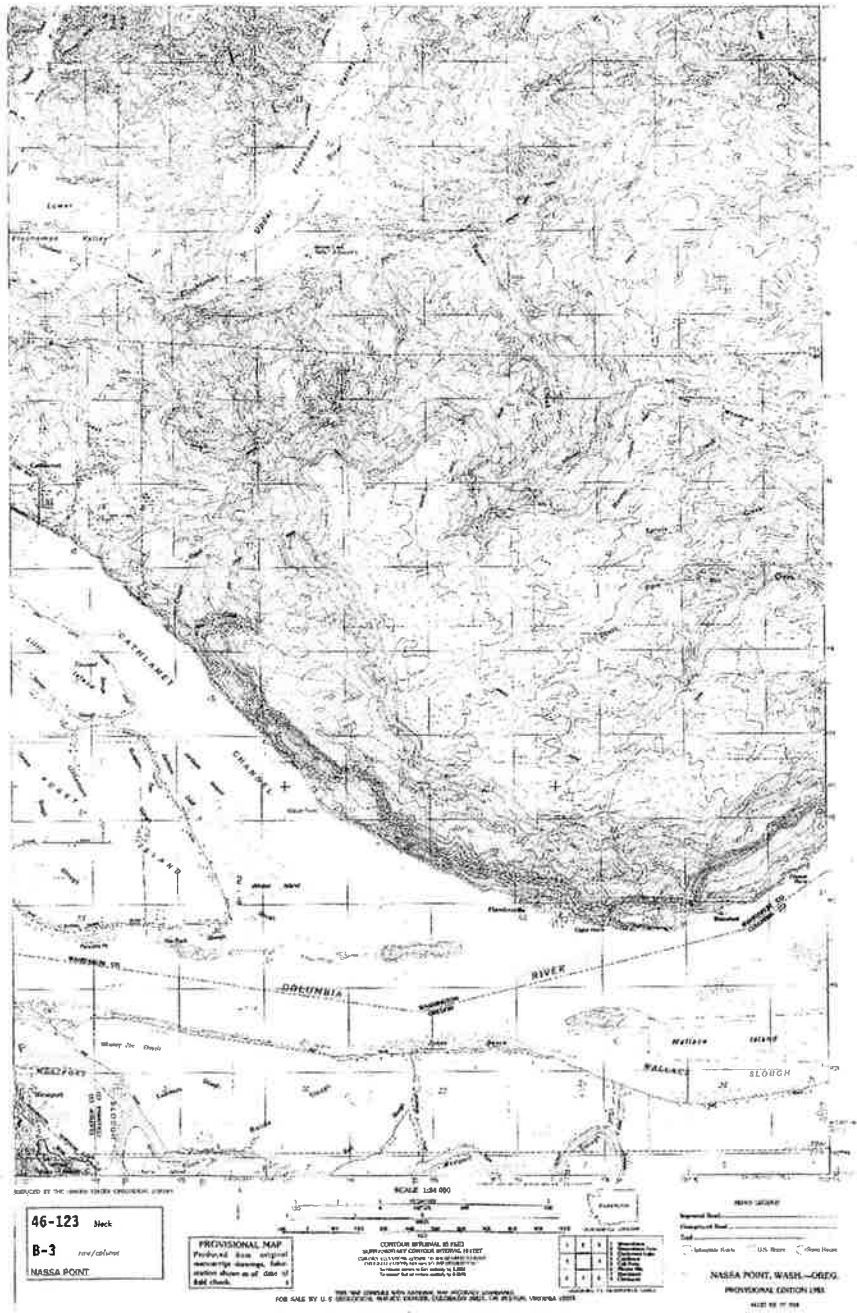
Stream Class	Stream Width	Stream Depth	Stream Velocity	Stream Substrate	Stream Bank Composition	Stream Bank Stability	Stream Bank Erosion	Stream Bank Accretion	Stream Bank Deposition	Stream Bank Migration
S	< 10'	< 1'	< 1 ft/sec	Gravel	Grass	Stable	None	None	None	None
M	10' - 30'	1' - 3'	1 - 3 ft/sec	Gravel	Grass	Stable	None	None	None	None
L	> 30'	> 3'	> 3 ft/sec	Gravel	Grass	Stable	None	None	None	None

MADE BY: [Name]
DATE: [Date]
SCALE: 1:24,000
PROVISIONAL SECTION 1983
ISSUE # 10 894

OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
F = UPSTREAM LIMIT OF FISH RUN
S = SMALL M = MEDIUM L = LARGE

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 STREAM CLASSIFICATION MAPS**
F = UPSTREAM LIMIT OF FISH RUN
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46-123 Sheet
B-3
 NASSA POINT

PROVISIONAL MAP
 Prepared from original
 meandering drawings. Refer
 original drawings for
 B&E check.

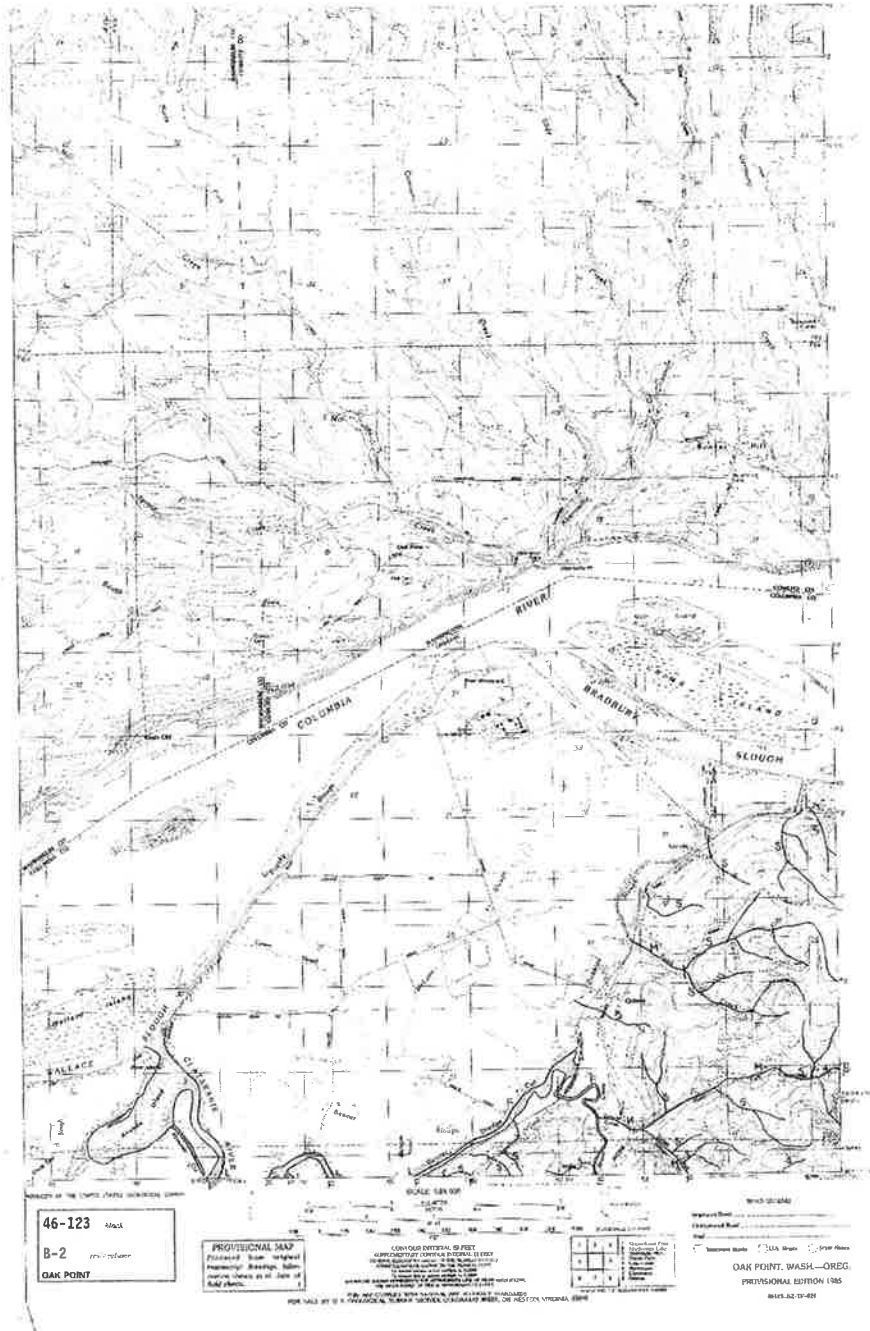
CONTOUR INTERVAL 40 FEET
 SUPERIOR TO CONTOUR INTERVAL IS LISTED
 OTHER INTERVALS LISTED IN PROVISIONAL MAP
 (SEE LISTING ON PAGE 10 OF THIS MAP)
 CONTOUR INTERVAL 40 FEET

THIS MAP COMPILED FROM ORIGINAL AND REPRODUCED MATERIAL
 FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20540

1. This map is a provisional stream classification map.
 2. It is not intended for use as a navigation map.
 3. It is not intended for use as a road map.
 4. It is not intended for use as a general reference map.
 5. It is not intended for use as a scientific map.

6. This map is a provisional stream classification map.
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 8. It is not intended for use as a road map.
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 10. It is not intended for use as a scientific map.

NASSA POINT, WASH.-OREG.
 PROVISIONAL CONTOUR LINES
 46-123 B-3



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STREAM CLASSIFICATION MAPS
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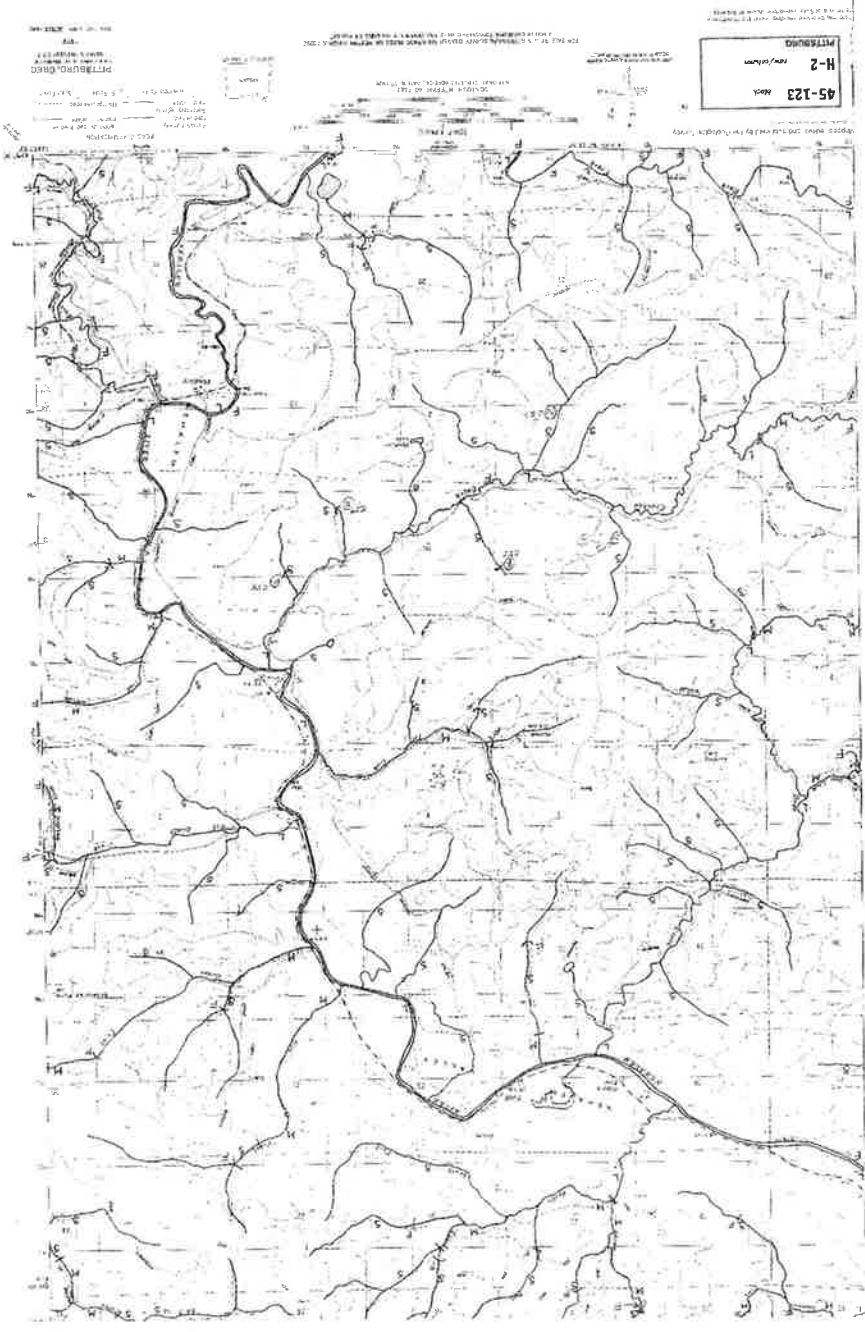
NOTE: This map is a professional map of the area shown. It is not a survey map. It is not to be used for legal purposes. It is not to be used for engineering purposes. It is not to be used for any other purpose.

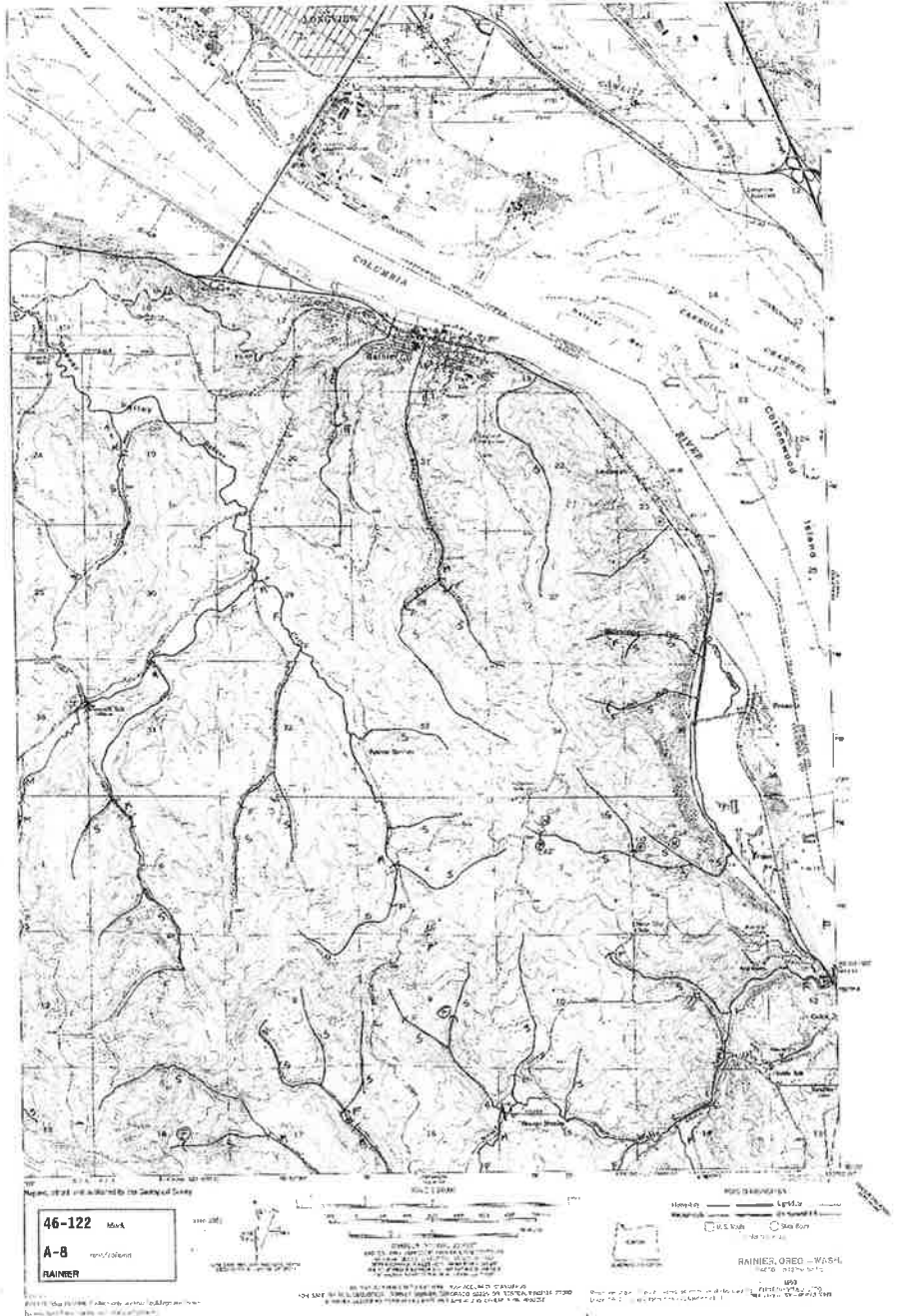
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**OREGON DEPARTMENT OF FORESTRY
STREAM CLASSIFICATION MAPS
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Scale: 1 inch = 1 mile
Map prepared by the Oregon Department of Forestry, Forest Management Division, Forest Planning Section, Corvallis, Oregon, 1964.

This map is a reproduction of the original map prepared by the Oregon Department of Forestry, Forest Management Division, Forest Planning Section, Corvallis, Oregon, 1964.





**OREGON DEPARTMENT OF FORESTRY
 STREAM CLASSIFICATION MAPS
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1. This map is a stream classification map prepared by the Oregon Department of Forestry. It is based on field observations and aerial photography. The map shows the upstream limit of fish run for various streams in the Rainier area. The map is intended for use by landowners, anglers, and other interested parties.

2. The map is a topographic map of the Rainier area in Oregon. It shows a network of streams and rivers, with various symbols and line styles indicating their classification and the upstream limit of fish run. The map includes a grid, contour lines, and a scale bar.



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 STREAM CLASSIFICATION MAPS**
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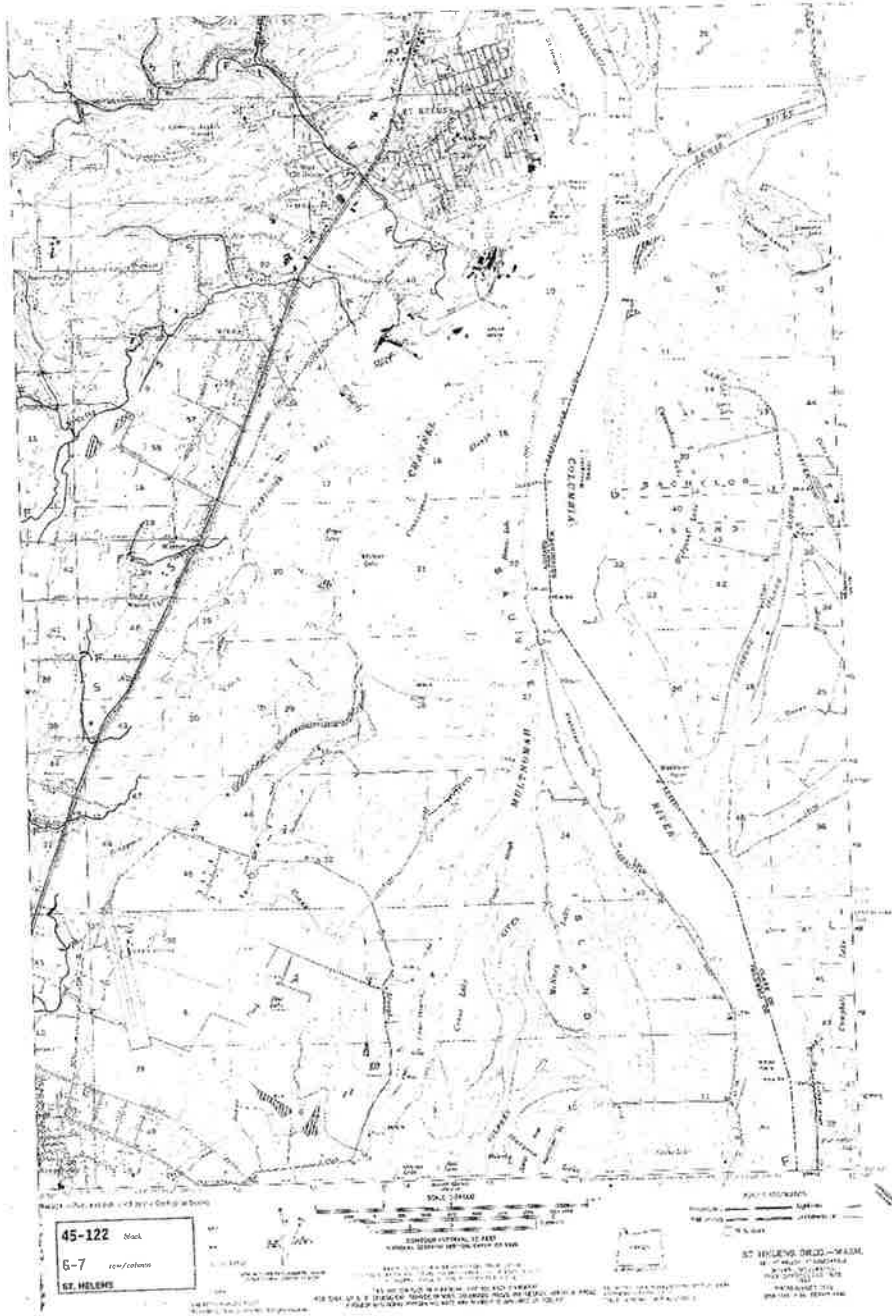
Scale 1:62,500
 1 inch = 1 mile
 1 centimeter = 1000 meters

Scale 1:62,500
 1 inch = 1 mile
 1 centimeter = 1000 meters

45-122 6000
 F-7
 SAUTIE ISLAND

OREGON DEPARTMENT OF FORESTRY
 SAUTIE ISLAND, OREGON - WASH.
 SEP 1954

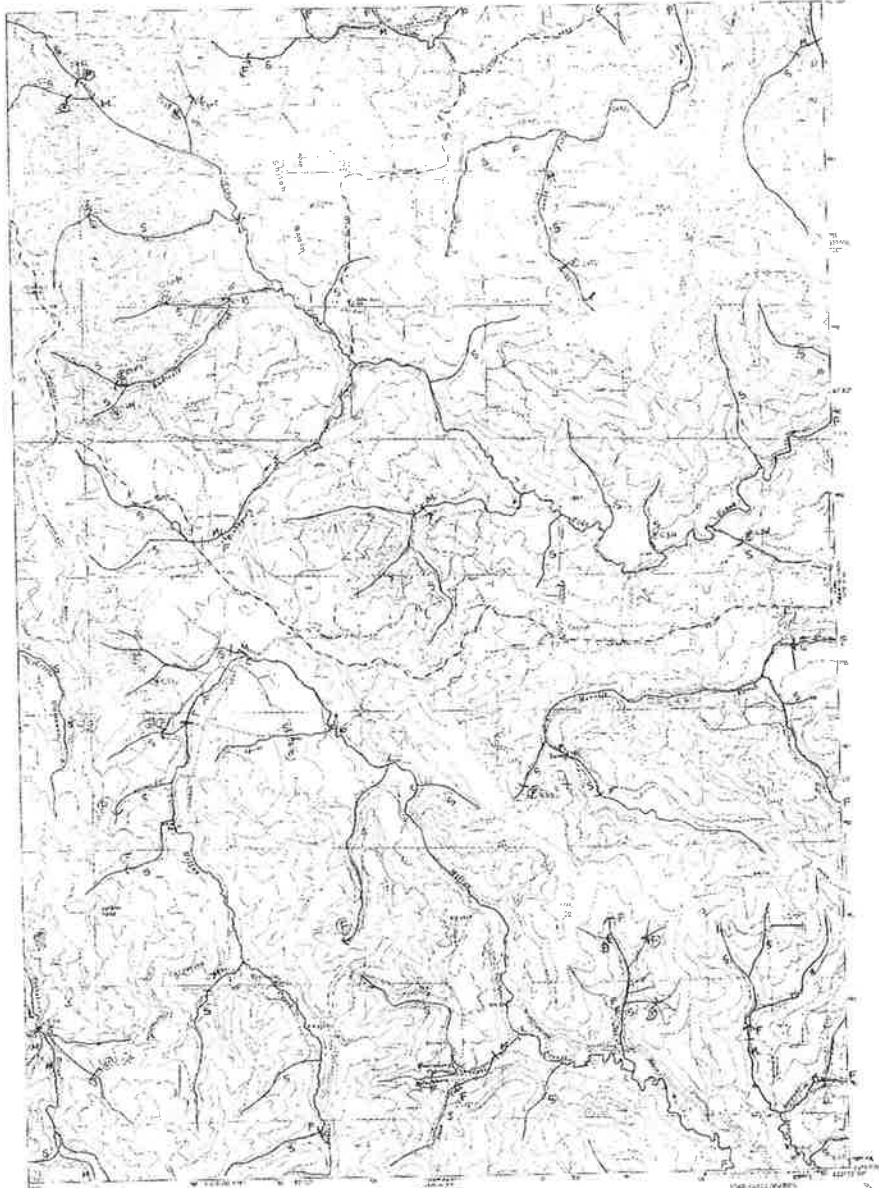
Copyright 1957 by Oregon Department of Forestry



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The Oregon Department of Forestry is not responsible for any errors or omissions in this map or for any consequences arising from its use.



45-122 Maps
 H-8
 TRESHOLM

SCALE 1:50,000
 METRIC SYSTEM - METERS, KILOMETERS

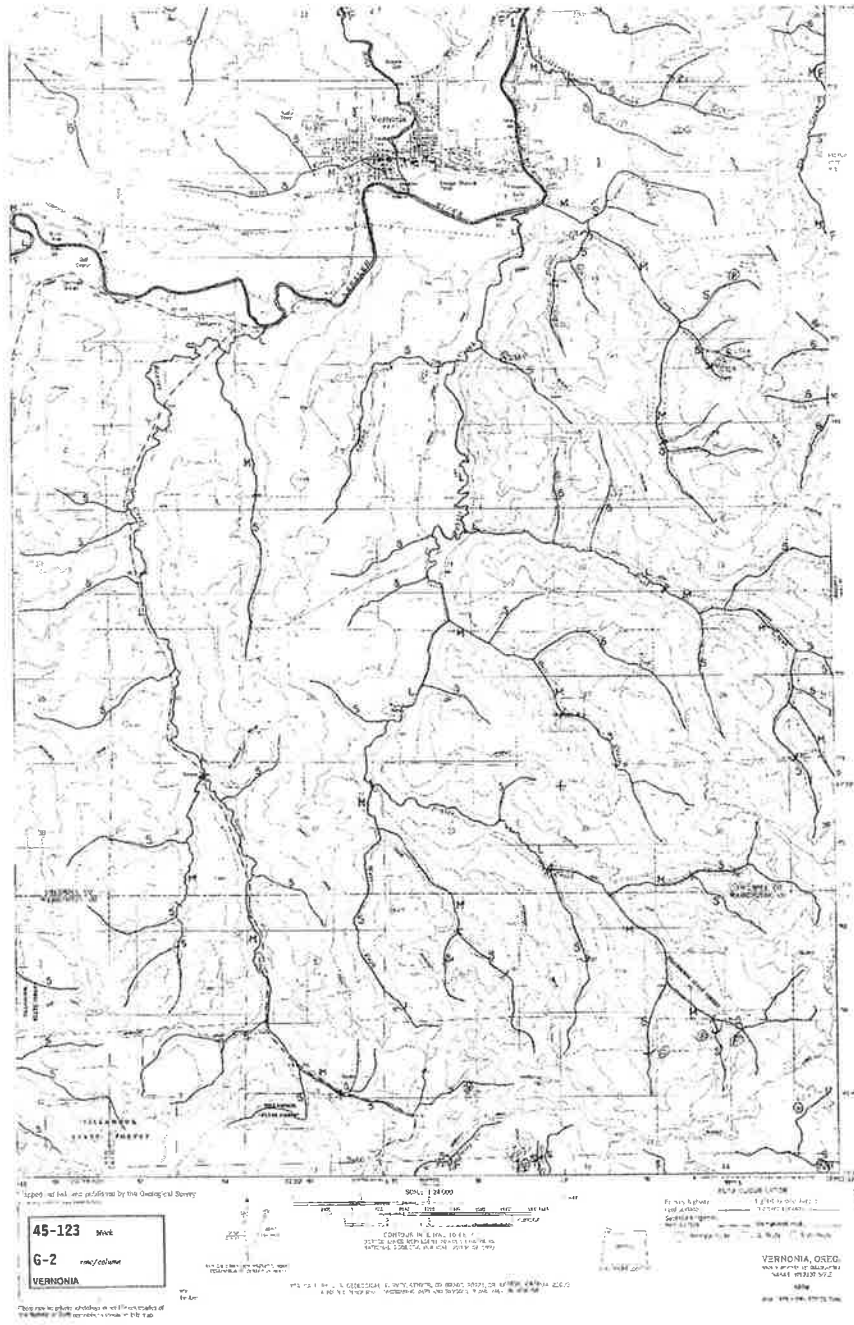
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 OR RESTON, VIRGINIA, 20192

U.S. GEOLOGICAL SURVEY
 WATER RESOURCES DIVISION
 TRESHOLM, OREGON
 1981

**OREGON DEPARTMENT OF FORESTRY
 STREAM CLASSIFICATION MAPS
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NOTE: This map is a reproduction of the original map. It is not a substitute for the original map. The original map is available for purchase from the Oregon Department of Forestry, 1000 NE Oregon Street, Portland, Oregon 97232.

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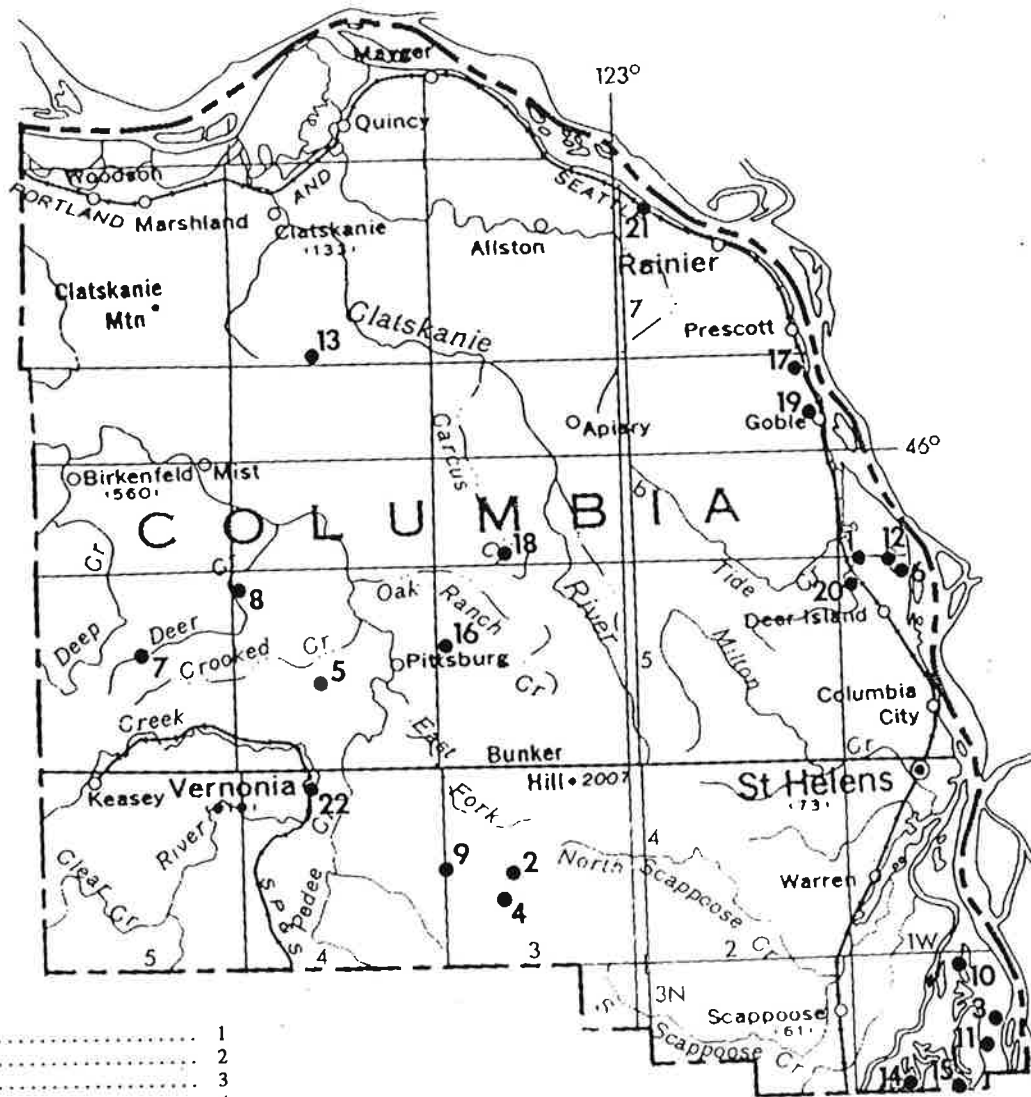


OREGON DEPARTMENT OF FORESTRY
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Lakes of Columbia County



- | | |
|----------------------------|----|
| Adams (Borlin) Lake | 1 |
| Floeter Pond | 2 |
| Guiles Lake | 3 |
| Gunners Lake (Upper) | 4 |
| Hawkins Lake | 5 |
| Horsepasture Lake | 6 |
| Kauppi Lake | 7 |
| Lindsey Lake | 8 |
| Mansfield Lake | 9 |
| McNary Lake | 10 |
| Racetrack Lake | 11 |
| Resting Lake | 12 |
| Scout Lake | 13 |
| Steelman Lake | 14 |
| Sturgeon Lake | 15 |
| Titus Pond | 16 |
| Trojan Lake | 17 |
| Unnamed fishponds | 18 |
| Unnamed lakes | 19 |
| Unnamed lakes | 20 |
| Unnamed lakes | 21 |
| Vernonia Millpond | 22 |



Locations and identification numbers of lakes in Columbia County