Oregon
Theodore R. Kulongoski, Governor

Department of Land Conservation and Development
635 Capitol Street, Suite 150
Salem, OR 97301-2540
(503) 373-0050
Fax (503) 378-5518
www.lcd.state.or.us

NOTICE OF ADOPTED AMENDMENT

1/5/2010

TO: Subscribers to Notice of Adopted Plan or Land Use Regulation Amendments

FROM: Plan Amendment Program Specialist

SUBJECT: City of Bandon Plan Amendment
DLCD File Number 005-09

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. Due to the size of amended material submitted, a complete copy has not been attached. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Tuesday, January 19, 2010

This amendment was submitted to DLCD for review prior to adoption with less than the required 45-day notice. Pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

*NOTE: THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAT IT WAS MAILED TO DLCD. AS A RESULT, YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.

Cc: Charlice Davis, City of Bandon
Gloria Gardiner, DLCD Urban Planning Specialist
Amanda Punton, DLCD Regional Representative
Dave Perry, DLCD Regional Representative

<paa> YA

FORM 2 DLCD Notice of Adoption

This Form 2 must be mailed to DLCD within **5-Working Days after the Final Ordinance is signed** by the public Official Designated by the jurisdiction and all other requirements of ORS 197.615 and OAR 660-018-000

☐ In person ☐ electronic ☐ mailed

DATE STAMP

DEPT OF

DEC 29 2009

LAND CONSERVATION AND DEVELOPMENT

For Office Use Only

Jurisdiction: Bandon

Local file number: **Riparian Inventory**

Date of Adoption:

Date Mailed: **12-29-09**

Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? ☒ Yes ☐ No Date: 9-03-09

☒ Comprehensive Plan Text Amendment ☐ Comprehensive Plan Map Amendment

☐ Land Use Regulation Amendment ☐ Zoning Map Amendment

☐ New Land Use Regulation ☐ Other:

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

Comprehensive Plan amendment Riparian Corridor Inventory
New Land Use Regulation BMC 17.103 Riparian Corridor Protection

Does the Adoption differ from proposal? Please select one

Only the Riparian Inventory and Assessment was adopted by the City Council. The Municipal Code changes is on the City Council Agenda at the next regular meeting of the Council, January 4, 2009

Plan Map Changed from: N/A to: N/A

Zone Map Changed from: N/A to: N/A

Location: **within the City limits** Acres Involved: N/A

Specify Density: Previous: N/A New: N/A

Applicable statewide planning goals:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
☒	☒	☐	☐	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☐	☐

Was an Exception Adopted? ☐ YES ☐ NO

Did DLCD receive a Notice of Proposed Amendment...

45-days prior to first evidentiary hearing? ☒ Yes ☐ No

If no, do the statewide planning goals apply? ☐ Yes ☐ No

If no, did Emergency Circumstances require immediate adoption? ☐ Yes ☒ No

DLCD File No. 005-09 (17815) [15926]

DLCD file No. _____

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

DLCD, OFW, USFW, DSL,

Local Contact: **Charli Davis** Phone: **(541) 347-2437** Extension: **230**

Address: **PO Box 67** Fax Number: **541-347-1415**

City: **Bandon OR** Zip: **97411** E-mail Address: **cdavis06@ci.bandon.or.us**

ADOPTION SUBMITTAL REQUIREMENTS

This Form 2 must be received by DLCD no later than 5 days after the ordinance has been signed by the public official designated by the jurisdiction to sign the approved ordinance(s)
per ORS 197.615 and OAR Chapter 660, Division 18

1. This Form 2 must be submitted by local jurisdictions only (not by applicant).
2. When submitting, please print this **Form 2** on light **green paper if available.**
3. Send this Form 2 and **One (1) Complete Paper Copy and One (1) Electronic Digital CD** (documents and maps) of the Adopted Amendment to the address in number 6:
4. **Electronic Submittals: Form 2 – Notice of Adoption will not be accepted via email or any electronic or digital format at this time.**
5. The Adopted Materials must include the final decision signed by the official designated by the jurisdiction. The Final Decision must include approved signed ordinance(s), finding(s), exhibit(s), and any map(s).
6. **DLCD Notice of Adoption must be submitted in One (1) Complete Paper Copy and One (1) Electronic Digital CD via United States Postal Service, Common Carrier or Hand Carried to the DLCD Salem Office and stamped with the incoming date stamp.** (for submittal instructions, also see # 5)] MAIL the **PAPER COPY and CD** of the Adopted Amendment to:

ATTENTION: PLAN AMENDMENT SPECIALIST
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
635 CAPITOL STREET NE, SUITE 150
SALEM, OREGON 97301-2540

7. Submittal of this Notice of Adoption must include the signed ordinance(s), finding(s), exhibit(s) and any other supplementary information (see ORS 197.615).
8. Deadline to appeals to LUBA is calculated **twenty-one (21) days** from the receipt (postmark date) of adoption (see ORS 197.830 to 197.845).
9. In addition to sending the Form 2 - Notice of Adoption to DLCD, please notify persons who participated in the local hearing and requested notice of the final decision at the same time the adoption packet is mailed to DLCD (see ORS 197.615).
10. **Need More Copies?** You can now access these forms online at **http://www.lcd.state.or.us/**. You may also call the DLCD Office at (503) 373-0050; or Fax your request to: (503) 378-5518.

ORDINANCE NO. 1573

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF BANDON AMENDING THE COMPREHENSIVE PLAN, TO INCLUDE THE BANDON LOCAL SIGNIFICANT RIPARIAN INVENTORY AND ASSESSMENT, AND AMENDING POLICIES IN THE NATURAL RESOURCES SECTION OF THE COMPREHENSIVE PLAN.

WHEREAS, the City of Bandon recognized that riparian areas serve several important functions, including the enhancement of water quality, flood management, thermal regulation, wildlife habitat, open space, recreation opportunities and aesthetic values; and

WHEREAS, riparian corridors benefit streams and neighboring landowners by slowing the flow of flood waters and controlling erosion and sediment; and

WHEREAS, the Planning Commission has properly noticed and held the required public hearings, has reviewed the proposed amendments, and has recommended approval to the City Council; and

WHEREAS, the City Council has determined that the proposed amendments are in the best interest of the City of Bandon, and are in compliance with state and local requirements.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Council of the City of Bandon that the Findings of Fact attached hereto as "Exhibit A" are hereby adopted; and

BE IT FURTHER ORDAINED that the City of Bandon Comprehensive Plan is hereby amended to include the Local Significant Riparian Inventory and Assessment, which is attached hereto as "Exhibit B," and to include the amended policies in the Natural Resources section of the Comprehensive Plan, which are attached hereto as "Exhibit C."

PASSED to a second reading this 7th day of December, 2009, on a roll call vote: 6 : 0.

ADOPTED by the City Council of the City of Bandon this 7th day of December, 2009, on a roll call vote: 6 : 0.

Mary Schamehorn

Mary Schamehorn, Mayor

Attest:

Jo Anne Lepley

Jo Anne Lepley, City Recorder

Exhibit A
To Ordinance 1581
Local Significant Riparian Inventory and Assessment

FINDINGS OF FACT

AN ORDINANCE AMENDING THE COMPREHENSIVE PLAN, TO INCLUDE THE BANDON LOCAL SIGNIFICANT RIPARIAN INVENTORY AND ASSESSMENT, AND AMENDING THE POLICIES IN THE NATURAL RESOURCES SECTION OF THE COMPREHENSIVE PLAN.

I. ACTION:

City Council adoption of Ordinance 1573, amending the Bandon Comprehensive Plan to include the Local Significant Riparian Inventory and Assessment.

The goal of this Riparian Corridor Inventory is to address the requirements of Statewide Planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces), and Oregon Administrative Rule (OAR) Section 660, Division 23. The objective of Goal 5 is to "protect natural resources and conserve scenic, historic and open space resources for present and future generations."

II. AUTHORITY:

The amendment procedures established in the Bandon Municipal Code (Section 17.116.010) authorize the Planning Commission to initiate amendments to the Code and Comprehensive Plan. Section 17.116.010 authorizes the City Council to enact an ordinance which adopts those amendments if the Council concurs with the recommendation.

III. PROPOSAL

The proposed amendment will adopt the Local Significant Riparian Inventory and Assessment and related policies, as additions to the Bandon Comprehensive Plan.

IV. BACKGROUND

A Riparian Corridor Inventory was prepared by Pacific Habitat Services, Inc., in 2003. Several riparian corridors associated with wetland areas were assessed as well as those bordering flowing streams. In 2008 the City Manager/Community Development Director, City Planning Staff and the Bandon Planning Commission visited riparian areas along streams to gather additional information on site aesthetics and potential for restoration. Photographs were taken to support the visual assessments made by the inventory team. In 2003 and 2008 riparian corridors were inventoried as a series of "reaches", or segments, in order to provide more detailed analysis of the functions important to riparian corridors.

Discussions on a Bandon Municipal Code amendment to protect riparian began at the August 28, 2008 meeting of the Planning Commission. Proper notice was posted to the Department of Land Conservation and Development on November 21, 2008 and a Measure 56 notice was sent to property owners within the city limits. A hearing was scheduled for the January 22, 2008 meeting of the Planning Commission. The

hearing was continued to March 26, 2009 due to additional work required by the Department of Land Conservation and Development. At the March 26 meeting, the Commission tabled the subject until May 28, 2009.

The Department of Land Conservation and Development was noticed of a new hearing on a revised Code amendment and amendments to the Comprehensive Plan on September 4, 2009. On October 1, 2009 an additional Measure 56 notice was sent to property owners who might be affected by the proposed amendments. This additional notice was necessary because staff was also proposing a riparian inventory, required prior to adoption of a protection chapter in the Bandon Municipal Code.

On October 22, 2009, the Planning Commission made a recommendation to the City Council to adopt the amendments to include the Local Significant Riparian Inventory and Assessment in the Comprehensive Plan, amend the Natural Resources policy section of the Comprehensive Plan and to amend the Bandon Municipal Code to include Chapter 17.103, Riparian Corridor Protection.

The City used the Functional Analysis provided by Pacific Habitat. The analysis criteria were the Water Quality, the degree of Flood Management, the presence of Aquatic Habitat, and the quality of Wildlife Habitat. In 2008 the City Manager/Community Development Director, City Planning Staff and the Bandon Planning Commission visited riparian areas along streams to gather additional information on site aesthetics and potential for restoration. The local riparian areas identified by the inventory team were added to the Pacific Habitat inventory and through the combined methods, created a riparian inventory which was specific to the City of Bandon.

Photographs were taken to support the visual assessments made by the inventory team. In the 2003 and 2008 inventory riparian corridors were inventoried as a series of "reaches", or segments, in order to provide more detailed analysis of the functions important to riparian corridors.

The principle riparian areas of concern to the City of Bandon are along flowing streams that have high or moderate functional value and/or have high aesthetic and restoration potential value.

The revisions to the riparian policies in the Comprehensive Plan and the regulations in the Bandon Municipal Code govern the development of land and use of land within the Bandon City limits. The revised riparian inventory is consistent with the general purposes of Goal 5 and not contrary to public interest.

V. CONCLUSIONARY FINDINGS

BANDON MUNICIPAL CODE

Chapter 17.116

ZONE CHANGES AND AMENDMENTS

17.116.010 Authorization to initiate amendments.

An amendment to the text or the zoning map of this title or the comprehensive plan may be initiated by the city council, by the planning commission, or by a property owner or his or her authorized agent. The planning commission shall hold a hearing and recommend to the city council to approve, approve with conditions, or deny the proposed amendment. The city council may hold a public hearing (public hearings shall occur in accordance with Section 17.120.080). Amendments shall be adopted by ordinance.

Finding: The local significant riparian inventory and assessment was initiated by the City as a basis to provide protection for local significant riparian areas.

Finding: The Planning Commission held hearings on January 22, 2009 and October 22, 2209. At the October meeting the Planning Commission recommended that the City Council adopt the assessment and the policies in the Natural Resources section of the Comprehensive Plan.

COMPREHENSIVE PLAN

COMMITTEE FOR CITIZEN INVOLVEMENT

Citizen Influence, Implementation Measure 2

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

FINDING: The Committee for Citizen Involvement conducted a forum on September 26, 2009 for the purpose of informing the public of the proposed Comprehensive Plan amendments. A roundtable discussion regarding the proposed amendments was held on October 8, 2009.

FINDING: The Planning Commission was provided with minutes of the of the Committee for Citizen Involvement forums and took the information into account during the hearing process

Two-way Communication, Applicable Implementation Measures:

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

FINDING: A Measure 56 notice was sent to property owners who might be affected by the proposed amendments, the hearing was given notice through the Western World newspaper, and applicable documentation was placed in the library.

FINDING: Notice of the hearing was posted in City Hall and the City Public Library.

FINDING: Hearing information and documentation was published on the City's website.

Technical Information, Implementation Measure 1:

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

FINDING: Documentation regarding the amendments was posted on the City Website in August, 2009.

Open Space, Policy 3, Implementation Measure 1

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

FINDING: The Parks Master Plan was utilized as a criterion for the designation of significant riparian corridors.

OREGON STATEWIDE PLANNING GOAL 5

To protect natural resources and conserve scenic and historic areas and open spaces.

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability. The following resources shall be inventoried:

a. Riparian corridors, including water and riparian areas and fish habitat;

FINDING: The proposed Local Significant Riparian Inventory and Assessment was created using identification data which was found compliant by the Department of Land Conservation and Development.

FINDING: The methodology used for the determination of significant riparian corridors was a combination of the function of the standard methodology outlined in the Urban Riparian Inventory and Assessment Guide. The standard assessment criteria used to determine the quality of a riparian area are water quality; flood management; thermal regulation; and wildlife habitat. The local riparian quality criteria is based on Aesthetic Value which includes proximity of view sheds, designation in the Parks Master Plan, and the width of riparian borders and Potential for Restoration which includes the ownership, development potential and zoning.

FINDINGS: The method combining functional and local criteria for the purpose of providing a significant riparian inventory is consistent with the requirements of Oregon Administrative Rule (OAR) Section 660, Division 23:

(4) Determine the significance of resource sites: For sites where information is adequate, local governments shall determine whether the site is significant. This determination shall be adequate if based on the criteria in subsections (a) through (c) of this section, unless challenged by the department, objectors, or the commission based upon contradictory information. The determination of significance shall be based on:

(a) The quality, quantity, and location information;

(b) Supplemental or superseding significance criteria set out in OAR 660-023-0090 through 660-023-0230; and

(c) Any additional criteria adopted by the local government, provided these criteria do not conflict with the requirements of OAR 660-023-0090 through 660-023-0230.

FINDINGS: The proposed Local Significant Riparian Inventory and Assessment and protection policies of the Comprehensive Plan provides a clear and objective method of determining riparian areas to be protected under this title.

CONCLUSION: The proposed Local Significant Riparian Inventory and Assessment and accompanying policy amendments to the Comprehensive Plan are consistent with the Bandon Municipal Code, Comprehensive Plan, Oregon Statewide Planning Goal 5, and Section 660, Division 23.

Charli Davis, City Planner

ORDINANCE NO. 1573

EXHIBIT B

LOCAL SIGNIFICANT RIPARIAN INVENTORY AND ASSESSMENT

INTRODUCTION

The goal of this Riparian Corridor Inventory is to address the requirements of Statewide Planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces), and Oregon Administrative Rule (OAR) Section 660, Division 23. The objective of Goal 5 is to "protect natural resources and conserve scenic, historic and open space resources for present and future generations."

The Oregon Administrative Rules require communities to protect riparian corridors as a Goal 5 resource. A riparian area is classified as the area adjacent to a wetland or stream consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem. Riparian areas serve several important functions, including the enhancement of water quality, flood management, thermal regulation, wildlife habitat, open space, recreation opportunities and aesthetic values.

Healthy, well-managed riparian corridors have a variety of tree species and understory vegetation growing along stream banks and other water resources. They also have a layer of dead leaves, which contribute to a thick humus layer in the soil. This wooded border benefits the stream and neighboring landowners by controlling erosion and sediment in several ways. During a flood the streamside trees and brushy vegetation slow the water before it passes over the flood plain. This reduces erosion on bottom land fields.

A Riparian Corridor Inventory was prepared by Pacific Habitat Services, Inc., in 2003. Several riparian corridors associated with wetland areas were assessed as well as those bordering flowing streams. In 2008 the City Manager/Community Development Director, City Planning Staff and the Bandon Planning Commission visited riparian areas along streams to gather additional information on site aesthetics and potential for restoration. Photographs were taken to support the visual assessments made by the inventory team. In the 2003 and 2008 inventory riparian corridors were inventoried as a series of "reaches", or segments, in order to provide more detailed analysis of the functions important to riparian corridors.

The principle riparian areas of concern to the City of Bandon are along flowing streams that have high or moderate functional value and/or have high aesthetic and restoration potential value. In developing a matrix for identifying significant riparian corridors the city used data on riparian function included in the Pacific Habitat Riparian Inventory. To incorporate aesthetic value and restoration potential into the assessment the city used information from the Parks Master Plan, Transportation Plan and Scenic View Inventory designations, information on the proximity to other important natural areas, and the aesthetic value and potential for restoration collected by the City of Bandon.

DEFINITIONS

Reach

A linear measurement of a section of a stream or other water resource. The reach may be measured between geographic, biologic or manmade landmarks.

Riparian Area

The area adjacent to a river, lake, or stream, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem.

Riparian Assessment

Determining the relative quality of a riparian area by assessing its functions. (PHS, 1998)

An evaluation of the ability of the riparian area to provide water quality, flood management, thermal regulation, and wildlife habitat functions. The methodology generally used to determine the relative quality of riparian corridors for purposes of an inventory is The Urban Riparian Inventory and Assessment Guide.

Riparian Corridor

A Goal 5 resource that includes the water areas, fish habitat, adjacent riparian areas, and wetlands within the riparian area boundary.

Riparian Function

A characteristic action or role provided by riparian corridors, such as water quality; flood management; thermal regulation; and wildlife habitat. (PHS, 1998)

Significant Riparian Corridor

Flowing streams and their riparian areas identified in the Bandon Local Riparian Corridor Inventory and subject to the protection measures described in Chapter 17.90 of the Bandon Municipal Code.

Water Resource

An intermittent or perennial stream, pond, river, lake and including their adjacent wetlands. (PHS, 1998).

Water Quality

Vegetated riparian areas can enhance water quality in many ways. Undisturbed, densely vegetated riparian corridors trap sediments, inhibit erosion and filter runoff originating from impervious surfaces, lawns, golf courses, etc. Vegetated riparian areas also provide shade to streams, helping to maintain cool water in the summer months.

Well-managed riparian corridors are accompanied by a general lack of erosion. The root systems of trees growing near the water's edge are vital to controlling stream bank erosion. A wide corridor of trees will ensure that banks are protected even when unusual flooding removes some streamside trees.

The ability of a riparian corridor to resist erosion is related to slope, soil type, type of vegetation, vegetation cover, landscape position, and degree of human disturbance.

Flood Management

Riparian corridors and associated wetlands and floodplains provide a valuable flood management function by reducing the force and volume of floodwaters. Floodwaters flowing into a vegetated riparian corridor can be slowed or temporarily stored, reducing peak flows and flooding downstream. Woody vegetation, in particular, resists floodwaters and reduces its velocity. Topographic features, such as swales and depressions, can enhance a riparian corridor's ability to manage flood flows. Reducing the velocity of floodwaters in the riparian corridor allows infiltration of water into the soil. Water entering the soil is slowly released into the main channel, delaying its movement downstream.

Aquatic Habitat

Water temperature affects the ability of a stream to support viable populations of certain aquatic organisms. Riparian shade, especially forest canopy, moderates temperature within and adjacent to a water resource. Although stream temperatures are important throughout the year, summer temperature is generally more critical for fish species such as salmonids. High water temperatures and sunlight are factors that can promote algal blooms, reducing dissolved oxygen required by anadromous fish and other cold-water dependent organisms.

The trees present on stable banks shade the stream to moderate water temperatures. The leaf litter produced is a vital source of soil nutrients and a food supply for many aquatic insects. Streamside vegetation also attracts terrestrial insects which fall to the water and provide food for fish. The submerged root systems of these trees also act as excellent habitat for fish, frogs, beaver, muskrat, otter, and a variety of other animals. Fish and wildlife habitats are improved by forested stream corridors.

Wildlife Habitat

Some animal species use riparian woodlands through all stages of their lives. Most animal species use the riparian corridor for part of their habitat needs. The diversity of plant species, along with a source of water, make riparian woodlands attractive to wildlife. Nuts, fruits, roots, and grasses are among the beneficial products available to wildlife in the riparian woodlands. Trees, grasses, and other plants

provide shelter and cover for various species of wildlife. Various sizes of trees serve as specific habitats. After trees have died, their decaying logs provide shelter for snakes, rodents, and other ground-dwelling species. Trees provide shade over streams which affect the amount of dissolved oxygen the water can hold. Shaded stream areas may be as much as 10 degrees cooler than areas exposed to direct sunlight.

The highest quality wildlife habitat in urban areas has a variety of plant species and layers, a perennial water source, and some degree of protection or buffering from disturbance.

Riparian corridors are particularly important migration areas between upland and aquatic systems for a wide variety of species. It has been reported that the majority of Oregon's major wildlife species, including amphibians and reptiles, use wetlands or riparian corridors during some portion of their life cycle.

The main objective of riparian wildlife management is to provide for overall biodiversity within riparian zones, create and maintain viable habitat areas, and cool water as it flows downstream. Wildlife maintenance within the riparian zone is accomplished either by 1) landscape planning or 2) the establishment of uniform buffers that meet all history needs of the species.

Riparian corridors in the study area varied depending on the degree of human caused disturbance resulting from development and clearing. Many of the riparian corridors were dominated by the invasive species, gorse (*ulex europaeus*). While this species is woody and can reach heights up to 8 feet or so, it provides little habitat value due to its impenetrability.[1]

AESTHETIC VALUE

Proximity To Viewsheds

The Comprehensive Plan designates major viewsheds within the Bandon City Limits. Chapter 12: Scenic Resources was adopted by the City in October 2003. Many of these viewsheds are related to the views of the Pacific Ocean, one of the most spectacular seacoasts in the world. The Coquille River Estuary view points are also destinations linked by the park trail system.

Parks Master Plan

The Reach is in proximity to, or in an area designated for development in the Bandon Trail system in the Parks Master Plan. The Parks Master Plan trail system provides community recreation and connectivity between parks and other recreational opportunities or points of interest.

Riparian Borders

The resource is bordered by a minimum of thirty (30) feet of vegetation over thirty (30) percent of the reach.

[1] Bandon Riparian Inventory, Pacific Habitat Services, Inc.pg. 9

POTENTIAL FOR RESTORATION

Ownership

The Reach is in single ownership.

Development

The Reach has potential for rezoning and/or clustered development

Zoning

The Reach is zoned Natural Resources, is designated as a Natural Resource Area in the Parks Master Plan or is associated with a Locally Significant Wetland.

Locally Significant Wetlands are identified on the Locally Significant Wetland Map adopted by the City Council in Ordinance 1538, on February 22, 2005.

SIGNIFICANT ASSESSMENT METHODO LOGY

The Riparian significance assessment is completed by considering the rating and values assigned to each reach for function, aesthetic value and potential for restoration.

Function

The ranking for each of the four functional categories, water quality, flood management, thermal regulation, and wildlife habitat, is taken from the 2003 PHS assessment. The function of each reach was assigned a rating of high (H), medium (M), or low (L).

Aesthetic Value

Aesthetic value was assigned based on recognition of aesthetic value in each of three documents, the Parks Master Plan (View sheds and recreational potential) findings of the 2008 riparian assessment/inventory, and A score of 0 or one to each of the documents, with total ranging from 1 – 3. 1 = Low, 2 = Medium, or 3 = High.

Potential for Restoration

Potential for restoration was assigned based on consideration of zoning, ownership and parcel size. It was assumed that reaches in single ownership, zoned "natural resource" or in public or quasi public ownership have relatively high potential for restoration. A score of 0 or 1 is ascribed to each reach for each of these three factors.

Significance Determination

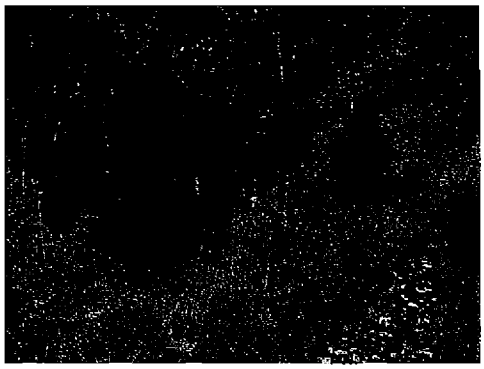
A determination of significance is made for each reach based on the following matrix: a combined score of function, aesthetic value, and Potential for Restoration. A significant corridor will have a functional score of three Medium or two High in a reach, or an aesthetic value of Medium or High, or a Potential for Restoration of Medium or High.

LOCAL INVENTORY ASSESSMENT TABLE

This table is a quick reference of the results of the Pacific Habitat Inventory and the Local Riparian Inventory scores by reach.

Stream Reach	Functional Value				Aesthetic Value	Potential for Restoration	Significant Y/N
	WQ	FL	TR or AH	WH			
Spring Creek Reach 1	H	M	H	H	M	M	Y
Spring Creek Reach 2	H	M	H	H	M	M	Y
Gross Creek Reach 1	L	L	L	L	M	M	Y
Gross Creek Reach 2	M	M	H	H	H	L	Y
Gross Creek Reach 3	M	M	H	H	M	L	Y
Gross Creek Reach 4	M	M	H	H	L	L	Y
Gross Creek Reach 5	M	M	L	M	M	M	Y
Gross Creek Reach 6	H	L	H	M	L	L	Y
Tupper Creek	H	M	H	H	H	L	Y
Johnson Creek Reach 1	H	L	M	H	M	H	Y
Johnson Creek Reach 2	H	L	M	H	H	L	Y
Ferry Creek Reach 1	M	L	M	L	L	M	Y
Ferry Creek Reach 2	M	L	M	L	L	M	Y
Ferry Creek Reach 3	H	H	H	H	M	L	Y
Ferry Creek Reach 4	M	M	H	H	M	L	Y
Ferry Creek Reach 5	M	M	H	H	M	L	Y

SPRING CREEK



Spring Creek enters the City's jurisdiction at Ohio and Fifth Street NE and flows year-round in a northwesterly direction where it culverts under Highway 101 and exits at Cody Avenue in Northwest Bandon and on to the Coquille River. Areas of Spring Creek are thickly grown with riparian vegetation. Most of the property abutting the creek is privately owned and many areas of the creek have been highly channelized and landscaped as yards. Areas which have been left in a natural state are well established with heavy canopy and undergrowth. These areas are especially important in sustaining migrating and local wildlife.

REACH 1

This reach is approximately 1,000 feet in length from Highway 101 to the Coquille River. The creek flows through a 36 inch culvert under Highway 101.

The Pacific Habitat inventory states "*Drainage with well defined outer slopes of riparian (old dunes), partially developed. No access, but visible from Highway 101. Spring Creek has scattered forested riparian corridor, with dense stands of willow occasionally. Most of riparian corridor was not visible from road. Creek drains to Coquille River with culvert under Riverside Drive.*"

The Pacific Habitat wetland inventory states that the culvert has a ten inch outfall and may not be passable by fish most of the year[2].

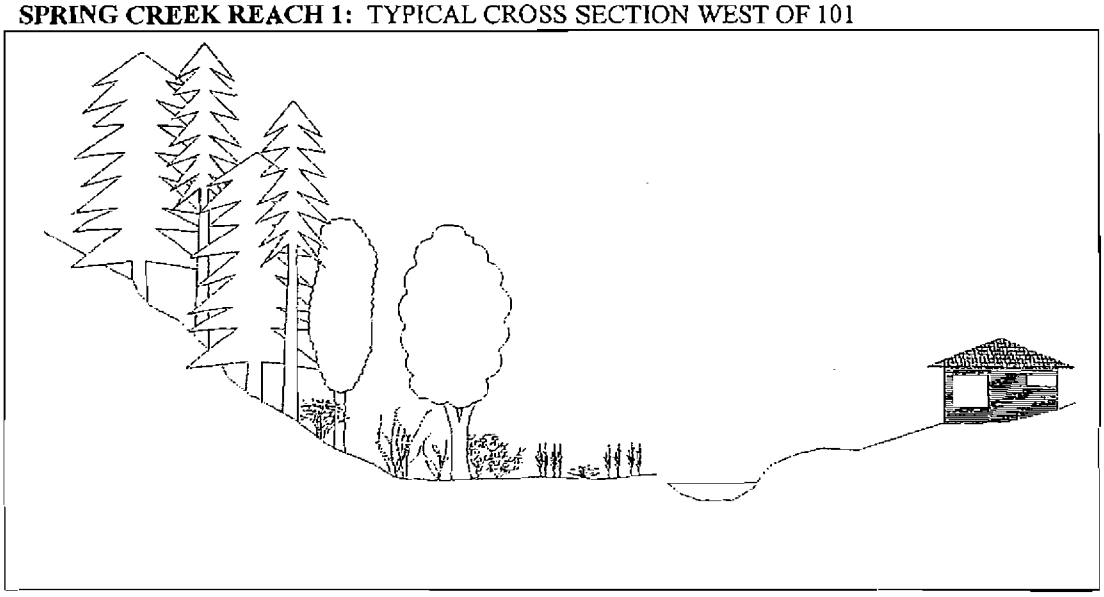
This reach has been severely degraded and is presently under investigation by the US Army Corps of Engineers.

RIPARIAN STUDY RESULTS SPRING CREEK REACH 1

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:	**Water Quality**	**High**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**16 – 18 feet**				
Riparian Width:	**120 feet**				
Aesthetic Quality	**Proximity to Viewsheds**	**1**	**TOTAL**		**SCORE**
	Parks Master Plan	**0**			
	Riparian Borders	**1**	**2**	**=**	**Medium**
Restoration Potential	**Ownership**	**1**			
	Development	**0**			
	Zoning	**1**	**2**	**=**	**Medium**

[2] Wetland Characterization Sheet SIM-4, Comments

SPRING CREEK REACH 1: TYPICAL CROSS SECTION WEST OF 101

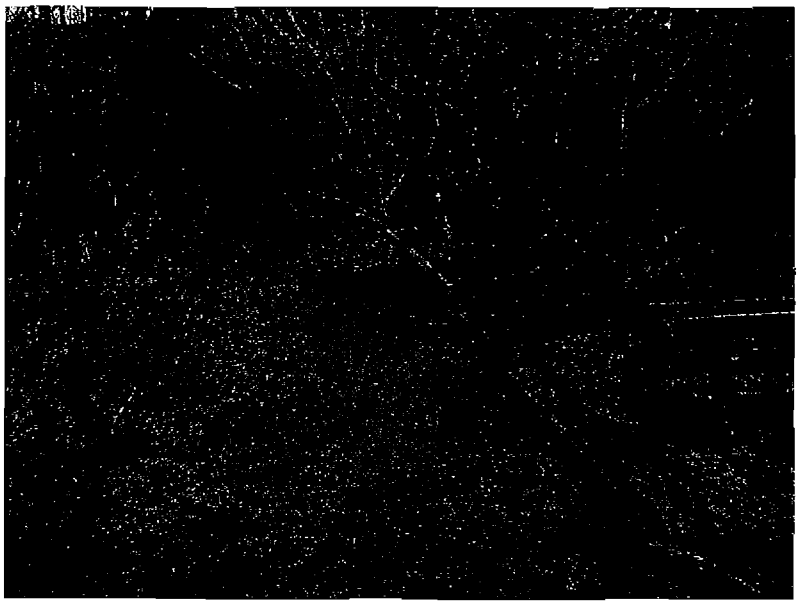


SPRING CREEK REACH 2 □□ □□

Reach 2 of Spring Creek is approximately 1,200 feet in length, from Riverside Drive to the city limits at Ohio Avenue. The recent site visit confirmed the existence of thick natural riparian vegetation along most of the length of the reach. An area near 11th Street has been landscaped and channeled (see photo below).

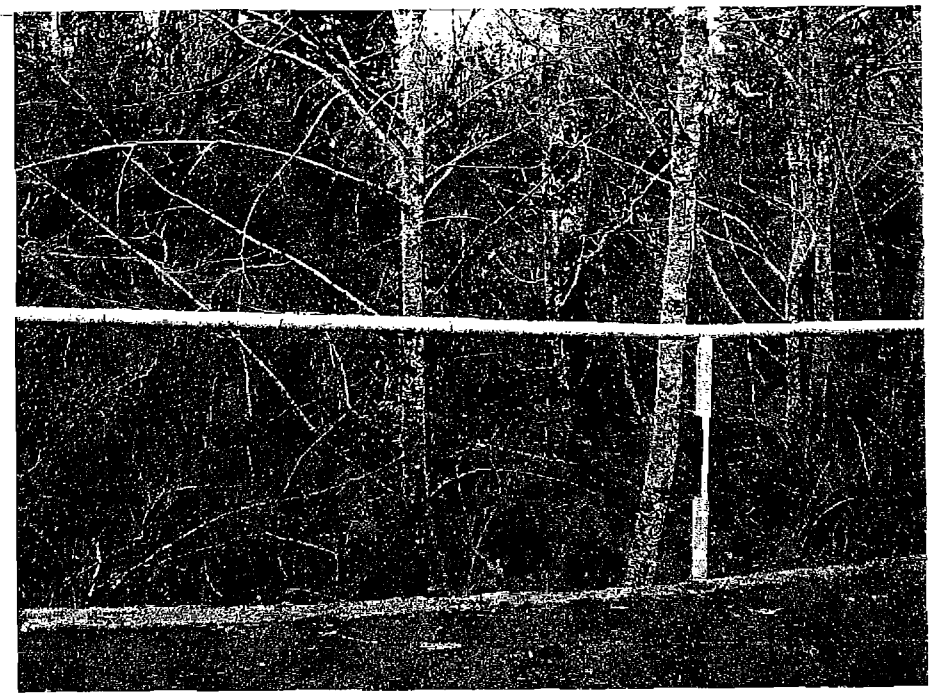
RIPARIAN STUDY RESULTS SPRING CREEK REACH 2

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:	**Water Quality**	**High**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**16 – 18 feet**				
Riparian Width:	**120 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**1**			
	Parks Master Plan	**1**	**2**	**=**	**Medium**
	Riparian Borders	**0**			
Restoration Potential					
	Ownership	**0**			
	Development	**1**	**2**	**=**	**Medium**
	Zoning	**1**			



SPRING CREEK REACH 2: NORTH AND 6TH STREET LOOKING EAST. THE STREAM IN THIS AREA HAS BEEN ARTIFICIALLY CHANNELED AND LANDSCAPED.

SPRING CREEK REACH 2: NORTH AND 6TH STREET LOOKING SOUTHEAST. NOTE NARROW CHANNELING OF CREEK



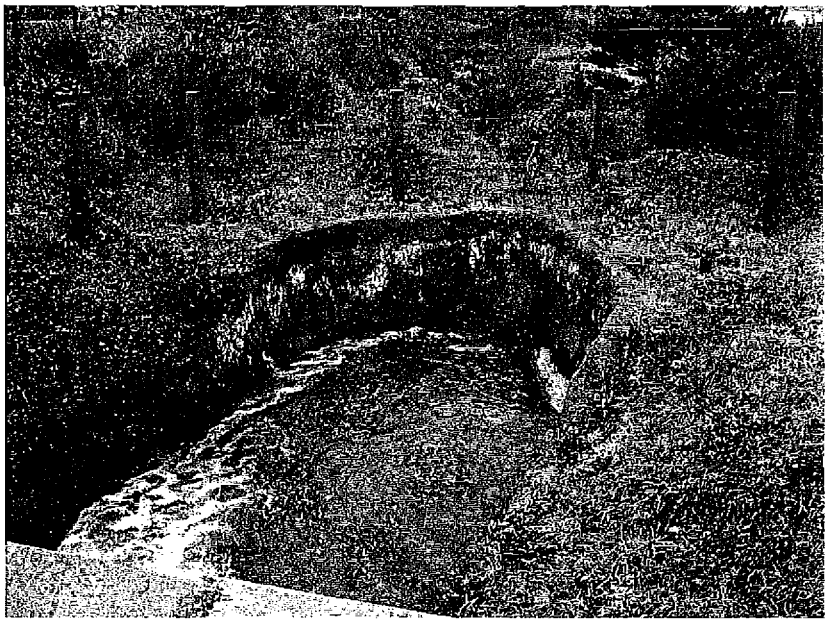
SPRING CREEK REACH 2: 10TH STREET AND OHIO. STREAM CULVERTED UNDER STREET. RIPARIAN CORRIDOR APPROXIMATELY 100 FEET ON CENTER OF STREAM.

The photo of the riparian area at 10th and Ohio shows a well established riparian corridor with thick undergrowth of willow, blackberry and broadleaf fern. Alder trees and other native vegetation form a canopy approximately fifty feet in height.

REACH 1

Reach 1 of Gross Creek is presently culverted from Edison to the Coquille River. The culvert runs under private property.

No typical cross section was prepared for this area.



GROSS CREEK REACH 1 AT EDISON LOOKING NORTH WHERE IT CULVERTS UNDERGROUND TO THE RIVER.

Riparian Study Results for Gross Creek Reach 1

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**	
Riparian Function:	**Water Quality**	**Low**
	Flood Management	**Low**
	Thermal Regulation	**Low**
	Wildlife Habitat	**Low**
Stream Width:	**10 feet**	
Riparian Width:	**4 feet**	

Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**1**			
	Parks Master Plan	**1**	**2**	**=**	**Medium**
	Riparian Borders	**0**			
Restoration Potential					
	Ownership	**1**			
	Development	**1**	**2**	**=**	**Medium**
	Zoning	**0**			

GROSS CREEK REACH 2

Reach 2 of Gross Creek extends from the corner of Edison Avenue and Second Street approximately four hundred (400) feet where it culverts under Fourth Street.

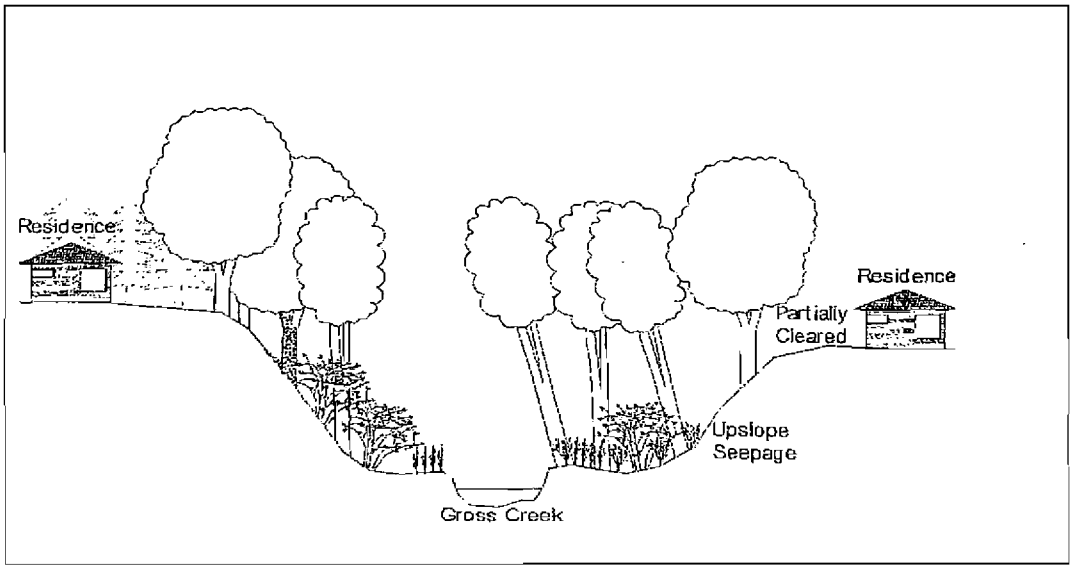
No typical cross section was prepared for this area.

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:	**Water Quality**	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**6 feet**				
Riparian Width:	**50 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**1**			
	Parks Master Plan	**1**	**3**	**=**	**High**
	Riparian Borders	**1**			
Restoration Potential	**Ownership**	**0**			
	Development	**0**	**1**	**=**	**Low**
	Zoning	**1**			

GROSS CREEK REACH 2: FROM EDISON LOOKING SOUTH. NOTE: BLUE HOUSE SEEN FROM FOURTH STREET IN PHOTO BELOW.

GROSS CREEK REACH 2: RIPARIAN CORRIDOR FROM 4TH STREET LOOKING NORTH. **NOTE:** BLUE HOUSE IN CENTER OF PHOTO, ALSO SEEN FROM EDISON

GROSS CREEK REACH 2: TYPICAL CROSS SECTION BETWEENT 4TH ST AND 8TH



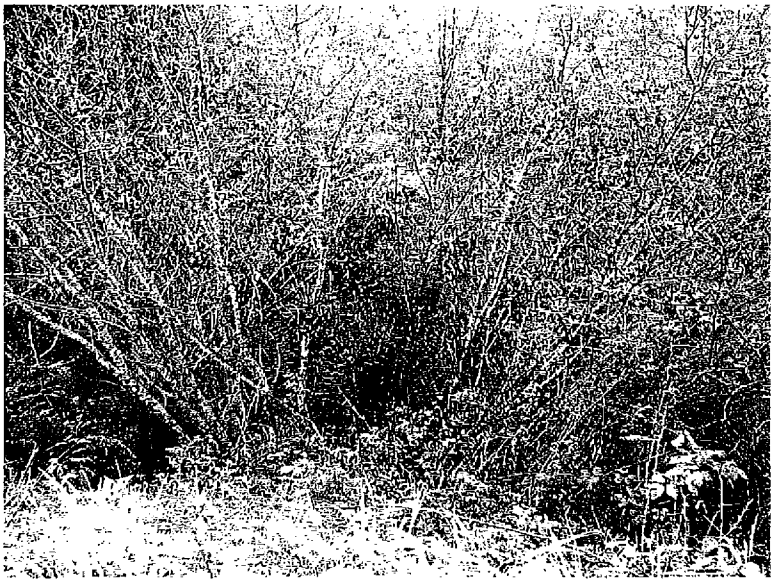
GROSS CREEK REACH 3 □□ □□□

Reach 3 extends from 9th Street approximately 300 feet south to the mid point of Gross Creek behind Ocean Crest School.

The Pacific Habitat inventory states, "*Relatively nice area except for Hedera helix [English ivy] beginning to dominate. Dominate tree species on south end is Alnus Rubra [Red alder], but there are spruce trees further north. Riparian corridor is limited to stream side banks due to enhancement to top of bank. Wetland width on either side is variable, as stream meanders across the bottom of the (ravine) channel bottom*".

RIPARIAN STUDY RESULTS GROSS CREEK REACH 3

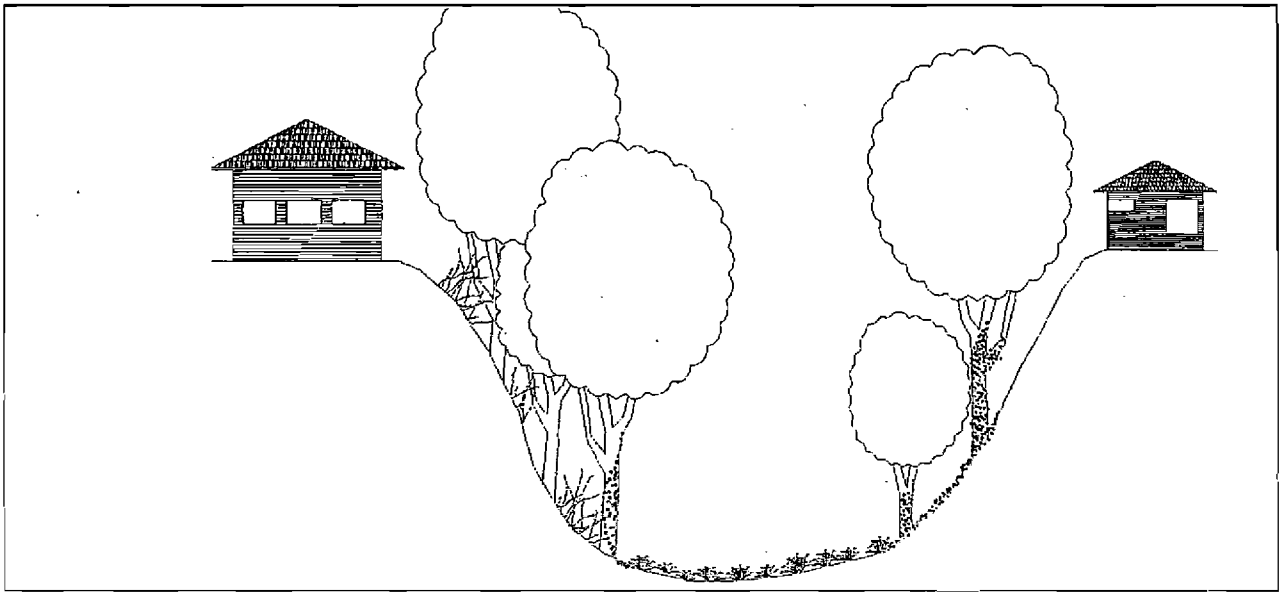
Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:					
	Water Quality	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**4 - 8 feet**				
Riparian Width:	**50 – 65 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**0**			
	Parks Master Plan	**1**	**2**	**=**	**Medium**
	Riparian Borders	**1**			
Restoration Potential					
	Ownership	**0**			
	Development	**0**	**1**	**=**	**Low**
	Zoning	**1**			



GROSS CREEK REACH 3: 8TH STREET LOOKING SOUTH

GROSS CREEK REACH 3: 9th STREET LOOKING NORTH

GROSS CREEK REACH 3: TYPICAL CROSS SECTION FROM 9TH STREET



GROSS CREEK REACH 4

Reach 4 extends from the mid point of Gross Creek behind Ocean Crest School approximately 550 feet to the point where it culverts under Eleventh Street.

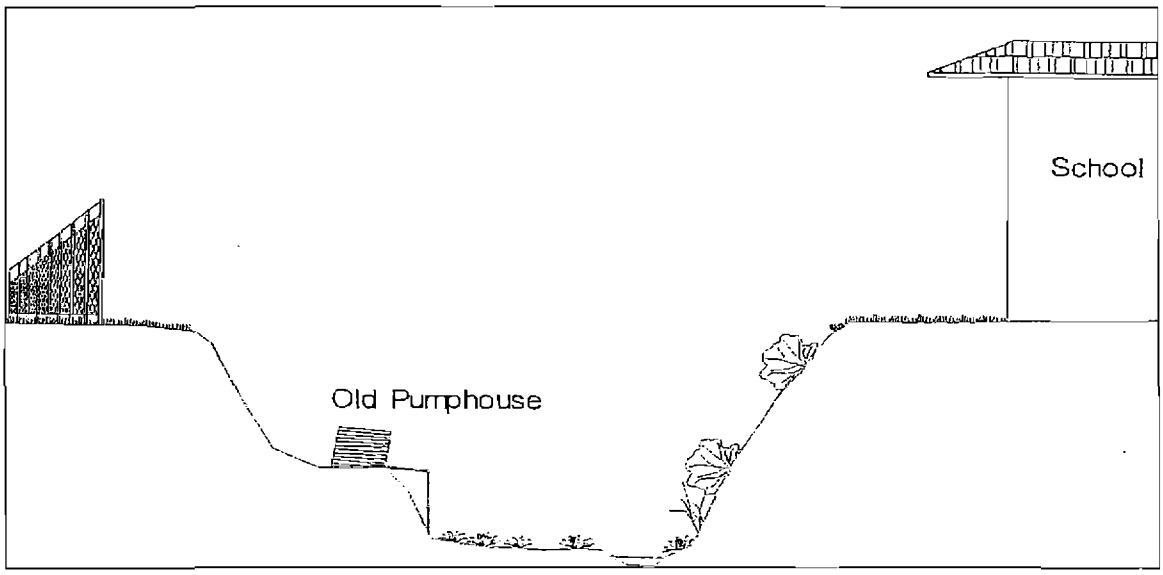
The Pacific Habitat inventory states, "*Highly disturbed reach of Gross Creek immediately west of Ocean Crest School. Portions have been recently cleared of Rubus Discolor [Himalayan Blackberry] and other woody vegetation, limited shrub growth otherwise. Widely scattered Pinus Conorta [Lodgepole pine] and Salix hookeriana [Dune willow] clumps. Fish unfriendly culvert at south end, along with pump station/piping (maybe for irrigation purposes.*"

RIPARIAN STUDY RESULTS GROSS CREEK REACH 4

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:					
	Water Quality	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**Low**			
	Wildlife Habitat	**Medium**			
Stream Width:	**3 feet**				
Riparian Width:	**50-65 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**0**			
	Parks Master Plan	**0**	**1**	**=**	**Low**
	Riparian Borders	**1**			
Restoration Potential					
	Ownership	**1**			
	Development	**0**	**0**	**=**	**Low**
	Zoning	**1**			

GROSS CREEK REACH 4: OLD PUMP HOUSE ON LEFT BANK

GROSS CREEK REACH 4: TYPICAL CROSS SECTION



GROSS CREEK REACH 5 □□ ..□

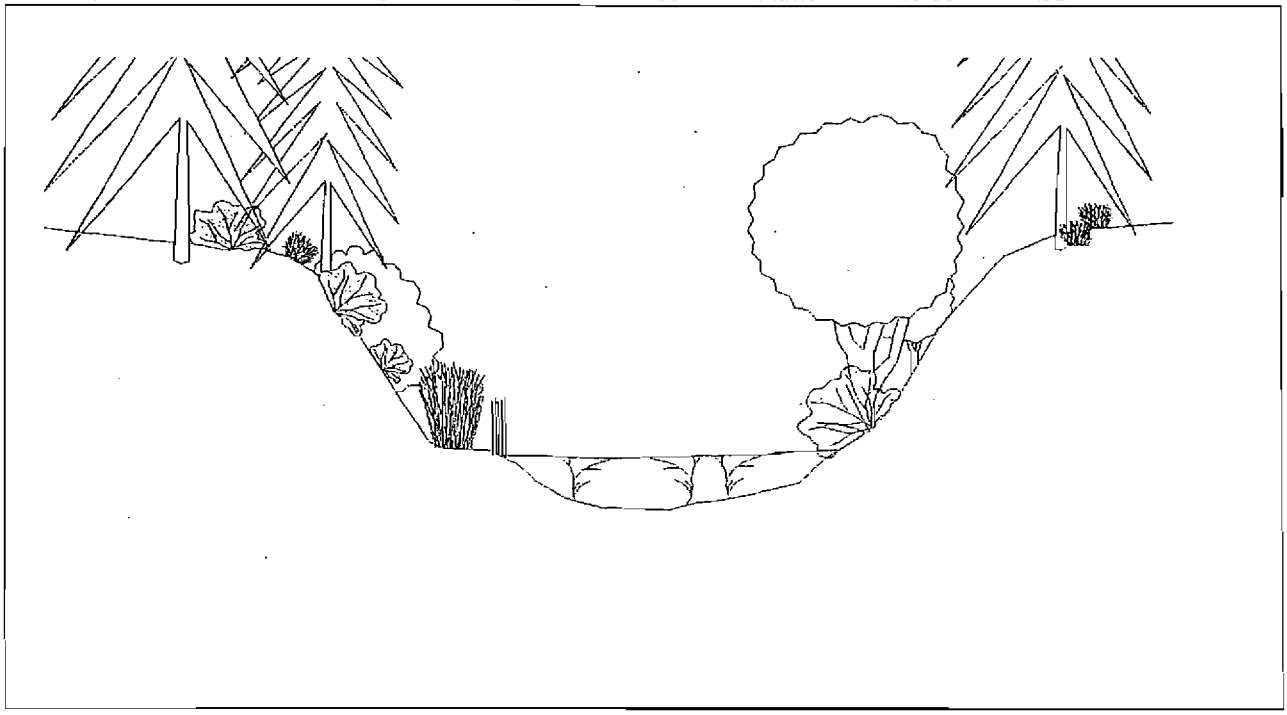
Reach 5 of Gross Creek extends approximately 1,600 feet from Eleventh Street south to the City limits. The east and west forks of Gross Creek empty into a pond south of Eleventh Street where the single stream exits the pond and runs north under Eleventh, through property owned by the Bandon School District.

A culvert under Highway 101 channels the east fork of Reach 5 until it daylights at Thirteenth Street and Allegheny, where it flows approximately 400 feet to the pond. The Bandon Teen Center and its basketball court abuts the creek on the west side.

The west fork of the Reach enters the City limits at Thirteenth Street and Douglas Avenue and flows approximately 500 feet to the pond.

The Pacific Habitat inventory states, "*Gross Creek drainage southwest of confluence, near playing field, variable development in surrounding area*".

GROSS CREEK REACH 5: TYPICAL CROSS SECTION WEST OF HIGHWAY 101 AT 11th STREET



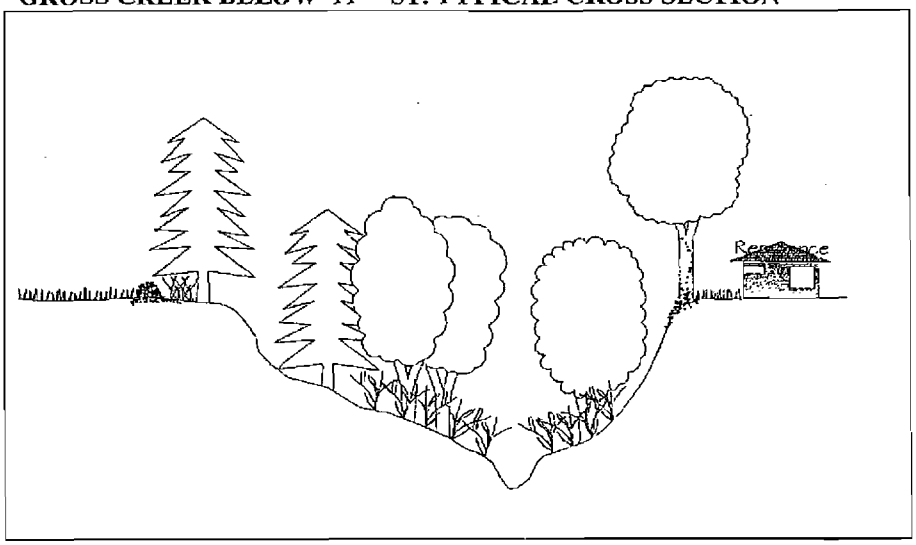
RIPARIAN STUDY RESULTS GROSS CREEK REACH 5

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:					
	Water Quality	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**Low**			
	Wildlife Habitat	**Medium**			
Stream Width:	**40 feet**				
Riparian Width:	**50 - 120 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**0**			
	Parks Master Plan	**1**	**2**	**=**	**Medium**
	Riparian Borders	**1**			
Restoration Potential					
	Ownership	**0**			
	Development	**1**	**2**	**=**	**Medium**
	Zoning	**1**			

Cross Creek Reach 5 Pond area . The Bandon Teen Center is on the east and the fence to the school baseball field on the west.

Gross Creek Reach 5 In the vicinity of 12th Street west of Highway 101. Basketball court fence visible on the west bank. This area of the creek has extensive gorse infestation. This invasive plant crowds the sedges and willow on the bank.

GROSS CREEK BELOW 11TH ST. TYPICAL CROSS SECTION



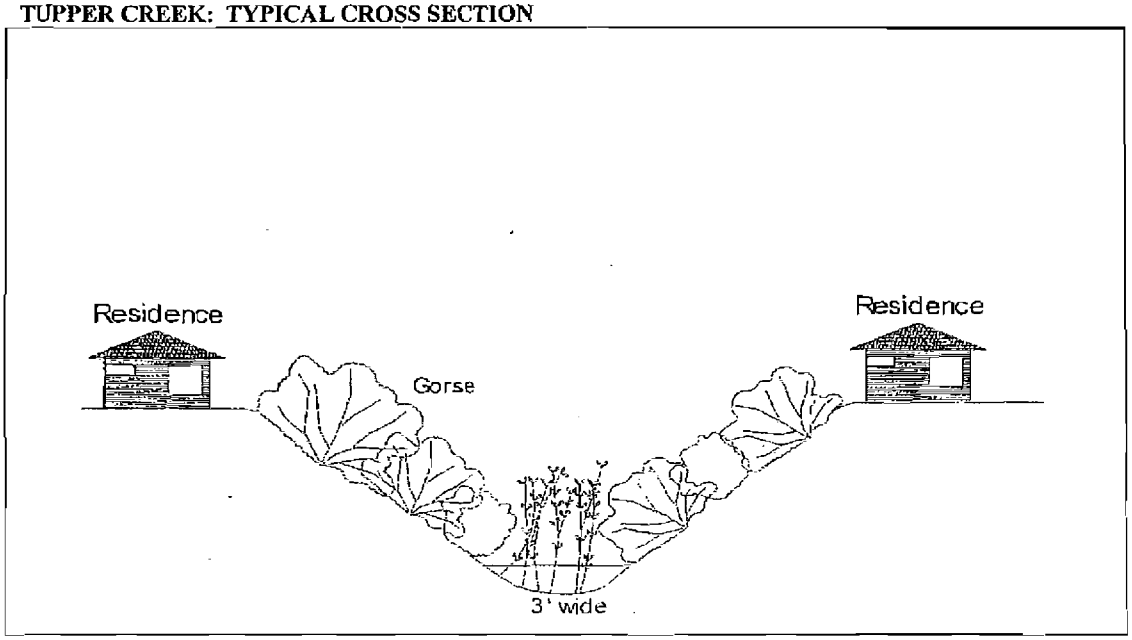
TUPPER CREEK

Tupper Creek is a small reach stream which channels water from a wetland and seasonal pond area through a culvert under Beach Loop Drive where it flows down to the beach at the Coquille Point Wildlife Refuge (Oregon Islands). It is surrounded by dense vegetation offering shelter to a variety of wildlife. This area is also part of the Beach/Bluff viewshed in the Scenic Resources Inventory.

RIPARIAN STUDY RESULTS TUPPER CREEK REACH

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:	**Water Quality**	**High**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**16 – 18 feet**				
Riparian Width:	**120 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**1**			
	Parks Master Plan	**1**	**3**	**=**	**High**
	Riparian Borders	**1**			
Restoration Potential					
	Ownership	**0**			
	Development	**0**	**1**	**=**	**Low**
	Zoning	**1**			

TUPPER CREEK: TYPICAL CROSS SECTION



TUPPER CREEK REACH 1 WEST OF BEACH LOOP DRIVE

TUPPER CREEK OUTFALL

TUPPER CREEK REACH 1 SEEN FROM THE BEACH

JOHNSON CREEK

Johnson Creek enters the City limits near Highway 101 south of Seabird Drive where it flows through the Bandon Golf Course. Most of the creek is highly channelized between the City limits and Beach Loop drive where it culverts under and empties onto the beach and meanders into the ocean.

JOHNSON CREEK REACH 1

Reacb one of Johnson Creek flows through a golf course from the City limits to Beach Loop Drive. It is highly channelized and degraded by the maintenance of the area through chemicals and mowing. Slopes are between 30% and 50%. Potential for restoration is high as the reach runs though a large property in single ownership, and is conducive to development under the City Planned Unit Development Code. Rezoning would be required, however, restoration of the creek and surrounding area would be an amenity which would be beneficial to the City and the developer.

Johnson Creek Reach 1: Looking east from Beach Loop Drive

RIPARIAN STUDY RESULTS JOHNSON CREEK REACH 1

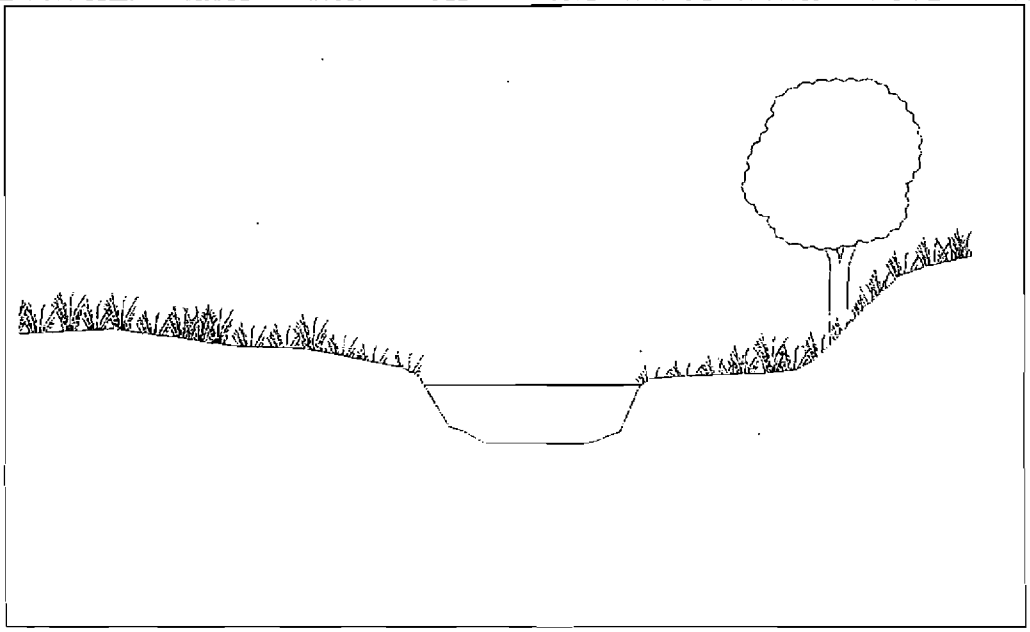
Stream Characteristics: Running stream less than 1,000 feet per second. Non-fish bearing.

Riparian Function:

	Water Quality	High		
	Flood Management	Low		
	Thermal Regulation	Meduim		
	Wildlife Habitat	High		
Stream Width:	5 – 8 feet			
Riparian Width:	50 feet (Potential)			
Aesthetic Quality			TOTAL	SCORE
	Proximity to Viewsheds	1		
	Parks Master Plan	1	2 =	Medium
	Riparian Borders	0		
Restoration Potential				
	Ownership	1		
	Development	1	3 =	High
	Zoning	1		

LOOKING EAST FROM BEACH LOOP DRIVE

JOHNSON CREEK REACH 1: TYPICAL CROSS SECTION LOOKING EAST FROM BEACH LOOP DRIVE



JOHNSON CREEK REACH 2

Johnson Creek culverts under Beach Loop Drive into Reach 2 where it outfalls into the Pacific Ocean. The view west from Beach Loop Drive is on of the most majestic on the Beach Loop Scenic Drive. The creek flows through private property to the beach line. With proper maintenance and new culverts, Johnson Creek is one of the small number of streams in Bandon with a potential to be fish-bearing.

JOHNSON CREEK FROM BEACH LOOP DRIVE WEST.

RIPARIAN STUDY RESULTS JOHNSON CREEK REACH 2

Stream Characteristics:	**Running stream less than 1,000 feet per second. Non-fish bearing.**				
Riparian Function:					
	Water Quality	**High**			
	Flood Management	**Low**			
	Thermal Regulation	**Meduim**			
	Wildlife Habitat	**High**			
Stream Width:	**5 – 8 feet**				
Riparian Width:	**50 feet (Potential)**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**1**			
	Parks Master Plan	**1**	**3**	**=**	**High**
	Riparian Borders	**1**			
Restoration Potential					
	Ownership	**1**			
	Development	**0**	**1**	**=**	**Low**
	Zoning	**0**			

FERRY CREEK WATERSHED

The Ferry Creek watershed is the largest single stream system within the Bandon City limits. The 387 acre drainage basin contains approximately forty-eight acres of locally significant wetland. This area is zoned Natural Resources and is protected under the regulations regarding locally significant wetlands in the Bandon Municipal Code.

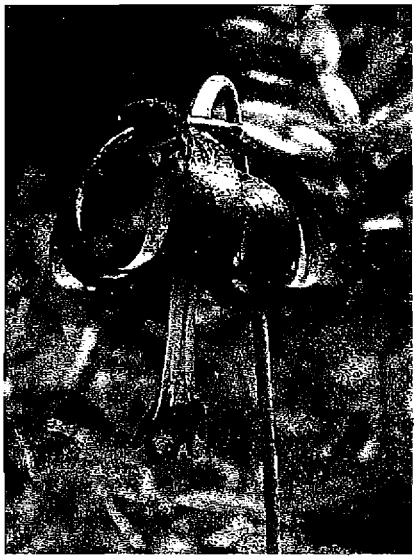
The north fork of Ferry Creek enters the City's jurisdiction at Ohio Avenue SE and Fourth Street SE. The south fork enters the City at Thirteenth Street SE near Michigan. The two forks join north of Ninth Street between June and Lexington Avenues, where flows northwest to the Coquille River.

Ferry Creek from Highway 101 to the Coquille River was channelized by the ODOT in 1995. The channel is constructed of cement approximately fifteen feet in height. There is no riparian vegetation along this channel. This area is not included as a reach of Ferry Creek.

Ferry creek and its tributary, Geiger Creek are the main source of Bandon's water supply. Geiger Creek is located outside the City limits where it meets the main fork of Ferry Creek at the Fish Hatchery, east of

the City Limits. The Fish Hatchery is an Oregon Department of Fish and Wildlife (ODFW) facility, which provides hatchling salmon, steelhead, and trout to much of the Coquille River[3]

The Western Lily, an endangered species, has been found in the main watershed of Ferry and Geiger Creeks east of the City limits, near the Geiger Reservoir.



Land use in the area includes private residences, light industry and commercial businesses.

The Pacific Habitat Wetland Inventory states, "*Large Ferry Creek wetland floodplain complex located south and east of Highway 101. Steep Hillsides, mostly forested with residential development on top of plateaus. Ferry Creek is a perennial stream and Essential Salmonid Habitat. Drains north to Coquille River. Partially channelized downstream of 3rd Street.*"

The wetland area is a mixture of forested, scrub shrub, and emergent categories. For the purpose of this Chapter, the riparian vegetation in the Locally Significant Wetland of Ferry Creek will serve as the designated Riparian Corridor.

FERRY CREEK REACH 1

This reach is approximately 100 feet in length from Highway 101 south to Third Street SE where it culverts under Third Street.

This small reach provides open space and flood control in a Light Industrial area which has little vegetation. The creek is approximately 20 feet in width with riparian areas on each side. Since Ferry Creek is a fish-bearing stream, any improvement to the riparian area will be of benefit to the salmonids and existing wildlife.

Pacific Habitat remarks, "Very disturbed riparian area. Lots of rip-rap, culverts, roads, confined stream, little shade."

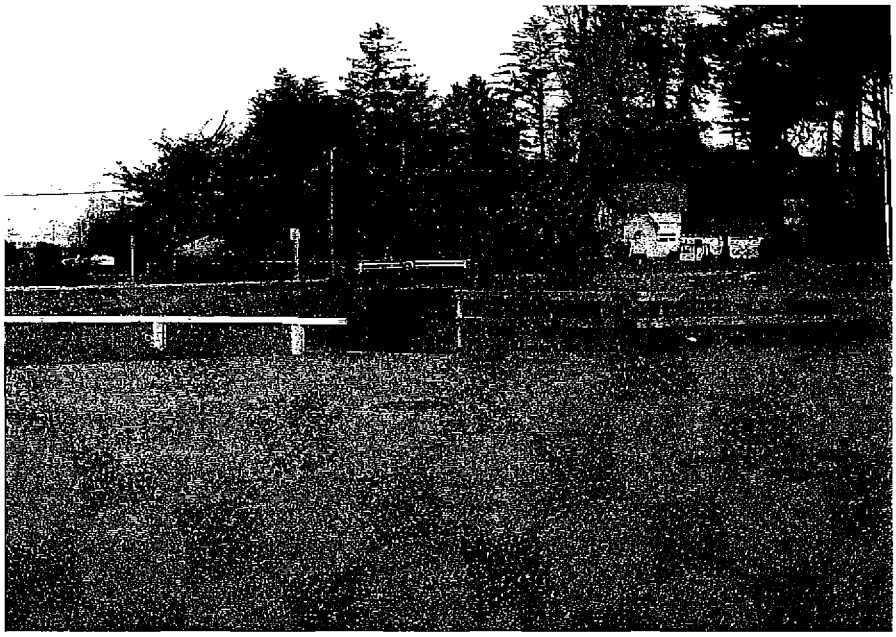
[3] Humphrey, Corrinne, Small Watershed Analysis: The Ferry Creek Example, prepared for the City of Bandon 1995

RIPARIAN STUDY RESULTS FERRY CREEK REACH 1

Stream Characteristics: Running stream less than 1,000 feet per second. Non-fish bearing.

Riparian Function:

	Water Quality	**Medium**		
	Flood Management	**Low**		
	Thermal Regulation	**Medium**		
	Wildlife Habitat	**Low**		
Stream Width:	**15 – 20 feet**			
Riparian Width:	**50 feet (Potential)**			
Aesthetic Quality			**TOTAL**	**SCORE**
	Proximity to Viewsheds	**0**		
	Parks Master Plan	**0**	**0 =**	**Low**
	Riparian Borders	**0**		
Restoration Potential				
	Ownership	**1**		
	Development	**0**	**2 =**	**Medium**
	Zoning	**1**		

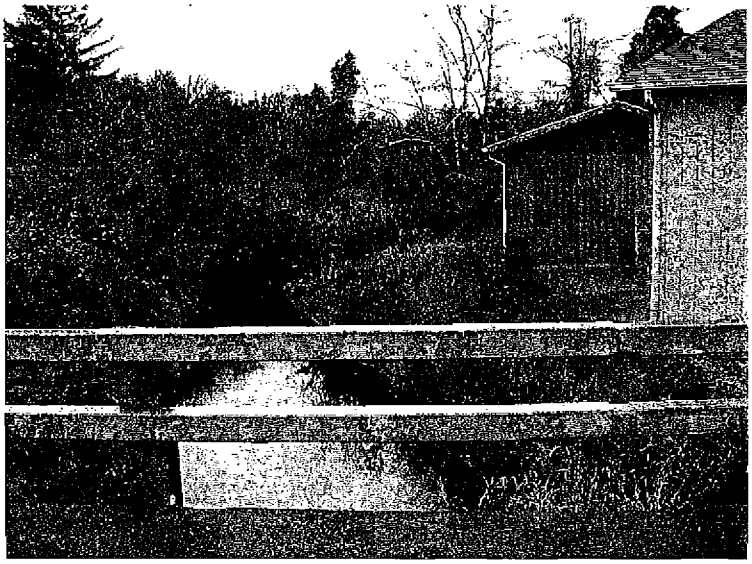


12-31-2008: FERRY CREEK NARROW CHANNEL AT THIRD AND GRAND

FERRY CREEK REACH 2

Ferry Creek Reach 2 is approximately 300 feet long from its beginning at the south of Third Street SE at Grand Avenue to the point in the alley between Fourth and Fifth Streets, mid-block between Grand and Harlem Avenues. It is at this point that the locally significant wetland begins. The creek is approximately ten feet wide at the south point of Third Street.

The east side of the creek is bordered by herbaceous vegetation with scattered evergreen and Alder trees.



12-31-2008: FERRY CREEK REACH 2, AT THIRD AND GRAND. RIPARIAN AREA DEGRADED BY LIGHT INDUSTRIAL DEVELOPMENT.

RIPARIAN STUDY RESULTS FERRY CREEK REACH 2

Stream Characteristics:	Running stream less than 1,000 feet per second. Non-fish bearing.				
Riparian Function:					
	Water Quality	**Medium**			
	Flood Management	**Low**			
	Thermal Regulation	**Medium**			
	Wildlife Habitat	**Low**			
Stream Width:	**15 – 20 feet**				
Riparian Width:	**50 feet (Potential)**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**0**			
	Parks Master Plan	**0**	**0**	**=**	**Low**
	Riparian Borders	**0**			
Restoration Potential					
	Ownership	**1**			
	Development	**0**	**2**	**=**	**Medium**
	Zoning	**1**			

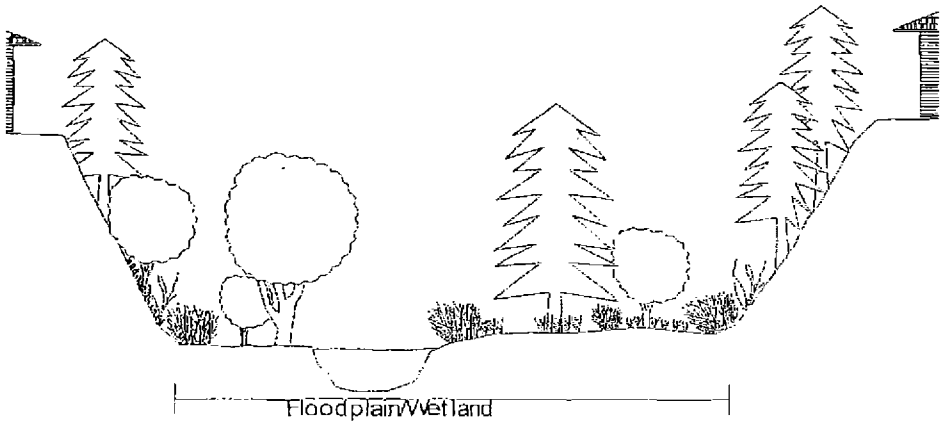
FERRY CREEK REACH 3 ☐

Reach two of Ferry Creek begins on the north side of Third Street to the point where the creek forks into the two tributaries, approximately 1,400 feet in length. The width of the wetland at this juncture is approximately 450 feet.

The Pacific Habitat inventory states, "*high quality riparian areas adjacent to broad floodplain/. Steep forested slopes with residential on top. Undisturbed*". .

Salal

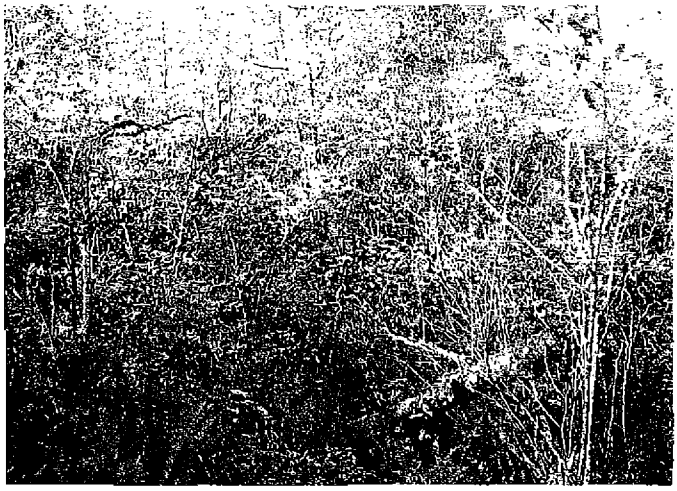
TYPICAL CROSS SECTION FERRY CREEK REACH 3



RIPARIAN STUDY RESULTS FERRY CREEK REACH 3

Stream Characteristics:	Running stream less than 1,000 feet per second. Fish bearing.				
Riparian Function:	**Water Quality**	**High**			
	Flood Management	**High**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**4 – 8 feet**				
Riparian Width:	**120 feet**				
Aesthetic Quality			**TOTAL**		**SCORE**
	Proximity to Viewsheds	**0**			
	Parks Master Plan	**1**			
	Riparian Borders	**1**	**2**	=	**Medium**
Restoration Potential					
	Ownership	**0**			
	Development	**0**			
	Zoning	**1**	**1**	=	**Low**

FERRY CREEK REACH 4 ☐



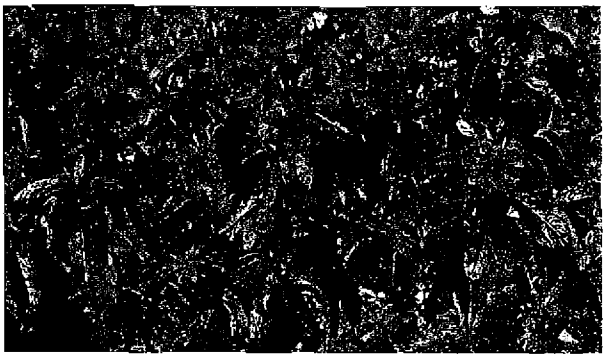
Reach 4 of Ferry Creek is comprised of the north fork which stretches from the terminus of Reach 3 to Ohio Avenue SE and Fourth Street SE, approximately 1,600 feet.

The largest area of this reach centers on Fifth Street SE and ends at the City limits at Ohio Avenue SE.

The creek flows in a deep ravine which is considered undevelopable at this time. There is residential development on the plateaus above the creek.

Vegetation in this area is grows thick with black poplar, vinca, common rush and other wetland grasses.

Common Rush

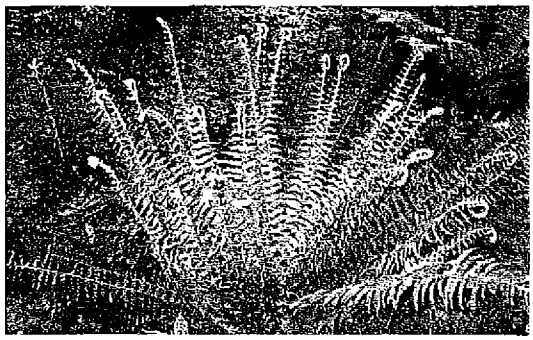


Vinca

Other vegetation common to the area includes red alder, blackberries, small bulrush, vinca, Sitka Spruce, huckleberries, and salmonberry.

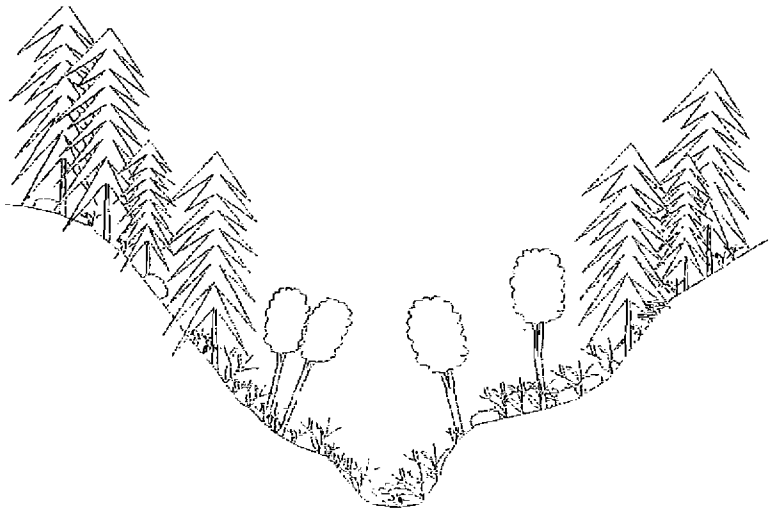
The vegetation shelters a variety of wildlife living their entire lives in the wetland and riparian or migrating through the vicinity.

The Bandon Parks and Recreation Master Plan designates this area as a Natural Resource area and a future park is planned on Sixth Street SE and North Avenue.



Western Sword Fern

TYPICAL CROSS SECTION: FERRY CREEK REACH 4



RIPARIAN STUDY RESULTS FERRY CREEK REACH 4

Stream Characteristics:	**Running stream less than 1,000 feet per second. Fish bearing.**				
Riparian Function:	**Water Quality**	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**4 – 8 feet**				
Riparian Width:	**120 feet**				
			TOTAL		**SCORE**
Aesthetic Quality	**Proximity to Viewsheds**	**0**			
	Parks Master Plan	**1**			
	Riparian Borders	**1**	**2**	**=**	**Medium**
Restoration Potential	**Ownership**	**0**			
	Development	**0**			
	Zoning	**1**	**1**	**=**	**Low**

FERRY CREEK REACH 5

Reach 5 of Ferry Creek is described by Pacific Habitat as a tributary of Ferry Creek. This reach stretches from the terminus of Reach 3, southeasterly to the south City limits at Michigan Avenue, approximately 1,700 feet.

Douglas Fir

Development is encroaching the area from the east. Pacific Habitat states, "*Dense Riparian area adjacent to creek and dense upland forest upslope of riparian area. Recent disturbance in some areas along east side of creek due to logging of new street right-of-way.*"

Near the south city limits, the wetland occupies approximately thirty percent of the property owned by Southern Coos Hospital.

Typical vegetation includes, velvet grass, Western Sword Fern, Sitka Spruce, red flowering currant, Incense Cedar, Douglas Fir, huckleberry and Salmonberry.

Flowering Red Currant

Huckleberry

Hooker Willow

RIPARIAN STUDY RESULTS FERRY CREEK REACH 5

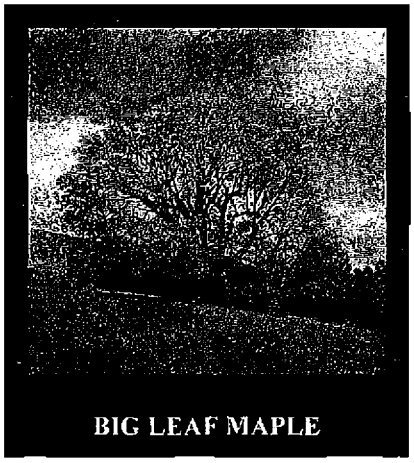
Stream Characteristics:	**Running stream less than 1,000 feet per second. Fish bearing.**				
Riparian Function:	**Water Quality**	**Medium**			
	Flood Management	**Medium**			
	Thermal Regulation	**High**			
	Wildlife Habitat	**High**			
Stream Width:	**4 – 8 feet**				
Riparian Width:	**120 feet**				
			TOTAL		SCORE
Aesthetic Quality	**Proximity to Viewsheds**	**0**			
	Parks Master Plan	**1**			
	Riparian Borders	**1**	**2**	=	**Medium**
Restoration Potential	**Ownership**	**0**			
	Development	**0**			
	Zoning	**1**	**1**	=	**Low**

Appendix A: Vegetation Commonly Found in Riparian Areas: □

Latin Name	Common Name
Abies Amabilis	Pacific Silver Fir
Abies grandis	Grand Fir
Abies procera	Noble Fir
Acer circnatum	Vine maple
Acer glabrum	Douglas maple
Acer macrophyllum	Big Leaf maple
Alnus crispa	Sitka alder
Alnus rubra	Red alder
Amelanchier anifollia	Serviceberry
Arctostaphylos uva-ursi	Kinnikinnick
Ash Sorbus sitchensis	Sitka Mountain
Betula papyrifera	Paper birch
Calodedrus decurrens	Incense cedar
Cornus stolonifera	Red-Osier dogwood
Corylus Cornuta	Beaked Hazelnut
Crataegus douglasii	Black hawthorn
Fragaria chiloensis	Coastal Strawberry
Fraxinus latifolia	Oregon ash
Gaultheria shallon	Salal
Holodicus discolor	Ocean spray
Larix occidentalis	Western Larch
Lonicera involucrata	Black twinberry
Mahonia aquilfolium	Oregon grape (Tall)
Mahonia repens	Oregon Grape (Low)
Malus fusca	Pacific Crab apple
Omleria cerasiformis	Indian plum

Philadelphus lewlsii	Mock orange
Physocarpus capitatus	Nine bark
Picea sitchensis	Sitka spruce
Pinus contorta	Shore pine
Pinus ponderosa	Ponderosa pine
Polystitchum Munitum	Sword Fern
Populus tremuloides	Quaking aspen
Populus trichocarpa	Black cottonwood
Prunus Emarginata	Bitter Cherry
Pseudotsuga menzie	Douglas Fir
Quercus garryana	Garry oak
Rhamnus purshiana	Cascara
Rhododendron macrophyllum	Pacific Rhododendron
Ribes lacustre	Black gooseberry
Ribes Sanquineum	Red-flowering currant
Rosa nutkana	Nootka rose
Rubus spectaabilis	Salmonberry
Salix	Mixed Willow
Sequoia giganteum	Sequoia
Spiraea douglasii	Hardhack/Spirea
Symphoricarpos albus	Snowberry
Thuja plicata	Western red cedar
Tsuga heterophylla	Western hemlock
Tsuga mertensiana	Mountain hemlock

ILLUSTATED INDEX OF RIPARIAN VEGETATION FOUND IN THE BANDON AREA

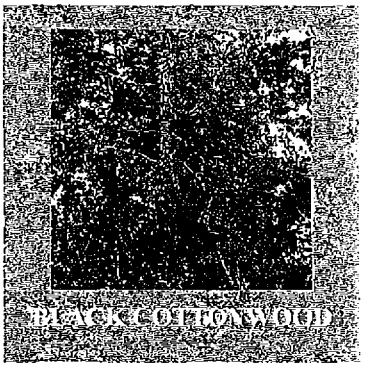

BIG LEAF MAPLE

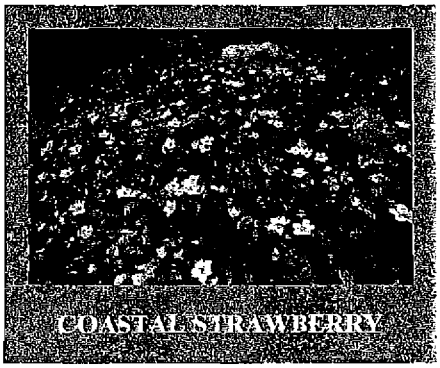

BITTER CHERRY OR BLACK TWINBERRY

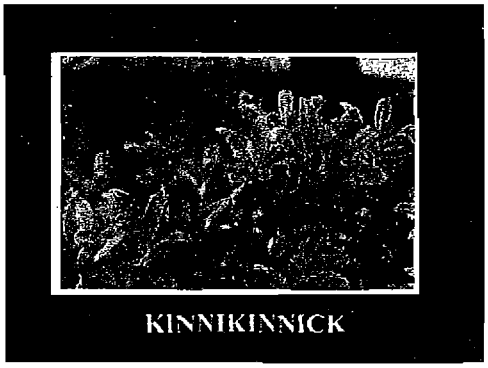

BEAKED HAZELNUT


BLACK GOOSEBERRY


BLACK HAWTHORN


BLACK COTTONWOOD


COASTAL STRAWBERRY


KINNIKINNICK

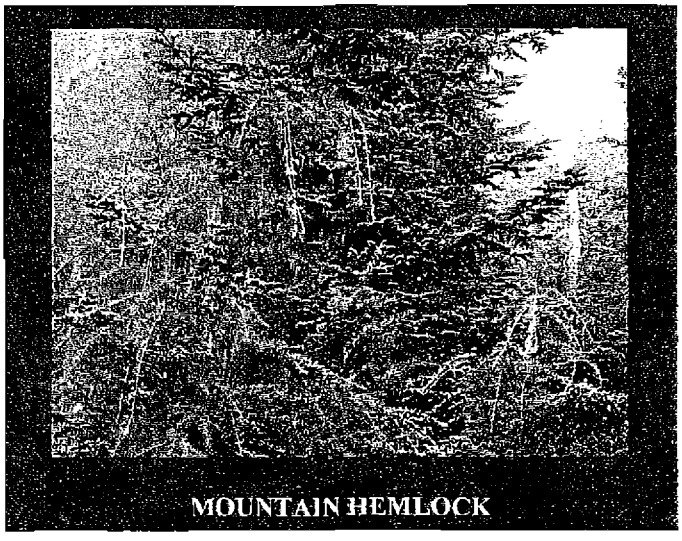

CASCARA

INCENSE CEDAR

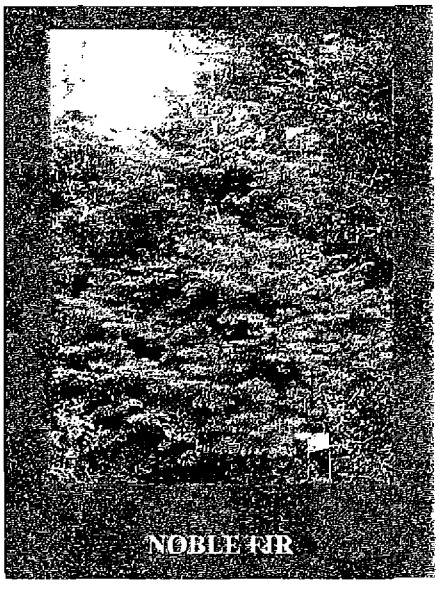
INDIAN PLUM

GRAND FIR

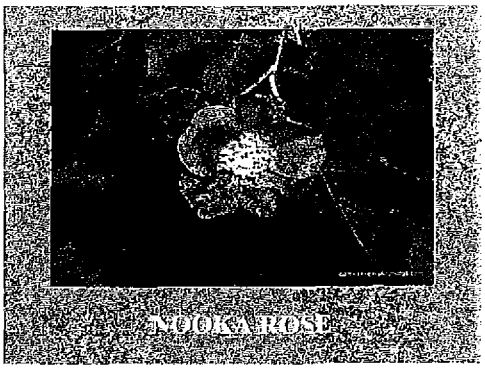
DOUGLAS MAPLE



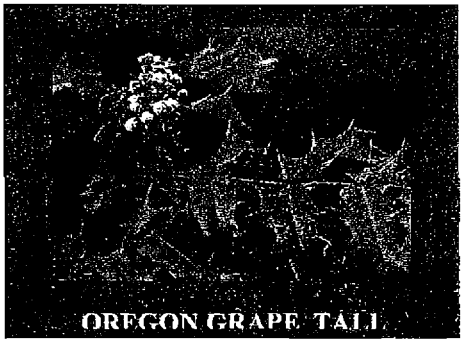
MOUNTAIN HEMLOCK



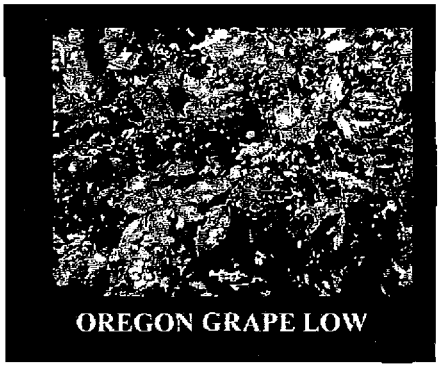
NOBLE FIR



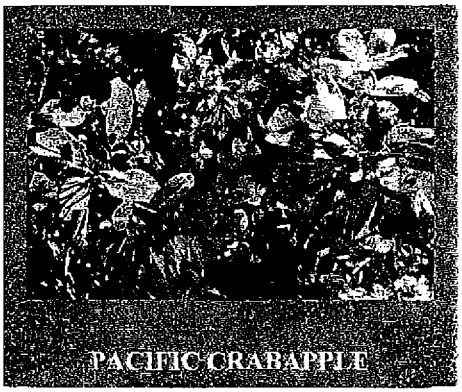
NOOKA ROSE



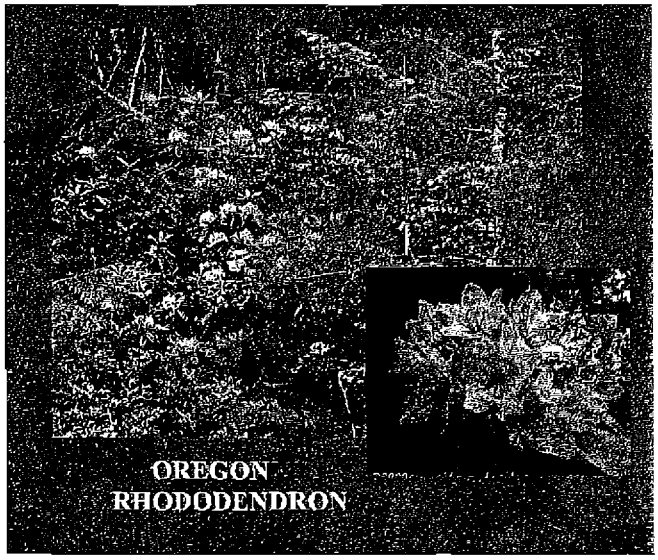
OREGON GRAPE TALL



OREGON GRAPE LOW

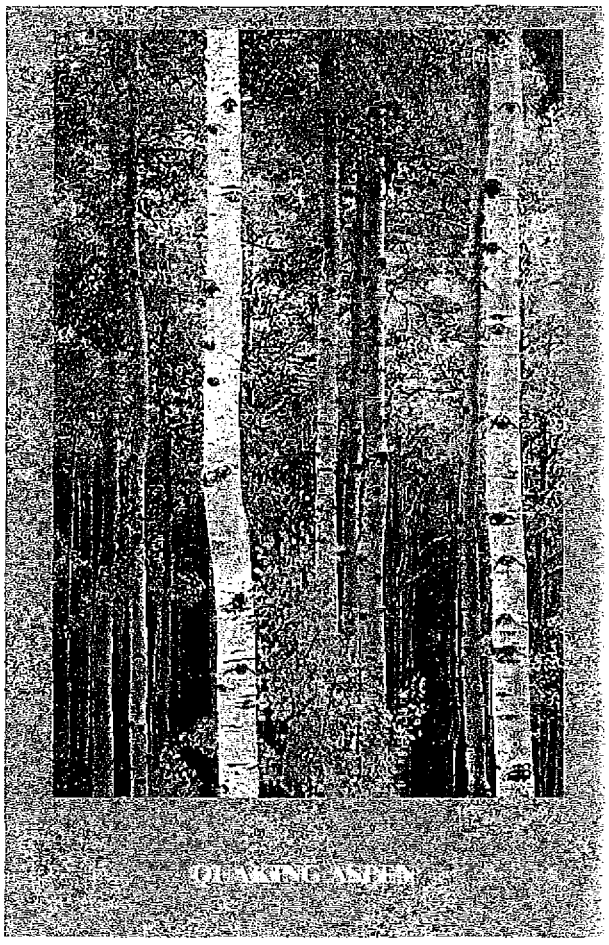


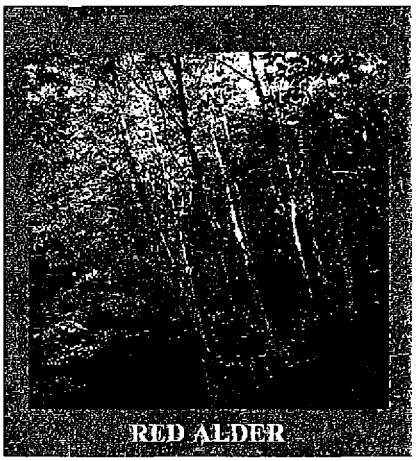
PACIFIC CRABAPPLE

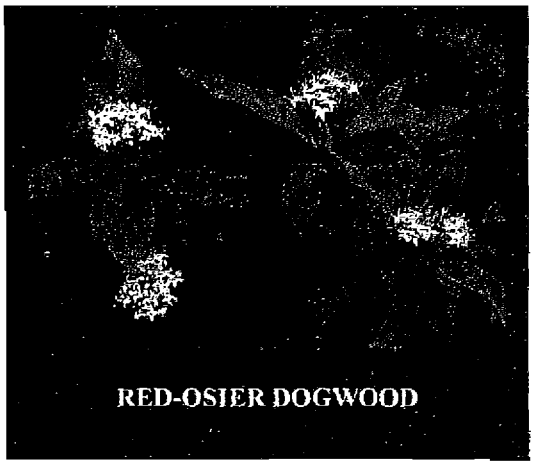


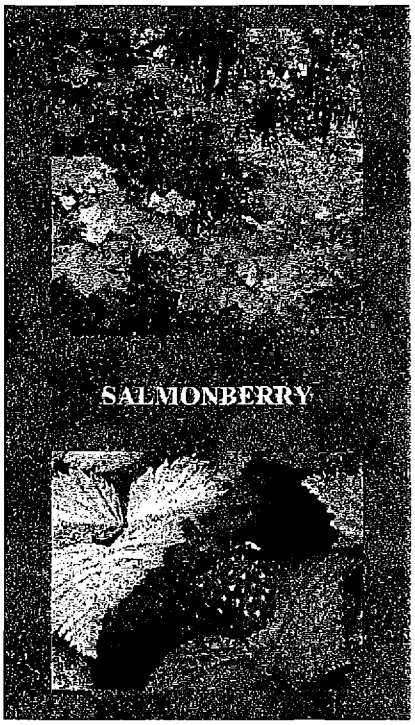
OREGON
RHODODENDRON

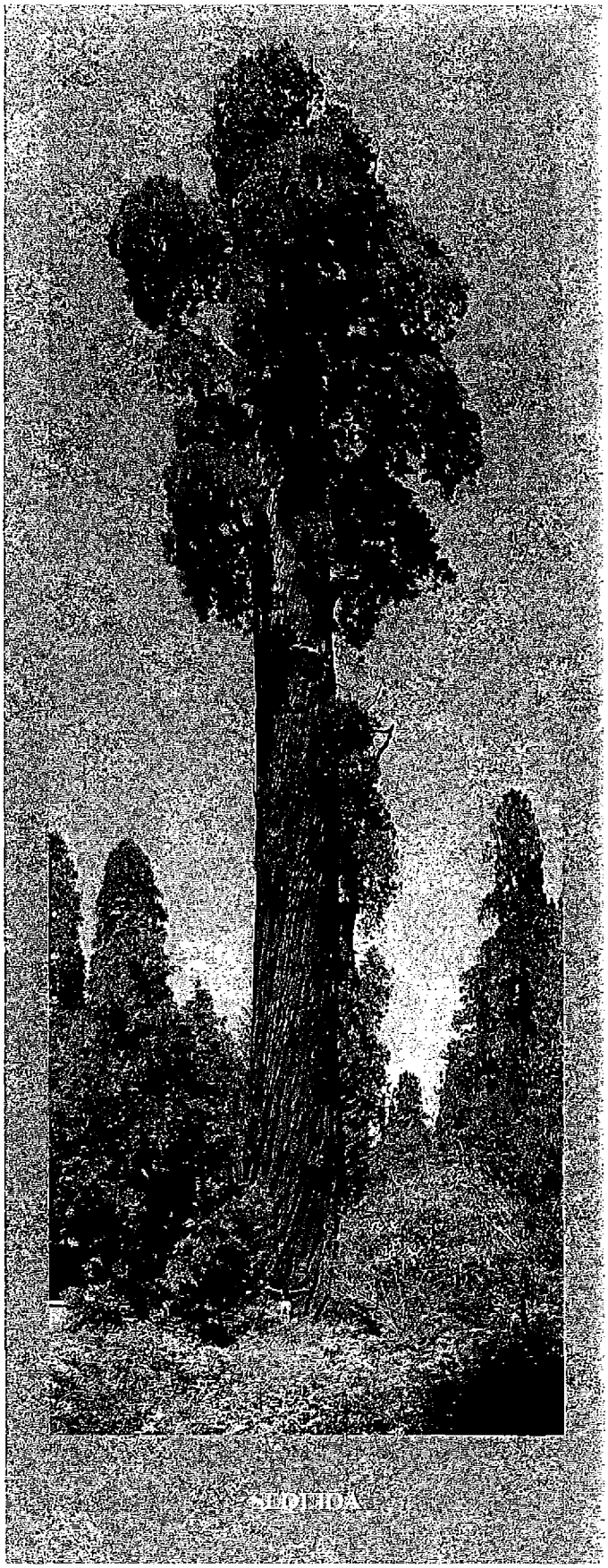

PONDEROSA PINE



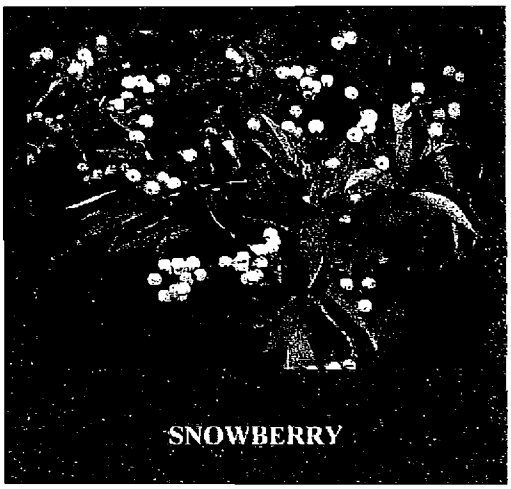

RED ALDER


RED-OSIER DOGWOOD

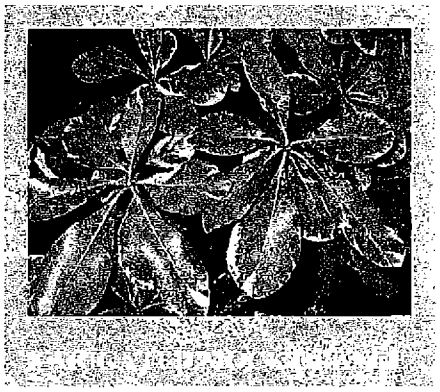

SALMONBERRY

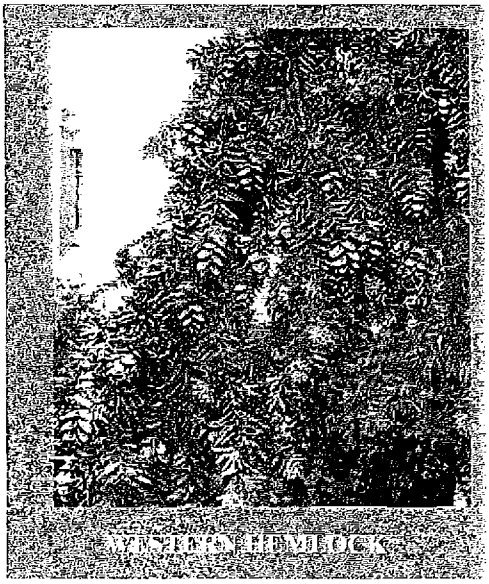

SEQUOIA

SITKA MOUNTAIN ASH

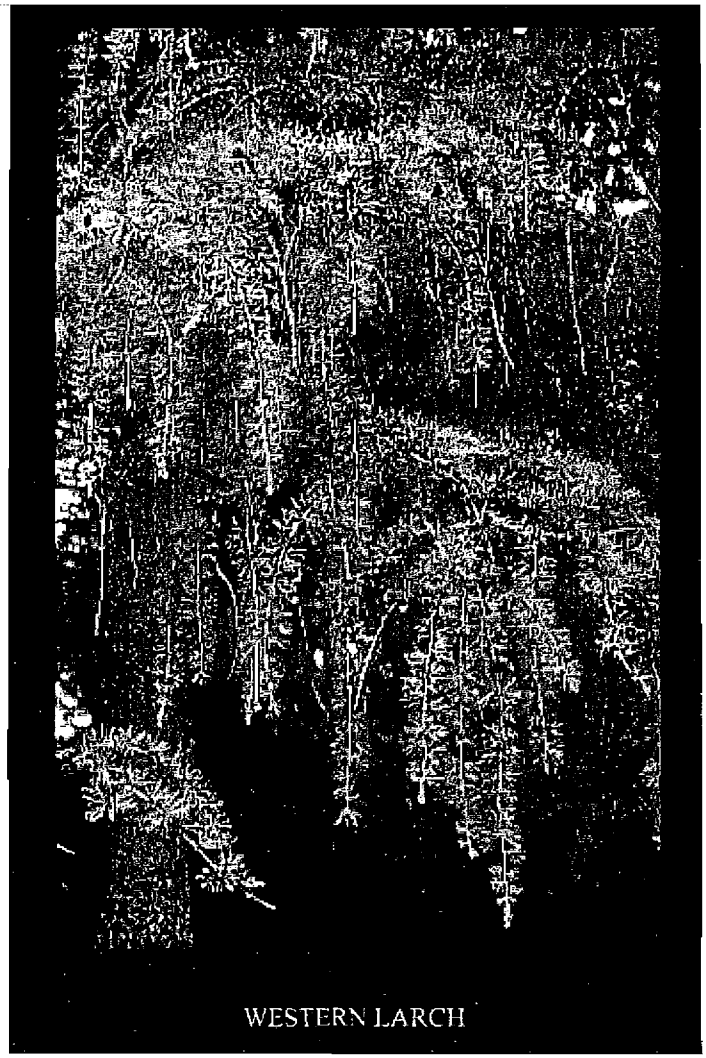


SNOWBERRY

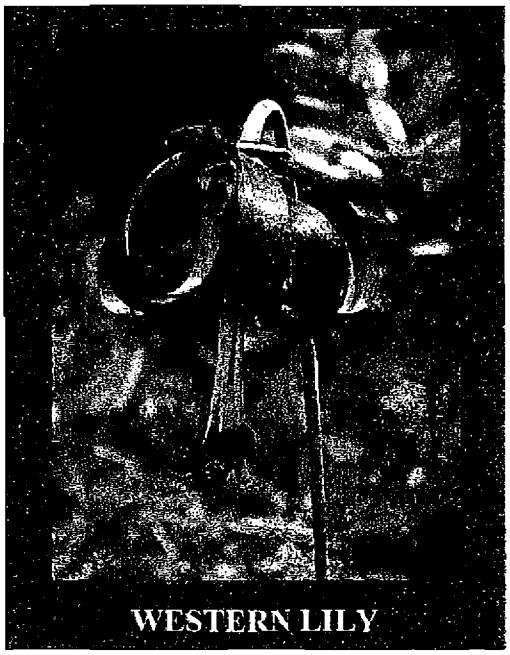




WESTERN HEMLOCK



WESTERN LARCH



WESTERN LILY

ORDINANCE NO. 1573

EXHIBIT C

COMPREHENSIVE PLAN POLICIES

NATURAL RESOURCES-RIPARIAN CORRIDORS

GOAL

To protect, maintain, enhance and restore significant riparian corridors abutting flowing streams.

POLICIES

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

2. The City shall encourage the enhancement and restoration of riparian corridors designated in the Bandon Local Significant Riparian Inventory and Assessment

3. The City shall support community efforts to restore and maintain riparian corridors and develop educational and recreational activities related to these areas.

CITY OF BANDON
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BANDON OR 97411

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AND DEVELOPMENT
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SALEM OR 97301-2540