ORDINANCE NO. 110.01

ORDINANCE AMENDING THE BANKS COMPREHENSIVE PLAN
AND ADOPTING WETLANDS PROTECTION ORDINANCE

WHEREAS, the Banks City Council has adopted a Periodic Review Work Program to update the Banks Comprehensive Plan and implementing ordinances; and

WHEREAS, Task 2 of the adopted Work Program provides for plan and ordinance amendments regarding statewide planning Goal 5 and specifically pertaining to wetlands, historic resources, and the Endangered Species Act (ESA) 4(d) rule; and

WHEREAS, the subject plan amendments include adoption of a Local Wetlands Inventory (L WI), which in effect has been approved and is contingent on final approval by the Oregon Division of State Lands, and adoption of a Wetlands Protection Ordinance; and

WHEREAS, the Banks Planning Commission has conducted a public hearing on November 26, 2002 to consider the proposed amendments and ordinance and unanimously adopted a motion to forward the proposal to City Council with a recommendation that Council adopt them; and

WHEREAS, the Banks City Council has conducted a public hearing on January 14, 2003 and concurs with the Planning Commission's recommendation.

THEREFORE BE IT RESOL VED by the City Council of Banks that the attached document entitled "Goal 5 Update " containing Part I Wetlands (including Local Wetlands Inventory and Wetlands Protection Ordinance No.2002-04), Part II Historic Resources, and Part III ESA 4(d) Rule, is hereby adopted this 11th day of February, 2003.

Robert Orlowski, Mayor

ATTEST:

Deborah Deegan, City Recorder

FILE COPY

GOAL 5 UPDATE

5 OPEN SPACES, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES

GOAL: To conserve open space and protect natural and scenic resources.

Programs shall be provided that will: (1) insure open space, (2) protect scenic and historic areas and natural resources for future generations, and (3) promote healthy and visually attractive environments in harmony with the natural landscape character. The location, quality and quantity of the following resources shall be inventoried:

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

Where no conflicting uses for such resources have been identified, such resources shall be managed so as to preserve their original character. Where conflicting uses have been identified the economic, social, environmental and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal.

GOAL 5 UPDATE

November 2002

The City has previously adopted statewide planning Goal 5 pertaining to open space, scenic and historic areas, and natural resources. The goal reads as follows:

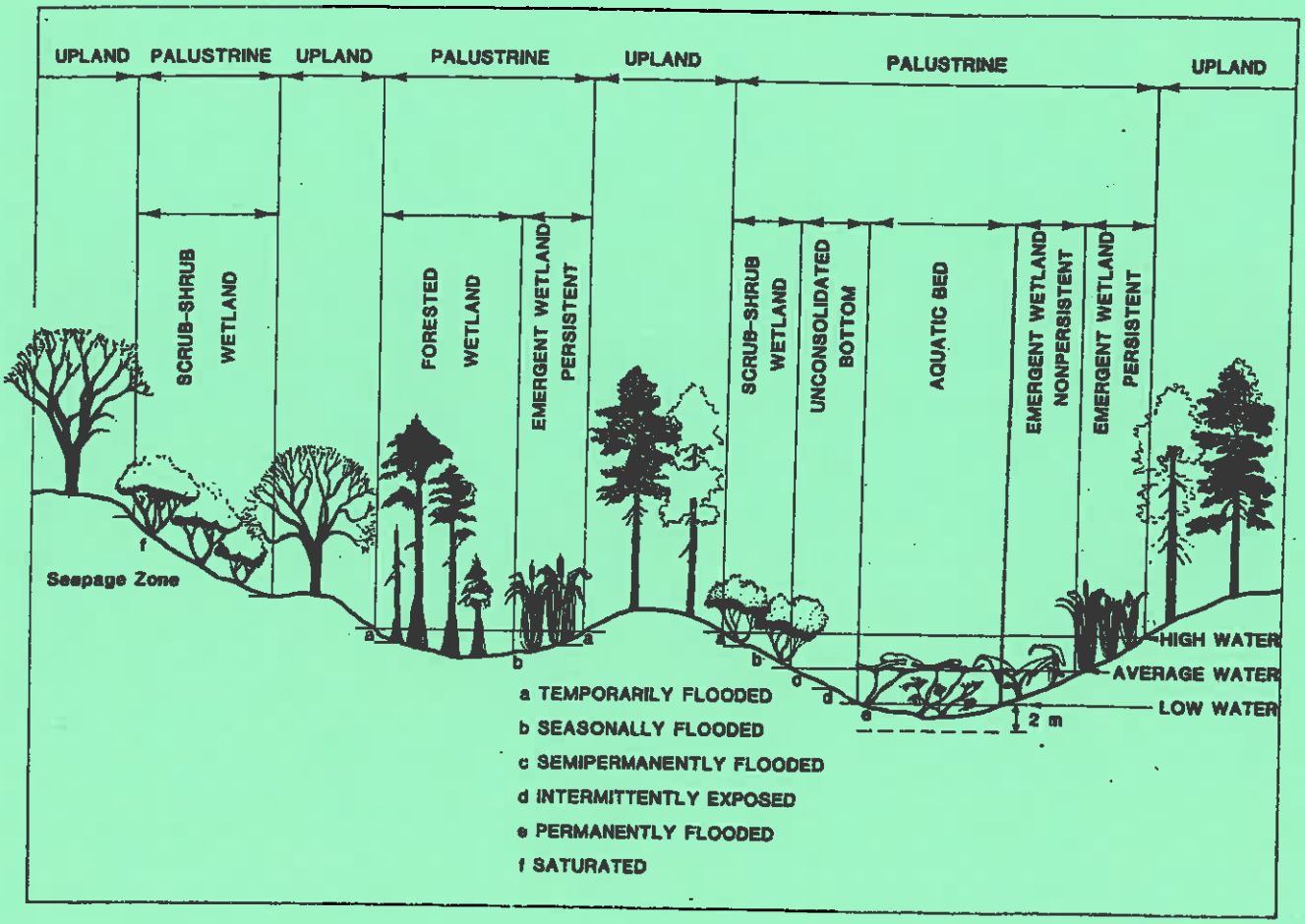
> ***"To protect and enhance through proper use and development the open spaces, scenic and historic areas, and natural resources of the area."***
>
> (Page 10, City of Banks Comprehensive Plan, revised 12/88.)

In conformance with the above goal, the City has adopted a work program to update Goal 5 resource requirements through the LCDC Periodic Review process. This update provides the plan and code amendments that pertain to three subject areas – wetlands, historic resources, and Endangered Species Act (ESA) 4(d) rule. The update information is organized into three parts as follows:

Part I: Wetlands
Part II: Historic Resources
Part III: ESA 4(d) Rule

PART I

WETLANDS



PART I: WETLANDS

The following policy has been adopted in the City of Banks Comprehensive Plan:

> ***"1. The City will protect natural resource areas and require that the long range availability and use of the following will not be limited or impaired by development.***
>
> - ***Water areas and wetlands"***
>
> (Page 10, City of Banks Comprehensive Plan, revised 12/88.)

Consistent with the above plan policy regarding wetlands and the requirements of OAR 660-023-0100, the City has conducted a Local Wetlands Inventory (LWI) and determined which wetlands on the LWI are "significant wetlands". The LWI is attached as Exhibit A.

In order to complete the Goal 5 process for wetlands, the City has prepared a Wetlands Protection Ordinance to protect significant wetlands in accord with OAR "safe harbor" provisions. The Wetlands Protection Ordinance is attached as Exhibit B.

EXHIBIT A

LOCAL WETLANDS INVENTORY

-

CITY OF BANKS, OREGON

NOVEMBER 2002

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1.0 INTRODUCTION

The City of Banks Comprehensive Plan (Revised 4/89) includes a brief discussion about wetlands in South Banks. The wetland areas were not inventoried or identified on a map.

On June 14, 1996, the Oregon Land Conservation and Development Commission (LCDC) adopted amendments to statewide Goal 5 that affect wetlands. The amended rule imposes the following requirements on local governments:

> *"(a) Conduct a local wetlands inventory (LWI) using the standards and procedures of OAR 141-86-110 through 141-86-240, and adopt the LWI as part of the comprehensive plan or as a land use regulation; and*
>
> *(b) Determine which wetlands on the LWI are "significant wetlands" using the criteria adopted by the Division of State Lands (DSL) pursuant to ORS 197.279(3)(b), and adopt the list of significant wetlands as part of the comprehensive plan or as a land use regulation."*
>
> [OAR 660-23-100 (3) (a) and (b)]

In order to comply with the amended Goal 5 rule above, the City has conducted a local wetlands inventory (LWI) and determined which areas are significant wetlands. The LWI and significant wetlands are adopted as part of the comprehensive plan.

2.0 LOCAL WETLANDS INVENTORY (LWI)

The Oregon Division of State Lands (DSL) is the principal state agency involved with wetlands. DSL has developed LWI standards and guidelines (Attachment A) in accord with the specified statute regulations. In view of the small amount of wetlands anticipated to occur within the Urban Growth Boundary, the DSL staff offered to assist the City by performing the field assessment tasks required for the inventory.

The purpose of the LWI is to locate, map and classify wetlands by type (such as scrub-shrub wetlands) within the city limits. According to DSL standards for the LWI, all wetlands at least one-half (0.5) acre and larger shall be identified and mapped. The LWI includes:

- A report describing methods and results.
- A LWI map, showing the location of each identified wetland.
- Supporting maps and aerial photographs used to conduct the LWI.
- A Wetland Summary Sheet that describes each identified wetland.
- Field data sheets for any site where wetland determination data was collected.
- An assessment of wetland functions, using the *Oregon Freshwater Wetland Assessment Methodology* (OFWAM).
- Significance determination results using criteria established by DSL.

3.0 METHODS

A LWI is conducted by consulting existing information, conducting a field review, and collecting new information. Wetlands are located and verified using the on-site option where access to property is allowed, or off-site where access has not been obtained. Wetlands can be mapped off-site by using information such as topographic and National Wetlands Inventory maps, aerial photographs, soils surveys and observation of wetland boundaries from adjacent roads or properties.

Prior to beginning field work, off-site mapping was conducted for the entire study area (UGB) to determine the approximate location of wetland boundaries based on available information. This information included the USGS topographic quadrangles (Attachment B), the Soil Survey of Washington County, Oregon (SCS, 1982, Attachment C), the National Wetlands Inventory

(Attachment D), and a June 2000 color aerial photograph. Previous wetland information was also used, including wetland delineations approved by DSL and other assessments prepared by professional wetland consultants as follows:

A. *Banks Lumber Company Mill Site Wetland Delineation & Vegetated Corridor Condition Assessment"* by Fishman Environmental Services, October 2001. DSL wetland determination # WD 01-0612.

B. *"Jurisdictional Wetland Determination and Delineation of the Banks Ministorage Site"* by Schott & Associates, May 2001. DSL wetland determination # WD 01-0258.

C. *"Division of State Lands Waterway Project Permit Review"*, April 23, 1997 (includes wetland delineation and proposed mitigation prepared by SHAPIRO). DSL wetland determination # WD 97-0190.

D. *"Wetland Determination and Delineation for the Proposed Arbor Village at South Banks"* by SRI/SHAPIRO/AGCO, Inc., December 3, 1996. DSL wetland determination # WD 96-0588.

E. *"South Banks Subdivision Drainage/Wetland Issues"* by Kurahashi & Associates, Inc., Appendix L, August 1994.

F Correspondence regarding *"Banks Wetland Reconnaissance"* by ASCG, Inc., November 19, 1993.

The prior assessments provide valuable information for documenting the size, type and location of the existing wetlands, including mitigation and enhancement measures. (Copies of the above references except items 3.0 A. and C. are on file at City Hall)

The City and DSL staff performed site visits, and wetland determinations were made following DSL's standards and guidelines. Generally speaking, the following three criteria must be met in order for a site to be considered a wetland:

- Presence of wetland hydrology
- Dominance of hydrophytic vegetation
- Presence of hydric soils

DSL inventory requirements specify that all identified wetlands be classified to "Cowardin class" level, including special modifiers such as "farmed" or "excavated". The Cowardin system classifies wetlands according to general systems, vegetation structure, water regime, and other modifiers. For example, wetlands within the City of Banks are primarily Palustrine emergent, scrub/shrub and forested wetland areas. Wetlands dominated by grasses and other herbaceous plants are classified as Palustrine Emergent (PEM). A site dominated by woody vegetation less than 30 feet tall is classified as Palustrine Scrub/Shrub (PSS). Wetlands dominated by trees over 30 feet tall are classified as Palustrine Forested (PFO).

Information compiled for each wetland (see Wetland Summary Sheets in Attachment E) also includes:

- Description of the wetland and wetland boundary
- Main source(s) of hydrology
- Mapped soil type
- Location
- Approximate size
- Predominant plant species

4.0 WETLAND FUNCTION ASSESSMENT

The quality of wetlands in the study area was assessed using the *Oregon Freshwater Wetland, Assessment Methodology* (OFWAM) (Roth et al. 1996). OFWAM was developed by an interagency committee to assess the relative quality of wetlands primarily for planning and educational purposes. OFWAM does not assign a numeric ranking to the wetlands, but does determine the relative quality of six functions and three conditions for each of the wetlands. Five of these functions were assessed for the City of Banks LWI. The other functions were not assessed, as

they are not used to determine wetland significance. The five functions assessed were:

Wildlife habitat: Evaluates the habitat diversity for species usually associated with wetlands, without emphasizing one particular species. Wetlands assessed by OFWAM can provide diverse habitat for wildlife, habitat for some wildlife species, or does not provide habitat.

Fish habitat: Evaluates how a wetland contributes to fish habitat in streams, ponds or lakes associated with a wetland. The questions are suitable for both warmwater and coldwater fish and no particular species is emphasized. Wetlands assessed by OFWAM can have fish habitat function intact, impacted or degraded, or lost or not present.

Water Quality: Evaluates the potential of a wetland to reduce the impacts of excess nutrients in storm water runoff on downstream waters. A wetland's water quality function can be assessed by OFWAM as intact, impacted or degraded, or lost or not present.

Hydrologic control: Evaluates the effectiveness of a wetland to reduce downstream flood peaks and store floodwaters. A wetland's hydrologic control functions can be assessed by OFWAM as intact, impacted or degraded, or lost or not present.

Education: Evaluates the suitability of a wetland to provide educational opportunity and act as an "outdoor classroom." A wetland assessed by OFWAM can have educational uses, have the potential to provide, or not be appropriate for educational uses.

The following information was used in answering several of the assessment questions:

Water Quality: There is no data on the intermittent stream within the study area (flows through DC-2). However, the West Fork of Dairy Creek is listed to the headwaters as water quality limited on the Oregon Department of Environmental Quality

303(d) list (ODEQ, 1998) for phosphorus, sediment, dissolved oxygen and bacteria. Temperature is also a concern. Wetlands DC-1, DC-2, DC-3, and DC-5 all have a surface water connection to the West Fork of Dairy Creek.

Fish Habitat: Fish are present in the West Fork of Dairy Creek, which is mapped as Essential Salmonid Habitat. ODFW indicates that seasonal tributaries (such as the tributary associated with Wetland DC-2) typically provide rearing and migration habitat for fish, including anadromous salmonids.

Floodplain Maps: The Federal Emergency Management Agency (FEMA) has mapped the 100-year floodplain of the West Fork of Dairy Creek. Wetland DC-4 is located within the 100-year floodplain.

Land Use and Zoning: Existing land use was obtained from aerial photographs and field reconnaissance. Planned land use was obtained from city and county zoning maps.

5.0 LOCALLY SIGNIFICANT WETLANDS

As defined by DSL, locally significant wetlands (LSW) *"are those wetland sites that provide functions or exhibit characteristics that are pertinent to community planning decisions made at a local scale, for example within a UGB."* As specified in DSL administrative rules, a wetland is considered locally significant if it meets one or more of the following mandatory criteria:

A. The wetland performs any of the following functions at the levels indicated below using the *"Oregon Freshwater Wetland Assessment Methodology"* (OFWAM):
   (1) Diverse wildlife habitat, or
   (2) Intact fish habitat, or
   (3) Intact water quality function, or
   (4) Intact hydrologic control function.

B. The wetland or a portion of the wetland occurs within a horizontal distance less than one-quarter mile from a water body shown on the DEQ list as a water quality limited water

body (303 (d) list), and the wetland's water quality function is described as *intact* or *impacted* or *degraded* using OFWAM.

C. The wetland contains one or more rare plant communities.

D. The wetland is inhabited by any species listed by the federal government as threatened or endangered, or listed by the state as sensitive, threatened or endangered, unless the appropriate state or federal agency indicates that the wetland is not important for the maintenance of the species.

E. The wetland has a direct surface water connection to a stream segment mapped by the Oregon Department of Fish and Wildlife as habitat for indigenous anadromous salmonids, and the wetland is determined to have *intact* or *impacted* or *degraded* fish habitat function using OFWAM.

At the discretion of local government, a wetland meeting one or more of the following criteria may also be determined to be locally significant:

F. The wetland represents a locally unique plant community. The wetland is or contains the only representative within the UGB of a particular native plant community (listed in the Oregon Natural Heritage Program's *"Classification and Catalog of Native Wetland Plant Communities in Oregon"*)

G. The wetland is publicly owned and determined to have educational uses according to OFWAM, and such use by a school or organization is documented for that site.

6.0 RESULTS

6.1 Local Wetlands Inventory Results

Five wetlands were identified and mapped within the study area that coincides with the Banks Urban Growth Boundary as shown on the attached LWI map. The total wetland acreage is

approximately ten acres. Four of these wetlands (DC-1, DC-2, DC-3 and DC-5) had been previously identified in wetland delineation reports approved by DSL. DC-4 was mapped using offsite methods. DC-5 consists of four distinct stormwater detention basins that were previously associated with the DC-2 wetland, but are now physically separate and managed for their stormwater and water quality functions. DC-5 represents artificially created wetlands that incorporate storm drainage facilities managed by the Clean Water Service agency of Washington County.

A Wetland Summary Sheet was prepared for each wetland (Attachment E). Wetland DC-2 was separated into four units (A-D) to facilitate description and mapping, but represent one wetland unit physically separated by roads and culverts, yet still hydrologically connected.

Note: Two other constructed wetlands were mapped but were not further evaluated because they were constructed entirely from upland for water quality improvement/stormwater detention purposes. As such, they are not subject to state removal-fill permit requirements and also are automatically "non-significant" per the Significant Wetland criteria.

6.2 OFWAM Results

6.2.1 Wetlands of Special Interest for Protection

Each of the wetlands was assessed according to the ten questions in this section of OFWAM (Attachment F). These questions address the presence of federal or state listed threatened, endangered or sensitive species; existing management plans; protected mitigation areas; critical habitat for listed species; USDA wetland reserve areas; and the presence of uncommon wetland plant communities in Oregon. These questions were answered "no" for all the wetlands, therefore none of the wetlands in the study area qualify as "wetlands of special interest for protection".

6.2.2 Wetland Function Assessment

A summary of the OFWAM results is presented in Table I below. Attachment G contains the complete OFWAM results for each of the five wetlands.

Table I. Summary of OFWAM Results

Note: To meet the criteria for a locally significant wetland (LSW), at least one of the first 4 functions must be performed at the highest level of functioning (or wetland must meet one of the other significance criteria, like supporting listed species). **Bold font** in table indicates that the level of functioning for that ecological function meets the criteria for designating the wetland a LSW.

Wetland Code	Wildlife Habitat	Fish Habitat	Water Quality	Hydrol. Control	Education
DC-1	Some	NA	**Intact**	Impacted	NA
DC-2	Some	Impacted	**Intact**	**Intact**	Has Uses
DC-3	Some	Not Present	Impacted	Impacted	NA
DC-4	**Diverse**	NA	Impacted	**Intact**	NA
DC-5	Some	NA	**Intact**	Impacted	NA

All wetlands provide wildlife habitat for some species; however, only Wetland DC-4 provided diverse wetland wildlife habitat. Factors include presence of more than one Cowardin class (shrub and emergent), adjacent farmland, and degree of connectivity (wildlife dispersal corridor) to the West Fork of Dairy Creek.

The fish habitat function was assessed for those wetlands that occur within or immediately adjacent to a stream (DC-2 and DC-3). Fish habitat functions of DC-2 were impacted or degraded due to lack of structure within the stream, assumed poor water quality (per DEQ), modification of the channel

(ditching), and proximity of development. Fish habitat functions of DC-3 are lost or not present.

The water quality function was assessed as intact for three of the five wetlands (DC-1, DC-2, DC-5). For Wetlands DC-3 and DC-4, the ability to remove pollutants from streams is limited.

Hydrologic control was assessed as intact for Wetland DC-2 and DC-4. Wetland DC-2 is relatively large, retains floodwaters, is heavily vegetated (retards runoff) and urban land uses occur downstream. Wetland DC-4 is located within the 100-year floodplain and is relatively large. The hydrologic control function of the other wetlands was impacted or degraded.

The educational function was assessed only for Wetland DC-2 because it is the only wetland in public ownership and is used for educational purposes by students in the adjacent schools. The wetland is also readily viewed from a safe, paved foot/bike path.

6.3 Significant Wetlands Determination

The locally significant wetlands criteria were applied to the five wetlands within the study area. Except for Wetland DC-3, all of the wetlands satisfied one or more of the significance criteria (Table II). The results of applying the criteria are included in Attachment G.

Table II. Locally Significant Wetlands in the Banks LWI

Wetland	Criteria Met
DC-1	Provides Intact Water Quality Function
DC-2	Provides Intact Water Quality & Hydrologic Control Functions & Education
DC-4	Provides Diverse Wildlife Habitat and Intact Hydrologic Control Functions
DC-5	Provides Intact Water Quality Function

7.0 STAFF QUALIFICATIONS

Janet Morlan is Wetlands Program Manager with the Oregon Division of State Lands. She is a certified Professional Wetland Scientist, and has conducted or reviewed more than 1,000 wetland determinations and delineations, and has reviewed and approved approximately 24 LWIs.

K.J. Won, AICP is the Banks City Planner and has over thirty years of professional experience in land use and environmental planning. He has provided planning services for public and private sector clients on various planning and development projects involving wetlands, including wetlands assessment for the City of Fairview, wetlands permit coordination and EIS for Shore Pines Development (Pacific County, Washington), and site assessment/wetlands coordination for Arcata Redwood Company (California).

8.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, 1979. *Classification of wetlands and deepwater habitats of the United States*, U.S. Fish and Wildlife Service, Office of Biological Services, FWS/OBS-79/31. 103 pp.

Environmental Laboratory, 1987. *Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*, (U.S. Army Corps of Engineers).

Land Conservation and Development Commission, 1996. *Statewide Planning Goal 5. Amended Administrative Rules OAR 660, DSL 23.*

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Oregon Administrative Rules 141-086-0180 to 0240: Local Wetlands Inventory (LWI) Standards and Guidelines. Revised 2001.

Oregon Administrative Rules 141-086-300 to350: Administrative Rules for Identifying Significant Wetlands. 1997.

Reed, Porter B., Jr., 1988 and 1993 Supplement. *National List of plant Species That Occur in Wetlands: Northwest (Region 9)*. Prepared by the U.S. Fish and Wildlife Service, St. Petersburg, FL. NERC-88/18.37.

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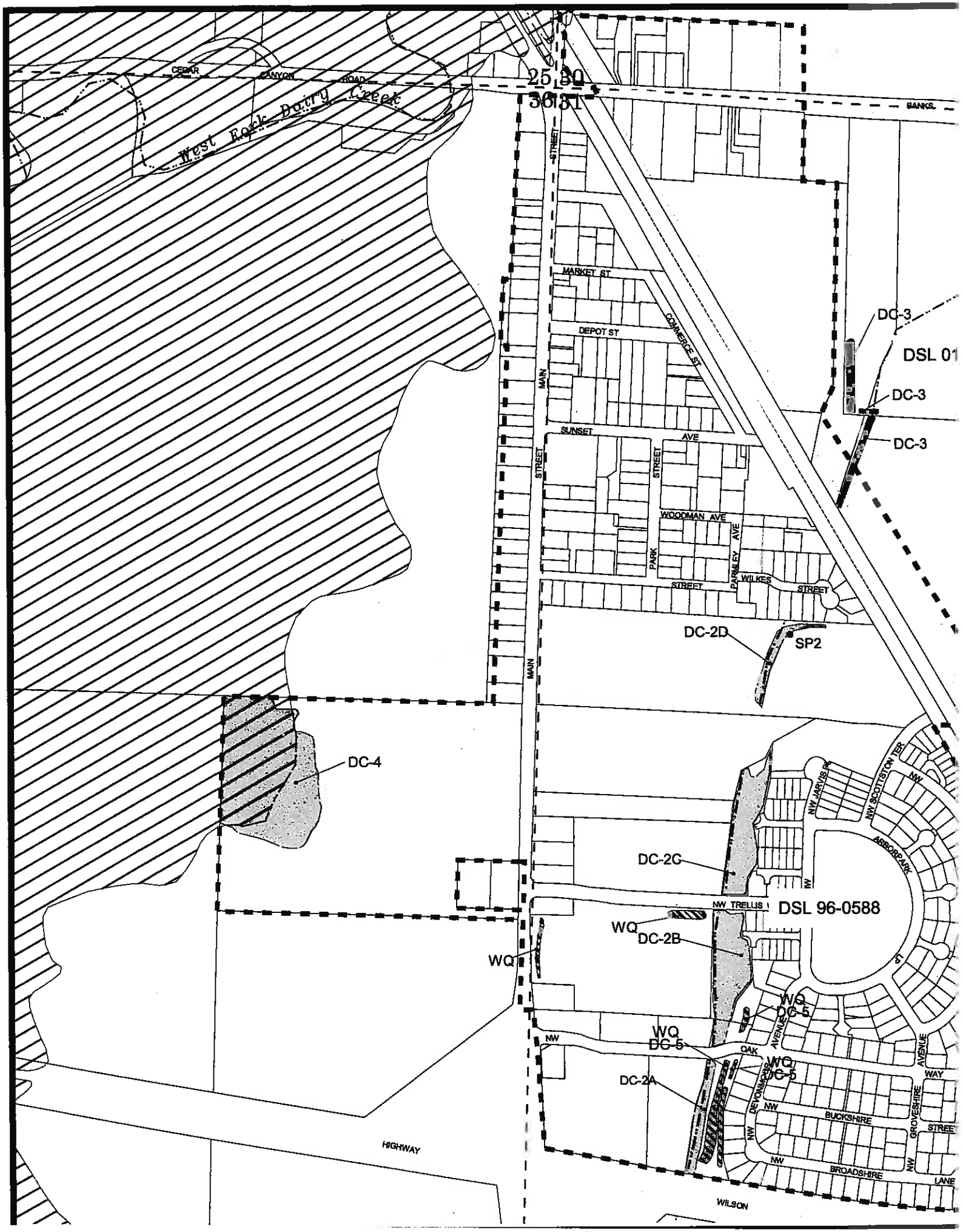
U.S.D.A., Soil Conservation Service, 1989. *Oregon Hydric Soils by Counties.*

U.S.F.W.S. *National Wetlands Inventory* map, 1992. *Forest Grove,* Oregon quadrangle.

U.S. Geological Survey. 1956, Photorevised 1992. *Forest Grove,* Oregon topographical quadrangle, 1:24,000.



CEDAR
CANYON
ROAD
West Fork Dairy Creek
25 30
36 31
BANKS
MAIN STREET
MARKET ST
DEPOT ST
COMMERCE ST
SUNSET AVE
WOODMAN AVE
PARK STREET
PARMLEY AVE
WILKES STREET
DC-3
DSL 01
DC-3
DC-3
DC-2D
SP2
DC-4
DC-2C
NW TRELLIS
DSL 96-0588
WQ
DC-2B
WQ
WQ
DC-5
WQ
DC-5
WQ
DC-5
DC-2A
NW JARVIS PL
NW SCOTTSTON TER
ARBORPARK
NW
OAK
AVENUE
DEVONMOOR
NW
BUCKSHIRE
GROVESHIRE
WAY
STREET
NW
BROADSHIRE
LANE
HIGHWAY
WILSON

ATTACHMENT A

LOCAL WETLANDS INVENTORY (LWI) STANDARDS AND GUIDELINES

141-086-0180 Purpose

Pursuant to ORS 196.674 pertaining to the Statewide Wetlands Inventory (SWI), these rules establish a system for uniform wetland identification and comprehensive mapping. These rules also establish wetlands inventory standards for cities or counties developing a wetland conservation plan (WCP) pursuant to ORS 196.678. A Local Wetlands Inventory (LWI) is developed for all or a portion of a city or county according to the standards and guidelines contained in these rules (OAR 141-086-0180 through 141-086-0240).

141-086-0185 Uses

(1) Once approved by the Division of State Lands (Division), the LWI shall be used in place of the National Wetlands Inventory (NWI) and is incorporated into the SWI.

(2) The approved LWI shall be used by cities and counties in lieu of the NWI for notifying the Division of land use applications affecting mapped wetlands (ORS 215.418 and ORS 227.350).

(3) A LWI fulfills the wetlands inventory requirements for Goal 5 and Goal 17 (OAR 660-023-0000 through 660-023-0250 and OAR 660-015-0010). A LWI that meets the additional WCP requirements specified in these rules shall be used as the wetlands inventory basis for a WCP.

(4) In order to designate significant wetlands (OAR 141-086-0300 through 141-086-0350) as required for Goal 5, or to assess wetland functions for a WCP, a wetland function and condition assessment of mapped wetlands must be conducted as part of the LWI using the *Oregon Freshwater Wetland Assessment Methodology (OFWAM)* published by the Division in 1996. An equivalent functional assessment methodology may be used or adjustments may be made to OFWAM upon written approval by the Director.

141-086-0190 Policy

(1) A LWI provides good information for planning purposes on the location of potentially regulated wetlands and streams, but is generally not of sufficient detail for permitting purposes under the state Removal-Fill Law (ORS 196.800 through 196.990). A wetland delineation is usually needed prior to site development.

(2) Wetland determinations conducted for the purpose of developing the LWI shall be conducted according to the criteria, methodologies and guidance currently accepted by the Division.

(3) All wetlands inventory procedures and products are subject to review and approval by the Division before the products:

(a) Are incorporated into the SWI;

(b) Can be used in lieu of the NWI for Wetland Land Use Notification purposes; or

(c) Can be used by a city or county for Goal 5, Goal 17 or WCP purposes.

141-086-0200 Definitions

(1) "Coverage" means a set of digital data files that store a single layer or theme of geographic information such as roads or wetlands.

(2) "Cowardin Class" means the wetland classification according to the U.S. Fish and Wildlife Service's *Classification of Wetlands and Deepwater Habitats of the United States*, Cowardin et al., 1979.

(3) "Director" means the Director of the Oregon Division of State Lands or designee.

(4) "Division" means the Oregon Division of State Lands.

(5) "Field-Verify" or "Field Verification" means to walk over and/or visually check an area to make a wetland determination and map wetlands. This may or may not include collecting sample plot data.

(6) "Georeference" or "Geographical Reference" means linking geographic data to known coordinates on the surface of the earth.

(7) "GIS" or "Geographic Information System" means a system of hardware, software and data storage that allows for the analysis and display of information that has been geographically referenced.

(8) "HGM class or subclass" means the hydrogeomorphic classification of the wetland based upon its landscape position and hydrology characteristics, according to the HGM key developed by the Division.

(9) "Indicator" means the soil, vegetation, and hydrology characteristics or other field evidence that indicate that wetlands are present.

(10) "Inventory" means a systematic survey of an area to identify, classify and map the approximate boundaries of wetlands, and includes the supporting documentation required by these rules.

(11) "Mapping" means representing the identified wetlands and their approximate boundaries on a map.

(12) "Offsite Determination" means a wetland determination conducted without field verification using NWI maps, soils maps, and aerial photographs.

(13) "Other Waters" means waters of the state other than wetlands, such as streams and non-vegetated ponds.

(14) "Possible Wetland" means an area noted during the course of LWI development that appears to meet wetland criteria but is too small to require its inclusion in the LWI.

(15) "Rectified" means correcting the scale variation and image displacement from aerial photos and similar imagery that results from ground relief and airplane tilt.

(16) "Sample Plot" means a specific area on the ground where soils, vegetation and hydrology data are recorded on a field data form in order to make a wetland determination.

(17) "Statewide Wetlands Inventory" or "SWI" means an inventory which contains the location, wetland types and approximate boundaries of wetlands in the State of Oregon. This inventory is continually revised as additional information is received or obtained by the Division.

(18) "Stream" means a watercourse created by natural processes, or one that would be in a natural state if it were not for human-caused alterations.

(8) A study area summary shall be prepared that includes:
  (a) Total acreage in the study area;
  (b) Total acreage of wetlands in the study area, excluding actively used, artificially created wetlands such as detention ponds or aggregate extraction ponds; and
  (c) Total number of wetlands in the study area.

(9) A minimum of two (2) sets of final LWI products shall be prepared; one (1) set shall be provided to the Division for inclusion in the SWI and the other shall be provided to the local government.

(10) LWI maps and documents provided to the Division are public record and may be made available at cost to the public and state and federal agencies.

141-086-0225 Digital Map Standards

(1) Digital versions of map materials and associated databases are required and shall be submitted to the Division according to the requirements in OAR 141-086-0225(2) through (8). GIS products are preferred.

(2) GIS files shall have a linked database containing descriptive attributes and be georeferenced.
  (a) GIS coverages shall be submitted in an ArcView shape file, ArcInfo export file or a format that is compatible to these, or in other formats approved by the Division.
  (b) The following attributes must be included for each wetland polygon: a unique wetland identification label, Cowardin class code, field verified or not, and the Division's wetland delineation file number, if any. Sample points must be attributed with unique identification labels, and linear waterways must be attributed with unique identification labels.

(3) If GIS is not available, then other map files (such as AutoCAD drawing files) shall be submitted.
  (a) Non-GIS maps shall be in a digital format such as .dxf, .dwg, or Microstation .dgn files, or other formats approved by the Division.
  (b) Digital database information associated with the data layers shall be provided, including: a unique identification label for each wetland polygon, a unique identification label for each sample point, and a unique identification label for each linear waterway segment.
  (c) A database must be included that links the wetland polygon layer to the Cowardin class, field verification status, and wetland delineation file number, if any, for each wetland polygon.

(4) If the digital product is not georeferenced and rectified, a minimum of five (5) points, evenly distributed within the LWI area, shall be recorded with a Geographical Positioning System (GPS) unit and include:
  (a) A record of the positional accuracy of each point;
  (b) Brand and model type of the GPS equipment used; and
  (c) GPS points established at identifiable stable landmarks in the field and located on the final map.

(5) All georeferenced data sets shall report the following projection parameters:
  (a) Projection (Oregon Lambert preferred);

(b) Zone (if UTM);
(c) Units of Projection;
(d) Datum; and
(e) Spheroid.

(6) Separate coverages or data layers shall be submitted showing:
(a) Wetland polygons;
(b) Streams;
(c) Study area boundary;
(d) Tax lot lines (if they exist in digital format);
(e) Wetland and upland sample points;
(f) Potential mitigation/restoration sites, if any; and/or
(g) Other coverage combinations approved by the Division.

(7) Attribute or layer code list and metadata (description for each coverage or dataset and source material citations) shall be provided, including date and a disclaimer as is described in OAR 141-086-0220(2)(m) of these rules.

(8) Digital maps shall also be provided in a print file (such as .eps, .rtl, .cgm or .gra).

141-086-0228 Review and Approval Process

(1) A draft of all the LWI products required in OAR 141-086-0220 of these rules shall be provided to the Division (if the inventory was not developed by the Division) and the local government(s) for review.

(2) The local government shall provide opportunity for public review of and comment on the draft LWI products.

(3) Public and local government comments on draft LWI products shall be provided to the Division. The Division shall request in writing from the party responsible for preparing the LWI any revisions or additions required in order for the LWI to be approved.

(4) The Division shall review final products to ensure that all changes requested by the Division have been adequately addressed.

(5) If the final LWI products meet the requirements in these rules, the Division shall send a letter of approval to the local government.

141-086-0230 Revisions

(1) When local jurisdictions are required by the Department of Land Conservation and Development to review and update their LWI, the provisions of OAR 141-086-0230(1)(a) through (d) of these rules shall be followed.
(a) All Urban Growth Boundary expansion areas or other areas not included in the original LWI study area shall be inventoried according to the requirements in these rules.
(b) Within the previous LWI study area, wetland additions or boundary changes equal to or greater than one-half (0.5) acre shall be identified, mapped and assessed using OFWAM. A summary report including the results and any map changes shall be provided to the Division and is subject to Division review and approval.

(19) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (ORS 196.800(16)).

(20) "Wetland Delineation" means a determination of wetland presence that includes marking the wetland boundaries on the ground and/or on a detailed map prepared by professional land survey or similar accurate methods.

(21) "Wetland Determination" means identifying an area as wetland or non-wetland.

(22) "Wetland Mosaic" means a complex of several wetlands smaller than one-half (0.50) acres in size each, or less than one-tenth (0.10) acres in size for a WCP, that are interspersed between areas of non-wetland.

(23) "Wetland Boundary" means a line marked on a map that identifies the approximate wetland/non-wetland boundary.

141-086-0210 Inventory Development Process and Standards

(1) Sources of inventory information shall include:
- (a) U.S. Natural Resources Conservation Service (NRCS) county soil survey and county list of hydric soils and soils with hydric inclusions, or other available soil surveys;
- (b) NWI maps;
- (c) NRCS-certified wetland determinations, where available;
- (d) Federal Emergency Management Act floodplain maps, where available;
- (e) Other available local wetlands inventories or wildlife habitat inventories that include wetlands;
- (f) Division wetland determination files; and
- (g) Color and/or color infrared aerial photos, or other aerial photography approved by the Division, taken within five (5) years of inventory initiation. The minimum photo scale shall be 1 inch = 600 feet (1 inch = 200 feet for a WCP) unless another scale is approved by the Division.

(2) Sources of inventory information may include but are not limited to:
- (a) U.S. Department of Agriculture Farm Services Agency aerial color slides;
- (b) Local knowledge of area (e.g., residents);
- (c) Oregon Natural Heritage Program data;
- (d) Division permit files; and
- (e) Resource agencies, including the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife Service.

(3) Before beginning field verification, a field map such as an aerial photograph with a mylar overlay shall be prepared and shall include the approximate location of:
- (a) Any wetlands and deepwater habitats (other waters) from the NWI;
- (b) Any wetlands from the Division's wetland determination files or other inventories;
- (c) Hydric soils and soils with hydric inclusions (each coded separately);
- (d) Wetlands or possible wetlands identified on aerial photos; and
- (e) Sites to field-verify based on other leads.

(4) Aerial photo interpretation shall be tested early in the inventory process by interpreting several wetland types, ground truthing the interpretations, then completing the aerial photo interpretations.

(5) The local government shall be responsible for requesting property access permission from landowners in the study area for parcels identified by inventory staff and/or the Division as possibly containing wetlands.

(6) All probable wetlands, other waters and streams identified through the process described in OAR 141-086-0210(1) through (3) of these rules shall be field-verified.

(7) Sample plot data shall be provided according to the following minimum standards:

(a) At least one (1) sample plot that best characterizes each wetland or each portion of a wetland that has a distinctly different character (e.g., different landscape position, land use and Cowardin classification);

(b) Verify any uncertain wetland/non-wetland boundaries with paired sample plots;

(c) Verify with at least one (1) sample plot each probable wetland where land use activities such as ditching, water diversion, or agricultural practices are likely to have significantly altered site conditions, making observations from a distance or a site walk-over unreliable; and

(d) Verify with at least one (1) sample plot probable wetlands with unreliable indicators (e.g., one dominant plant that grows in both wetlands and non-wetlands, such as *Phalaris arundinacea*).

(8) If the LWI will be used for a WCP, in addition to the requirements in OAR 141-086-0210(6) and (7), a minimum of one (1) sample plot shall be provided that best characterizes each dominant wetland plant community.

(9) If the landowner denies access permission, employ off-site wetland determination methods and map those areas as wetland that appear to have wetland indicators.

(10) All wetlands one-half (0.5) acre and larger shall be identified and mapped. For a WCP, all wetlands one-tenth (0.10) acre and larger shall be identified and mapped.

(11) Each wetland shall be assigned a unique identification code. Contiguous wetlands assigned different codes may be grouped into a single OFWAM assessment unit based upon the guidance in OFWAM and/or in consultation with the Division.

(12) All previously delineated wetlands from the Division's files shall be field-verified, if possible, to determine if wetlands are still present and are approximately the same size and configuration as when delineated.

(13) All identified wetlands shall be classified:

(a) To Cowardin "class" level including special modifiers (i.e., "farmed" or "excavated"); and

(b) By dominant HGM class and subclass.

(14) When a wetland contains more than one (1) adjoining Cowardin classification, the minimum wetland class which must be differentiated shall be one-half (0.5) acre.

(15) Artificially created wetlands or other waters (such as a stormwater detention pond) shall be included in the inventory regardless of their jurisdictional status, and their purpose shall be labeled on the inventory maps.

(16) Where a wetland/non-wetland mosaic occurs, the site shall be labeled as a wetland/upland mosaic on all inventory maps and so described on the wetland summary sheet.

(17) Streams shall be mapped, but no further documentation such as wetland summary sheets (OAR 141-086-0220(6)) or OFWAM assessment (OAR 141-086-0220(7) is required.

(18) Possible wetlands noted during inventory development shall be mapped as point data on the appropriate parcel(s) and shall all be assigned the code "PW" and so labeled on the maps. No sample plot data is required and no further documentation such as wetland summary sheets (OAR 141-086-0220(6)) or OFWAM assessment (OAR 141-086-0220(7) is required.

(19) Vacant, former wetlands, consisting mostly of relict (dewatered) hydric soils, which are five (5) acres or larger in size shall be identified and mapped as potential wetland mitigation or restoration sites and shall be described in the LWI report as follows:

(a) Assign a unique identification code for mapping and reference in the text;

(b) Briefly describe easily-observed soil, vegetation and hydrologic alterations; and

(c) Identify the most likely water source (e.g., stream, groundwater) for restoring wetland hydrology.

141-086-0220 Maps and Reports

(1) Maps shall be developed and submitted to the Division in both paper and electronic format. If the study area is covered by more than one (1) wetland map, a single, smaller scale reference map of the complete study area is required. The reference map shall be indexed to the individual, large-scale maps and show, at a minimum, the Public Land Survey System grid, the location and code of all identified wetlands, the study area boundary, and major, named streets.

(2) Wetland maps shall include:

(a) Map name;

(b) Scale bar;

(c) Geographic reference to the Public Land Survey System;

(d) Roads, with major roads named, and railroads;

(e) Streams and stream names;

(f) Property boundaries if a parcel-based coverage of the study area exists;

(g) Watershed boundaries;

(h) Legend that explains all map symbols, line work and patterns;

(i) Map date (month and year final map prepared);

(j) All wetlands, clearly and accurately drawn and clearly identified by a unique wetland code that relates each wetland to field data forms, tables, databases, wetland summary sheets, and OFWAM summary forms;

(k) Previously delineated wetlands labeled with the Division's file number;

(l) Distinctive symbol or pattern for wetlands or significant portions of wetlands that were field-verified as opposed to those not field-verified;

(m) Disclaimer that reads: "Information shown on this map is for planning purposes only and wetland information is subject to change. There may be unmapped wetlands subject to regulation and all wetland boundary mapping is approximate. In all cases, actual field conditions determine wetland boundaries. You are advised to contact the Oregon Division of State Lands and the U.S. Army Corps of Engineers with any regulatory questions;"

(n) Numbered sample plots; and
(o) Study area boundary.

(3) A separate map shall be provided showing the approximate location of potential wetland mitigation/restoration sites and which includes the map elements described in Section 0220(2)(a) through (i) and (o) of this rule.

(4) Minimum map scale shall be 1 inch = 600 feet (1:7,200) or 1 inch = 200 feet (1:2,400) for a WCP.

(5) The inventory and mapping process shall be fully documented in order to ensure accuracy and consistency throughout the process. Documentation shall include:
(a) Wetland verification procedures used;
(b) Date(s) and scale(s) of source maps and aerial photos used;
(c) Technical staff members and qualifications;
(d) Sample plot data on standard field data forms, including data for sites sampled that failed to meet wetland criteria;
(e) Aerial photos or other field maps with an overlay of wetland mapping, sample plots, and any measurements taken; and
(f) All mapping and map transfer procedures used.

(6) A wetland summary sheet shall be prepared for each wetland. The summary sheet shall at a minimum include:
(a) The unique wetland code;
(b) Street address or equivalent location description;
(c) Township, Range, Section, Quarter Quarter Section and tax lot(s) that contain the mapped wetland;
(d) Approximate wetland size (in acres);
(e) Cowardin wetland classification(s);
(f) Soil type(s);
(g) Hydrologic basin;
(h) HGM classification;
(i) Sample plot numbers;
(j) Common name of dominant plant species;
(k) Primary hydrology source, including hydrology source and use of artificially created wetlands;
(l) Field verification date(s);
(m) Summary of OFWAM assessment results;
(n) Significant wetland determination, if made; and
(o) Comments which describe the wetland, including topographic position, land uses, alterations (including agricultural) and the basis for the wetland boundary determination.

(7) OFWAM assessment results shall be submitted for each wetland assessment unit and shall include:
(a) Wetlands of Special Interest for Protection (OFWAM, Chapter Five (5));
(b) Wetland Characterization results (OFWAM, Appendix B);
(c) Answer sheets for all wetland assessment questions (OFWAM, Appendix C);
(d) Function and condition summary sheet (OFWAM, Appendix C); and
(e) Assessment results represented in table format.

(c) Sources of information for review of the previous study area shall at a minimum include:

(A) Wetland delineation reports approved by the Division or map errors verified by the Division after the date of the approved LWI;

(B) Color and/or color infra-red aerial photos, or other aerial photos approved by the Division, taken within three (3) years of inventory revision initiation; and

(C) A field reconnaissance of the study area.

(d) Wetlands not previously mapped on the LWI shall be field verified as required in OAR 141-086-0210(7) through (9) of this rule; previously mapped wetlands no longer apparent on aerial photos shall also be field verified as necessary to confirm their absence.

(2) If the LWI was used as the basis for an approved WCP, the local jurisdiction shall instead:

(a) Provide to the Division, as part of the annual report (OAR 141-086-0035), a revised map and report indicating wetlands filled and wetlands restored, enhanced or created for mitigation; and

(b) Every five (5) years, in conjunction with the Division's five (5) year WCP review (ORS 196.684(6)), conduct a LWI review and incorporate new information, as required in OAR 141-086-0230(1)(b) through (1)(d) of these rules.

~~141-086-0240~~ ~~Landowner~~ Notification~~

When the LWI is approved by the Division, the local jurisdiction shall notify by mail within one hundred twenty (120) calendar days all landowners of record whose parcel contains a wetland or possible wetland that:

(1) Their parcel(s) was included in the wetlands inventory study area; and

(2) There is a wetland mapped on their parcel.

DIVISION OF STATE LANDS
ADMINISTRATIVE RULES FOR
IDENTIFYING SIGNIFICANT WETLANDS

141-86-300 PURPOSE

ORS 197.279 (3) directs the Division of State Lands to establish these criteria and procedures for the identification of significant wetlands under Statewide Planning Goal 5. Local governments will use these technical standards to complete their planning responsibilities for wetlands, which are established by the Land Conservation and Development Commission (OAR 660-23-100).

141-86-310 POLICY

To protect the state's wetland resources, the functions and services they provide, and all interests, it is important that clear and consistent criteria be used to identify significant wetlands for planning purposes.

141-86-320 USES AND APPLICABILITY

(1) These rules provide standard criteria for local governments to use to meet their obligations for freshwater wetland planning as set forth by the Land Conservation and Development Commission (LCDC) in Goal 5. These rules do not address planning requirements for estuarine wetlands, which are covered under Statewide Planning Goal 16.

(2) Local governments shall apply the criteria for identifying locally significant wetlands (LSW). As specified in LCDC's Goal 5 rules (OAR 660-23-100), the use of these criteria is required within urban growth boundaries (UGBs) and urban unincorporated communities (UUCs). The Goal 5 rules also authorize an option for counties to conduct detailed wetland planning in areas outside of UGBs and UUCs. Should a county choose to do so, the same rules and procedures as for UGBs and UUCs shall apply, including these criteria for significant wetlands.

(3) As provided by LCDC's Goal 5 rules (OAR Chapter 660, Division 23), local government planning and zoning responsibilities include the determination, designation, and protection of significant wetlands. A community that has identified significant wetlands prior to this rule should proceed under the provisions of OAR 660-23-250.

141-86-330 DEFINITIONS

(1) **"Director"** means the Director of the Division of State Lands or the Director's designee.

(2) **"Division"** means the Division of State Lands.

(3) **"Indigenous Anadromous Salmonids"** are chum, sockeye, Chinook and Coho salmon, and steelhead and cutthroat trout, that are members of the family Salmonidae and are listed as sensitive, threatened or endangered by a state or federal authority.

(4) **"Inhabited by"** means that a plant or animal species uses the site for rearing, feeding, or breeding or as a migration or dispersal corridor. This does not include incidental use of the site by an animal species.

(5) **"Locally Significant Wetlands"** or **"LSW"** are those wetland sites that provide functions or exhibit characteristics that are pertinent to community planning decisions made at a local scale, for example within a UGB. These wetland sites shall be identified by local governments according to the criteria and procedures in sections 141-86-340 and 141-86-350.

(6) **"Native Plant Community"** is used here to indicate a recognized assemblage of plant species indigenous to Oregon. All such wetland plant communities are listed in the most recent version of *Classification and Catalog of Native Wetland Plant Communities in Oregon* (Oregon Natural Heritage Program).

(7) **"Rare Plant Community"** is defined as relictual, uncommon or unique in Oregon, determined by number of occurrences and threats following national heritage program criteria (i.e., rarity ranking of G1-G3 or S1-S3). The most concise listing of wetland plant communities in Oregon that meet this standard for rarity is found in Appendix G of the *Oregon Freshwater Wetland Assessment Methodology* (Oregon Division of State Lands, 1996). The rarity rank of all wetland plant communities is also listed in the most recent version of *Classification and Catalog of Native Wetland Plant Communities in Oregon* (Oregon Natural Heritage Program).

(8) **"Wetlands"** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

141-86-340 PROCEDURES FOR IDENTIFYING LOCALLY SIGNIFICANT WETLANDS

(1) LSW criteria are applied by the local government.

(2) The following base information is required prior to applying the LSW criteria:

(a) An approved Local Wetlands Inventory (OAR 141-86-110 through 141-86-240) covering the plan area; and

(b) A function and quality assessment of all inventoried wetlands using the *Oregon Freshwater Wetland Assessment Methodology* (OFWAM; Oregon Division of State Lands, 1996). Functional assessment descriptors from OFWAM appear in italics in section 146-86-350 of these rules. An equivalent functional assessment methodology may be used, or adjustments may be made, upon written approval by the Director. If a different assessment methodology is approved, then equivalent terminology will be set out in the Division's letter of approval.

141-86-350 LOCALLY SIGNIFICANT WETLAND CRITERIA

(1) Exclusions. Regardless of their standing in relation to the criteria in OAR 141-86-350 (2) or (3) of these rules, wetlands shall not be designated as locally significant if they fall within any one of the following categories:

(a) Wetlands artificially created entirely from upland that are:

(A) created for the purpose of controlling, storing, or maintaining stormwater; or

(B) active surface mining or active log ponds; or

(C) ditches without a free and open connection to natural waters of the state (as defined in OAR 141-85-010 (9)) and which do not contain food or game fish (as defined in ORS 496.009); or

(D) less than one acre in size and created unintentionally as the result of:

(i) irrigation water overflow or leakage; or

(ii) construction activity not related to compensatory mitigation for permitted wetland impacts; or

(E) of any size and created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard.

(b) Wetlands or portions of wetlands that are contaminated by hazardous substances, materials or wastes as per the following conditions:

(A) The wetland is documented as contaminated on either the U.S. Environmental Protection Agency's (EPA) National Priority List (NPL, also known as the "superfund list"), or the Department of Environmental Quality's (DEQ) Inventory of Hazardous Substance Sites (ORS 465.225).

(B) Only the portion of the wetland affected by such hazardous substances or wastes shall be excluded from the LSW analysis. Affected portions shall be delineated in consultation with EPA and DEQ, and shall include areas potentially disturbed by clean-up activities.

(C) Contaminated wetlands that have subsequently been removed from the NPL or DEQ Inventory ~~following clean-up shall be re-evaluated under the LSW criteria at the next~~ periodic review.

(2) Mandatory LSW Criteria. A local government shall identify a wetland as locally significant if it meets one or more of the following criteria:

(a) The wetland performs any of the following functions at the levels indicated below using the *Oregon Freshwater Wetland Assessment Methodology*:

(A) *diverse* wildlife habitat; or

(B) *intact* fish habitat; or

(C) *intact* water quality function; or

(D) *intact* hydrologic control function.

(b) The wetland or a portion of the wetland occurs within a horizontal distance less than one-fourth mile from a water body listed by the Department of Environmental Quality as a water quality limited water body (303 (d) list), and the wetland's water quality function is described as *intact* or *impacted or degraded* using OFWAM. The 303(d) list specifies which parameters (e.g., temperature, pH) do not meet state water quality standards for each water body. A local government may determine that a wetland is not significant under this subsection upon documentation that the wetland does not provide water quality improvements for the specified parameter(s).

(c) The wetland contains one or more rare plant communities, as defined in this rule.

(d) The wetland is inhabited by any species listed by the federal government as threatened or endangered, or listed by the state as sensitive, threatened or endangered, unless the

appropriate state or federal agency indicates that the wetland is not important for the maintenance of the species.

(A) The use of the site by listed species must be documented, not anecdotal. Acceptable sources of documentation may include but are not limited to: field observations at the wetland sites during the local wetlands inventory and functional assessments, and existing information on rare species occurrences at agencies such as the Oregon Natural Heritage Program, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture and the U.S. Fish and Wildlife Service.

(B) Input originating from other locally knowledgeable sources constitutes "documentation" if verified by one of the above agencies or a university or college reference collection.

(e) The wetland has a direct surface water connection to a stream segment mapped by the Oregon Department of Fish and Wildlife as habitat for indigenous anadromous salmonids, and the wetland is determined to have *intact* or *impacted or degraded* fish habitat function using OFWAM.

(3) Optional LSW Criteria. At the discretion of the local government, wetlands that meet one or more of the following criteria may be identified as locally significant wetlands:

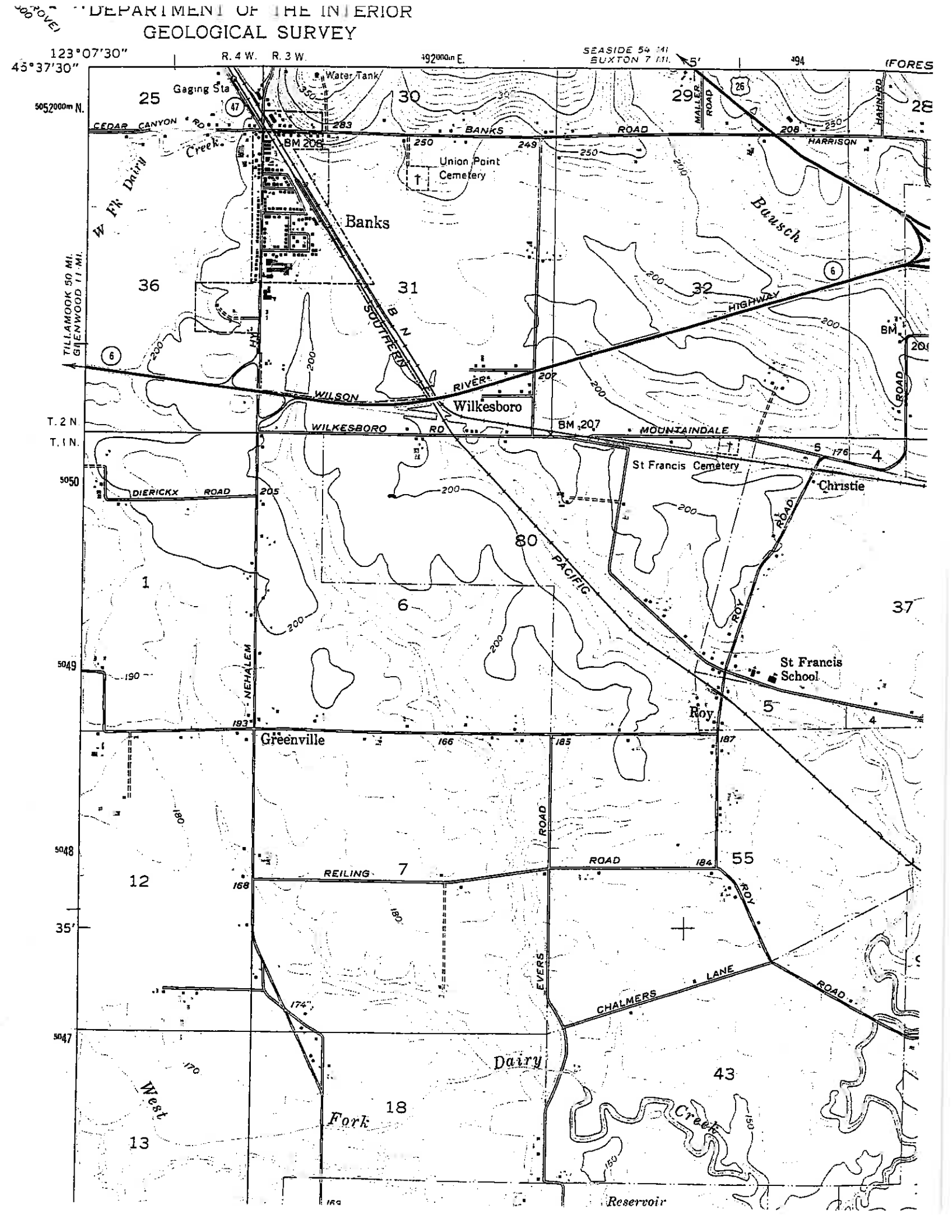
(a) The wetland represents a locally unique native plant community: wetland is or contains the only representative of a particular native wetland plant community in the UGB/UUC, which is only applicable if the entire UGB/UUC is inventoried. To be identified as a LSW, such a wetland must also have been assessed to perform at least one of the following functions at the levels indicated below using OFWAM:
(A) Its wildlife habitat descriptor is either *provides diverse habitat*, or *provides habitat for some wildlife species*; or
(B) Its fish habitat descriptor is either *intact*, or *impacted or degraded*; or
(C) Its water quality function descriptor is either *intact*, or *impacted or degraded*; or
(D) its hydrologic control function descriptor is either *intact*, or *impacted or degraded.*

(b) The wetland is publicly owned and determined to *have educational uses* using OFWAM, and such use by a school or organization is documented for that site.

FLSWRUL.DOC

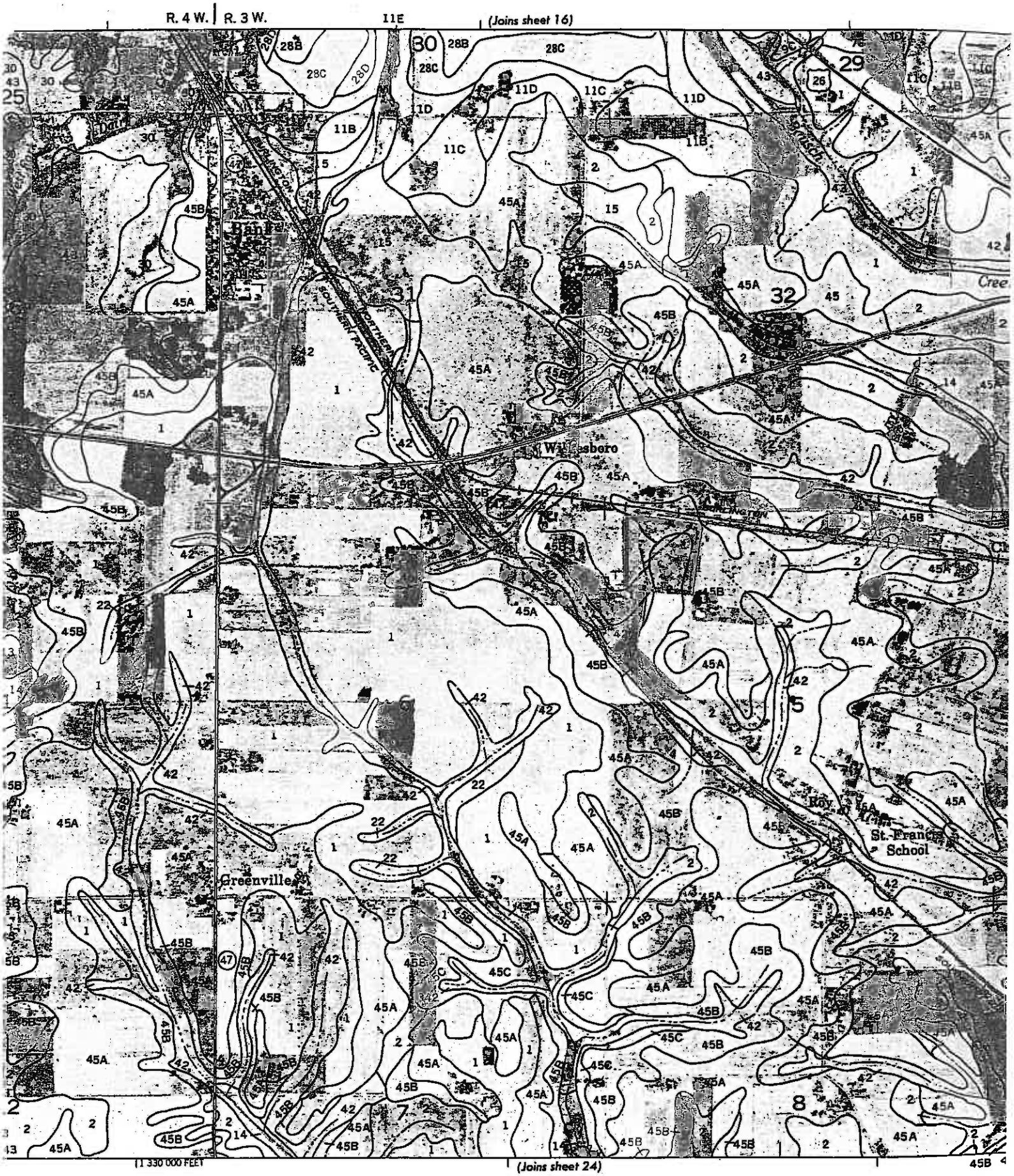
ATTACHMENT B

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



ATTACHMENT C

ATTACHMENT D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11E
(Joins sheet 16)
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1 330 000 FEET
Greenville
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Wilkesboro
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BURLINGTON
NORTHERN
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Creek
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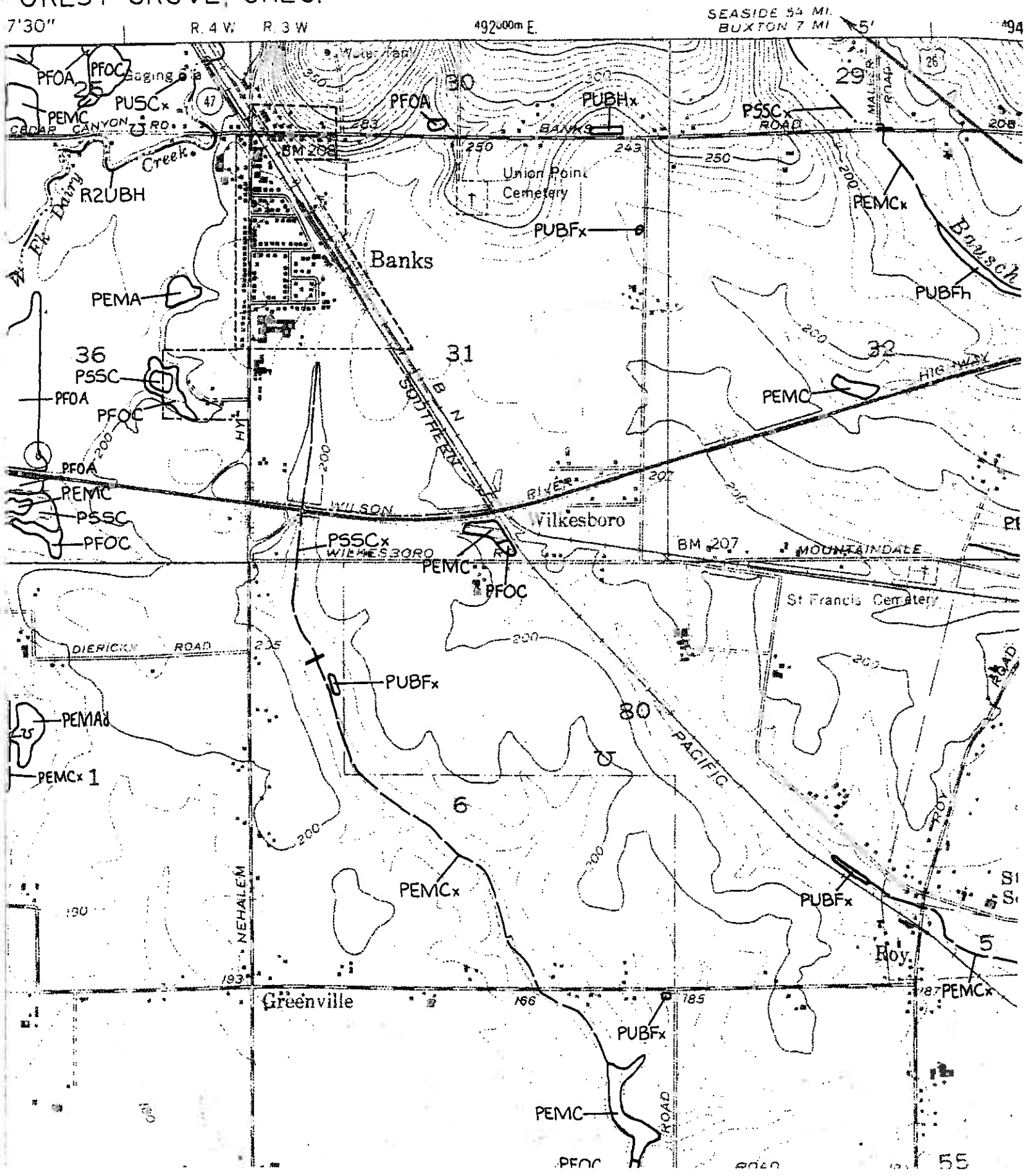
4000
3000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7'30"
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R. 3 W
492000m E.
SEASIDE 54 MI.
BUXTON 7 MI
5'
PFOA
PFOC
PUSCx
PEMC
CEDAR CANYON RD.
Creek
R2UBH
E. Fk. Dairy
BM 208
Union Point Cemetery
PUBHx
PSSCx
ROAD
PEMCx
PUBFx
Banks
PEMA
PUBFh
Brusch
36
31
32
PSSC
PFOA
PFOC
HIGHWAY
PEMC
SOUTHERN P. R.R.
WILSON RIVER
Wilkesboro
PSSCx
WILKESBORO
PEMC
PFOC
BM 207
MOUNTAINDALE
St Francis Cemetery
DIERICKX ROAD
PUBFx
PEMAd
PEMCx 1
30
PACIFIC
6
PEMCx
NEHALEM
PUBFx
Roy
5
Greenville
PUBFx
PEMC
ROAD
55

ATTACHMENT E

CITY OF BANKS LWI
WETLAND SUMMARY SHEET

WETLAND Code: DC-1 **Field Date:** 10/29/02

Location: Between subdivision, railroad and HWY 6 **Observers:** J. Morlan & K.J. Won

Tax Map: _____ **Tax Lot(s):** _____ **Wetland Size (Acres):** 0.3
T _____ **R** _____ **Sect:** _____ **Quarter/Quarter:** _____ **On-site:** Yes

Drainage Basin: Dairy Creek **Mapped Soils:** Verboort silty clay loam **Sample plots:** Plot 1

NWI Classification: ____ % POW __95 % PEM ____ % PSS _5__ % PFO ____ % ____%

HGM classification: Depressional Outflow

Hydrologic Source/Comments: Culvert from stormwater detention pond, precipitation & overland flow

Dominant Vegetation:

Herbs	Shrubs	Trees
Soft rush (*Juncus effusus*)	Himalayan blackberry (*Rubus discolor*)	Willows (*Salix* sp.)
Bentgrass (*Agrostis* sp.)	Douglas spiraea (*Spiraea douglasii*)	
Reed canarygrass (*Phalaris arundinacea*)		
Meadow foxtail (*Alopecurus pratensis*)		
Velvetgrass (*Holcus lanatus*)		
Willowherb (*Epilobium watsonii*)		

General Description:
Remnant of former wetland/creek swale. Very disturbed by past fill and excavation and current human activity. Water detention pond abuts west side of wetland; culvert discharges overflow to wetland. Wetland extends east to blackberry thicket at edge of fill. Narrow forested/shrub wetland at base of steep slope formed by HWY 6; culvert under highway conveys water from wetland to creek/wetland south of highway.

Wetland Boundary Information:
West: abrupt at berm for detention basin. North: abrupt at edge of fill. South: abrupt at base of fill for highway. West: gradual to non-wetland (would need delineation).

Wetland Functions & Condition (OFWAM Summary):

Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Education
Some	NA	**Intact**	Impacted	NA

Jurisdictional*: Yes

LSW: Yes

* subject to state permit requirements

CITY OF BANKS LWI
WETLAND SUMMARY SHEET

WETLAND Code: DC-2 (units A-D) **Field Date:** 10/29/02

Location: Between RR track east of high school south to HWY 6 **Observers:** J. Morlan & K.J. Won

Tax Map: _____ **Tax Lot(s):** _____ **Wetland Size (Acres):** approx. 6
T _____ **R** _____ **Sect:** _____ **Quarter/Quarter:** _____ **On-site:** Yes

Drainage Basin: Dairy Creek **Mapped Soils:** Verboort silty clay loam **Sample plots:** 2 and WD 96-0588

NWI Classification: <5 % POW 75 % PEM 15 % PSS 5 % PFO ____ % ____%

HGM classification: Riverine Impounding

Hydrologic Source/Comments: Creek, plus precipitation and groundwater

Dominant Vegetation:

Herbs	Shrubs	Trees
Soft rush (*Juncus effusus*)	Pacific Willow (*Salix lucida*)	Oregon ash (*Fraxinus latifolia*)
Broad-leaved cattail (*Typha latifolia*)	Douglas spiraea (*Spiraea douglasii*)	Red alder (*Alnus rubra*)
Reed canarygrass (*Phalaris arundinacea*)	Willows (*Salix sp.*)	Black cottonwood (*Populus balsamifera*)
Meadow foxtail (*Alopecurus pratensis*)	Black cottonwood (*Populus balsamifera*)	
	Rose (*Rosa sp.*)	

General Description:
Creek was ditched many years ago. PEM wetlands adjacent along eastern side of creek except along DC-2D. West side of creek has narrow wetland fringe to abrupt boundary at base of slope; school playing fields and other development at top of slope. Shrubs along creek banks; a few scattered shrubs in PEM wetlands, especially in DC-2C. DC-2C ("Whispering waters") used by school classes—signs, birdhouses, sample plot flags. Small area of recent fill at north end. Paved path along east side of most of wetland (Oak Way to high school track). Culverts under roads.

Wetland Boundary Information:
DC-2A: South of Oak Way to HWY 6. Narrow, reed canarygrass and shrubs along edges. New fill/construction in progress immediately to west. Mowed upland strip between creek/wetland and water detention swale to east.
DC-2B: Paved path forms east wetland boundary. Abrupt boundary on both east and west.
DC-2C: Paved path forms east wetland boundary. Abrupt boundary at playing fields on west.
CD-2D: All wetland confined within ditched banks of creek.

Wetland Functions & Condition (OFWAM Summary):

Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Education
Some	Impacted	**Intact**	**Intact**	**Has Uses**

Jurisdictional*: Yes

LSW: Yes

* subject to state permit requirements

CITY OF BANKS LWI
WETLAND SUMMARY SHEET

WETLAND Code: DC-3 **Field Date:** 10/29/02

Location: Between subdivision, railroad and HWY 6 **Observers:** J. Morlan & K.J. Won

Tax Map: _____ **Tax Lot(s):** _____ **Wetland Size (Acres):** ?
T ____ **R** ____ **Sect:** ____ **Quarter/Quarter:** _____ **On-site:** Yes

Drainage Basin: Dairy Creek **Mapped Soils:** Verboort silty clay loam **Sample plots:** WD 01-0612

NWI Classification: ____ % POW 100 % PEM ____ % PSS ___ % PFO ____ % ____%

HGM classification: Riverine flow-through

Hydrologic Source/Comments: Creek, overland flow

Dominant Vegetation:

Herbs	Shrubs	Trees
Soft rush (*Juncus effusus*)		
Bentgrass (*Agrostis* sp.)		
Reed canarygrass (*Phalaris arundinacea*)		
Water foxtail (*Alopecurus geniculatus*)		

General Description:
Ditched intermittent creek/wetland including ditch segment alongside lumber yard that connects directly to creek. Creek culverted under railroad and residential area; daylights at NE end of DC-2D. Fish presence highly unlikely due to small size of creek and length of downstream culverts. Headwater of creek extends to north outside study area.

Wetland Boundary Information:
Abrupt at both sides and at culvert under railroad.

Wetland Functions & Condition (OFWAM Summary):

Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Education
Some	Not present	Impacted	Impacted	NA

Jurisdictional*: Yes

LSW: No

* subject to state permit requirements

CITY OF BANKS LWI
WETLAND SUMMARY SHEET

WETLAND Code: DC-4 **Field Date:** 10/29/02

Location: West end of Sunset Park (private park) **Observers:** J. Morlan & K.J. Won

Tax Map: _____ **Tax Lot(s):** _____ **Wetland Size (Acres):** >5
T _____ **R** _____ **Sect:** _____ **Quarter/Quarter:** _____ **On-site:** No

Drainage Basin: Dairy Creek **Mapped Soils:** Wapato silty clay loam **Sample plots:**

NWI Classification: ____ % POW 10 % PEM 90 % PSS ___ % PFO ____ % ____%

HGM classification: Slope/flat

Hydrologic Source/Comments: Precipitation and groundwater

Dominant Vegetation:

Herbs	Shrubs	Trees
Unidentified cultivated grass	Willows (*Salix sp.*)	Black cottonwood (*Populus balsamifera*)

General Description:
Shrub wetland with isolated tall cottonwoods within study area, continuing to west and north as farmed wetland/nonwetland complex. Several large Douglas firs at southwest end on terrace above floodplain. Considerable human activity in park adjacent to wetland.

Wetland Boundary Information:
South and east boundary is abrupt at topographic break. West and north boundaries are subtle and wetland likely continues outside study area.

Wetland Functions & Condition (OFWAM Summary):

Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Education
Diverse	NA	Impacted	**Intact**	NA

Jurisdictional*: Yes

LSW: Yes

* subject to state permit requirements

CITY OF BANKS LWI
WETLAND SUMMARY SHEET

WETLAND Code: DC-5 **Field Date:** 10/29/02

Location: Between Oak Way & HWY 6 and north of Oak Way, East of path **Observers:** J. Morlan & K.J. Won

Tax Map: _____ **Tax Lot(s):** _____ **Wetland Size (Acres):** >5
T _____ **R** _____ **Sect:** _____ **Quarter/Quarter:** _____ **On-site:** Yes

Drainage Basin: Dairy Creek **Mapped Soils:** Verboort silty clay loam **Sample plots:** WD 96-0588

NWI Classification: 5 % POW 80 % PEM 5 % PSS ___ % PFO ____ % ____%

HGM classification: Riverine Impounding

Hydrologic Source/Comments: Stormwater discharge; overland flow

Dominant Vegetation:

Herbs	Shrubs	Trees
Reed canarygrass (*Phalaris arundinacea*)	Willows (*Salix sp.*)	
Broad-leaved cattail (*Typha latifolia*)		

General Description:
Stormwater detention basins constructed parallel to stream and associated wetlands (DC-2). Constructed at least partially from wetland. Basins maintained by Clean Water Services.

Wetland Boundary Information:
Mostly distinct along all edges.

Wetland Functions & Condition (OFWAM Summary):

Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Education
Some	NA	**Intact**	Impacted	NA

Jurisdictional*: Yes

LSW: Yes

* subject to state permit requirements

DIVISION OF STATE LANDS – WETLAND DETERMINATION DATA FORM

County: Washington Date: 10/29/02 File #
Project/Contact: Banks LWZ Det. by: J. Morlan
Plant Community: Disturbed Alder/Hola Plot # (1) Wetland DC-1
Plot location: at East end of wetland/transition zone to himalayan blackberry patch to East
Do normal environ. conditions exist? Y ✓ N ___ Explain:
Has Veg. ___ ✓ Soil ___ ✓ Hydrology ___ ✓ been significantly disturbed?
Explain: Area has been subject to fill, excavation of WQ pond, HW46 construction etc.

VEGETATION

Dominant Species	Status	% Cover
Tree Stratum		
Total Cover: —		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: —		
1.		
2.		
3.		
4.		
5.		

Dominant Species	Status	% Cover
Herb Stratum		
Total Cover: 100		
1. Holcus lanatus	FAC	40 *
2. Alopecurus pratensis	FACW	60 *
3. Juncus tenuis	FACW	T
4. Agropyron repens	FAC-	T
5. Epilobium sp. likely	FACW	5
6. Rumex crispus	FAC+	T
7. Cirsium vulgare	FAC U	5
8.		
9.		
10		

Percent of Dominant Species that are OBL, FACW, FAC (not FAC-): 100%
Other Notable Species:
Criteria Met? YES X NO ___

SOILS

Map Unit Name: Verboort silty clay loam Drainage Class:
Taxonomy: On Hydric Soils List? Y X N ___

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
10"		10YR 3/2	7.5YR 4/6 cmmm/med/prom.			

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Reducing Conditions (tests positive)
- ___ Gleyed
- X Redox. features (w/in 10")

Criteria Met? YES X NO ___

- ___ Concretions/Nodules (w/in 3"; > 2mm)
- ___ High organic content in surface (in Sandy Soils)
- ___ Organic streaking (in Sandy Soils)
- ___ Organic pan (in Sandy Soils)
- ___ Listed on Hydric Soils List
- ___ Other:

* abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

Recorded Data

___ Recorded Data Available: ___ Aerial Photos ___ Stream gauge ___ Other
___ No Recorded Data Available

Field Data

Depth of inundation: Depth to Saturation: Depth to free water:

Primary Hydrology Indicators:

- ___ Inundated
- ___ Saturated in upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns

Criteria Met? YES X NO ___

Secondary Hydrology Indicators (2 or more required):

- X Oxidized Root Channels (upper 12") few
- ___ Water-stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- X Other: Depression

DETERMINATION

WETLAND? YES X NO ___ Comments:

DIVISION OF STATE LANDS – WETLAND DETERMINATION DATA FORM

County: Washington Date: 10/29/02 File #
Project/Contact: Banks LW2 Det. by: J. Morlan
Plant Community: Agrostis Plot # (2) DC-2-D
Plot location: on bench above ditched creek/wetland; between creek and ballfield fence near scoreboard
Do normal environ. conditions exist? Y ✓ N ___ Explain:
Has Veg. ___ Soil ✓ Hydrology ✓ been significantly disturbed?
Explain: Creek/wetland ditched a long time ago. Apparent soil alteration perhaps w/ ballfield construction

VEGETATION

Dominant Species	Status	% Cover
Tree Stratum		
Total Cover: —		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: —		
1.		
2.		
3.		
4.		
5.		

Dominant Species	Status	% Cover
Herb Stratum		
Total Cover: 100		
1. Agrostis sp.	FAC-FACW	90 ✓
2. Phalaris arundinacea	FACW	5
3. Rumex crispus	FAC+	T
4. Holcus lanatus	FAC	10
5. Senecio Jacobaea	FACU	T
6.		
7.		
8.		
9.		
10		

Percent of Dominant Species that are OBL, FACW, FAC (not FAC-): 100
Other Notable Species:
Criteria Met? YES X NO ___

SOILS

Map Unit Name: Urryboort silty clay loam Drainage Class:
Taxonomy: On Hydric Soils List? Y ___ N ___

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
Refusal at about 1" in 2 locations attempted					apparent fill	

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions (tests positive)
___ Gleyed
___ Redox. features (w/in 10")
___ Concretions/Nodules (w/in 3"; > 2mm)
___ High organic content in surface (in Sandy Soils)
___ Organic streaking (in Sandy Soils)
___ Organic pan (in Sandy Soils)
___ Listed on Hydric Soils List
___ Other:
Criteria Met? YES ___ NO X
* abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

Recorded Data
___ Recorded Data Available: ___ Aerial Photos ___ Stream gauge ___ Other
___ No Recorded Data Available

Field Data
Depth of inundation: Depth to Saturation: Depth to free water:

Primary Hydrology Indicators:
___ Inundated
___ Saturated in upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns
Criteria Met? YES ___ NO X

Secondary Hydrology Indicators (2 or more required):
___ Oxidized Root Channels (upper 12")
___ Water-stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other:

Bench slopes toward creek a bit.

DETERMINATION

WETLAND? YES ___ NO X Comments:

ATTACHMENT F

Wetlands of Special Interest for Protection

The first filter in the Oregon Method is to see whether the wetland is in a management plan, is protected by regulatory rules or statutes, or is uncommon in Oregon. A "yes" answer to any of the following questions will place the wetland into this category and management decisions should be made to protect the site. You still may want to evaluate the functions and conditions of each wetland to give you an overall evaluation of the wetlands in your assessment area. You should note on the Function and Condition Summary Sheet (Chapter VI and Appendix C) the information from this section. You do not need to contact every agency listed, but all those listed have all or some of the information you need.

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
Question 1 Does the wetland contain threatened, endangered or sensitive species of wildlife, plants, invertebrates or fish? (Either federal- or state-listed. Include species.) If yes, list.	B	B	B
a. Yes (Per Jim Grimes, ODFW)			
b. No			
c. Unknown			
List: (cutthroat trout likely in creek; not listed)			
Information source Oregon Natural Heritage Program, The Nature Conservancy, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture.			
Question 2 Is the wetland designated as critical habitat or essential habitat for federal- or state-listed threatened or endangered species of wildlife, plants, invertebrates or fish? If yes, list species.	B	B	B
a. Yes			
b. No			
c. Unknown			
List:			
Information source U.S. Fish and Wildlife Service, National Marine Fisheries Service, The Nature Conservancy.			

Question 3

Is the wetland a dedicated or proposed Registered State Natural Area or Area of Critical Environmental Concern, State Natural Heritage Conservation Area, Federal Research Natural Area, or a Nature Conservancy Preserve?

a. Yes
b. No
c. Unknown
List which it is:

Information source

The Nature Conservancy, the Oregon Natural Heritage Program, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service and Corps of Engineers.

Question 4

Is the wetland of regional or national significance for migratory birds?

a. Yes
b. No
c. Unknown
List which species:

Information source

U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife.

Question 5

Is the wetland protected in a local wetland conservation plan or a local comprehensive plan as a Goal 5 or Goal 17 resource?

a. Yes
b. No
c. Unknown

Information source

Local planning office.

Question 6

Is the wetland a designated State Outstanding Resource Water?

a. Yes
b. No
c. Unknown

Information source

Oregon Department of Environmental Quality. (As of 1996, DEQ has not made any such designations.)

Wetland 1	Wetland 2	Wetland 3
B	B	B
B	B	B
B	B	B
B	B	B

Question 7

Is the wetland a protected area in a recognized federal, state or local management plan, e.g., for a park, refuge or scenic river?

a. Yes
b. No
c. Unknown
List name:

Information source

Oregon Department of Fish and Wildlife, State Parks, U.S. Fish and Wildlife Service, Bonneville Power Administration, Bureau of Land Management, National Park Service, METRO, local parks department.

Question 8

Is the wetland a *protected* mitigation site for a removal-fill permit, federal 404 fill permit, or enforcement action? Protected means there is a legal instrument, such as a conservation easement, that will preclude a wetland impact permit from being issued for this site.

a. Yes
b. No
c. Unknown

Information source

Oregon Division of State Lands, Corps of Engineers, Environmental Protection Agency.

Question 9

Is the wetland a restoration or protected area included in the wetland reserve program administered by the Natural Resources Conservation Service? The length of protection may vary depending on landowner agreements.

a. Yes
b. No
c. Unknown

Information source

Natural Resources Conservation Service, Consolidated Farm Services Agency.

Wetland 1	Wetland 2	Wetland 3
B	B	B
B	C	B
B	B	B

Question 10

Is the wetland considered rare or unique in Oregon? Examples include bogs, vernal pools and old growth forested wetlands (See Appendix G).

a. Yes
b. No
c. Unknown

Information source

The Nature Conservancy, Oregon Division of State Lands, the Oregon Natural Heritage Program.

Wetland 1	Wetland 2	Wetland 3
B	B	B

Wetlands of Special Interest for Protection

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3
Question 1	B	B	
Question 2	B	B	

The first filter in the Oregon Method is to see whether the wetland is in a management plan, is protected by regulatory rules or statutes, or is uncommon in Oregon. A "yes" answer to any of the following questions will place the wetland into this category and management decisions should be made to protect the site. You still may want to evaluate the functions and conditions of each wetland to give you an overall evaluation of the wetlands in your assessment area. You should note on the Function and Condition Summary Sheet (Chapter VI and Appendix C) the information from this section. You do not need to contact every agency listed, but all those listed have all or some of the information you need.

Question 1

Does the wetland contain threatened, endangered or sensitive species of wildlife, plants, invertebrates or fish? (Either federal- or state-listed. Include species.) If yes, list.

a. Yes
b. No
c. Unknown
List:

Information source

Oregon Natural Heritage Program, The Nature Conservancy, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture.

Question 2

Is the wetland designated as critical habitat or essential habitat for federal- or state-listed threatened or endangered species of wildlife, plants, invertebrates or fish? If yes, list species.

a. Yes
b. No
c. Unknown
List:

Information source

U.S. Fish and Wildlife Service, National Marine Fisheries Service, The Nature Conservancy.

Question 3

Is the wetland a dedicated or proposed Registered State Natural Area or Area of Critical Environmental Concern, State Natural Heritage Conservation Area, Federal Research Natural Area, or a Nature Conservancy Preserve?

a. Yes
b. No
c. Unknown
List which it is:

Information source

The Nature Conservancy, the Oregon Natural Heritage Program, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service and Corps of Engineers.

Question 4

Is the wetland of regional or national significance for migratory birds?

a. Yes
b. No
c. Unknown
List which species:

Information source

U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife.

Question 5

Is the wetland protected in a local wetland conservation plan or a local comprehensive plan as a Goal 5 or Goal 17 resource?

a. Yes
b. No
c. Unknown

Information source

Local planning office.

Question 6

Is the wetland a designated State Outstanding Resource Water?

a. Yes
b. No
c. Unknown

Information source

Oregon Department of Environmental Quality. (As of 1996, DEQ has not made any such designations.)

Wetland 1	Wetland 2	Wetland 3
B	B	
B	B	
B	B	
B	B	

Question 7

Is the wetland a protected area in a recognized federal, state or local management plan, e.g., for a park, refuge or scenic river?

a. Yes
b. No
c. Unknown
List name:

Information source

Oregon Department of Fish and Wildlife, State Parks, U.S. Fish and Wildlife Service, Bonneville Power Administration, Bureau of Land Management, National Park Service, METRO, local parks department.

Question 8

Is the wetland a *protected* mitigation site for a removal-fill permit, federal 404 fill permit, or enforcement action? Protected means there is a legal instrument, such as a conservation easement, that will preclude a wetland impact permit from being issued for this site.

a. Yes
b. No
c. Unknown

Information source

Oregon Division of State Lands, Corps of Engineers, Environmental Protection Agency.

Question 9

Is the wetland a restoration or protected area included in the wetland reserve program administered by the Natural Resources Conservation Service? The length of protection may vary depending on landowner agreements.

a. Yes
b. No
c. Unknown

Information source

Natural Resources Conservation Service, Consolidated Farm Services Agency.

Wetland 1	Wetland 2	Wetland 3
B	B	
B	B	
B	B	

Question 10

Is the wetland considered rare or unique in Oregon? Examples include bogs, vernal pools and old growth forested wetlands (See Appendix G).

a. Yes
b. No
c. Unknown

Information source

The Nature Conservancy, Oregon Division of State Lands, the Oregon Natural Heritage Program.

Wetland 1	Wetland 2	Wetland 3
B	B	

ATTACHMENT G

Wetland Assessment Questions: Answer Sheet

Wetland identifier	DC-1	DC-2	DC-3	DC-4
Wildlife habitat				
Question 1	B	A	C	A
Question 2	C	C	C	A
Question 3	C	B	B	B
Question 4	C	C	—	—
Question 5	A	A	A	B
Question 6	A	A	A	B
Question 7	A	C	C	A
Question 8	C	C	C	A
Question 9	A	C	C	C
Assessment descriptor	Some	Some	Some	Diverse
Fish habitat	N/A			N/A
Streams and rivers				
Question 1		A	C	
Question 2		C	C	
Question 3		C	C	
Question 4		C	C	
Question 5		C	C	
Question 6		A	C	
Lakes and ponds				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor	N/A	Impacted	Not Present	N/A
Water quality				
Question 1	B	A	A	B
Question 2	A	A	B	B
Question 3	A	A	A	A
Question 4	B	A	B	A
Question 5	A	A	A	C
Question 6	C	A	A	C
Assessment descriptor	Intact	Intact	Impacted	Impacted

Wetland Assessment Questions: Answer Sheet

Wetland identifier	DC-1	DC-2	DC-3	DC-4
Hydrologic control				
Question 1	B	B	B	A
Question 2	A	A	B	B
Question 3	B	A	B	A
Question 4	B	B	B	C
Question 5	C	C	C	A
Question 6	A	A	A	B
Question 7	A	A	A	A
Assessment descriptor	Impacted	Intact	Impacted	Intact
Sensitivity to future impacts	—	—	—	—
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Enhancement potential	—	—	—	—
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Education	—		—	—
Question 1		A		
Question 2		A		
Question 3		B		
Question 4		A		
Question 5		A		
Question 6		A		
Assessment descriptor		Has uses		

Wetland Assessment Questions: Answer Sheet

Wetland identifier	DC-5			
Wildlife habitat				
Question 1	A			
Question 2	C			
Question 3	C			
Question 4	C			
Question 5	B			
Question 6	A			
Question 7	C			
Question 8	C			
Question 9	C			
Assessment descriptor	Some			
Fish habitat	N/A			
Streams and rivers				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Lakes and ponds				
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Water quality				
Question 1	A			
Question 2	A			
Question 3	A			
Question 4	B			
Question 5	A			
Question 6	A			
Assessment descriptor	Intact			

Wetland Assessment Questions: Answer Sheet

Wetland identifier	DC-5			
Hydrologic control				
Question 1	B			
Question 2	A			
Question 3	B			
Question 4	B			
Question 5	B			
Question 6	A			
Question 7	A			
Assessment descriptor	Impacted			
Sensitivity to future impacts	—			
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Enhancement potential	—			
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				
Education	—			
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Assessment descriptor				

Appendix B
Wetland Characterization

Watershed characterization

Notes

Watershed identification _____

Wetland Characterization (Page 1 of 19)

Watershed setting

All questions pertaining to the watershed can be answered in the office from aerial photographs, U.S. Geological Service topographical maps, and other reference materials. (See Appendix A.)

Drainage basin

The Oregon Water Resources Department has divided the state into 18 drainage basins. Check the map in Appendix H to see which drainage basin contains the study site.

1. What is the name of the drainage basin that contains your assessment area?

Physical characteristics of the watershed being assessed (within the drainage basin)

Topography

2. What is the watershed's area in square miles? The watershed area is often much smaller than the drainage basin (see Appendix E).
3. Calculate the average slope of the watershed (see Appendix F).

Hydrologic profile

4. Is the stream flow in the watershed modified by dams, channelization or levees? (Choose all that are appropriate.)
   (a.) Tributary streams to the main stem stream are modified.
   (b.) Main stem stream is modified.
   c. Stream flow is not modified (free-flowing.)
5. Is water being taken out of the stream(s) through active diking, drainage or irrigation districts in the watershed upstream of the assessment area?
   a. Yes.
   (b.) No.

Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area?
   a. Urban.
   (b.) Urbanizing (mix of urban, agriculture and forest uses).
   c. Agriculture (farming, ranching or grazing).
   d. Forested or natural area.

Watershed Notes

Lower Willamette
(Tualatin / Dairy Creek)

ditched & straightened

Watershed identification Dairy Creek/ Tualatin

Wetland Characterization (Page 2 of 19)

Water quality *(Use more specific water quality information, if available. Contact local DEQ office, or call the DEQ lab at (503) 229-5983 for sampling information.)*

7. Consult the most recent State of Oregon Department of Environmental Quality 305(b) Report to determine whether any streams in the study area are listed as a *water quality limited.* (You may want to ask DEQ whether there are any proposed changes.) This information is included in Clean Water Act section 303(d) reporting.
   (a.) Streams or portions of streams within the study area are listed as *water quality limited.*
   b. No streams or portions of streams within the study area are listed as *water quality limited.*

8. Consult the most recent *Oregon Statewide Assessment of Nonpoint Sources of Water Pollution* to determine the water quality condition of stream reaches in the watershed upstream from the assessment area. (If both "b" and "c" apply, choose "c.")
   a. All upstream reaches are listed as *no problem* (or no data available).
   b. One or more upstream reaches are listed in *moderate* water quality condition.
   c. One or more upstream reaches are listed in *severe* water quality condition.

Biological characteristics of the watershed

9. Fisheries: Select all that are appropriate and list type if known. (Contact local Oregon Department of Fish and Wildlife office for this information.)

	Type
(a) Cold water.	
(b) Warm water.	
(c) Anadromous.	
(d) Wild population.	
e. Introduced or hatchery populations.	
f. None.	
g. Other (list).	

Watershed Notes

per DEQ, all streams in Dairy Creek basin a concern for Phosphorus, sediment, bacteria, DO.

← outdated & no longer in use

estimated, based on information from DEQ (Robert Burkhart, Tualatin Basin coordinator)

Watershed identification _____

Wetland Characterization (Page 3 of 19)

Watershed Notes

10. Are known sensitive, threatened or endangered fish species present in the watershed? If so, list which species.

	Species
(a.) Yes.	winter steelhead (fed. listed)
b. No.	Coho salmon (not listed)
c. Unknown.	Cutthroat trout (not listed)

In west fork of Dairy Creek

11. Wildlife species: Select all that are appropriate and list species if known. (Contact local Oregon Department of Fish and Wildlife office for this information.)

	Species
(a.) Migratory birds.	
(b.) Big game.	
(c.) Nesting birds.	

12. Are known sensitive, threatened or endangered plant species or wildlife species other than fish present in the watershed? If so, list which species. (Contact local ODFW office or Natural Heritage Council for this information.)

	Species
a. Yes.	
b. No.	
(c.) Unknown.	

check w/ ONHP

13. Does the watershed provide a natural corridor for fish or wildlife movement? (Observe from aerial photographs.) **List whether for fish, wildlife or both.** Consider fences, dams and other barriers to travel. Aerial photographs of the watershed area are the best source of information. Fragmented systems have barriers to movement or a section where the natural area is broken by developed area.

A corridor is a landscape feature that enables fish or wildlife species to travel between broad geographical areas. (See Figure 1.)

(a.) There are contiguous natural areas that allow species movement, and if barriers exist, they do not stop animal or fish movement.

b. The natural areas are fragmented, but species movement is still possible.

c. The habitat system is fragmented, and there are barriers to species movement.

both

DC-1, DC-2, DC-3

Watershed identification _____

Wetland Characterization (Page 4 of 19)

Watershed Notes

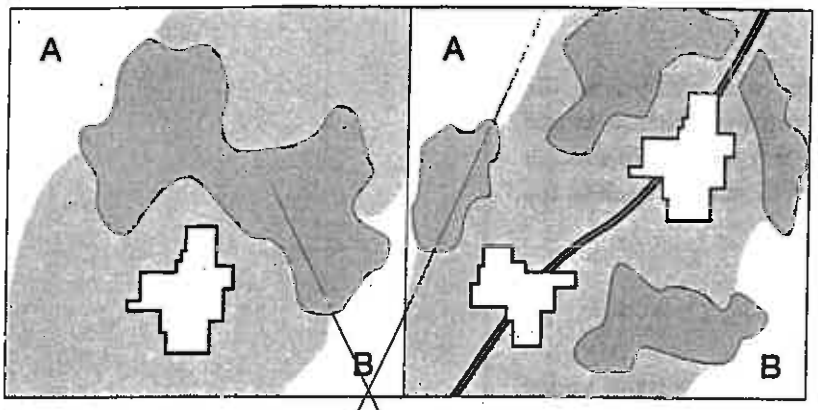


Figure 1. Watersheds as corridors for wildlife movement.
Areas A and B are the end points of a movement corridor through the watershed. Natural areas are shaded darkly, the irregular polygons represent highly developed areas, and the thick black line represents an impassable barrier such as an interstate highway. In the first part of the illustration, the contiguous natural area connects both ends of the corridor. The developed area is a barrier, but it does not obstruct species movement. The second half of the illustration shows fragmented natural areas with an impassable barrier. If the barrier stopped at the smaller developed area and did not continue off the lower left, species movement would still be possible.

14. What are the landscape features at both ends of the movement corridor? (These may lie outside the assessment area.) From an aerial photo, observation or local knowledge, determine whether there are large natural areas at either end of the movement corridor. The natural area does not have to be a wetland.
    a. Large natural habitat areas are at both ends.
    b. One end has a natural habitat area and the other end is developed.
    c. Both ends are developed.

Watershed identification _____

Wetland Characterization (Page 5 of 19)

Individual wetland sites

Fill out this part of the characterization for each wetland in the assessment area. Some of the information can be gathered in the office; some must be gathered at the site. You may want to do a rough sketch of the site (doesn't have to be to scale) to refer to back in the office.

Wetland structure and relation to surrounding landscape

✔15. What percentage of the area within 500 feet of the wetland's edge is dedicated to the land uses listed below? (From overlay 2 or in the field.)

It is best to determine the land uses from a recent aerial photo. If an aerial photo is not available, measure 500 feet in the field to get an idea of distance to evaluate. Use the following ranges for your answers for each land-use category:

a. Less than 20%.
b. Between 20% and 50%.
c. Greater than 50%.

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
1. Open Space (includes natural areas, parks and developed recreation areas, but not land designated for Exclusive Forest Use).	A	B	–
2. Agriculture (pasture, cropped lands, orchards, range land).	A	–	A
3. Exclusive Forest Use lands.	–	–	–
4. Developed uses (residential, commercial or industrial—rural and urban).	C	C	C
5. Other (list).	A	–	–

✔16. What is the dominant existing land use within 500 feet of the wetland on the **downstream or down-slope edge** of the wetland? Use the same land-use categories as question 15.

DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
Developed >50 Ag < 20	Developed >50 Ag < 20	Developed

17. What is the wetland's area in acres? (Measure the entire area of contiguous wetland, not just the portion within the assessment area. Use the dimensions of the wetland as outlined on the base map.)

a. Greater than 5 acres.
b. Between 0.5 acres and 5 acres.
c. Less than 0.5 acres.

DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
Calculate	A	B 2.

✔ *Questions preceded by a check mark can be completed in the field.*

Watershed identification _____

DC-1 Wetland 1 | DC-2 Wetland 2 | DC-3 Wetland 3

Wetland Characterization (Page 6 of 19)

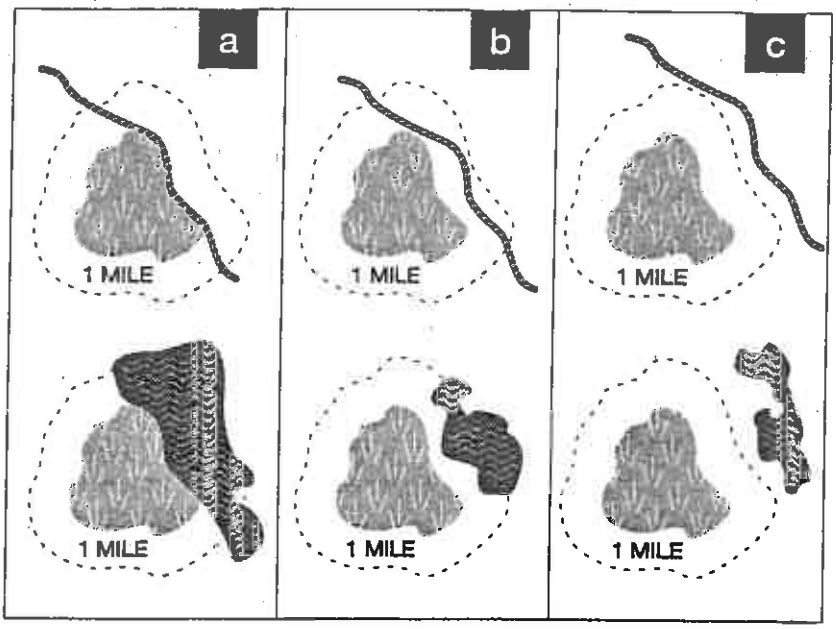


Figure 2. Connectivity to streams, lakes and ponds.
The lightly shaded area represents a wetland, the darkly shaded area represents a lake or pond and the dark line represents a stream. Part "a" shows the wetland connected to a stream, lake or pond, part "b" shows a stream, lake or pond within 1 mile but no surface connection, and part "c" shows no stream, lake or pond within 1 mile and no surface connection.

18. How is the wetland connected to another body of water, such as a stream, lake or pond? (See Figure 2.)
    a. The wetland is connected by surface water to another body of water. This may be by a culvert, irrigation ditch, intermittent stream or perennial stream.
    b. No surface-water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland.
    c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.

19. Is all or part of the wetland located within the 100-year floodplain (use floodplain maps to determine) or within an enclosed basin? An enclosed basin has no inlet or outlet.
    a. Yes.
    b. No.

Wetland 1	Wetland 2	Wetland 3
A	A	A
B	B	B

Watershed identification _____

Wetland Characterization (Page 7 of 19)

20. What percentage of the area within 500 feet of the wetland's edge is **zoned** for each of the land uses listed below?

    Use the following ranges for your answers:
    a. Less than 20%
    b. Between 20% and 50%
    c. Greater than 50%.

    1. Open Space (includes natural areas, parks and developed recreation areas, but not lands zoned for Exclusive Forest Use).
    2. Agriculture (pasture, cropped lands, orchards, range land).
    3. Exclusive Forest Use lands.
    4. Developed uses (residential, commercial, industrial).
    5. Other (list).

Wetland habitat

✓21. What percentage of the wetland's area is covered by the following Cowardin wetland classes? (Cowardin wetland classes refer to a classification of wetland type by vegetation cover. See Appendix D.) Only list those that compose 10% or more of the overall wetland.

    The percentages can be estimated in the field or from aerial photographs. Use the following categories for your answers:
    a. Between 70% and 100%.
    b. 50% or more, but less than 70%.
    c. 20% or more, but less than 50%.
    d. 10% or more, but less than 20%.

    1. Open water (deep water habitat, greater than or equal to 6.6 feet or 2 meters).
    2. Emergent (includes floating aquatics—herbaceous plants that can tolerate flooding and living in wet soils).
    3. Scrub-shrub (woody vegetation under 20 feet tall).
    4. Forested (woody vegetation 20 feet or taller).

✓22. For urban areas, how many wetland plant species are present? (You need not list the species name.)
    a. More than 5 plant species.
    b. Between 2 and 5 plant species.
    c. 1 plant species (monotypic).

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
20.1	A	C	–
20.2	A	–	B
20.3	–	–	–
20.4	C	B	C
20.5	–	–	–
21.1	A	A	A
21.2		D	
22	A	A	A

Watershed identification _____

	Dc-1 Wetland 1	Dc-2 Wetland 2	Dc-3 Wetland 3

Wetland Characterization (Page 8 of 19)

✓23. What is the dominant wetland vegetation cover type?

a. Woody vegetation (forested and scrub-shrub).
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation only or wet meadow.

	C	C	C

✓24. Refer to the diagrams in Figure 3 and select the one that most closely resembles the interspersion of Cowardin wetland classes and, if present, upland inclusions. (An upland inclusion is an island or an upland area surrounded on three sides by wetland.).

Wetlands composed of only one wetland class or with two wetland classes and a simple pattern have low interspersion. Wetland and upland complexes that have at least two wetland classes and a complex pattern have a moderate interspersion pattern. Wetlands with two or more wetland classes or upland inclusions with a complex pattern and lots of edge have a high interspersion pattern. If the wetland you are observing does not reflect any of the diagrams, use the above guidance to determine the complexity of the interspersion pattern and draw a sketch of the wetland.

a. High.
b. Moderate.
c. Low.

	C	B	B

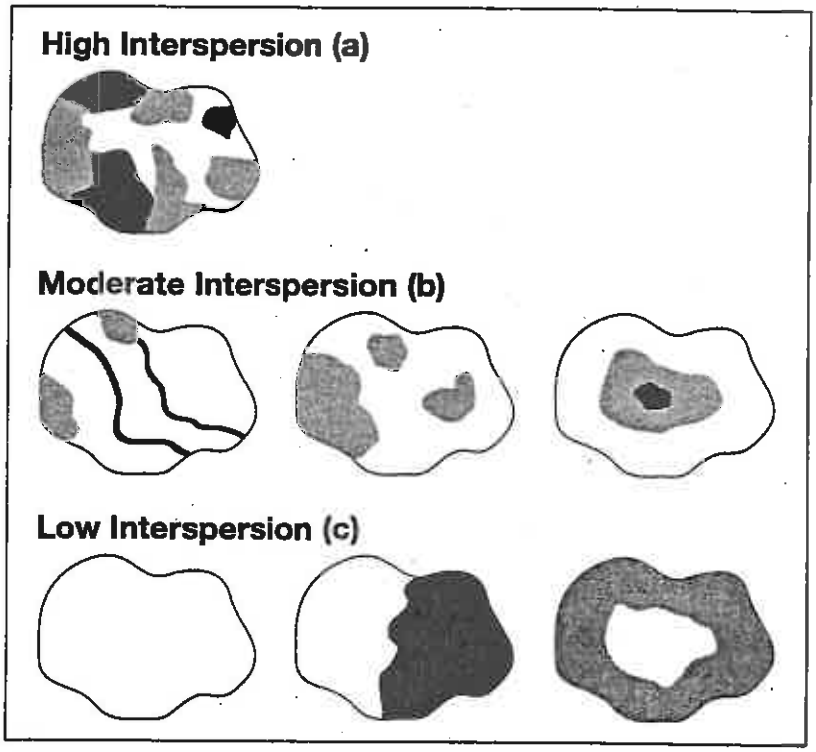


Figure 3. Interspersion of Cowardin classes and upland inclusions.

Watershed identification _____

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
	A	C	C

Wetland Characterization (Page 9 of 19)

✓25. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? Brush, woodland, non-farmed agricultural land and range land are considered upland habitat for this question. Actively farmed lands are not considered wildlife habitat. (See Figure 4.)

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

✓26. For **urban areas:** What percentage of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? A vegetative buffer consists of trees, bushes or vegetation that is not regularly mowed or farmed. (See Figure 5.)

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

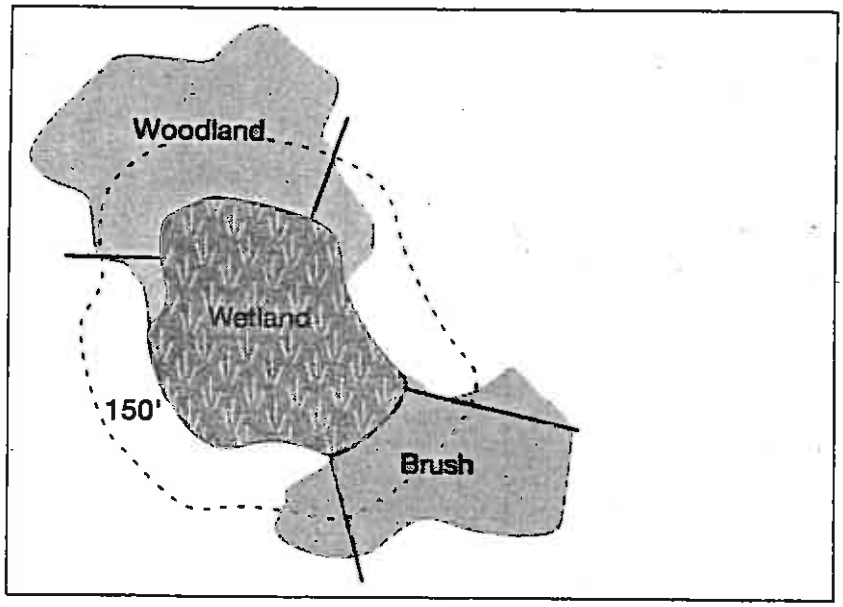


Figure 4. Percent of wetland edge bordered by upland habitat (for Question 25).
The dashed line delineates the area within 150 feet of the wetland; the "woodland" and "brush" areas are upland habitat; and the lines perpendicular to the wetland edge indicate where the upland habitat adjacent to the wetland habitat is at least 150 feet wide. The dark lines (portions of the wetland bordered by upland habitat at least 150 feet wide) make up roughly one-third (between 10% and 40%) of the wetland perimeter.

Watershed identification _____

Wetland Characterization (Page 10 of 19)

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
27. How is the wetland connected to other wetlands? (Look at an aerial photo or map to determine this.)	A	A	A
28. Estimate the area of unvegetated, open water within the wetland.	D	D	D

27. How is the wetland connected to other wetlands? (Look at an aerial photo or map to determine this.)
    a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake.
    b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius.
    c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.

28. Estimate the area of unvegetated, open water within the wetland.
    a. More than 3 acres.
    b. Greater than 1 acre, up to 3 acres.
    c. Between 0.5 acre and 1 acre.
    d. Less than 0.5 acre.

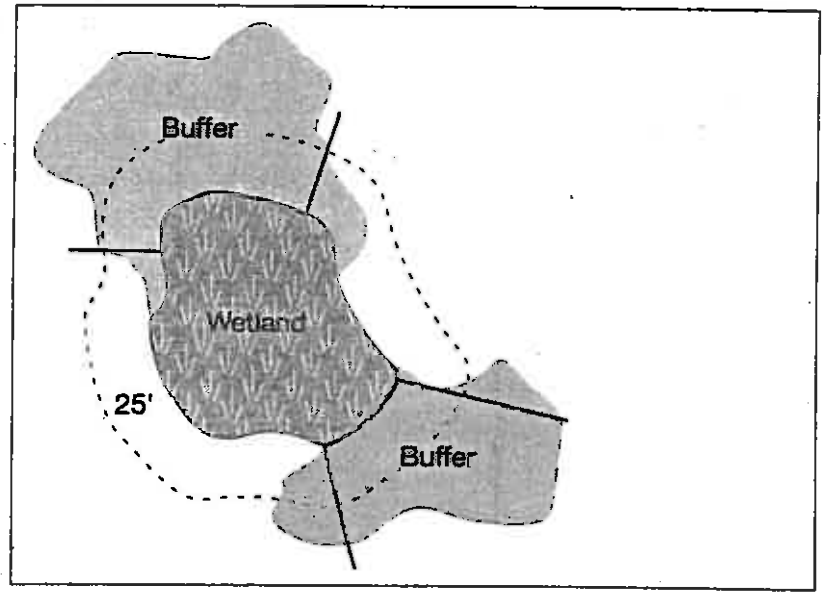


Figure 5. Percent of wetland edge bordered by vegetative buffer (for Question 26).
The dashed line delineates the area within 25 feet of the wetland; the vegetative buffer areas are labeled "buffer"; and the lines perpendicular to the wetland edge indicate where the vegetative buffer adjacent to the wetland habitat is at least 25 feet wide. The dark lines (portions of the wetland bordered by a vegetative buffer at least 25 feet wide) make up roughly one-third (between 10% and 40%) of the wetland perimeter.

Watershed identification _____

	Dc-1 Wetland 1	Dc-2 Wetland 2	Dc-3 Wetland 3
29.	C	A per Jim Grimes, ODFW	C 1mg culvert separates from Dc-2
30.	NA	C	C
31.	NA	A	C
32.	NA	C	C
33.			

Wetland Characterization (Page 11 of 19)

Fisheries habitat

29. Are fish present in a stream, lake or pond connected to the wetland.
    a. Salmon, trout or sensitive species are present at some time during the year.
    b. Species not covered in "a" are present at some time during the year.
    c. No species are present at any time during the year.

Streams connected to the wetland

Complete this section only if the wetland being assessed has an unimpeded surface water connection to a stream.

30. What is the physical character of the stream channel? To observe stream channel modifications, look for built rock banks, cement sides, straightened areas or other human-created features.
    a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel.
    b. Only portions of the stream are modified.
    c. The stream is extensively modified or confined in a non-vegetated channel or pipe.

31. What percentage of the stream is shaded by streamside (riparian) vegetation?
    a. Greater than 75%.
    b. Between 50 and 75%.
    c. 25% or more, but less than 50%.
    d. Less than 25%.

32. What percentage of the stream contains instream structures such as large woody debris, floating or submerged vegetation, large rocks or boulders?
    a. Greater than 25%.
    b. Between 10% and 25%.
    c. Less than 10%.

Lakes or ponds (entire lake or pond and wetland complex)

Complete this section only if the wetland being assessed has a surface water connection to a lake or pond.

33. Does the lake or pond contain areas of deep and shallow water? ("Deep" is defined as more than 6.5 feet deep.)
    a. Yes.
    b. Cannot be determined.
    c. No.

Watershed identification _____

Wetland Characterization (Page 12 of 19)

✓34. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
- a. 60% or more.
- b. 20% or more, but less than 60%.
- c. Less than 20%.

✓35. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
- a. Greater than 25%
- b. Between 10 and 25%
- c. Less than 10%

Wetland hydrology

36. What is the wetland's **primary** source of water? (Determine in the field or in the office. This may be difficult to determine. If a surface water connection exists—stream, lake, ditch—use it as the primary source. If no surface water connection is present, talk to local natural resource people for hints.)
- a. Surface flow, including streams and ditches.
- b. Precipitation or sheet flow.
- c. Groundwater, including springs or seeps.

✓37. Is there evidence of flooding or ponding during a portion of the growing season? Look for evidence of water fluctuation such as sediment stains on trees, drift lines, surface scour or sediment deposits. Also look at the location of the wetland. Is it in a distinct topographic depression or adjacent to a stream that is known to flood or fluctuate because of storm pulses?
- a. Yes (describe).
- b. Unable to determine or not applicable.
- c. No.

✓38. Is water flow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)?
- a. Yes, the outlet is restricted or the wetland has no outlet.
- b. Minor restrictions slow down the water (e.g., undersized culvert).
- c. No, the outlet has unrestricted flow.

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
36	B	A	A
37	A	A	B
	Small area near outlet from detention pond	floodplain, topographic depression, restricted outlets	wetland all w/in banks
38	B	B	B

Watershed identification _____

Wetland Characterization (Page 13 of 19)

	DC-1 Wetland 1	DC-2 Wetland 2	DC-3 Wetland 3
✓39. If the primary source of water is surface flow, is the water flow into the wetland restricted? a. Flow is not restricted, or if blocked, the obstruction can be removed easily. b. Permanent blockage to the flow exists but may be breached or a new flow channel created (engineering or earth moving solution). c. Flow is restricted and cannot be restored.	NA	A	A
40. Has the stream flow or stream bank been modified by human activities less than 1 mile above the wetland? Modifications include dams, channelizations and levees, and confinement of the stream in a pipe. a. Yes. b. No.	NA	A	A
Public access to wetland site *(select an appropriate area to observe the wetland to answer these questions:)*			
41. Is the wetland site open to the public for direct access or observation? a. Yes, the wetland is open to the public. b. Yes, but wetland access is allowed only by permission of the landowner or managing entity. c. No, access is not allowed.	B	A	C
✓42. Are there visible hazards to the public at the wetland site? (Examples: busy road adjacent to the site, and no buffer or sidewalk exists; steep embankment; and contaminated water.) a. No. b. One or two visible safety hazards exist (describe). c. More than two visible safety hazards exist (describe).	A	A	B RR, Lumber mill
✓43. Are there other natural landscape features, such as a stream, lake, pond, forest or agricultural land contiguous or adjacent to the wetland? a. Yes. (List type and extent.) b. No.	B	A stream	A Ag land

Watershed identification _____

	Dc-1 Wetland 1	Dc-2 Wetland 2	Dc-3 Wetland 3
44	NA	A	C
45	A	A	B
46	B	A	C

Wetland Characterization (Page 14 of 19)

✓44. Is there existing physical public access to features listed in Question 43? If not, can such access be created easily, or can other habitats be observed from the site? For a stream, pond or lake, access may require dry ground to the water's edge. Stream access could also be at a road crossing, but consider the safety at such locations

a. Public access to other habitats exists or can be created easily.

b. Public access doesn't exist and can't be created easily, but observation of other features can be made from the site.

c. Public access doesn't exist and can't be created easily. In addition, observation of other features can't be made from the site.

✓45. Does it appear that access to a viewing spot or wetland edge is available for individuals with limited mobility? (To see whether the site meets ADA requirements, a more thorough examination should be done.)

a. Yes.

b. No. (List physical barriers.)

✓46. Is there a public access point within 250 feet of the wetland's edge? Access points include parking lots, transit stops, bike lanes, trails and water courses. Maintained means that the area is designated as a car or transit area by the managing entity. Unmaintained would be a road pull-off or other area that people use but is not designated for such use. Describe the type of access.

a. Yes, a maintained access point exists (describe).

b. Yes, an unmaintained access point exists (describe).

c. No access point exists, or the access point is hazardous.

Recreation

✓47. Is the wetland accessible by boat?

a. Boat launching areas or access points exist on site or within 1/2 mile on a connected lake, river, bay or other body of water.

b. Potential to develop boat launching areas or access points exists, or such features are more than 1/2 mile but less than 1 mile from the wetland.

c. No boat launching areas or access points exist within 1 mile of the wetland, and potential to develop launching areas or access points is limited.

Watershed identification _____

	Wetland 1	Wetland 2	Wetland 3

Wetland Characterization (Page 17 of 19)

✓48. Are there trails, viewing areas or other structures that guide user movement to a particular area or areas in or around the wetland?
   a. Yes, developed or maintained trails or viewing areas exist.
   b. Yes, undeveloped trails or viewing areas exist that do not disrupt wildlife or plant habitat.
   c. No trails or viewing areas exist, or those that do disrupt wildlife or plant habitat.

49. Is fishing allowed at the wetland or connected water body? (Contact local Oregon Department of Fish and Wildlife office.) Answer "not applicable" if question 18 was answered "b" or "c," unless question 21 indicates that 10% or more of the wetland's area is covered by open water.
   a. Yes (either all or part of the year).
   b. No.
   c. Not applicable.

50. Is hunting allowed at the wetland? (If the wetland is within the city limits, hunting is not allowed. Otherwise, contact the local Oregon Department of Fish and Wildlife office for this information.)
   a. Yes (either all or part of the year).
   b. No.

Aesthetics

✓51. For **rural areas**, what is the extent of visual contrast with the surrounding landscape? (See Figure 6.)
   a. Significant contrast with surrounding landscape.
   b. Limited contrast with surrounding landscape.
   c. Little or no contrast with surrounding landscape.

✓52. For **urban areas**, what is the visual character of the surrounding area? (See Figure 7.)
   a. Open space or naturally landscaped areas.
   b. Areas landscaped or manipulated by people.
   c. Developed with no landscaping.

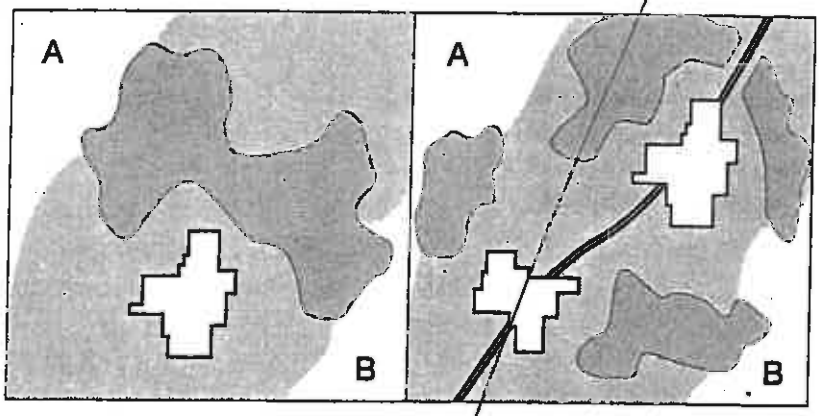
✓53. Are there visual detractors at the wetland site such as abandoned cars, litter, shopping carts or other objects that distract the viewer from the wetland?
   a. Yes.
   b. No.

DC-4 & DC-5

Watershed identification _____

Wetland Characterization (Page 4 of 19)

Watershed Notes



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14. What are the landscape features at both ends of the movement corridor? (These may lie outside the assessment area.) From an aerial photo, observation or local knowledge, determine whether there are large natural areas at either end of the movement corridor. The natural area does not have to be a wetland.
    a. Large natural habitat areas are at both ends.
    b. One end has a natural habitat area and the other end is developed.
    c. Both ends are developed.

Watershed identification _____

Wetland Characterization (Page 5 of 19)

Individual wetland sites

Fill out this part of the characterization for each wetland in the assessment area. Some of the information can be gathered in the office; some must be gathered at the site. You may want to do a rough sketch of the site (doesn't have to be to scale) to refer to back in the office.

Wetland structure and relation to surrounding landscape

	~~Wetland 1~~ Dc-4	~~Wetland 2~~ Dc-5	Wetland 3
✓15. What percentage of the area within 500 feet of the wetland's edge is dedicated to the land uses listed below? (From overlay 2 or in the field.)			
It is best to determine the land uses from a recent aerial photo. If an aerial photo is not available, measure 500 feet in the field to get an idea of distance to evaluate. Use the following ranges for your answers for each land-use category: a. Less than 20%. b. Between 20% and 50%. c. Greater than 50%.			
1. Open Space (includes natural areas, parks and developed recreation areas, but not land designated for Exclusive Forest Use).	C	B	
2. Agriculture (pasture, cropped lands, orchards, range land).	B	—	
3. Exclusive Forest Use lands.		—	
4. Developed uses (residential, commercial or industrial—rural and urban).		C	
5. Other (list).		—	
✓16. What is the dominant existing land use within 500 feet of the wetland on the **downstream or down-slope edge** of the wetland? Use the same land-use categories as question 15.	Ag	Developed	
17. What is the wetland's area in acres? (Measure the entire area of contiguous wetland, not just the portion within the assessment area. Use the dimensions of the wetland as outlined on the base map.) a. Greater than 5 acres. b. Between 0.5 acres and 5 acres. c. Less than 0.5 acres.	A calculate	B calculate	

✓ *Questions preceded by a check mark can be completed in the field.*

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3

Wetland Characterization (Page 6 of 19)

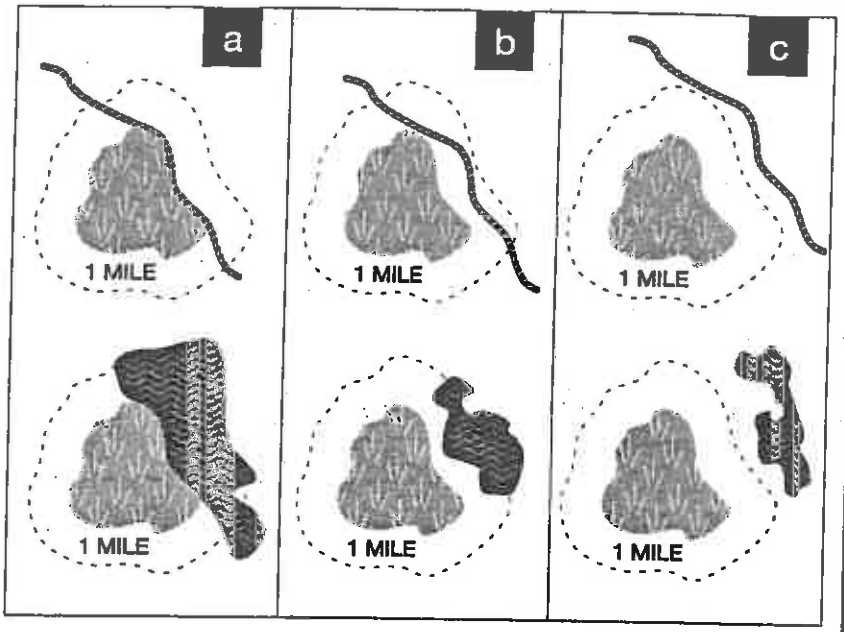


Figure 2. Connectivity to streams, lakes and ponds.
The lightly shaded area represents a wetland, the darkly shaded area represents a lake or pond and the dark line represents a stream. Part "a" shows the wetland connected to a stream, lake or pond, part "b" shows a stream, lake or pond within 1 mile but no surface connection, and part "c" shows no stream, lake or pond within 1 mile and no surface connection.

18. How is the wetland connected to another body of water, such as a stream, lake or pond? (See Figure 2.)
    a. The wetland is connected by surface water to another body of water. This may be by a culvert, irrigation ditch, intermittent stream or perennial stream.
    b. No surface-water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland.
    c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.

	B	B

19. Is all or part of the wetland located within the 100-year floodplain (use floodplain maps to determine) or within an enclosed basin? An enclosed basin has no inlet or outlet.
    a. Yes.
    b. No.

	A	B

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3

Wetland Characterization (Page 7 of 19)

20. What percentage of the area within 500 feet of the wetland's edge is **zoned** for each of the land uses listed below?

    Use the following ranges for your answers:

    a. Less than 20%
    b. Between 20% and 50%
    c. Greater than 50%.

    1. Open Space (includes natural areas, parks and developed recreation areas, but not lands zoned for Exclusive Forest Use).
    2. Agriculture (pasture, cropped lands, orchards, range land).
    3. Exclusive Forest Use lands.
    4. Developed uses (residential, commercial, industrial).
    5. Other (list).

	Wetland 1	Wetland 2	Wetland 3
1		C	
2	B	—	
3		—	
4	C	B	
5		—	

Wetland habitat

✓21. What percentage of the wetland's area is covered by the following Cowardin wetland classes? (Cowardin wetland classes refer to a classification of wetland type by vegetation cover. See Appendix D.) Only list those that compose 10% or more of the overall wetland.

The percentages can be estimated in the field or from aerial photographs. Use the following categories for your answers:

a. Between 70% and 100%.
b. 50% or more, but less than 70%.
c. 20% or more, but less than 50%.
d. 10% or more, but less than 20%.

	Wetland 1	Wetland 2	Wetland 3
1. Open water (deep water habitat, greater than or equal to 6.6 feet or 2 meters).			
2. Emergent (includes floating aquatics—herbaceous plants that can tolerate flooding and living in wet soils).	D	D	
3. Scrub-shrub (woody vegetation under 20 feet tall).	A	A	
4. Forested (woody vegetation 20 feet or taller).	D		

✓22. For urban areas, how many wetland plant species are present? (You need not list the species name.)

	Wetland 1	Wetland 2	Wetland 3
a. More than 5 plant species.	A	A	
b. Between 2 and 5 plant species.			
c. 1 plant species (monotypic).			

Watershed identification _____

DC-4 DC-5

Wetland 1	Wetland 2	Wetland 3
A	B	
B	C	

Wetland Characterization (Page 8 of 19)

✓23. What is the dominant wetland vegetation cover type?

a. Woody vegetation (forested and scrub-shrub).
b. Emergent vegetation and ponding, or open water only.
c. Emergent vegetation only or wet meadow.

✓24. Refer to the diagrams in Figure 3 and select the one that most closely resembles the interspersion of Cowardin wetland classes and, if present, upland inclusions. (An upland inclusion is an island or an upland area surrounded on three sides by wetland.).

Wetlands composed of only one wetland class or with two wetland classes and a simple pattern have low interspersion. Wetland and upland complexes that have at least two wetland classes and a complex pattern have a moderate interspersion pattern. Wetlands with two or more wetland classes or upland inclusions with a complex pattern and lots of edge have a high interspersion pattern. If the wetland you are observing does not reflect any of the diagrams, use the above guidance to determine the complexity of the interspersion pattern and draw a sketch of the wetland.

a. High.
b. Moderate.
c. Low.

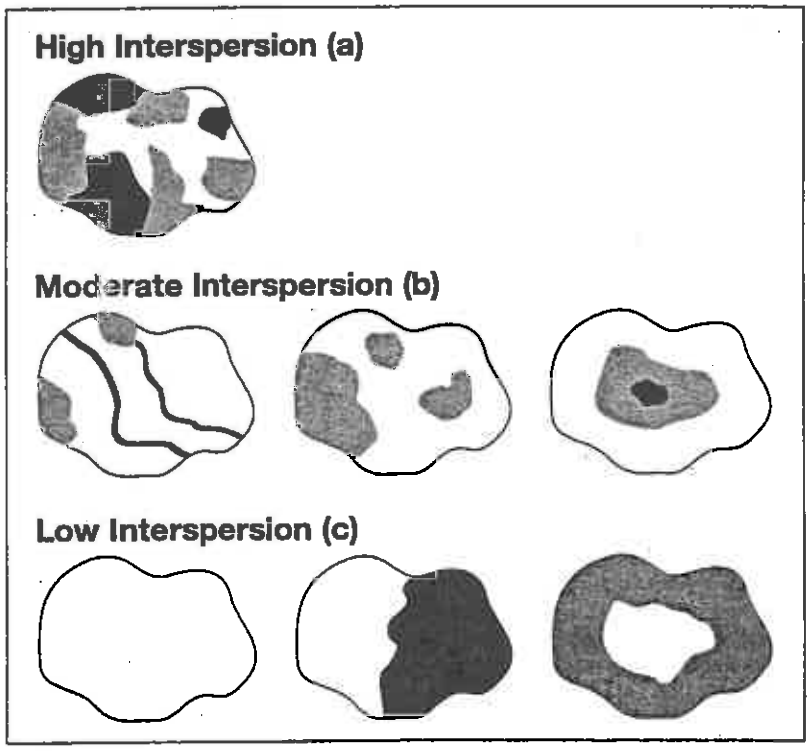


Figure 3. Interspersion of Cowardin classes and upland inclusions.

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3
25.	C	C	
26.			

Wetland Characterization (Page 9 of 19)

✓25. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? Brush, woodland, non-farmed agricultural land and range land are considered upland habitat for this question. Actively farmed lands are not considered wildlife habitat. (See Figure 4.)

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

✓26. For **urban areas:** What percentage of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? A vegetative buffer consists of trees, bushes or vegetation that is not regularly mowed or farmed. (See Figure 5.)

a. Greater than 40%.
b. Between 10% and 40%.
c. Less than 10%.

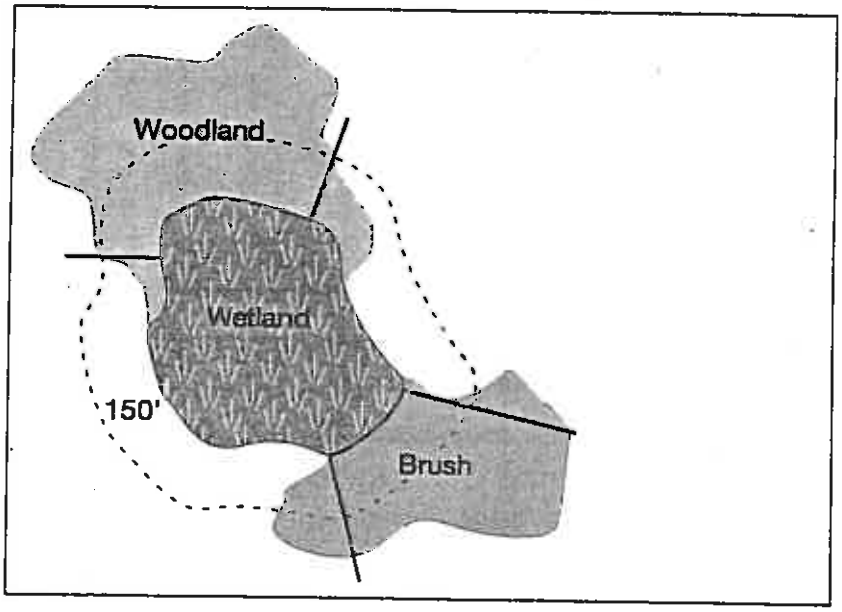


Figure 4. Percent of wetland edge bordered by upland habitat (for Question 25).
The dashed line delineates the area within 150 feet of the wetland; the "woodland" and "brush" areas are upland habitat; and the lines perpendicular to the wetland edge indicate where the upland habitat adjacent to the wetland habitat is at least 150 feet wide. The dark lines (portions of the wetland bordered by upland habitat at least 150 feet wide) make up roughly one-third (between 10% and 40%) of the wetland perimeter.

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3
27. How is the wetland connected to other wetlands? (Look at an aerial photo or map to determine this.)			
a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake.		A	
b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius.	B		
c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.			
28. Estimate the area of unvegetated, open water within the wetland.			
a. More than 3 acres.			
b. Greater than 1 acre, up to 3 acres.			
c. Between 0.5 acre and 1 acre.			
d. Less than 0.5 acre.	D	D	

Wetland Characterization (Page 10 of 19)

27. How is the wetland connected to other wetlands? (Look at an aerial photo or map to determine this.)
    a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake.
    b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius.
    c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.
28. Estimate the area of unvegetated, open water within the wetland.
    a. More than 3 acres.
    b. Greater than 1 acre, up to 3 acres.
    c. Between 0.5 acre and 1 acre.
    d. Less than 0.5 acre.

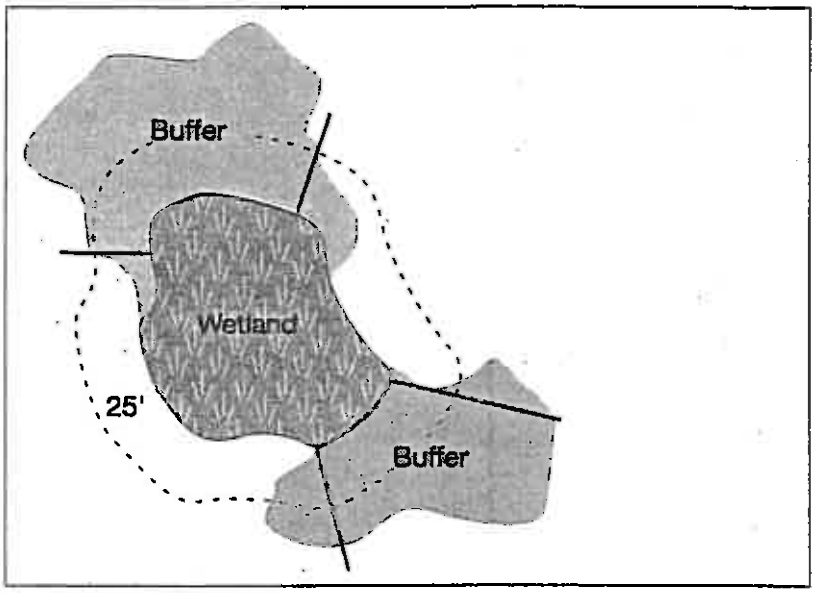


Figure 5. Percent of wetland edge bordered by vegetative buffer (for Question 26).
The dashed line delineates the area within 25 feet of the wetland; the vegetative buffer areas are labeled "buffer"; and the lines perpendicular to the wetland edge indicate where the vegetative buffer adjacent to the wetland habitat is at least 25 feet wide. The dark lines (portions of the wetland bordered by a vegetative buffer at least 25 feet wide) make up roughly one-third (between 10% and 40%) of the wetland perimeter.

Watershed identification _____

	DC-4 Wetland 1	DC-5 Wetland 2	Wetland 3

Wetland Characterization (Page 11 of 19)

Fisheries habitat

29. Are fish present in a stream, lake or pond connected to the wetland.

a. Salmon, trout or sensitive species are present at some time during the year.	NA	C
b. Species not covered in "a" are present at some time during the year.		
c. No species are present at any time during the year..		

Streams connected to the wetland

Complete this section only if the wetland being assessed has an unimpeded surface water connection to a stream.

✓30. What is the physical character of the stream channel? To observe stream channel modifications, look for built rock banks, cement sides, straightened areas or other human-created features.		
a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel.	NA	NA
b. Only portions of the stream are modified.		
c. The stream is extensively modified or confined in a non-vegetated channel or pipe.		
✓31. What percentage of the stream is shaded by streamside (riparian) vegetation?		
a. Greater than 75%.		
b. Between 50 and 75%.		
c. 25% or more, but less than 50%.		
d. Less than 25%.		
✓32. What percentage of the stream contains instream structures such as large woody debris, floating or submerged vegetation, large rocks or boulders?		
a. Greater than 25%.		
b. Between 10% and 25%.		
c. Less than 10%.		

Lakes or ponds (entire lake or pond and wetland complex)

Complete this section only if the wetland being assessed has a surface water connection to a lake or pond.

33. Does the lake or pond contain areas of deep and shallow water? ("Deep" is defined as more than 6.5 feet deep.)			
a. Yes.			
b. Cannot be determined.			
c. No.			

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3
34. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?			
35. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?			
Wetland hydrology			
36. What is the wetland's **primary** source of water? (Determine in the field or in the office. This may be difficult to determine. If a surface water connection exists—stream, lake, ditch—use it as the primary source. If no surface water connection is present, talk to local natural resource people for hints.)	B	A stormwater	
37. Is there evidence of flooding or ponding during a portion of the growing season? Look for evidence of water fluctuation such as sediment stains on trees, drift lines, surface scour or sediment deposits. Also look at the location of the wetland. Is it in a distinct topographic depression or adjacent to a stream that is known to flood or fluctuate because of storm pulses?	B	A	
38. Is water flow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)?	C	B	

Wetland Characterization (Page 12 of 19)

34. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
    a. 60% or more.
    b. 20% or more, but less than 60%.
    c. Less than 20%.

35. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
    a. Greater than 25%
    b. Between 10 and 25%
    c. Less than 10%

Wetland hydrology

36. What is the wetland's **primary** source of water? (Determine in the field or in the office. This may be difficult to determine. If a surface water connection exists—stream, lake, ditch—use it as the primary source. If no surface water connection is present, talk to local natural resource people for hints.)
    a. Surface flow, including streams and ditches.
    b. Precipitation or sheet flow.
    c. Groundwater, including springs or seeps.

37. Is there evidence of flooding or ponding during a portion of the growing season? Look for evidence of water fluctuation such as sediment stains on trees, drift lines, surface scour or sediment deposits. Also look at the location of the wetland. Is it in a distinct topographic depression or adjacent to a stream that is known to flood or fluctuate because of storm pulses?
    a. Yes (describe).
    b. Unable to determine or not applicable.
    c. No.

38. Is water flow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)?
    a. Yes, the outlet is restricted or the wetland has no outlet.
    b. Minor restrictions slow down the water (e.g., undersized culvert).
    c. No, the outlet has unrestricted flow.

Watershed identification _____

DC-4 DC-5

Wetland Characterization (Page 13 of 19)

	Wetland 1	Wetland 2	Wetland 3
✓39. If the primary source of water is surface flow, is the water flow into the wetland restricted? a. Flow is not restricted, or if blocked, the obstruction can be removed easily. b. Permanent blockage to the flow exists but may be breached or a new flow channel created (engineering or earth moving solution). c. Flow is restricted and cannot be restored.	NA	NA	
40. Has the stream flow or stream bank been modified by human activities less than 1 mile above the wetland? Modifications include dams, channelizations and levees, and confinement of the stream in a pipe. a. Yes. b. No.	NA	NA	
Public access to wetland site *(select an appropriate area to observe the wetland to answer these questions.)*			
41. Is the wetland site open to the public for direct access or observation? a. Yes, the wetland is open to the public. b. Yes, but wetland access is allowed only by permission of the landowner or managing entity. c. No, access is not allowed.	B	A	
✓42. Are there visible hazards to the public at the wetland site? (Examples: busy road adjacent to the site, and no buffer or sidewalk exists; steep embankment; and contaminated water.) a. No. b. One or two visible safety hazards exist (describe). c. More than two visible safety hazards exist (describe).	A	A	
✓43. Are there other natural landscape features, such as a stream, lake, pond, forest or agricultural land contiguous or adjacent to the wetland? a. Yes. (List type and extent.) b. No.	A Ag land	A stream, wetland	

Watershed identification _____

DC-4 DC-5

	Wetland 1	Wetland 2	Wetland 3
## Wetland Characterization (Page 14 of 19)			
✓44. Is there existing physical public access to features listed in Question 43? If not, can such access be created easily, or can other habitats be observed from the site? For a stream, pond or lake, access may require dry ground to the water's edge. Stream access could also be at a road crossing, but consider the safety at such locations a. Public access to other habitats exists or can be created easily. b. Public access doesn't exist and can't be created easily, but observation of other features can be made from the site. c. Public access doesn't exist and can't be created easily. In addition, observation of other features can't be made from the site.	A	A	
✓45. Does it appear that access to a viewing spot or wetland edge is available for individuals with limited mobility? (To see whether the site meets ADA requirements, a more thorough examination should be done.) a. Yes. b. No. (List physical barriers.)	A	A	
✓46. Is there a public access point within 250 feet of the wetland's edge? Access points include parking lots, transit stops, bike lanes, trails and water courses. Maintained means that the area is designated as a car or transit area by the managing entity. Unmaintained would be a road pull-off or other area that people use but is not designated for such use. Describe the type of access. a. Yes, a maintained access point exists (describe). b. Yes, an unmaintained access point exists (describe). c. No access point exists, or the access point is hazardous.	B	A	
## Recreation			
✓47. Is the wetland accessible by boat? a. Boat launching areas or access points exist on site or within 1/2 mile on a connected lake, river, bay or other body of water. b. Potential to develop boat launching areas or access points exists, or such features are more than 1/2 mile but less than 1 mile from the wetland. c. No boat launching areas or access points exist within 1 mile of the wetland, and potential to develop launching areas or access points is limited.			

Watershed identification _____

	Wetland 1	Wetland 2	Wetland 3

Wetland Characterization (Page 17 of 19)

✓48. Are there trails, viewing areas or other structures that guide user movement to a particular area or areas in or around the wetland?
   a. Yes, developed or maintained trails or viewing areas exist.
   b. Yes, undeveloped trails or viewing areas exist that do not disrupt wildlife or plant habitat.
   c. No trails or viewing areas exist, or those that do disrupt wildlife or plant habitat.

49. Is fishing allowed at the wetland or connected water body? (Contact local Oregon Department of Fish and Wildlife office.) Answer "not applicable" if question 18 was answered "b" or "c," unless question 21 indicates that 10% or more of the wetland's area is covered by open water.
   a. Yes (either all or part of the year).
   b. No.
   c. Not applicable.

50. Is hunting allowed at the wetland? (If the wetland is within the city limits, hunting is not allowed. Otherwise, contact the local Oregon Department of Fish and Wildlife office for this information.)
   a. Yes (either all or part of the year).
   b. No.

Aesthetics

✓51. For **rural areas**, what is the extent of visual contrast with the surrounding landscape? (See Figure 6.)
   a. Significant contrast with surrounding landscape.
   b. Limited contrast with surrounding landscape.
   c. Little or no contrast with surrounding landscape.

✓52. For **urban areas**, what is the visual character of the surrounding area? (See Figure 7.)
   a. Open space or naturally landscaped areas.
   b. Areas landscaped or manipulated by people.
   c. Developed with no landscaping.

✓53. Are there visual detractors at the wetland site such as abandoned cars, litter, shopping carts or other objects that distract the viewer from the wetland?
   a. Yes.
   b. No.

Appendix C
Assessment questions, answer sheets & summary sheets

Dc-1

Notes

Wetland identification DC-1

Assessment questions: wildlife habitat (Page 1 of 3)

Question	Answer
1. How many Cowardin wetland classes are present? (Characterization: 21)	*Rural areas:* a. Three or four. b. Two. c. One. *Urban areas:* a. Two or more. (b.) One class with more than five plant species. c. One class with five or fewer plant species.
2. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
3. What is the degree of Cowardin class interspersion for the wetland being observed? (Characterization: 24)	a. High. b. Moderate. (c.) Low.
4. If the wetland contains unvegetated open water, how many acres of unvegetated open water are present? (Characterization: 28)	*Rural areas:* a. More than 3 acres. b. Between 0.5 and 3 acres. c. Less than 0.5 acres. *Urban areas:* a. More than 1 acre. b. Between 0.5 and 1 acre. (c.) Less than 0.5 acres.

Notes

Wetland identification DC-1

Assessment questions: wildlife habitat (Page 2 of 3)

Question	Answer
5. How is the wetland connected to another body of water, such as a stream, lake or pond? (Characterization: 18)	(a.) The wetland is connected by surface water to another body of water. b. No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland. c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.
6. How is the wetland connected to other wetlands? (Characterization: 27)	(a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake. b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius. c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	(a.) No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Drainageway culverted under highway & flows to South

Wetland identification DC-1

NA

Assessment questions: fish habitat (Page 1 of 3)

Part A—streams

Question	Answer
1. What percentage of the stream is shaded by streamside (riparian) vegetation? (Characterization: 31)	*Western Oregon:* a. More than 75%. b. Between 50% and 75%. c. Less than 50%. *Eastern Oregon:* a. 50% or more. b. 25% or more, but less than 50%. c. Less than 25%.
2. What is the physical character of the stream channel? (Characterization: 30)	a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel. b. Only portions of the stream channel are modified. c. The stream is extensively modified or confined in a non-vegetated channel or pipe.
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders? (Characterization: 32)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 2 of 3)

Question	Answer
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish present in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Part B—lakes and ponds

1. Does the lake or pond contain areas of both deep and shallow water? (Characterization: 33)	a. Yes. b. Cannot be determined. c. No.
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders? (Characterization: 35)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation? (Characterization: 34)	a. 60% or more. b. 20% or more, but less than 60%. c. Less than 20%.

Notes

Wetland identification DC-1

Assessment questions: wildlife habitat (Page 3 of 3)

Question	Answer
8. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
9a. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? (Characterization: 25)	a. Greater than 40%. b. Between 10% and 40%. c. Less than 10%.
9b. For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? (Characterization: 26)	(a.) Greater than 40%. b. Between 10 and 40%. c. Less than 10%.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 3 of 3)

Question	Answer
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Fish habitat: assessment criteria

The wetland's fish habitat function is intact if:	Any three questions are answered "a," and no more than one is answered "c."
The wetland's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's fish habitat function is lost or not present if:	All questions are answered "c."

Notes

Answer

Wetland identification DC-1

Assessment questions: hydrologic control (Page 1 of 2)

Question	Answer
1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin? (Characterization: 19)	a. Yes. (b.) No.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	(a.) Yes. b. Unable to determine or not applicable. c. No.
3. What is the wetland's area in acres? (Characterization: 17)	a. More than 5 acres. (b.) Between .5 acres and 5 acres. c. Less than .5 acres.
4. Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)? (Characterization: 38)	a. Yes, the outlet is restricted or the wetland has no outlet. (b.) Minor restrictions slow down the water (i.e., undersized culvert.) c. No, the outlet has unrestricted flow.
5. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
6. What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland? (Characterization: 16)	(a.) Developed uses. b. Agriculture. c. Exclusive Forest Use and Open Space.
7. What is the dominant land use in the watershed upstream from the assessment area? (Characterization: 6)	(a.) Urban or urbanizing. b. Agriculture. c. Forested or natural area.

Notes

small portion of wetland; related to stormwater detention pond overflow culvert

Wetland identification DC-1

Assessment questions: hydrologic control (Page 2 of 2)

Hydrologic control: assessment criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

Appendix C
Assessment questions, answer sheets & summary sheets

DC-2

Notes

Wetland identification DC-2

Assessment questions: wildlife habitat (Page 1 of 3)

Question	Answer
1. How many Cowardin wetland classes are present? (Characterization: 21)	*Rural areas:* a. Three or four. b. Two. c. One. *Urban areas:* (a.) Two or more. b. One class with more than five plant species. c. One class with five or fewer plant species.
2. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
3. What is the degree of Cowardin class interspersion for the wetland being observed? (Characterization: 24)	a. High. (b.) Moderate. c. Low.
4. If the wetland contains unvegetated open water, how many acres of unvegetated open water are present? (Characterization: 28)	*Rural areas:* a. More than 3 acres. b. Between 0.5 and 3 acres. c. Less than 0.5 acres. *Urban areas:* a. More than 1 acre. b. Between 0.5 and 1 acre. (c.) Less than 0.5 acres.

Notes

Wetland identification DC-2

Assessment questions: wildlife habitat (Page 2 of 3)

Question	Answer
5. How is the wetland connected to another body of water, such as a stream, lake or pond? (Characterization: 18)	(a.) The wetland is connected by surface water to another body of water. b. No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland. c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.
6. How is the wetland connected to other wetlands? (Characterization: 27)	(a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake. b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius. c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification DC-2

Assessment questions: wildlife habitat (Page 3 of 3)

Question	Answer
8. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
9a. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? (Characterization: 25)	a. Greater than 40%. b. Between 10% and 40%. c. Less than 10%.
9b. For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? (Characterization: 26)	a. Greater than 40%. b. Between 10 and 40%. (c.) Less than 10%.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-2

Assessment questions: fish habitat (Page 1 of 3)

Part A—streams

Question	Answer
1. What percentage of the stream is shaded by streamside (riparian) vegetation? (Characterization: 31)	*Western Oregon:* (a) More than 75%. b. Between 50% and 75%. c. Less than 50%. *Eastern Oregon:* a. 50% or more. b. 25% or more, but less than 50%. c. Less than 25%.
2. What is the physical character of the stream channel? (Characterization: 30)	a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel. b. Only portions of the stream channel are modified. (c.) The stream is extensively modified or confined in a non-vegetated channel or pipe.
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders? (Characterization: 32)	a. More than 25%. b. Between 10% and 25%. (c.) Less than 10%.
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. (c) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification DC-2

Assessment questions: fish habitat (Page 2 of 3)

Question	Answer
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
6. Are fish present in a stream, lake or pond associated with the wetland? (Characterization: 29)	(a.) Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Notes

Likely per ODFW

Part B—lakes and ponds

1. Does the lake or pond contain areas of both deep and shallow water? (Characterization: 33)	a. Yes. b. Cannot be determined. c. No.
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders? (Characterization: 35)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation? (Characterization: 34)	a. 60% or more. b. 20% or more, but less than 60%. c. Less than 20%.

Wetland identification _____

Assessment questions: fish habitat (Page 3 of 3)

Question	Answer
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Fish habitat: assessment criteria

The wetland's fish habitat function is intact if:	Any three questions are answered "a," and no more than one is answered "c."
The wetland's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's fish habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-2

Assessment questions: hydrologic control (Page 1 of 2)

Question	Answer
1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin? (Characterization: 19)	a. Yes. (b.) No.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	(a.) Yes. b. Unable to determine or not applicable. c. No.
3. What is the wetland's area in acres? (Characterization: 17)	(a.) More than 5 acres. b. Between .5 acres and 5 acres. c. Less than .5 acres.
4. Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)? (Characterization: 38)	a. Yes, the outlet is restricted or the wetland has no outlet. (b.) Minor restrictions slow down the water (i.e., undersized culvert.) c. No, the outlet has unrestricted flow.
5. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
6. What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland? (Characterization: 16)	(a.) Developed uses. b. Agriculture. c. Exclusive Forest Use and Open Space.
7. What is the dominant land use in the watershed upstream from the assessment area? (Characterization: 6)	(a.) Urban or urbanizing. b. Agriculture. c. Forested or natural area.

Notes

Wetland identification DC-2

Assessment questions: hydrologic control (Page 2 of 2)

Hydrologic control: assessment criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

Wetland identification DC-2

Assessment questions: education (Page 2 of 2)

Question	Answer
5. Is there a public access point within 250 feet of the wetland's edge? (Characterization: 46)	(a.) Yes, a maintained access point exists. b. Yes, an unmaintained access point exists. c. No access point exists, or the access point is hazardous.
6. Does it appear that access to a viewing spot or wetland edge is available for individuals with limited mobility? (Characterization: 45)	(a.) Yes. b. No.

Education: assessment criteria

A wetland has educational uses if:	Questions 1 and 2 are answered "a," and questions 3, 4 and 5 are either "a" or "b."
A wetland has potential for educational use if:	Answers do not satisfy the above- or below-listed criteria.
A wetland site is not appropriate for educational use if:	The answer to 1 or 2 is "c."

Notes

Wetland identification DC-2

Assessment questions: education (Page 1 of 2)

Question	Answer
1. Is the wetland site open to the public for direct access or observation? (Characterization: 41)	(a.) Yes, the wetland is open to the public. b. Yes, but wetland access is allowed only by permission of the landowner or managing entity. c. No, access is not allowed.
2. Are there visible hazards to the public at the wetland site? (Characterization: 41)	(a.) No. b. One or two visible safety hazards exist. c. More than two visible safety hazards exist.
3. What are the results for the wildlife habitat and fish habitat assessment criteria?	a. The wetland provides diverse wildlife habitat, or the fish habitat function is intact. (b.) Results for the wildlife habitat and fish habitat assessment criteria do not meet the criteria for responses "a" or "c." c. Both wildlife habitat function and fish habitat function are lost or not present.
4. Is there existing physical public access to other features? If not, can such access be created easily, or can other habitats be observed from the site? (Characterization: 44)	(a.) Public access to other habitats exists or can be created easily. b. Public access doesn't exist and can't be created easily, but observation of other features can be made from the site. c. Public access doesn't exist and can't be created easily. In addition, observation of other features can't be made from the site.

Notes

Appendix C
Assessment questions, answer sheets & summary sheets

DC-3

Notes

Wetland identification Dc-3

Assessment questions: wildlife habitat (Page 1 of 3)

Question	Answer
1. How many Cowardin wetland classes are present? (Characterization: 21)	*Rural areas:* a. Three or four. b. Two. c. One. *Urban areas:* a. Two or more. b. One class with more than five plant species. (c.) One class with five or fewer plant species.
2. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
3. What is the degree of Cowardin class interspersion for the wetland being observed? (Characterization: 24)	a. High. (b.) Moderate. c. Low.
4. If the wetland contains unvegetated open water, how many acres of unvegetated open water are present? (Characterization: 28)	*Rural areas:* a. More than 3 acres . b. Between 0.5 and 3 acres. c. Less than 0.5 acres. *Urban areas:* a. More than 1 acre. b. Between 0.5 and 1 acre. c. Less than 0.5 acres.

Notes

Wetland identification DC-3

Assessment questions: wildlife habitat (Page 2 of 3)

Question	Answer
5. How is the wetland connected to another body of water, such as a stream, lake or pond? (Characterization: 18)	(a.) The wetland is connected by surface water to another body of water. b. No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland. c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.
6. How is the wetland connected to other wetlands? (Characterization: 27)	(a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake. b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius. c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification DC-3

Assessment questions: wildlife habitat (Page 3 of 3)

Question	Answer
8. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
9a. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? (Characterization: 25)	a. Greater than 40%. b. Between 10% and 40%. c. Less than 10%.
9b. For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? (Characterization: 26)	a. Greater than 40%. b. Between 10 and 40%. (c.) Less than 10%.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-3

Assessment questions: fish habitat (Page 1 of 3)

Part A—streams

Question	Answer	Notes
1. What percentage of the stream is shaded by streamside (riparian) vegetation? (Characterization: 31)	*Western Oregon:* a. More than 75%. b. Between 50% and 75%. (c.) Less than 50%. *Eastern Oregon:* a. 50% or more. b. 25% or more, but less than 50%. c. Less than 25%.	
2. What is the physical character of the stream channel? (Characterization: 30)	a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel. b. Only portions of the stream channel are modified. (c.) The stream is extensively modified or confined in a non-vegetated channel or pipe.	
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders? (Characterization: 32)	a. More than 25%. b. Between 10% and 25%. (c.) Less than 10%.	
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.	

Wetland identification DC-3

Assessment questions: fish habitat (Page 2 of 3)

Question	Answer
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
6. Are fish present in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. (c.) No species are present at any time during the year.

Part B—lakes and ponds

1. Does the lake or pond contain areas of both deep and shallow water? (Characterization: 33)	a. Yes. b. Cannot be determined. c. No.
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders? (Characterization: 35)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation? (Characterization: 34)	a. 60% or more. b. 20% or more, but less than 60%. c. Less than 20%.

Notes

Wetland identification DC-3

Assessment questions: fish habitat (Page 3 of 3)

Question	Answer
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Fish habitat: assessment criteria

The wetland's fish habitat function is intact if:	Any three questions are answered "a," and no more than one is answered "c."
The wetland's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's fish habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-3

Assessment questions: water quality (Page 1 of 2)

Question	Answer
1. What is the wetland's primary source of water? (Characterization: 36)	(a.) Surface flow, including streams and ditches. b. Precipitation or sheet flow. c. Groundwater, including seeps and springs.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	a. Yes. (b.) Unable to determine or not applicable. c. No.
3. What is the degree of wetland vegetation cover? (Characterization: 21)	(a.) High (greater than 60%). b. Moderate (approximately 60%). c. Low (less than 60%).
4. What is the wetland's area in acres? (Characterization: 17, 27)	a. More than 5 acres. (b.) Between 0.5 acres and 5 acres; or wetland area is less than 0.5 acres, and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake. c. Less than 0.5 acres, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.
5. What is the dominant, existing land use within 500 feet of the wetland's edge? (Characterization: 15)	(a.) Developed uses. b. Agriculture. c. Exclusive Forest Use or Open Space.

Notes

Wetland identification DC-3

Assessment questions: water quality (Page 2 of 2)

Question	Answer
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	(a.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

Water quality: assessment criteria

A wetland's water-quality function is intact if:	Question 1 is answered "a" or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's water-quality function is lost or not present if:	Four out of six questions are answered "c."

Notes

Wetland identification DC-3

Assessment questions: hydrologic control (Page 1 of 2)

Question	Answer
1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin? (Characterization: 19)	a. Yes. (b.) No.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	a. Yes. (b.) Unable to determine or not applicable. c. No.
3. What is the wetland's area in acres? (Characterization: 17)	a. More than 5 acres. (b.) Between .5 acres and 5 acres. c. Less than .5 acres.
4. Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)? (Characterization: 38)	a. Yes, the outlet is restricted or the wetland has no outlet. (b.) Minor restrictions slow down the water (i.e., undersized culvert.) c. No, the outlet has unrestricted flow.
5. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c.) Emergent vegetation or wet meadow.
6. What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland? (Characterization: 16)	(a.) Developed uses. b. Agriculture. c. Exclusive Forest Use and Open Space.
7. What is the dominant land use in the watershed upstream from the assessment area? (Characterization: 6)	(a.) Urban or urbanizing. b. Agriculture. c. Forested or natural area.

Notes

Wetland identification DC-3

Assessment questions: hydrologic control (Page 2 of 2)

Hydrologic control: assessment criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

Appendix C
Assessment questions, answer sheets & summary sheets

DC-4

Notes

Wetland identification DC-4

Assessment questions: wildlife habitat (Page 1 of 3)

Question	Answer
1. How many Cowardin wetland classes are present? (Characterization: 21)	*Rural areas:* a. Three or four. b. Two. c. One. *Urban areas:* (a) Two or more. b. One class with more than five plant species. c. One class with five or fewer plant species.
2. What is the dominant wetland vegetation cover type? (Characterization: 23)	(a) Woody vegetation. b. Emergent vegetation and ponding, or open water only. c. Emergent vegetation or wet meadow.
3. What is the degree of Cowardin class interspersion for the wetland being observed? (Characterization: 24)	a. High. (b) Moderate. c. Low.
4. If the wetland contains unvegetated open water, how many acres of unvegetated open water are present? (Characterization: 28)	*Rural areas:* a. More than 3 acres . b. Between 0.5 and 3 acres. c. Less than 0.5 acres. *Urban areas:* a. More than 1 acre. b. Between 0.5 and 1 acre. c. Less than 0.5 acres.

Notes

Wetland identification DC-4

Assessment questions: wildlife habitat (Page 2 of 3)

Question	Answer	Notes
5. How is the wetland connected to another body of water, such as a stream, lake or pond? (Characterization: 18)	a. The wetland is connected by surface water to another body of water. (b.) No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland. c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.	
6. How is the wetland connected to other wetlands? (Characterization: 27)	a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake. (b.) Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius. c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.	
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	(a.) No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.	No upstream stream to affect wetland

Wetland identification DC-4

Assessment questions: wildlife habitat (Page 3 of 3)

Question	*Answer*
8. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	(a.) Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
9a. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? (Characterization: 25)	a. Greater than 40%. b. Between 10% and 40%. c. Less than 10%.
9b. For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? (Characterization: 26)	a. Greater than 40%. b. Between 10 and 40%. (c.) Less than 10%.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-4

Assessment questions: fish habitat (Page 1 of 3)

NA

Part A—streams

Question	Answer
1. What percentage of the stream is shaded by streamside (riparian) vegetation? (Characterization: 31)	*Western Oregon:* a. More than 75%. b. Between 50% and 75%. c. Less than 50%. *Eastern Oregon:* a. 50% or more. b. 25% or more, but less than 50%. c. Less than 25%.
2. What is the physical character of the stream channel? (Characterization: 30)	a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel. b. Only portions of the stream channel are modified. c. The stream is extensively modified or confined in a non-vegetated channel or pipe.
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders? (Characterization: 32)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 2 of 3)

Question	Answer
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish present in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Part B—lakes and ponds

1. Does the lake or pond contain areas of both deep and shallow water? (Characterization: 33)	a. Yes. b. Cannot be determined. c. No.
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders? (Characterization: 35)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation? (Characterization: 34)	a. 60% or more. b. 20% or more, but less than 60%. c. Less than 20%.

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 3 of 3)

Question	Answer
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Fish habitat assessment criteria	
The wetland's fish habitat function is intact if:	Any three questions are answered "a," and no more than one is answered "c."
The wetland's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's fish habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-4

Assessment questions: water quality (Page 1 of 2)

Question	Answer	Notes
1. What is the wetland's primary source of water? (Characterization: 36)	a. Surface flow, including streams and ditches. (b) Precipitation or sheet flow. c. Groundwater, including seeps and springs.	
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	a. Yes. (b.) Unable to determine or not applicable. c. No.	
3. What is the degree of wetland vegetation cover? (Characterization: 21)	(a.) High (greater than 60%). b. Moderate (approximately 60%). c. Low (less than 60%).	
4. What is the wetland's area in acres? (Characterization: 17, 27)	(a.) More than 5 acres. b. Between 0.5 acres and 5 acres; or wetland area is less than 0.5 acres, and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake. c. Less than 0.5 acres, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.	including portions outside study boundary
5. What is the dominant, existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Developed uses. b. Agriculture. (c.) Exclusive Forest Use or Open Space.	

Wetland identification DC-4

Assessment questions: water quality (Page 2 of 2)

Question

6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)

Answer

a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.

c. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

Water quality: assessment criteria

A wetland's water-quality function is intact if:	Question 1 is answered "a" or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's water-quality function is lost or not present if:	Four out of six questions are answered "c."

Notes

Wetland identification DC-4

Assessment questions: hydrologic control (Page 1 of 2)

Question	Answer
1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin? (Characterization: 19)	(a.) Yes. b. No.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	a. Yes. (b.) Unable to determine or not applicable. c. No.
3. What is the wetland's area in acres? (Characterization: 17)	(a.) More than 5 acres. b. Between .5 acres and 5 acres. c. Less than .5 acres.
4. Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)? (Characterization: 38)	a. Yes, the outlet is restricted or the wetland has no outlet. b. Minor restrictions slow down the water (i.e., undersized culvert.) (c.) No, the outlet has unrestricted flow.
5. What is the dominant wetland vegetation cover type? (Characterization: 23)	(a.) Woody vegetation. b. Emergent vegetation and ponding, or open water only. c. Emergent vegetation or wet meadow.
6. What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland? (Characterization: 16)	a. Developed uses. (b.) Agriculture. c. Exclusive Forest Use and Open Space.
7. What is the dominant land use in the watershed upstream from the assessment area? (Characterization: 6)	(a.) Urban or urbanizing. b. Agriculture. c. Forested or natural area.

Notes

Including area outside study area

Wetland identification DC-4

Assessment questions: hydrologic control (Page 2 of 2)

Hydrologic control: assessment criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

Appendix C
Assessment questions, answer sheets & summary sheets

DC-5

Notes

Wetland identification DC-5

Assessment questions: wildlife habitat (Page 1 of 3)

Question	Answer
1. How many Cowardin wetland classes are present? (Characterization: 21)	*Rural areas:* a. Three or four. b. Two. c. One. *Urban areas:* (a.) Two or more. b. One class with more than five plant species. c. One class with five or fewer plant species.
2. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. b. Emergent vegetation and ponding, or open water only. (c) Emergent vegetation or wet meadow.
3. What is the degree of Cowardin class interspersion for the wetland being observed? (Characterization: 24)	a. High. b. Moderate. (c.) Low.
4. If the wetland contains unvegetated open water, how many acres of unvegetated open water are present? (Characterization: 28)	*Rural areas:* a. More than 3 acres . b. Between 0.5 and 3 acres. c. Less than 0.5 acres. *Urban areas:* a. More than 1 acre. b. Between 0.5 and 1 acre. (c.) Less than 0.5 acres.

Notes

Wetland identification DC-5

Assessment questions: wildlife habitat (Page 2 of 3)

Question	Answer
5. How is the wetland connected to another body of water, such as a stream, lake or pond? (Characterization: 18)	a. The wetland is connected by surface water to another body of water. (b.) No surface water connection exists to another body of water, but other bodies of water lie within 1 mile of the wetland. c. No surface-water connection exists to another body of water, and no other bodies of water lie within 1 mile of the wetland.
6. How is the wetland connected to other wetlands? (Characterization: 27)	(a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, ~~irrigation or drainage ditch~~, culvert, canal or lake. b. Not connected by surface waters, but other unconnected wetlands lie within a 3-mile radius. c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius.
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification DC-5

Assessment questions: wildlife habitat (Page 3 of 3)

Question	Answer
8. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. (c.) Developed uses.
9a. For **rural areas:** What percentage of the wetland's edge is bordered by upland wildlife habitat that is at least 150 feet wide? (Characterization: 25)	a. Greater than 40%. b. Between 10% and 40%. c. Less than 10%.
9b. For **urban areas:** What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide? (Characterization: 26)	a. Greater than 40%. b. Between 10 and 40%. (c.) Less than 10%.

Wildlife habitat: assessment criteria

The wetland provides diverse wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides habitat for some wildlife species if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-5

Assessment questions: fish habitat (Page 1 of 3)

N/A

Part A—streams

Question	Answer
1. What percentage of the stream is shaded by streamside (riparian) vegetation? (Characterization: 31)	*Western Oregon:* a. More than 75%. b. Between 50% and 75%. c. Less than 50%. *Eastern Oregon:* a. 50% or more. b. 25% or more, but less than 50%. c. Less than 25%.
2. What is the physical character of the stream channel? (Characterization: 30)	a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel. b. Only portions of the stream channel are modified. c. The stream is extensively modified or confined in a non-vegetated channel or pipe.
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders? (Characterization: 32)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited,* and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 2 of 3)

Question	Answer
5. What is the dominant existing land use within 500 feet of the wetland's edge? (Characterization: 15)	a. Exclusive Forest Use or Open Space. b. Agriculture. c. Developed uses.
6. Are fish present in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Part B—lakes and ponds

1. Does the lake or pond contain areas of both deep and shallow water? (Characterization: 33)	a. Yes. b. Cannot be determined. c. No.
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders? (Characterization: 35)	a. More than 25%. b. Between 10% and 25%. c. Less than 10%.
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation? (Characterization: 34)	a. 60% or more. b. 20% or more, but less than 60%. c. Less than 20%.

Notes

Wetland identification _____

Assessment questions: fish habitat (Page 3 of 3)

Question	Answer
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)	a. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants. b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants. c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.
5. ~~What is the dominant existing~~ land use within 500 feet of the wetland's edge? (Characterization: 15)	a. ~~Exclusive Forest Use~~ or Open Space. b. Agriculture. c. Developed uses.
6. Are fish in a stream, lake or pond associated with the wetland? (Characterization: 29)	a. Salmon, trout or sensitive species are present at some time during the year. b. Species not covered in "a" are present at some time during the year. c. No species are present at any time during the year.

Fish habitat: assessment criteria

The wetland's fish habitat function is intact if:	Any three questions are answered "a," and no more than one is answered "c."
The wetland's fish habitat function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's fish habitat function is lost or not present if:	All questions are answered "c."

Notes

Wetland identification DC-5

Assessment questions: water quality (Page 1 of 2)

Question	Answer	Notes
1. What is the wetland's primary source of water? (Characterization: 36)	(a) Surface flow, including streams and ditches. b. Precipitation or sheet flow. c. Groundwater, including seeps and springs.	stormwater inputs
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	(a.) Yes. b. Unable to determine or not applicable. c. No.	
3. What is the degree of wetland vegetation cover? (Characterization: 21)	(a.) High (greater than 60%). b. Moderate (approximately 60%). c. Low (less than 60%).	
4. What is the wetland's area in acres? (Characterization: 17, 27)	a. More than 5 acres. (b.) Between 0.5 acres and 5 acres; or wetland area is less than 0.5 acres, and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake. c. Less than 0.5 acres, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake.	
5. What is the dominant, existing land use within 500 feet of the wetland's edge? (Characterization: 15)	(a.) Developed uses. b. Agriculture. c. Exclusive Forest Use or Open Space.	

Wetland identification DC-5

Assessment questions: water quality (Page 2 of 2)

Question

6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland? (Characterization: 8)

Answer

(a.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants.

b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants.

c. No upstream or adjacent reaches are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants.

Water quality: assessment criteria

A wetland's water-quality function is intact if:	Question 1 is answered "a" or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is impacted or degraded if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's water-quality function is lost or not present if:	Four out of six questions are answered "c."

Notes

Wetland identification DC-5

Assessment questions: hydrologic control (Page 1 of 2)

Question	Answer
1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin? (Characterization: 19)	a. Yes. (b) No.
2. Is there evidence of flooding or ponding during a portion of the growing season? (Characterization: 37)	(a) Yes. b. Unable to determine or not applicable. c. No.
3. What is the wetland's area in acres? (Characterization: 17)	a. More than 5 acres. (b) Between .5 acres and 5 acres. c. Less than .5 acres.
4. Is waterflow out of the wetland restricted (e.g., beaver dam, concrete structure, undersized culvert)? (Characterization: 38)	a. Yes, the outlet is restricted or the wetland has no outlet. (b) Minor restrictions slow down the water (i.e., undersized culvert.) c. No, the outlet has unrestricted flow.
5. What is the dominant wetland vegetation cover type? (Characterization: 23)	a. Woody vegetation. (b) Emergent vegetation and ponding, or open water only. c. Emergent vegetation or wet meadow.
6. What is the dominant existing land use, within 500 feet of the wetland on the downstream or down-slope edge of the wetland? (Characterization: 16)	(a) Developed uses. b. Agriculture. c. Exclusive Forest Use and Open Space.
7. What is the dominant land use in the watershed upstream from the assessment area? (Characterization: 6)	(a) Urban or urbanizing. b. Agriculture. c. Forested or natural area.

Notes

Wetland identification DC-5

Assessment questions: hydrologic control (Page 2 of 2)

Hydrologic control: assessment criteria	
A wetland's hydrologic control function is intact if:	Four or more questions are answered "a."
A wetland's hydrologic control function is is impacted or degraded if:	Answers do not satisify the above- or below-listed criteria.
A wetland's hydrologic control function is lost or not present if:	Four or more questions are answered "c."

Notes

EXHIBIT B

WETLAND PROTECTION ORDINANCE
CITY OF BANKS ORDINANCE NO. 2002-04

I. Wetland Protection Areas, Purposes

The purposes of establishing wetland protection areas are:

- To implement the goals and policies of the Banks Comprehensive Plan;
- To satisfy the requirements of Statewide Planning Goal 5;
- To protect and restore wetland areas in Banks, thereby protecting and restoring the hydrologic and ecologic functions these areas provide for the community;
- To protect fish and wildlife habitat;
- To enhance and protect water quality and natural hydrology, to control erosion and sedimentation, and to reduce the effects of flooding;
- To protect and restore the natural beauty and distinctive character of wetlands in Banks as community assets;
- To enhance the value of properties near wetlands by utilizing the wetland as a visual amenity; and
- To improve or promote coordination among local, state, and federal agencies regarding development activities near wetlands.

II. Wetland Protection Areas, Definitions

The following definitions shall apply to Sections I through X, *"Wetland Protection Areas:"*

A. **Jurisdictional delineation** - A delineation of the wetland boundaries that is approved by the Oregon Division of State Lands (DSL). [See OAR 141-090-005 et seq. for specifications for wetland delineation or determination reports.]

B. **Locally significant wetland** - Locally significant wetlands are as determined by the provisions of OAR 141-086-0300 et seq.

C. **Local Wetlands Inventory (LWI)** - Maps and report entitled *"Local Wetlands Inventory City of Banks, Oregon"* and any subsequent revisions as approved by the Oregon Division of State Lands.

D. **Oregon Freshwater Wetland Assessment Methodology (OFWAM)** - A wetland function and quality assessment methodology developed by the Oregon Division of State Lands.

E. **Wetland** - An area inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which, under normal circumstances, does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

F. **Wetland protection area** - An area that includes any wetland determined to be locally significant subject to the provisions of this chapter.

G. **Wetland resource map** - The local map which incorporates the DSL-approved LWI map and identifies locally significant wetlands.

III. Determination of Locally Significant Wetlands

The determination of locally significant wetlands is made by the City of Banks (hereafter referred to as City) in accordance with rules adopted by Division of State Lands (OAR 141-086-0300). Locally significant wetlands are identified on the wetland resource map for Banks.

IV. Wetland Protection Areas, Applicability, and Application Submittal Requirements

A. Wetland protection areas consist of locally significant wetlands.

B. Unless otherwise stated, the City shall apply the provisions of Sections I through X in conjunction and concurrently with any other development permit being sought by an applicant. If no other permit is being sought the Planning Director shall serve as the approving authority.

C. Applications for plan approvals, development permits, or building permits, and plans for proposed public facilities, on parcels containing a wetland protection area, or a portion thereof, shall contain the following:

1) A delineation of the wetland boundary completed by a professional wetland scientist, or similar expert, qualified to delineate wetlands in accordance with Oregon Division of State Lands rules. If the proposed project is designed to avoid wetlands, a wetland determination report may be provided in place of the delineation.

2) A scale drawing that clearly depicts the wetland boundary, the surface water source, existing trees and vegetation, property boundaries, and proposed site alterations including proposed excavation, fill, structures, and paved areas.

3) Verification that the application packet has been submitted to the Oregon Department of Fish and Wildlife for review and comment.

D. No delineation or other wetland approval is required if the proposed development is located 25 feet or greater from a wetland identified and depicted on the LWI map.

V. Approval Criteria

The approving authority shall base its decision on the following criteria in addition to the required criteria for any other permit or approval that is being sought. Approvals shall be based on compliance with all of the following criteria:

A. The proposed project complies with the provisions of Sections VI through IX of this ordinance.

B. Except as otherwise allowed in Section VI, the proposed project will not result in filling of a wetland or reduction of wetland area on a parcel that has been delineated as containing a wetland.

C. Except as otherwise allowed in Section VI, the proposed project will not result in development or filling of land within 25 feet of the boundary of wetland that has been identified only through the wetland inventory process. (The wetland inventory process is generally accurate within approximately 25 +/- feet of the actual wetland. Requiring that no development or fill occur within 25 feet of the boundary can assure that the actual wetland will be avoided. This is not to be confused with a buffer and provides an allowance for map imprecisions where a more accurate delineation is not warranted.)

VI. Allowed Activities within Wetland Protection Areas

A. Any use, sign, or structure, and the maintenance thereof, that was lawfully existing on the date of adoption of this ordinance is allowed to continue within a wetland protection area. Such use, sign, or structure may continue at a similar level and manner as existed on the date of adoption of this ordinance. The maintenance and alteration of pre-existing ornamental landscaping is permitted within a wetland protection area so long as no additional native vegetation is disturbed. The provisions of this section shall not be affected by any change in ownership of properties containing a wetland protection area.

B. The following activities and maintenance thereof are allowed within a wetland protection area, provided that any applicable state or federal permits are secured:

1) Wetland restoration and rehabilitation activities;

2) Restoration and enhancement of native vegetation;

3) Cutting and removal of trees which pose a hazard to structures or people due to threat of falling;

4) Removal of non-native vegetation, if replaced with native plant species at the same amount of coverage or density;

5) Maintenance of existing drainage ways or ditches, other than structures, to maintain flow at original design capacity and mitigate upstream flooding, provided that management practices minimize sedimentation and impact to native vegetation;

6) Replacement of a permanent, legal, nonconforming structure in existence on the date of adoption of this ordinance with a structure on the same building footprint, if it does not disturb additional area, and in accordance with the provisions of Article 5, Section 5.010, Banks Zoning Ordinance (amended April, 1989);

7) Expansion of a permanent, legal, nonconforming structure in existence on the date of adoption of this ordinance, if the expansion area is not within and does not disturb the wetland protection area, and in accordance with the provisions of Article 5, Section 5.010, Banks Zoning Ordinance (amended April, 1989);

8) Emergency stream bank stabilization; and

9) Maintenance and repair of existing roads and streets, including repaving and repair of existing bridges, and culverts.

C. New fencing may be permitted by the Planning Director where the applicant demonstrates that the following criteria are satisfied:

1) The fencing does not affect the hydrology of the site;

2) The fencing does not present an obstruction that would increase flood velocity or intensity;

2) Fish habitat is not adversely affected by the fencing;

4) The fencing is the minimum necessary to achieve the applicant's purpose;

Applications for new fencing within a wetland protection area shall contain a scale drawing that clearly depicts the wetland area boundary.

VII. Prohibited Activities within Wetland Protection Areas

Except as permitted in Sections VI "Allowed Activities Within Wetland Protection Areas", the following activities are prohibited within a wetland protection area:

A. Placement of new structures or impervious surfaces;

B. Excavation, drainage, grading, fill, or removal of vegetation except for fire protection purposes or removing hazard trees;

C. Expansion of areas of landscaping with non-native species, such as a lawn or garden, into the wetland protection area;

D. Dumping, piling, or disposal of refuse, yard debris, or other material;

E. Discharge or direct runoff of untreated stormwater;

F. Uses not allowed in the list of permitted uses for the underlying zone, and;

G. Any use not specifically allowed in Section VI.

VIII. Limited Exemption Areas

Artificially created wetlands such as detention ponds, water quality facilities, or other types of storm drainage facilities managed by the Clean Water Services agency of Washington County shall be exempt from the requirements of Sections IV – VII, and the following activities are allowed therein:

A. Removal of vegetation and accumulated sediment, provided the material is placed in an upland location;

B. Minor bank recontouring or enlargement into abutting upland (but not wetland);

C. Activities specifically allowed in Section VI, and;

D. Normal maintenance and repair of the developed facility.

IX. Notification and Coordination with State Agencies

A. The Oregon Division of State Lands shall be notified in writing of all applications to the City for development activities - including development applications, building permits, and other development proposals - that may affect any wetland identified in the Local Wetlands Inventory. This applies for both significant and non-significant wetlands. The Division provides a Wetland Land Use Notification form that should be used for this purpose.

B. When reviewing wetland development permits authorized under this Ordinance, the approving authority shall consider recommendations from the Oregon Department of Fish and Wildlife regarding OAR 635-415 "Fish and Wildlife Habitat Mitigation Policy."

X. Variances

A. The Planning Commission shall be the approving authority regarding variance applications to the Wetland Protection Area provisions. The procedures of Article 9, Sections 9.020 – 9.070, Banks Zoning Ordinance (amended April, 1989) shall be followed, except that the variance criteria of this section shall apply.

B. Mapping Error Exemption. The Planning Director may grant an exemption from the ordinance provisions when the applicant has shown that a mapping error has occurred, and the error has been verified by DSL. Delineations verified by DSL shall be used to automatically update and replace LWI mapping. No formal variance application or amendment is needed for map corrections where delineations are provided.

C. Hardship Variances. The Planning Commission may grant a variance to the provisions of this ordinance only when the applicant has satisfied all of the following conditions:

1) Through application of this ordinance, the property has been rendered not buildable, or a significant hardship has been imposed on the property;

2) The applicant has exhausted all other options available under this ordinance to relieve the hardship;

3) The variance is the minimum necessary to afford relief, considering the potential for increased flood and erosion hazard, and potential adverse impacts on native vegetation, fish and wildlife habitat, and water quality;

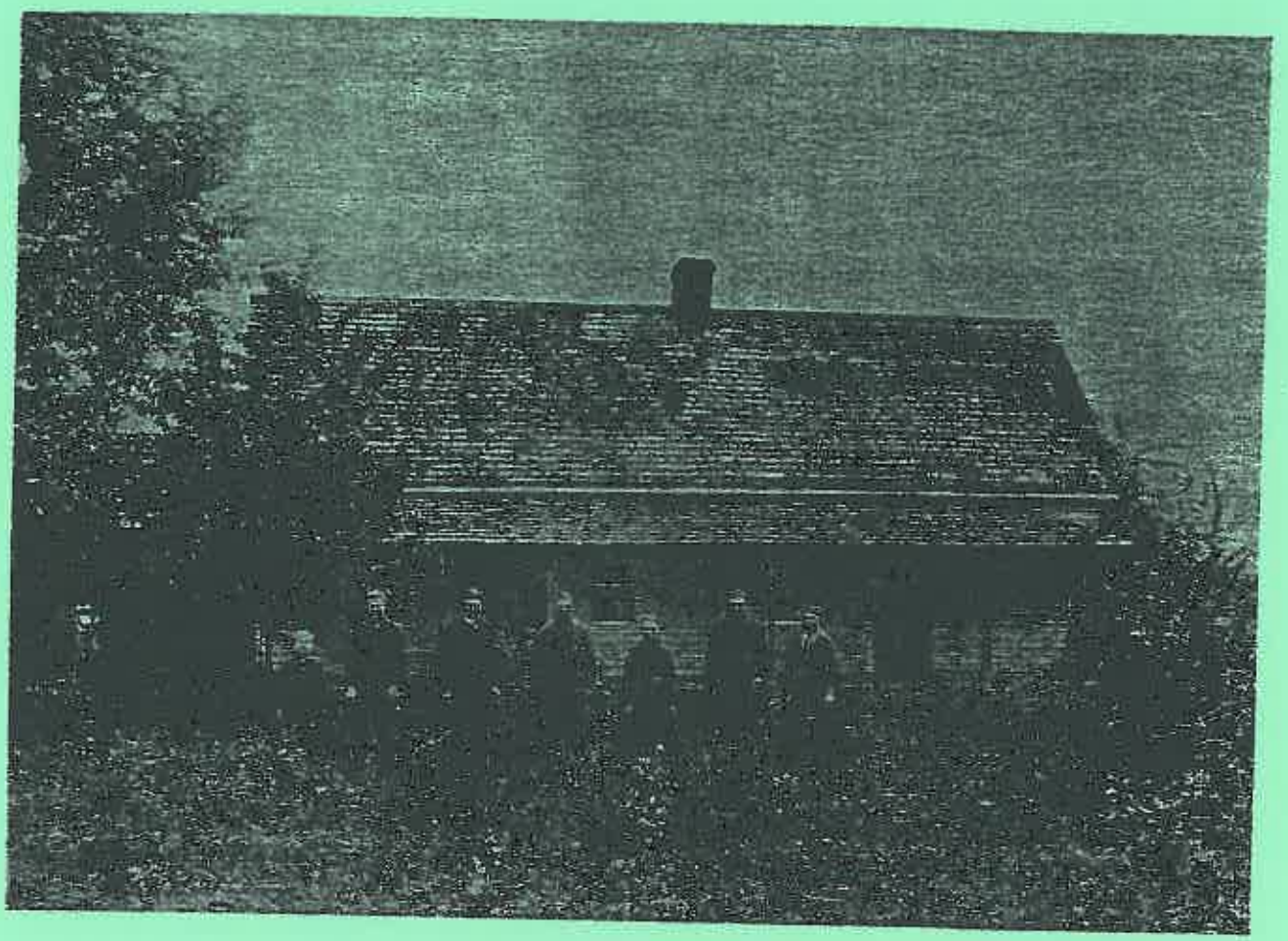
4) No significant adverse impacts on water quality, erosion, or slope stability will result from approval of this hardship variance, or these impacts have been mitigated to the greatest extent possible; and

5) Loss of vegetative cover shall be minimized.

PART II

HISTORIC RESOURCES

BANKS



JABEZ WILKES FAMILY, PIONEERS OF 1845, IN FRONT OF HOME IN BANKS, c. 1880.

PART II: HISTORIC RESOURCES

1. INTRODUCTION

The following policy has been adopted in the City of Banks Comprehensive Plan:

> ***"1. The City will protect natural resource areas and require that the long range availability and use of the following will not be limited or impaired by development.***
>
> - ***Historically and culturally significant sites/areas"***

(Page 10, City of Banks Comprehensive Plan, revised 12/88.)

Consistent with the above plan policy regarding historic resources and the requirements of OAR 660-023-0200, the City is updating its local cultural resources inventory.

In 1984, the Washington County Museum sponsored a project to conduct a *"Cultural Resources Survey and Inventory"* for the City of Banks. This survey provided a major first-time effort in producing a detailed inventory of historic buildings in Banks. The survey identified seven buildings as having historical significance:

- U.S. National Bank
- Banks Jr. High School
- Boy Scout Cabin
- Peppard/Moore Residence (281 S. Main St.)
- Stewart/Turner Residence (301 Park St.)
- Galloway House (160 Banks Rd.)
- Ruth's Beauty Shop (130 Main St.)

The survey provides an excellent source of information (much of which is still valid) regarding historically significant buildings and has not been incorporated into the comprehensive plan. It is noted, however, that the comprehensive plan was amended in 1989 to recognize four buildings which were identified in the inventory – U.S. Bank, Banks Jr. High School, Boy Scout Cabin, and Peppard/Moore Residence. These buildings were also designated with the City's Historic Resource Overlay Zone.

2. HISTORIC BUILDINGS UPDATE

As part of the 2002 Periodic Review Goal 5 update, the City has incorporated the *"Cultural Resources Survey and Inventory"* for Banks in its entirety (See Exhibit AA). Some of the information shown on the individual cultural resource inventory sheets is updated as follows:

- U.S. National Bank – The building presently houses City Hall and is owned by the City of Banks.
- Banks Jr. High School – The building presently houses administrative staff for the Banks School District.

- Peppard/Moore Residence – The building is presently owned by Ione Pilate.
- Galloway House - The building is presently owned by Carole Sue Plummer.
- Ruth's Beauty Shop - The building presently houses an accountant's office and is owned by Donald and Judith Olson.

In addition, the City considered other sources of information to help identify significant historic buildings. These informational sources included:

- *"Banks A Darn Good Little Town"* by Ann Fulton, Ph.D., 1995
- Washington County Museum
- Banks Historical Society
- State Historic Preservation Office (SHPO)
- Washington County Department of Land Use and Transportation (DLUT)

Generally speaking and with one addition, the same buildings identified in the *"Cultural Resources Survey and Inventory"* were referenced in most of the above sources. The one addition is the Banks Methodist Church, which was constructed in 1908. The historical significance of this church is quite evident from the information provided by the above sources as follows:

A. Excerpts from *"Banks A Darn Good Little Town"*

> *"The Methodist Church established the Banks church under its wing. Its organizing principle was that the religious doctrines would be Methodist, but it would also be a community church. The Banks church would welcome*

members of other Protestant denominations. The building project got underway with a clear vision of this mission.

Banks supported the drive to build a new church wholeheartedly. The Banks family donated the land and the community raised $2600 by subscription. A church social raised money for a bell and pulpit chairs in 1908. Michael Schramel and others in the community built a beautiful church with opposing gables and a conical central steeple. Multi-lighted Gothic-style windows brought glints of light into the sanctuary. The offering of $967.00 collected on the dedication day paid the $900 of indebtedness that remained and left $67.00 to spare. The Banks Methodist Episcopal congregation was proud to start off free of debt.

Three hundred people attended the dedication services on March 21, 1909. W.C. Stewart, the first pastor to serve in the new building, delivered the opening address and Bishop Smith from Portland delivered the morning sermon. The luncheon that followed was one of the highlights of the day:

> *At noon, a luncheon was served in the I.O.O.F. Hall and was furnished by the ladies of Banks. It should be called a feast rather than a luncheon for the repast was snot only bountiful, but was delicious, and seeming b those present, was more than abundant.*

When the services were over, the members gathered proudly in front of their beautiful new building for a photograph to commemorate the dedication day. Now Banks had a new church and a parsonage next door provided a home for the minister and his family."

(Pages 46 and 47, *"Banks A Darn Good Little Town"* by Ann Fulton, Ph.D., 1995.)

B. Washington County Museum File

The County Museum file provided newspaper articles about the Banks Methodist Church, including the following excerpts pertaining to the 75th anniversary of the church dedication:

"William Clyde Stewart was the pastor of the Methodist Episcopal Church in 1909 when the church was dedicated. Stewart's wife, now Mrs. J. Arthur Reeher of Forest Grove, will be a special guest for the observance, as will other former pastors and widows.

Forest Grove resident Emmett Shipley, who helped build the church, is also planning to attend. He and Hilda Shipley were honored guests at the church in 1982 on the occasion of their 70th wedding anniversary.

Looking back to earlier days of Banks has been an on going project through the church.

> *'John Carstens and Ben Dooley killed a 200-pound bear over the hill. After Garrigus brothers chased a bear for an hour and a half, A.B. Garrigus was severely bitten and most of his clothes torn off.'*

This was one of the news stories at the time the town of Banks was developing at the sight where a new railroad to the ocean would give access to the great stands of giant virgin timer. As the railroad tracks were laid down, the building and spire of the Methodist Episcopal Church went up. John Banks donated the property for the church which still stands, continuously serving the Banks community. 'Whosever will may come, worship at the little 'church in the vale',' was the motto."

(Page 5C, *Hillsboro Argus*, Thursday, April 26, 1984.)

C. Banks Historical Society

The Banks Historical Society provided the following excerpt:

> *"As the town of Banks boomed, in Greenville, the parent town 2 miles to the south, disappeared, Banks' identity as a protestant town with the Catholics' having previously established their own area communities. Protestants were in the majority from the beginning of the Banks settlement. As was common throughout America during this period, Banks the protestant town created minor frictions with Roy the Catholic town a few miles to the south.*
>
> *It is not surprising that it would be the Methodist church that established the Banks church, organizing principle, teaching doctrines and providing Methodist ministers. About the 1970's, this church by majority of its members, changed the name of the church to Banks Community Church, however it continued to be supported by Methodist preachers. Around the 1990's the church changed the name back to that of Methodist, and as it remains."*
>
> (Article entitled, *"Methodist Church Building Built 1908 Banks, Oregon.*)

An architectural description of the church building is provided as follows:

> *"The Banks Community United Methodist Church is a Gothic Revival, one and a half story building in an L-shaped plan with attachments. A tall tower component projects upward in the corner of the south and west façades; changing from a four-sided structure to a six-sided tower at approximately half-way up, denoted by a wooden course molding. A cupola with six louvered-*

windows sits on top of the tower; and a lantern with a cross finale is situated on the very top.

The church has a steep gable roof made out of composition shingles and the main building is clad with asbestos shingles. The upper part of the tower is covered with square-butt shingles and a band of fishscale shingles about two-thirds the way up the tower. The main entrance of the church is located on the south side of the tower, covered by a pedimented portico with vertical shiplap siding in the center. One wooden column supports the portico and there is a replacement metal door leading into the church. On the west side of the tower there is narrow, leaded, double-hung, 1/1 window with a fleur de lis design in the center.

Other fenestration of the building are two large, wood-frame, tripartite windows with simple wood tracery in their pointed arches on the south and west facades. There are 4/4 double-hung windows topped by a pediment; one on the south façade, three on the east facade. A brick chimney is located on the west façade. There are attached additions to the east and north facades."

(Architectural description provided by Laurel Schweitzer, Economic Development Coordinator, Banks Chamber of Commerce.)

3. Historic Resource Overlay Zone

As earlier indicated, four buildings identified in the historic inventory have already been designated with the City's *Historic Resource Overlay Zone*. Based on the prior discussion, it would appear appropriate for the remaining three buildings from the 1984 inventory, i.e., Stewart/Turner Residence, Galloway House, and Ruth's Beauty Shop, plus the Banks

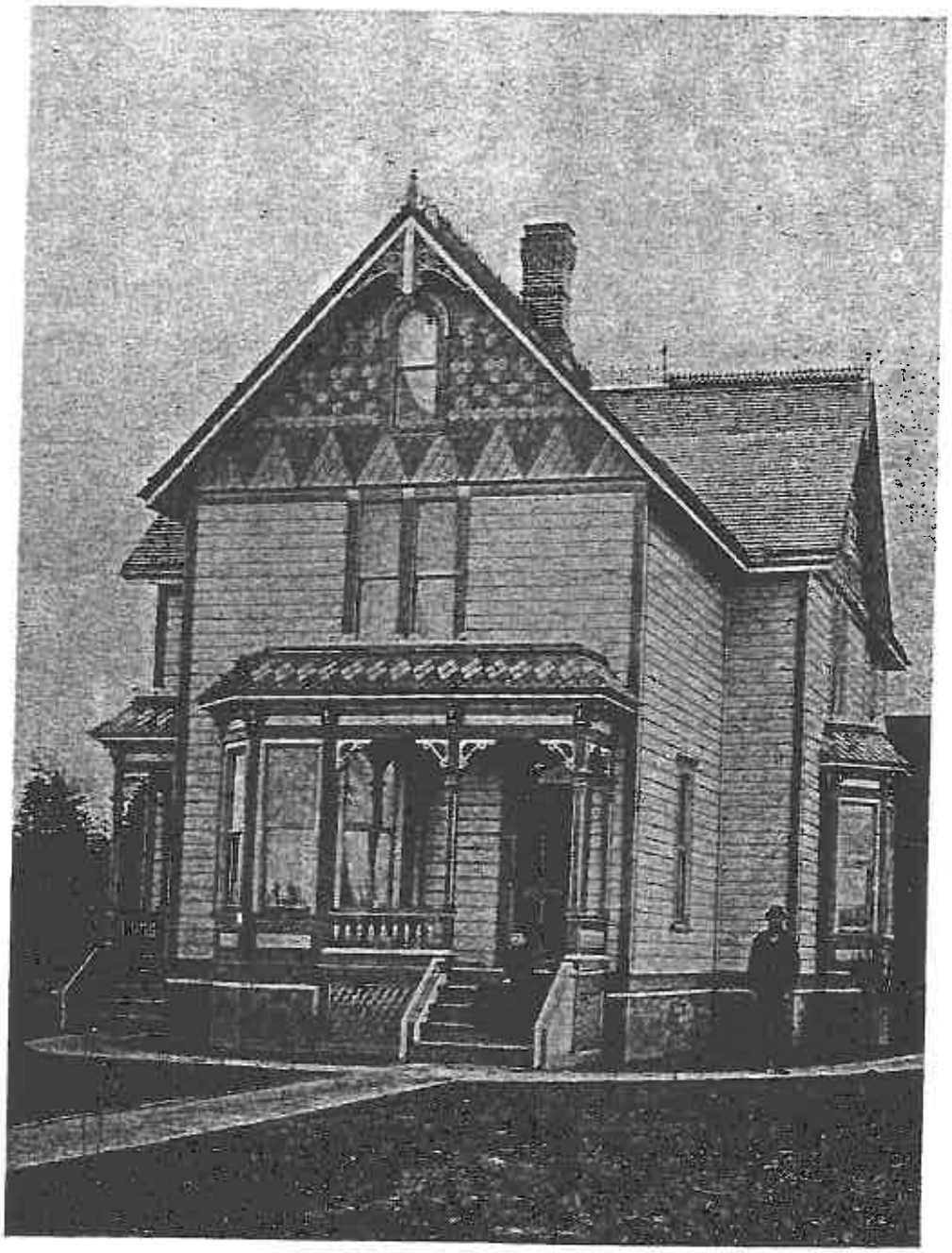
Methodist Church, to be designated with the *Historic Resource Overlay Zone*.

It is further noted, however, that the state statute does allow a property owner to refuse giving consent for having the historic designation on the property. The City staff has notified the four owners in this regard and has received two refusals to grant consent (Ruth's Beauty Shop and Banks Methodist Church).

If the remaining two owners do grant their consent, then the overlay zone would be assigned to these properties under the Periodic Review amendment process. Should the owners not consent, the overlay zone will not be designated for the properties.

EXHIBIT AA

Inventoried Resources



WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 239/91

PRESENT OWNER: Vesta Melissa and Claude R. Morgan

T 2N R 3W Sec. 31 ¼ BB

ORIGINAL OWNER: W. Otto & Detta Galloway

TAX LOT #: 400

ARCHITECT/BUILDER: Walter Beard

CONDITION: Good

LOCATION: 160 Banks Road, Banks

CONSTRUCTION DATE: ca. 1912

COMMON/HISTORIC NAME: Galloway House

USE: PRESENT Residence

THEME: Architecture: 20th ce:

ORIGINAL Residence

TYPE: Building

* * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

The Galloway house was constructed ca. 1912 in the town of Banks. It is three bays wide, rectangular in plan, and one and one-half stories high. It is covered with a gable roof of composition shingle with boxed eaves. A pedimented doormer is cut into the roof on the north elevation. The L shaped porch on the north and west facades is covered by a hip roof with pedimented gables above the entry doors. The interior chimney centrally located in the gable ridge is no longer in use. The current owners use an oil furnace for heating the house. The residence is clad with beveled tongue & groove siding and shingles in the gable ends. The original paneled entry door with one etched glass light remains on the north facade. Fenestration is regular; 1/1 double hung sash windows with leaded glass are seen throughout the house. The porch is supported by seven Tuscan columns. The original porch floor boards have been replaced with poured concrete. A woodshed and wellhouse have been attached to the rear of the residence. The orginal barn, constructed in the same time period as the residence, is to the south. A new garage is also sited on the property.

CONTEXTUAL DESCRIPTION

The Galloway residence faces north on Banks Road. It is situated on a hilly lot which slopes to the south. A barn, garage and fruit trees

(continued)

Sources consulted:

- Morgan, Claude and Vesta. Interview, February 22, 1983. Telephone Interview, February 13, 1984.
- Washington County Museum Vertical File: Banks
- Hillsboro Argus. "History of Banks Revives Good Old Days", February 13, 1961.
- Ownership Directory of Northwest Portland. Heald Map and Directory,Co. Inc. 1915

Recorded by: DeMuth/McLaughlin Date: February, 1984

PRESENT OWNER'S ADDRESS
(If different from above):

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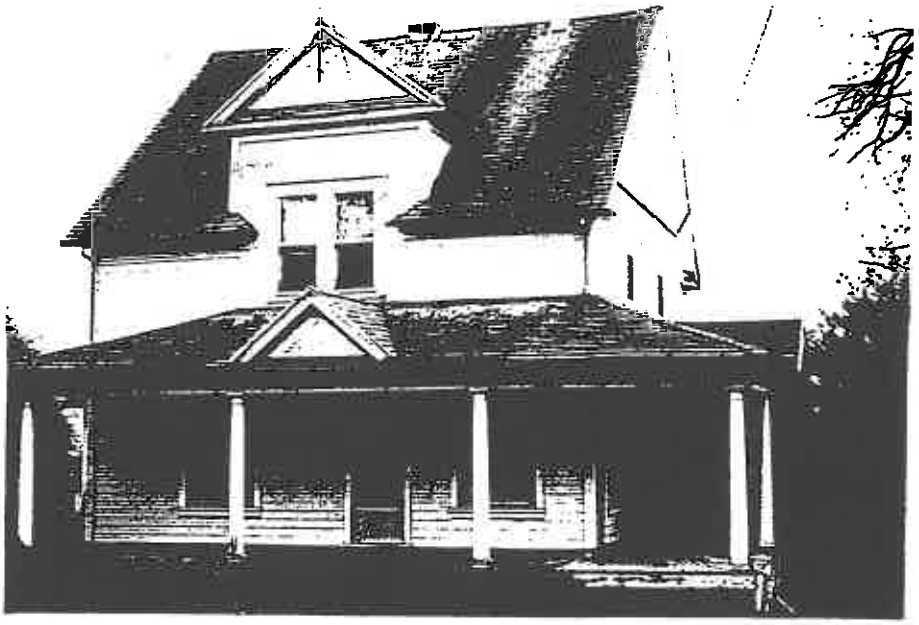
are located behind the house. A residential area lies to the east and west.

HISTORICAL SIGNIFICANCE

According to the current owners, Vesta and Claude Morgan, this residence was originally the home of W. Otto and Detta Galloway. It was constructed ca. 1912 by a local carpenter, Walter Beard. Otto Galloway was a businessman in Banks who bought the merchandise store established in 1904 by Fred Watrous. Galloway later sold it to Harold Jensen. Otto Galloway is listed in the Heald Ownership Directory of Washington County (1915) as owning about 75 acres in the Banks area. He also worked for the local Washington County Bank, according to Vesta Morgan.

The Galloways eventually sold their house and property to Wade and Stella Armentrout, the parents of Vesta Morgan. Wade Armentrout was a local farmer who came to Oregon from Iowa. The Armentrouts deeded their home to Vesta and her husband about 30 years ago.

The Galloway house is a significant example of residential building found in Banks during the early 1900's. It has unusual details such as the pedimented dormers and entryways. It is one of the few residences in Banks that has remained unaltered, having retained original character and design.



WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 240/90

PRESENT OWNER: City of Banks — T2N R 3W Sec. 31 ¼ BB

ORIGINAL OWNER: Boy Scouts of America — TAX LOT #: 4500

ARCHITECT/BUILDER: Mr. Lundeen and citizens of Banks — CONDITION: Good

LOCATION: Corner of Sunset St. & Sellers Road — CONSTRUCTION DATE: 1930

COMMON/HISTORIC NAME: Banks Boy Scout Cabin

USE: PRESENT Office Space & City Park — THEME: Architecture: 20th Cent; Social: Recreation

ORIGINAL Boy Scout Meeting Place — TYPE: Building

* * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

The Boy Scout cabin is a one story, peeled log building, constructed in 1930. The logs are milled on three sides, rounded on the fourth side, and have sawn ends. Vertical board is seen in the rake end of the gable roof which is covered with wood shakes. It has exposed rafters and a simple bargeboard of medium width. One exterior chimney is located on the northeast facade. The entry door on the southwest facade is composed of a single panel and a fixed window of four lights. Paired 6-pane casement windows are such on the southwest facade. Fixed multi-pane windows are on the west and north facades. The gabled front southwest entry porch is supported by two peeled logs.

CONTEXTUAL DESCRIPTION

The cabin is sited on a corner lot at the intersection of Sunset Road and Sellers Road in Banks. It is surrounded by large oak trees and a tended lawn. Residential areas are to the north and east.

HISTORICAL SIGNIFICANCE

The Boy Scout Cabin was first constructed as a meeting place for Troop 240, Portland Area Council, Boy Scouts of America. It was built in 1930 by the fathers of the boys in the troop and other men in the town of Banks. The logs for the building were sawn at Mr. Lundeen's sawmill. Mr. Lundeen was a major impetus behind the building project. The J.H.

Sources consulted: (continued)

- Morgan, Claude and Vesta. Interview, February 22, 1983.
- Steinbach, Marian. Interview, February 22, 1983.
- Washington County Vertical Files: Banks.

Recorded by: Demuth — Date: February, 1984

PRESENT OWNER'S ADDRESS
(If different from above):

Duke brickyard supplied the bricks for the fireplace and chimney. The Duke brickyard was on the Southern Pacific Railroad route to Wilkesboro.

The Boy Scout Cabin is significant architecturally as the only peeled log building in Banks, representative of the revival of log cabins popular during this era. The building is associated with significant trends and social activities of the Boy Scouts. It is in good condition and is virtually unaltered. Since it has been owned by the City of Banks, it has been used for office space for a number of city officials.

WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 241/82

PRESENT OWNER: Banks School District #13 T 2N R 3W Sec. 31 ¼ ___

ORIGINAL OWNER: Banks Union High School Dist.#1 TAX LOT #: 801

ARCHITECT/BUILDER: _____ CONDITION: Good

LOCATION: Main Street, Banks CONSTRUCTION DATE: 1919-20

COMMON/HISTORIC NAME: Banks Junior High/High School

USE: PRESENT Jr. High School THEME: Education: Formal Schooling

ORIGINAL High School TYPE: Building

* * * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

Banks Junior High School is a two story building, rectangular in plan with attachments. It has a flat roof with a parapet wall on all elevations. Below the parapet is a simple wooden entablature which is broken on two fronts of the west facade. The building is sided with common bond brick. The prominent central entry on the west facade is accentuated by two wooden pilasters of the Tuscan order which support an entablature. The doors have five fixed lights and a transom. Above the entry a lunette window of twenty lights is trimmed by a soldier course of brick. Casement windows of 10/8 lights are grouped in bays of three on the west facade. Twenty double hung sash windows of 6/6 are on the north elevation. The school has a concrete foundation and a two foot watertable. Concrete steps lead to the main entry. An addition was made to the rear (east facade of the building) in the 1970's.

CONTEXTUAL DESCRIPTION

Banks Junior High is situated east of Highway 47 in the town of Banks. To the north is a mixed use area. The commercial core of Banks stretches one half mile north on either side of Highway 47. The school is landscaped with a tended lawn, foundation shrubs, and a large evergreen tree.

(continued)

Sources consulted:

- Washington County Museum Vertical Files: Banks.
- News Times, Forest Grove, Oregon, October 3, 1974.

Recorded by: Demuth/McLaughlin Date: February, 1983

PRESENT OWNER'S ADDRESS
(If different from above): _____

HISTORICAL SIGNIFICANCE

The present Banks Junior High was formerly known as Banks Union High School. The building was constructed as a high school in 1919-1920. The first graduation was held in the Spring of 1920. While the school was under construction, classes were held in the American Legion Hall.

The school building cost $38,000 to construct. Professor J.F. Santee and Miss Alice Stein were the first instructors. This building served as a high school until 1959, when a new school was constructed. The former high school building was then used as a Junior High School. It is still in use as a Junior High School today.

During the 1970's a group of Banks citizens, concerned about the state of disrepair of the building, organized a building improvements committee. They requested money be set aside in the school budget for interior repair and remodeling. The budget increase was approved, and the building was repainted, carpeted, re-wired, and a new heating system was installed.

Banks Junior High School is a significant building architecturally as one of the few brick buildings in the area. It has unusual wooden architectural detail exhibited in the wood frieze, pilasters and lunette window above the entry. The building has maintained its original use as a school since 1920. It is an important historical feature in the City of Banks as the first high school.

WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 242/797

PRESENT OWNER: Ruth Canby

T 2N R 3W Sec. 31 ¼ BB

ORIGINAL OWNER: Bert Friday

TAX LOT #: 2200

ARCHITECT/BUILDER: _____

CONDITION: Good

LOCATION: 130 Main Street, Banks

CONSTRUCTION DATE: 1916

COMMON/HISTORIC NAME: Ruth's Beauty Shop

USE: PRESENT Beauty Shop

THEME: Commerce & Industry: Business

ORIGINAL Barber Shop

TYPE: Building

* * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

Ruth's Beauty Shop is a one story, wood frame, false front commercial building. It is two bays wide, covered with a gable roof of corrugated tin. A wood parapet separates the main body of the building from the porch, which is covered with a hip roof. A brick chimney is centrally located in the gable roof. The building is sided with shiplap and finished with cornerboards. Storefront windows appear on either side of the entry door of two lights and transom. The windows are fixed with three to a bay. The porch across the west facade is supported by four turned carved wooden posts. A garage, which appears to be an older addition, is attached to the east facade. A residence is located behind the building to the east.

CONTEXTUAL DESCRIPTION

This commercial building is on a city lot, on the east side of Main Street. It is surrounded by a mixed use area of both residential and commercial buildings. The U.S. Bank building is to the immediate north.

HISTORICAL AND ARCHITECTURAL SIGNIFICANCE

Constructed circa. 1916, this building was first used as a barber shop. It was owned by Bert Friday. Bert lived in the house in back of the shop with his wife, Alice, who was a school teacher. The current owner

(cont'd.)

Sources consulted:

- Wilcox, Grace (resident of Banks for 57 years), Interview, Feb. 6, 1984.
- Canby, Ruth. Interview Feb. 15, 1984.

Recorded by: Demuth/McLaughlin Date: February, 1984

PRESENT OWNER'S ADDRESS
(If different from above): _____

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HISTORICAL AND ARCHITECTURAL SIGNIFICANCE (continued)

of the building, Ruth Canby, bought the shop from Mrs. Friday about 10 years ago. The building had been vacant for some time prior to Ruth Canby's purchase. She now operates a beauty shop in the building. Improvements and alterations made under Mrs. Canby's ownership have been minimal. A new tin roof has replaced the original shingle roof.

This one story, false front building is one of the few remaining commercial buildings in Banks that has not been significantly altered. It has remained as constructed, simple in design, with few architectural features. Ruth's Beauty Shop is representative of the many wooden commercial buildings which once lined Banks' Main Street in the early 1900's.

WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 243/798

PRESENT OWNER: U.S. National Bank — T 2N R 3W Sec. 31 ¼ BB

ORIGINAL OWNER: U.S. National Bank — TAX LOT #: 2000, 2100

ARCHITECT/BUILDER: _____ — CONDITION: Good

LOCATION: 120 Main Street, Banks — CONSTRUCTION DATE: 1940

COMMON/HISTORIC NAME: U.S. National Bank

USE: PRESENT U.S. Bank; Carl W. Heisler Real Estate Office — THEME: Arch: 20th Cent. Business & Industry: Commerce

ORIGINAL U.S. Bank; Drug Store — TYPE: Building

* * * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

The U.S. National Bank building was constructed circa 1940 on the southeast corner of Main and Market Streets. This building replaced the Washington County Bank, the original building on this site. The U.S. National Bank is a one story brick building with a flat roof surrounded by a concrete parapet. Concrete relief panels are also seen above the window openings and at the corner of the solider course brick surrounding the window openings. The west building facade has two entrances. The bank entrance is through a newer metal swinging door with a transom of 10 lights. Two windows of 10/1 and 12/1 lights align this doorway. To the south, the second entry door on the west facade opens into Carl W. Heisler's Real Estate office. The office has a wooden door of one light framed by four fixed storefront windows. Four window bays of fifteen lights are situated above this entry. The north facade has a bay of five windows with twenty lights each and one window of 1/1 double hung sash. A doorway or window opening on the north facade, indicated as such by the presence of a concrete panel above, has been bricked in. The building has a concrete foundation with a one and one half foot water table. Above the water table is rowlock brick coursing. A one story brick addition has been made on the east building facade.

Sources consulted:

. Nixon, Brigetta. Hillsboro Argus, Bicentennial Ed., 19 Oct. 1976, p. 73.
. Sandborn Fire Insurance Co. Map, Banks, 1921.
. Washington County Museum Vertical File: Banks.
. Wilcox, Grace. Interview, 15 Feb. 84.

Recorded by: McLaughlin/Demuth — Date: February, 1984

PRESENT OWNER'S ADDRESS
(If different from above): _____

CONTEXTUAL DESCRIPTION

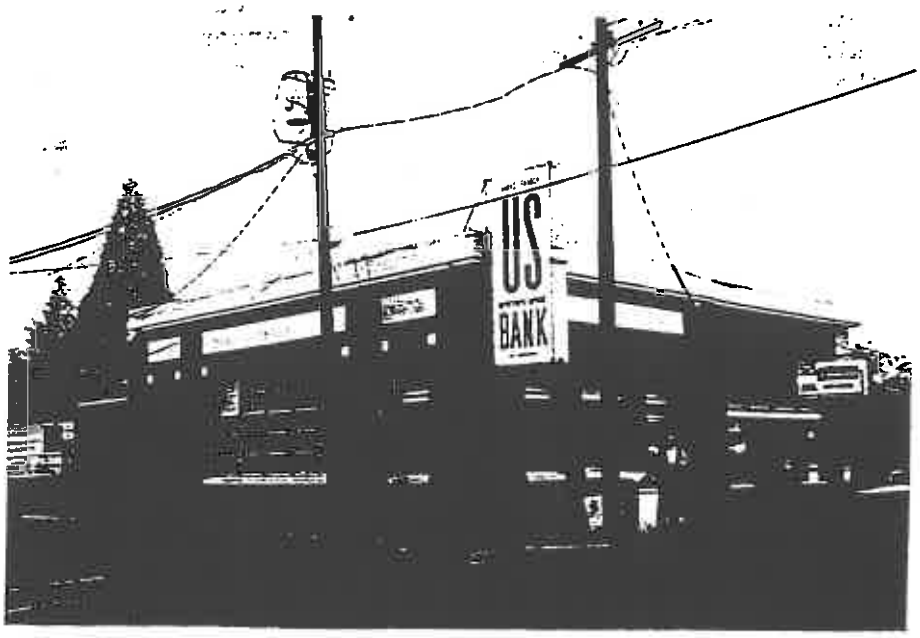
The bank is located on the southeast corner of Main Street and Market Street in Banks, Oregon. A wood frame false front commercial building is to the south. Other commercial buildings line Main Street.

HISTORICAL and ARCHITECTURAL SIGNIFICANCE

The first bank building in the town of Banks was the Washington County Bank, constructed in 1907. It was situated on the southeast corner of Main and Market Streets, at the same location as the present U.S. National Bank. Nathaniel Burnett was the first bank president, Lewis Carstens was the vice president, and W.O. Galaway was the cashier. A 1921 Sandborn Fire Insurance Co. map for Banks shows the original Washington County Bank as a one story wood frame building with a porch across the west facade. The vault was in the back of the building, and built of brick. This bank building was replaced by the new brick building, constructed circa. 1940.

The building is divided into two sections, the bank is in the north section and a drug store originally in the rear section. Claude Hutchens was the first owner of the drug store. At some later date, the drug store was converted for use as a real estate office. Mr. Garrigus first owned the real estate office. U.S. Bank now owns both sections of the building.

The significance of the U.S. Bank is based on both architectural and historical merit. The building is simple in design, yet features interesting details in the decorative brickwork coursing surrounding the double hung sash windows, and the concrete relief panels above these window groupings. The United States National Bank is in the same location as the Washington County Bank, the first bank in the town, constructed in 1907. It is significant that the same site was selected for the second bank, years later.



WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO: 244/784

PRESENT OWNER: Jessy Peppard — T 2N R 3W Sec. 31 ¼ BB

ORIGINAL OWNER: Bill Moore — TAX LOT #: 7500

ARCHITECT/BUILDER: _____ — CONDITION: Poor

LOCATION: 281 S. Main Street, Banks — CONSTRUCTION DATE: ca. 1890

COMMON/HISTORIC NAME: Peppard/Moore Residence

USE: PRESENT Residence — THEME: Arch: 19th Cent.

ORIGINAL Residence — TYPE: Building

* * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL DESCRIPTION

The Peppard/Moore house is a one and one-half story building, rectangular in plan with architectural details characteristic of the Queen Anne style. The gable roof is steeply pitched with boxed eaves and a one foot wide frieze on the rake end of the gable. One central brick chimney with a corbelled cap pierces the peak of the gable. The building is clad with shiplap siding and finished with cornerboards. The entry door is on the east facade; it is wood frame with vertical panels, one horizontal panel and a single light. The windows are 1/1 double hung sash, single and paired.

There is a projecting bay on the front facade of the building, which forms a cutout on the northeast corner. This cutout is enhanced by spindlework, scroll brackets and a hanging pendant. Similar spindlework is seen along the corner porch frieze on the southeast edge of the building. The brackets are composed of three jigsaw cut pieces of wood laminated together. A one story gable addition extends from the west facade. No outbuildings are present on the site.

CONTEXTUAL DESCRIPTION

The Peppard/Moore residence is located west off of Main Street in the town of Banks. Behind the house, further to the west is flat, agricultural land. Residences align Main Street to the east, north, and south.

Sources consulted:

(continued)

- Downe, Clark. Telephone Interview, Feb. 1984.
- Washington County Museum Vertical File: Banks.
- Sandborn Fire Insurance Co. Map, Banks, 1921.
- Wilkes Brothers Abstract Co. Map of Banks, 1909.

Recorded by: Demuth/McLaughlin — Date: January, 1984

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PRESENT OWNER'S ADDRESS
(If different from above): _____

HISTORICAL AND ARCHITECTURAL SIGNIFICANCE

According to Clarke Downe, a longtime resident of Banks, Bill Moore was the original owner of this residence. No archival data has been found on Moore at this time, however, on a Wilkes Brothers Abstract Co. Map of Banks, M.A. Moore is listed as the property owner in 1909. It is possible that by 1909, the residence was passed from father to child, Bill to W.A. Moore.

The house appears on a 1921 Sandborn Fire Insurance Co. Map similar to its present plan. The 1921 Map shows a porch on the north facade which has since been enclosed. A well is noted on the map, next to the porch. The rear addition to the south elevation of the house, now in poor condition, is also shown on the Sandborn Map. A garage, located northeast of the residence appears on the 1921 Map, but is not present on the property today.

The Peppard/Moore residence is significant as a simple architectural example of the Queen Anne style, and dates earlier than many residences in Banks. It has retained its original plan and ornamentation, exemplified by the decorative jigsaw cut brackets and spindlework along the porch and window openings.

WASHINGTON COUNTY CULTURAL RESOURCE INVENTORY

RESOURCE NO.: 245/94

PRESENT OWNER: Bart and Norma Stewart — T 2N R 3W Sec. 31 ¼

ORIGINAL OWNER: Montgomery Turner — TAX LOT #: 2601

ARCHITECT/BUILDER: _____ — CONDITION: Good

LOCATION: 301 Park Street, Banks — CONSTRUCTION DATE: 1910 or 1

COMMON/HISTORIC NAME: Stewart/Turner Residence

USE: PRESENT Residence — THEME: Architecture: 20th cent

ORIGINAL Residence — TYPE: Building

* * * * * * * * * * * * * * * *

Description of the resource and statement of historical significance:
(Continue on back if necessary)

ARCHITECTURAL SIGNIFICANCE

This residence is a one and one half story Dutch Colonial Revival style building, rectangular in plan, constructed in 1910. It has an intersecting gambrel, bellcast roof of composition shingle. The interior chimney has been replaced with a stovepipe. It is clad with clapboard siding. An "L" shape porch wraps around the north and east building elevations. It is supported by seven wooden columns and a 2½ foot clapboard skirting. The entry door on the east facade is wood paneled with one beveled glass light. The back door has been removed. The main entry door on the east facade is wood paneled with one glass light. The original windows are 1/1 double hung sash, with cornices intact. The bay window on the east facade has fixed glass lights. A gable roof garage is situated south of the residence. The garage remains, as it appeared on a 1921 Sandborn Fire Insurance Co. Map.

CONTEXTUAL DESCRIPTION

The Stewart/Turner residence is located on a flat, grassy lot, on the southwest corner of Park and Sunset Streets in Banks. A grove of pine trees is west of the house. Deciduous trees have been planted along Park and Sunset Street. A residential area surrounds the house.

(continued)

Sources consulted:

- Stewart, Noma. Interview, February 23, 1983.
- Morgan, Claude and Vesta. Interview, February 27, 1984.
- Downe, Clark. Interview, February 27, 1984.

Recorded by: Demuth — Date: February, 1984

PRESENT OWNER'S ADDRESS
(If different from above): _____

HISTORICAL SIGNIFICANCE

According to Clark Downe, a former owner of the residence, the house was built in 1910. It was first owned by Montgomery Turner who owned a merchandise store in Banks. The Turners also owned a ranch one mile east of Banks.

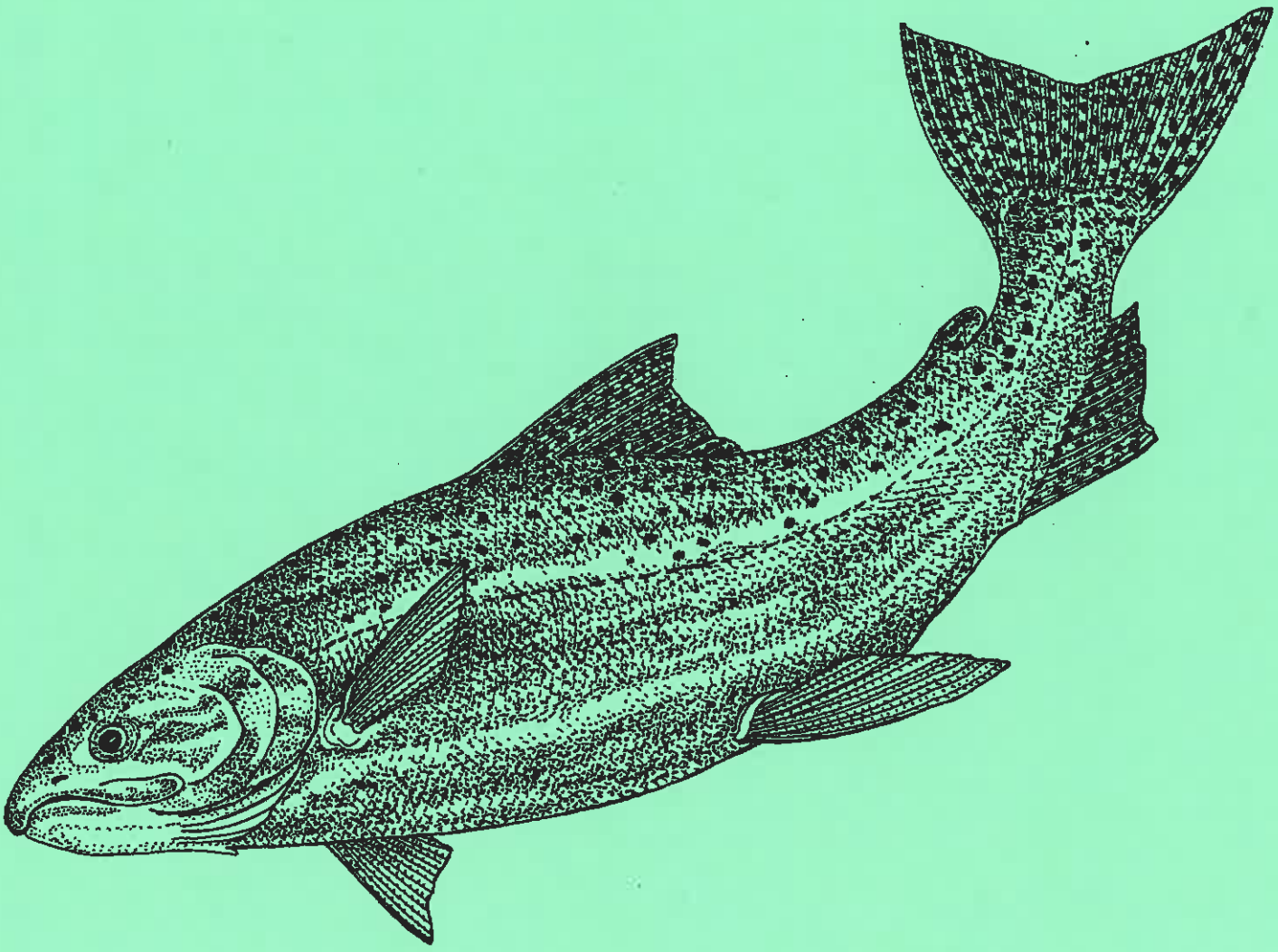
The residence passed through several hands after the Turner's sold it. Sometime later, during the 1940's, Moxie Hopkins and her husband, Clark Downe, bought the property from Moxie Hopkin's parents. The Downes rented the house out to tenants for 15 years until their daughter, Noma Stewart, bought the property. The Stewarts presently own the property, and are in the process of refinishing portions of the interior of the building.

Few changes have occurred to the Turner residence since it was constructed in 1910. A 1921 Sandborn Fire Insurance Company Map of Banks shows the residence similar to its present form. One change that has been made since 1921 is the removal of a one story addition which was on the rear facade. Clark Downe confirmed that this addition was the original woodshed. Other changes include the removal of the chimney from the kitchen and the enclosure of the back (south) porch.

The Stewart/Turner residence is significant in its association with Montgomery Turner, an early Banks merchant. It is also significant as a good representation of Dutch Colonial Revival style architecture, which has remained true to its original condition.

PART III

ESA 4(d) RULE



PART III: ESA 4(d) RULE

1. INTRODUCTION

The following policy has been adopted in the City of Banks Comprehensive Plan:

> ***"1. The City will protect natural resource areas and require that the long range availability and use of the following will not be limited or impaired by development.***
>
> - ***Fish and wildlife habitats"***

(Page 10, City of Banks Comprehensive Plan, revised 12/88.)

Consistent with the above plan policy regarding fish habitat, the City is updating the Comprehensive Plan as discussed in the following paragraphs. In June 2000, the National Marine Fisheries Service (NMFS) adopted a rule prohibiting the "take" of 14 groups of salmon and steelhead listed as threatened under the Endangered Species Act (ESA). NMFS adopted the "take rule" under section 4(d), ESA.

This rule prohibits anyone from taking a listed salmon or steelhead except in cases where the take is associated with an approved program. The 4(d) rule approves some specific existing state and local programs and provides a process for NMFS to approve

additional programs that meet certain standards specified in the rule.

The ESA defines the term "take" as *"harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct"* (ESA section 3[19]).

The term "harass" means *"an intentional or negligent act that creates the likelihood of injuring wildlife by interfering with it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering"* (50 CFR 17.3).

The term "harm" means *"an act that actually kills or injures a protected species"* (50 CFR 222.102 (64FR 60727)). Harm can occur due to significant habitat modification or degradation that results in the actual killing or injury of protected species. Such action may occur by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering.

2. 4(d) RULE CATEGORICAL LIMITS

The 4(d) rule establishes two types of limits on the take prohibitions. One type pertains to specific programs that NMFS has already reviewed and determined will minimize adverse effects on threatened fish or contribute to their conservation. The second type includes general categories of programs that may be evaluated by NMFS in the future. For this second type, the 4(d) rule prescribes standards NMFS will use in reviewing programs,

describes how the public will be notified, and, if the limit is determined to sufficiently conserve the listed species, how the Northwest Regional Administrator will approve it.

NMFS is not requiring local governments to change their practices for conforming with any of the take limits described in the final rule. The limits provide one approach for ensuring that an activity or program does not risk violating the take prohibitions. By qualifying for a limit, local government receives assurance that its activities, when implemented in accordance with the 4(d) rule, do not violate the take provisions and will not be subject to enforcement actions.

NMFS has identified 13 limits in the 4(d) rule as follows:

Limit No. 1: ESA Permits
Limit No. 2: Ongoing Scientific Research
Limit No. 3: Rescue and Salvage Actions
Limit No. 4: Fishery Management
Limit No. 5: Artificial Propagation;
Limit No. 6: Limits on the Take Prohibitions for Joint Tribal/State Plans Developed under the United States v. Washington or United States v. Oregon Settlement Processes
Limit No. 7: Scientific Research Activities Permitted or Conducted by The States
Limit No. 8: Habitat Restoration
Limit No. 9: Water Diversion Screening
Limit No. 10: Routine Road Maintenance

Limit No. 11: Portland Parks Integrated Pest Management
Limit No. 12: Municipal, Residential, Commercial and Industrial Development and Redevelopment (MRCI)
Limit No. 13: Forest Management in Washington

Limits No. 10 and 12 are applicable to Banks, and a detailed explanation of these limits provided by NMFS is attached in Exhibit AAA.

Healthy Streams Plan Process

The Clean Water Services (CWS) agency of Washington County has undertaken a major planning project, i.e., *"Healthy Streams Plan Process"*, intended to address the 4(d) rule plus Federal Clean Water Act requirements as follows:

"The purpose of this project is to develop a watershed-based plan that integrates the requirements of the Clean Water Act (CWA) and the Endangered Species Act (ESA) in a manner that promotes overall stream health. The plan will identify and prioritize specific projects, policies, and programmatic changes needed to further improve water quality, manage flooding and floodplains, and provide for aquatic species recovery in the Tualatin River Basin.

It will target projects and programs that are ecologically sound, economically viable, socially acceptable, and will produce measurable results. Existing plans, studies, and materials from other regional efforts will be utilized, as appropriate and

additional information will be gathered as needed. The goal is to produce a watershed-based plan that is user friendly, adaptable over time and GIS and Internet supported. The Plan must effectively and efficiently serve local jurisdictions, businesses, industries, and citizens across various land use sectors in their efforts to protect water quality and aquatic species."

(Page 6, Healthy Streams Plan IGA, dated 5-3-01.)

Banks is a stakeholder in the Healthy Streams Plan Process, and, by virtue of this plan amendment, the City acknowledges and accepts the CWS planning process with the intent of compliance with the ESA 4(d) rule. The CWS staff anticipates that a preliminary Healthy Streams Plan package would be available for review by the summer of 2003. A schematic diagram showing the Healthy Streams Plan Process is attached in Exhibit BBB.

EXHIBIT AAA

Limit No. 10: Routine Road Maintenance

Summary of the Limit

NMFS does not find it necessary or advisable to apply take prohibitions to routine road maintenance activities provided that: (1) The activity constitutes routine road maintenance conducted by Oregon Department of Transportation (ODOT) employees (or their agents) that complies with ODOT's *Transportation Maintenance Management System Water Quality and Habitat Guide* (July, 1999); or (2) it is conducted by the employees or agents of a state, county, city, or port under a program that complies substantially with the ODOT Guide and has been determined to meet or exceed the protections provided by the ODOT Guide; or (3) it is conducted by the employees or agents of a state, county, city, or port in a manner that has been found to contribute to properly functioning condition (PFC).

The ODOT's maintenance and environmental staff have worked with NMFS to develop a routine road maintenance program that works well within the mandates of the ESA and the Clean Water Act while carrying out the agency's fundamental mission to provide a safe and effective transportation system. That work has resulted in a program that greatly improves protections for listed salmonids by minimizing the impacts that a range of routine maintenance activities have on receiving streams.

For a state, city, county, or port program that is equivalent to the ODOT program (or any of its amendments) to qualify under limit 10, it must be approved in writing by NMFS' Northwest or Southwest Regional Administrator, whichever is appropriate. Any jurisdiction desiring its routine road maintenance activities to qualify under this limit must have adopted road maintenance guidelines equivalent to or better than the ODOT program and commit in writing to apply these management practices.

Section 7 Consultation

Even if an activity or program qualifies under this limit, if a Federal agency is involved by funding, authorizing or carrying out actions that may affect listed species, that Federal agency still has consultation responsibilities under section 7 of the ESA. NMFS urges Federal agencies involved in programs under this limit (e.g., through funding, coordinated research) to work closely with the entity submitting a program and with NMFS so that sufficient information is provided with the 4(d) documentation for a concurrent section 7 consultation. NMFS will provide separate determinations for section 7 consultations.

Affected ESUs

A total of 14 ESUs (identified below) are subject to this limit. Specific descriptions of the affected ESUs are contained in the final listing determinations cited below.

Snake River Basin steelhead (62 FR 43937, August 18, 1997)	Oregon Coast coho salmon (63 FR 42587, August 10, 1998)
Lower Columbia River steelhead (63 FR 13347, March 19, 1998)	Ozette Lake sockeye salmon (64 FR 14528, March 25, 1999)
Upper Willamette River steelhead (64 FR 14517, March 25, 1999)	Hood Canal summer-run chum salmon (64 FR 14508, March 25, 1999)
Middle Columbia River steelhead (64 FR 14517, March 25, 1999)	Columbia River chum salmon (64 FR 14508, March 25, 1999)
Central California Coast steelhead (62 FR 43937, August 18, 1997)	Puget Sound chinook salmon (64 FR 14308, March 24, 1999)
South-Central California Coast steelhead (62 FR 43937, August 18, 1997)	Lower Columbia River chinook salmon (64 FR 14308, March 24, 1999)
Central Valley, California steelhead (63 FR 13347, March 19, 1998)	Upper Willamette River chinook salmon (64 FR 14308, March 24, 1999)

Regulatory Description of the Limit

From 50 CFR 223.203(b)(10):

> "...The prohibitions of paragraph (a) of this section relating to threatened species of salmonids listed in Sec. 223.102 (a)(5) through (a)(10), and (a)(12) through (a)(19) do not apply to routine road maintenance activities provided that:
>
> (i) The activity results from routine road maintenance activity conducted by ODOT employees or agents that complies with ODOT's Transportation Maintenance Management System Water Quality and Habitat Guide (July, 1999); or by employees or agents of a state, county, city or port that complies with a program substantially similar to that contained in the ODOT Guide that is determined to meet or exceed the protections provided by the ODOT Guide; or by employees or agents of a state, county, city or port that complies with a routine road maintenance program that meets proper functioning habitat conditions as described further in subparagraph (ii) following. NMFS' approval of state, city, county, or port programs that are equivalent to the ODOT program, or of any amendments, shall be a written approval by NMFS Northwest or Southwest

Regional Administrator, whichever is appropriate. Any jurisdiction desiring its routine road maintenance activities to be within this limit must first commit in writing to apply management practices that result in protections equivalent to or better than those provided by the ODOT Guide, detailing how it will assure adequate training, tracking, and reporting, and describing in detail any dust abatement practices it requests to be covered.

(ii) NMFS finds the routine road maintenance activities of any state, city, county, or port to be consistent with the conservation of listed salmonids' habitat when it contributes, as does the ODOT Guide, to the attainment and maintenance of properly functioning condition (PFC). NMFS defines PFC as the sustained presence of natural habitat-forming processes that are necessary for the long-term survival of salmonids through the full range of environmental variation. Actions that affect salmonid habitat must not impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC. Periodically, NMFS will evaluate an approved program for its effectiveness in maintaining and achieving habitat function that provides for conservation of the listed salmonids. Whenever warranted, NMFS will identify to the jurisdiction ways in which the program needs to be altered or strengthened. Changes may be identified if the program is not protecting desired habitat functions, or where even with the habitat characteristics and functions originally targeted, habitat is not supporting population productivity levels needed to conserve the ESU. If any jurisdiction within the limit does not make changes to respond adequately to the new information in the shortest amount of time feasible, but not longer than one year, NMFS will publish notification in the Federal Register announcing its intention to withdraw the limit so that take prohibitions would then apply to the program as to all other activity not within a limit. Such an announcement will provide for a comment period of no less than 30 days, after which NMFS will make a final determination whether to subject the activities to the ESA section 9(a)(1) prohibitions.

(iii) Prior to implementing any changes to a program within this limit the jurisdiction provides NMFS a copy of the proposed change for review and approval as within this limit.

(iv) Prior to approving any state, city, county, or port program as within this limit, or approving any substantive change in a program within this limit, NMFS will publish notification in the Federal Register announcing the availability of the program or the draft changes for public review and comment. Such an announcement will provide for a comment period of not less than 30 days.

(v) Pesticide and herbicide spraying is not included within this limit, even if in accord with the ODOT guidance."

Submittal Instructions

Early Involvement

NMFS strongly recommends that entities considering submitting a program for qualification under a 4(d) limit contact NMFS early to discuss the substance of their program, its appropriateness for coverage under a particular limit, and relevant references for effects analysis and conservation planning. NMFS can also provide information regarding the priority that a particular submittal might receive, and may suggest pursuing ESA coverage under § 7 or § 10 or a larger-scope 4(d) submittal. NMFS will generally not be able to provide intensive technical support for conservation planning or effects analysis. Entities thinking of applying should have professional biological staff members (or contractors) analyze the effects their programs are likely to have on listed salmon and their habitat and should modify those programs (as needed) to ensure that salmon are conserved.

As a submittal package nears completion, the applicant should coordinate closely with NMFS technical staff to ensure that the program, as submitted, is likely to be approved. Submittals for programs that NMFS' biologists are familiar with and believe will conserve listed salmon habitat can move more rapidly to the *Federal Register* notice and comment stage of the qualification process.

The Submittal Package

Limit 10 for routine road maintenance activities applies to ODOT's routine road maintenance program outright with no additional findings needed, unless that program is changed in a way that could affect listed salmon habitat.

The limit provides two routes for other road maintenance programs to qualify for the limit. The first is provided in (10)(i) and is based upon a road maintenance program being substantially similar to the ODOT guide and meeting or exceeding its protections. This route may be most useful to counties and municipalities within Oregon. All elements of the application package described below should be well developed, but it should place particular emphasis on element 7- information and analyses that demonstrate equivalence or better with ODOT's guide.

An application package for qualification under (10)(i) shall include:

(1) A cover letter from an appropriate official to the Regional Administrator (RA) requesting qualification of the program pursuant to (10)(i).

(2) A detailed description of the program to be considered and all covered activities. Identification of the responsible entity and legal authority for the program should be included.

(3) A description of the specific geographic area to which the program applies or within which covered activities are conducted, and any designated critical habitat that may be affected by the activities. Maps with appropriate data layers should be included. Existing

habitat quality and quantity (*i.e.*, the environmental baseline) should be illustrated in terms of migration barriers, structural elements, channel characteristics, water quality, instream flow, riparian condition, and watershed health.

(4) A description of any listed species that may be affected by the activities, and their distribution and status within the program area.

(5) Relevant reports, including any environmental impact statement, environmental assessment, or biological assessment prepared; and any other relevant available information on the program, the affected listed species, or critical habitat.

(6) A detailed description of how the program will assure adequate training, tracking, and reporting, and a detailed description of any included dust abatement practices.

(7) An affirmative conclusion that the program is substantially similar to and at least as protective as ODOT's program in its implementation. And all specific information and analyses necessary to support that conclusion.

The second route is provided in (10)(ii) and requires an original analysis of consistency with PFC. This route will probably be most useful to states other than Oregon and to counties and municipalities within those states where it will be impractical or inappropriate to adopt ODOT's guide. All elements of the submittal package described below should be well developed, but it should place particular emphasis on element 5—the effects analysis. The applicant must provide an original analysis concluding that the program will "not impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC." In order for the program to qualify, NMFS must be able to find that the analysis is scientifically credible and supports the conclusion.

An application package for qualification under (10)(ii) shall include:

(1) A cover letter from an appropriate official to the RA requesting qualification of the program pursuant to (10)(ii).

(2) A detailed description of the program to be considered and all covered activities. Identification of the responsible entity and legal authority for the program should be included.

(3) A description of the specific geographic area to which the program applies or within which covered activities are conducted, and any designated critical habitat that may be affected by the activities. Maps with appropriate data layers should be included. Existing habitat quality and quantity (*i.e.*, the environmental baseline) should be illustrated in terms of migration barriers, structural elements, channel characteristics, water quality, instream flow, riparian condition, and watershed health.

(4) A description of any listed species that may be affected by the activities, and their distribution and status within the program area.

(5) A description of the manner in which the activities may affect listed species or critical habitat, and an analysis of the effects of the program on those species and habitats—including short-term and long-term effects, indirect and cumulative effects.

(6) Relevant reports, including any environmental impact statement, environmental assessment, or biological assessment prepared; and any other relevant available information on the program, the affected listed species, or critical habitat.

(7) An affirmative conclusion that the program will not impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC. That conclusion should be clearly supported by the effects analysis of #5, above.

Effects Analysis

There is more than one scientifically credible analytical framework for determining an activity's effect, and NMFS will accept any scientifically credible analysis. However, NMFS has developed a default analytic methodology (*Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale*, NMFS, 1996) that applicants may want to consider when looking for an analytical model. It is often referred to as the Matrix of Pathways and Indicators, or MPI. In the MPI framework, the pathways for determining the effect of an action are represented as six conceptual groupings (*e.g.*, water quality, channel condition) of 18 habitat condition indicators (*e.g.*, temperature, width/depth ratio). Indicator criteria (mostly numeric, though some are narrative) are provided for three levels of environmental baseline condition: Properly functioning, at risk, and not properly functioning. The effect of the action upon each indicator is classified by whether it will restore, maintain, or degrade the indicator.

Although the indicators used to assess functioning condition may entail instantaneous measurements, they are chosen, using the best available science, to detect the health of underlying processes, not static characteristics. "Best available science" advances through time. This advance allows PFC indicators to be refined, new threats to be assessed, and species' status and trends to be better understood. River habitats are inherently dynamic, and the PFC concept recognizes that natural patterns of habitat disturbance will continue to occur. Floods, landslides, windstorms, and fires all result in spatial and temporal variability in habitat characteristics, as do human activities. Unique physiographic and geologic features may cause PFC indicators to vary between different landscapes. For example, aquatic habitats on timberlands in glacial mountain valleys are controlled by natural processes operating at different scales and rates than are habitats on low-elevation coastal rivers. The MPI provides a consistent, but geographically adaptable, framework for making effect determinations. The pathways and indicators, as well as the ranges of their associated criteria, may be altered through the watershed analysis process.

Regardless of the analytical method used, if a proposed action is likely to impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC, it cannot be found consistent with conserving the species. If a program preserves existing habitat function levels, and allows natural progression towards PFC where habitat is impaired, NMFS may determine that it qualifies.

NMFS defines PFC as the sustained presence of natural habitat-forming processes (*e.g.*, hydraulic runoff, bedload transport, channel migration, riparian vegetation succession) that are

necessary for the long-term survival and recovery of the species (*The Habitat Approach*, NMFS, 1999). PFC constitutes the habitat aspects of a species' biological requirements—providing the essential physical features that support spawning, incubation, rearing, feeding, sheltering, migration, and other behaviors. Such features include adequate instream flow, pure cold water, loose gravel for spawning, unimpeded fish passage, deep pools, and abundant large tree trunks and root wads.

Qualification Process

Due to limited staff resources, NMFS will prioritize submittals for consideration. They may be prioritized for consideration based upon: Potential conservation benefit to listed fish, legal authority of the submitted program, the scopes of the submitted program, quality and completeness of the submittal package, apparent consistency with NMFS' published conservation standards, or other criteria.

The RA will provide NMFS' findings in a response letter to the submittal. Such letters may be signed by the RA or by an Assistant Regional Administrator and may either approve or disapprove the submittal.

Letters of approval must be preceded by notification in the *Federal Register* announcing the availability of the program for public review and a 30-day (minimum) comment period. Comments received may be shared with the applicant. The program may subsequently be approved with minor modifications based upon the comments received. Major modifications to the program will require another *Federal Register* notice and comment period before the program can be approved.

NMFS' Assistance

INFORMATION ABOUT 4(d) RULE PROGRAMS AND ESA PERMIT OPTIONS		
TOPIC/TYPE OF ACTIVITY	**NMFS DIVISION**	**FOR MORE INFORMATION**
•Habitat Restoration •Routine Road Maintenance Activities •City of Portland Integrated Pest Management •Municipal, Residential, Commercial and Industrial Development (and Redevelopment) •Washington State Forest Practices •Section 10 Incidental Take Permit •Section 7 Consultation	Habitat Conservation	**State of Washington** Steve Landino (360/753-6054) **State of Oregon** Michael Tehan (503/231-2224) **State of Idaho** Ted Meyers (208/378-5698) **State of California** Craig Wingert (562/980-4021) Patrick Rutten (707/575-6059) Mike Aceituno (916/498-6498)

Limit No. 12: Municipal, Residential, Commercial and Industrial Development and Redevelopment (MRCI)

Summary of the Limit

As a general matter, MRCI development (and redevelopment) have a significant potential to degrade salmonid habitat and to injure or kill salmonids in a variety of ways. With appropriate safeguards, MRCI development can be specifically tailored to minimize impacts on listed salmonids to the extent that additional Federal protections would not be needed to conserve the listed ESU. Through the final rule, NMFS identifies a mechanism whereby cities, counties, and regional governments can ensure that MRCI development and redevelopment authorized within those areas is consistent with ESA requirements. Developers and their authorizing jurisdictions alike would benefit from the assurance that their actions conserve listed salmon and steelhead.

One example of an authorizing entity working toward the sort of plan envisioned in this limit is Metro, the regional governing body of the Portland metropolitan area, which prohibits development outside of an adopted urban growth boundary (UGB). Metro is in the process of bringing some large areas currently designated as urban reserve areas into the UGB. Before development may commence in these newly included areas, the jurisdiction within which the area lies must prepare and adopt comprehensive plan amendments for urban reserve areas consistent with all provisions of the Metro Urban Growth Management Functional Plan. The amendments must show what development will be allowed and the conditions to be placed upon that development.

Take prohibitions do not apply to MRCI development or redevelopment governed by and conducted in accordance with city, county, or regional government ordinances or plans that NMFS has found to adequately protect listed species. NMFS must agree in writing that the MRCI development ordinances and plans ensure that the development activities complying with them will conserve listed salmon and steelhead. NMFS will individually apply the following 12 evaluation considerations when determining whether MRCI development ordinances or plans adequately conserve listed fish.

(1) An MRCI development ordinance or plan ensures that development will avoid inappropriate areas such as unstable slopes, wetlands, areas of high habitat value, and similarly constrained sites. Activities such as development, timber harvest, or other soil disturbance should be sited in appropriate areas—avoiding unstable slopes, wetlands, areas already in a proper functioning condition, areas that are more functional than neighboring sites, and areas with the potential to be fully restored. A description of particularly sensitive areas is included in the April 29, 1999, Forests and Fish Report (FFR) to Governor Locke. Those sites include but are not limited to soils perennially saturated from a headwall or a sideslope seep or spring, the permanent initiation point of perennial flow of a stream, an alluvial fan, and the intersection of two perennial streams.

(2) An MRCI development ordinance or plan adequately prevents stormwater discharge impacts on water quality and quantity and stream flow patterns in the watershed—including peak and base flows in perennial streams. Stormwater management programs must require development activities to avoid impairing water quality and quantity. These activities must preserve or enhance stream flow patterns so they are as close as possible to the historic peak flows, base flows, durations, volumes, and velocities. This can be accomplished by reducing impervious surfaces and maintaining forest cover and natural soils. These conditions will, in turn, maintain essential habitat processes such as natural water infiltration rates, transpiration rates, stormwater run-off rates, sediment filtering, and provide hydrographic conditions that maintain and sustain aquatic life.

(3) An MRCI development ordinance or plan protects riparian areas well enough to attain or maintain PFC around all rivers, estuaries, streams, lakes, deepwater habitats, and intermittent streams. Compensatory mitigation is provided, where necessary, to offset unavoidable damage to PFC in riparian management areas. Activities should be quite limited in areas adjacent to all perennial and intermittent streams and waters supporting listed salmon and steelhead in order to avoid soil disturbance and maintain vegetated riparian corridors.

Limiting activities in riparian areas helps protect or restore the condition and quality of soil and ensure that a diversity of plants and trees of all ages is well-distributed across a riparian area. Such conditions on the landscape contribute to the natural succession of riparian forest trees and protect the water quality and flow conditions necessary to meet salmonid habitat needs downstream. In urban areas, riparian areas often face the added challenge of intercepting large amounts of nutrients, pesticides, and sediment so that they do not directly enter a stream.

NMFS' determinations are significantly influenced by science indicating that essential habitat functions are affected to varying (but significant) degrees by streamside activities conducted within a distance equal to the height of the tallest tree that can grow on that site (known as the site potential tree height). The distance is measured not from the stream itself, but from the edge of the area within which a stream naturally migrates back and forth over time (the channel migration zone).

When the scope of an activity includes modifying a riparian site that has existing, non-native vegetation, it may be important to restore native vegetation on the site in order to recover the essential habitat functions discussed above.

(4) An MRCI development ordinance or plan avoids stream crossings—whether by roads, utilities, or other linear development—wherever possible and, where crossings must be provided, minimizes impacts. One method of minimizing stream crossings and their associated disturbances is to optimize transit opportunities to and within newly developing urban areas. A plan should consider whether potential stream crossings can

be avoided by redesigning access. Where a crossing is unavoidable, the plan or ordinance should minimize its affect by preferring bridges over culverts; sizing bridges to a minimum width; designing bridges and culverts to pass at least the 100-year flood (and associated debris), and meet Oregon Department of Fish and Wildlife or Washington Department of Fish and Wildlife criteria (*ODFW's Oregon Road/Stream Crossing Restoration Guide, Spring, 1999 and WDFW's Fish Passage Design at Road Culverts, March 3, 1999*). In addition, all crossings must be regularly monitored and maintained, and intermittent and perennial streams should not be closed over.

(5) An MRCI development ordinance or plan adequately protects historic stream meander patterns and channel migration zones and avoids hardening stream banks and shorelines. Any MRCI development should be designed to allow streams to meander in historic patterns of channel migration. Activities on the landscape must protect conditions that allow gradual bank erosion, flooding, and channel meandering in the zone within which it would naturally occur. This natural channel migration promotes gravel recruitment, geomorphic diversity, and habitat development. If an adequate number of riparian management areas are linked to the channel migration zone, there should be no need for bank erosion control in all but the most unusual situations. In most circumstances, activities that call for hardening stream banks are not consistent with PFC.

If unusual circumstances require bank erosion to be controlled, it should be accomplished through vegetation or carefully bioengineered solutions. Rip-rap blankets or similar hardening techniques would not be allowed, unless particular site constraints made bioengineered solutions impossible. NMFS finds that the Washington Department of Fish and Wildlife's publication, *"Integrated Streambank Protection Guidelines" (June, 1998)* can provide sound guidance, particularly regarding mitigation for gravel recruitment.

The Fish and Forest Report (cited above) includes a detailed description of the types of channel migration zones found in most geomorphic settings. Further, the Washington State Forest Practices Board has published its *Standard Method for Measuring Physical Parameters of Streams and Channel Migration Zones (March, 2000).* Though it is designed for the forested environment, NMFS finds the document a useful aid in determining channel migration zones in any setting.

(6) An MRCI development ordinance or plan adequately protects wetlands, wetland buffers, and wetland function—including isolated wetlands. Activities on the landscape must protect wetlands and the vegetation surrounding them to avoid disturbing soils, vegetation, and local hydrology. Such conditions on the landscape contribute to the natural succession of wetlands and protect wetland functions needed to meet salmonid habitat requirements such as food chain support, shoreline protection, water purification, storm and flood water storage, and groundwater recharge. These conditions are also needed to protect the freshwater, marine, and estuarine wetland systems that provide vital habitat for rearing and migrating salmon and steelhead.

(7) An MRCI development ordinance or plan adequately preserves permanent and intermittent streams' ability to pass peak flows. Activities that decrease a stream's hydrologic capacity by filling in its channel for road crossings or other development will increase water velocities, flood potential, and channel erosion, as well as degrade water quality, disturb soils and groundwater flows, and harm vegetation adjacent to the stream. Preserving hydrologic capacity provides conditions on the landscape needed for maintaining essential habitat processes such as water quantity and quality, streambank and channel stability, groundwater flows, and succession of riparian vegetation. This means that dredge and fill operations should be avoided unless they are conducted in conjunction with a necessary stream crossing whose impacts are mitigated to the greatest extent possible.

(8) An MRCI development ordinance or plan stresses landscaping with native vegetation to reduce the need to water and apply herbicides, pesticides, and fertilizer. Plans must describe the techniques that local governments will use to encourage planting with native vegetation, reducing lawn area, and lowering water use. These provisions will maintain essential habitat processes by helping conserve water and reduce flow demands that compete with fish needs. They will also reduce the amount of chemicals contributing to water pollution.

(9) An MRCI development ordinance or plan contains provisions to prevent erosion and sediment run-off during (and after) construction and thus prevents sediment and pollutant discharge to streams, wetlands, and other water bodies that support listed salmonids. These provisions, at a minimum, should include detaining flows, stabilizing soils, protecting slopes, stabilizing channels and outlets, protecting drain inlets, maintaining Best Management Practices (BMPs), and controlling pollutants. These goals can be accomplished by applying seasonal work limits, performing land-clearing activities in phases, maintaining undisturbed native top soil and vegetation, etc. Doing this will help maintain natural runoff rates and protect water quality.

(10) An MRCI development ordinance or plan ensures that demands on the water supply can be met without affecting—either directly or through groundwater withdrawals—the flows that threatened salmonids need. A plan must ensure that any new water diversions are positioned and screened in a way that prevents salmonid injury or death.

(11) An MRCI development ordinance or plan provides mechanisms for monitoring, enforcing, funding, reporting, and implementing its program. Moreover, formal plan evaluations should take place at least once every five years. The plan should make a commitment to (and assign responsibility for) regular monitoring and maintenance activities for any detention basins, erosion and sediment control measures, and other management tools over the long term. Practices should be adapted, as needed, based on monitoring results. In addition, to ensure that development activities comply with the ordinance or plan and that PFC is attained or maintained, commitments must be made for regular funding, enforcement, reporting, implementation, and plan evaluations. These

commitments are vital to maintaining the whole suite of essential habitat processes for salmonids.

(12) An MRCI development ordinance or plan complies with all other state and Federal environmental and natural resource laws and permits.

NMFS concludes that development governed by ordinances or plans that fulfill the above considerations will address the potential negative impacts on salmon and steelhead associated with development and redevelopment. With these circumstances, a plan will contain sufficient safeguards that NMFS would not find it necessary or advisable to impose additional Federal protections through the take prohibitions.

Section 7 Consultation

Even if an activity or program qualifies under this limit, if a Federal agency is involved by funding, authorizing or carrying out actions that may affect listed species, that Federal agency still has consultation responsibilities under section 7 of the ESA. NMFS urges Federal agencies involved in programs under this limit (e.g., through funding, coordinated research) to work closely with the entity submitting a program and with NMFS so that sufficient information is provided with the 4(d) documentation for a concurrent section 7 consultation. NMFS will provide separate determinations for section 7 consultations.

Affected ESUs

A total of 14 ESUs (identified below) are subject to this limit. Specific descriptions of the affected ESUs are contained in the final listing determinations cited below.

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Central Valley, California steelhead (63 FR 13347, March 19, 1998)	Upper Willamette River chinook salmon (64 FR 14308, March 24, 1999)

Regulatory Description of the Limit

From 50 CFR 223.203(b)(12):

"...The prohibitions of paragraph (a) of this section relating to threatened species of salmonids listed in Sec. 223.102 (a)(5) through (a)(10), and (a)(12) through (a)(19) do not apply to municipal, residential, commercial and industrial (MRCI) development (including redevelopment) activities provided that:

(i) Such development occurs pursuant to city, county, or regional government ordinances or plans that NMFS has determined are adequately protective of listed species; or within the jurisdiction of the Metro regional government in Oregon and pursuant to ordinances that Metro has found comply with its Urban Growth Management Functional Plan (Functional Plan) following a determination by NMFS that the Functional Plan is adequately protective. NMFS approval or determinations about any MRCI development ordinances or plans, including the Functional Plan, shall be a written approval by NMFS Northwest or Southwest Regional Administrator, whichever is appropriate. NMFS will apply the following 12 evaluation considerations when reviewing MRCI development ordinances or plans to assess whether they adequately conserve listed salmonids by maintaining and restoring properly functioning habitat conditions:

(A) MRCI development ordinance or plan ensures that development will avoid inappropriate areas such as unstable slopes, wetlands, areas of high habitat value, and similarly constrained sites.

(B) MRCI development ordinance or plan adequately avoids stormwater discharge impacts to water quality and quantity, or to the hydrograph of the watershed, including peak and base flows of perennial streams.

(C) MRCI development ordinance or plan provides adequately protective riparian area management requirements to attain or maintain PFC around all rivers, estuaries, streams, lakes, deepwater habitats, and intermittent streams. Compensatory mitigation is provided, where necessary, to offset unavoidable damage to PFC due to MRCI development impacts to riparian management areas.

(D) MRCI development ordinance or plan avoids stream crossings by roads, utilities, and other linear development wherever possible, and where crossings must be provided, minimize impacts through choice of mode, sizing, and placement.

(E) MRCI development ordinance or plan adequately protects historic stream meander patterns and channel migration zones and avoids hardening of stream banks and shorelines.

(F) MRCI development ordinance or plan adequately protects wetlands and wetland functions, including isolated wetlands.

(G) MRCI development ordinance or plan adequately preserves the hydrologic capacity of permanent and intermittent streams to pass peak flows.

(H) MRCI development ordinance or plan includes adequate provisions for landscaping with native vegetation to reduce need for watering and application of herbicides, pesticides and fertilizer.

(I) MRCI development ordinance or plan includes adequate provisions to prevent erosion and sediment run-off during construction.

(J) MRCI development ordinance or plan ensures that water supply demands can be met without impacting flows needed for threatened salmonids either directly or through groundwater withdrawals and that any new water diversions are positioned and screened in a way that prevents injury or death of salmonids.

(K) MRCI development ordinance or plan provides necessary enforcement, funding, reporting, and implementation mechanisms and formal plan evaluations at intervals that do not exceed five years.

(L) MRCI development ordinance and plan complies with all other state and Federal environmental and natural resource laws and permits.

(ii) The city, county or regional government provides NMFS with annual reports regarding implementation and effectiveness of the ordinances, including: any water quality monitoring information the jurisdiction has available; aerial photography (or some other graphic display) of each MRCI development or MRCI expansion area at sufficient detail to demonstrate the width and vegetation condition of riparian set-backs; information to demonstrate the success of stormwater management and other conservation measures; and a summary of any flood damage, maintenance problems, or other issues.

(iii) NMFS finds the MRCI development activity to be consistent with the conservation of listed salmonids' habitat when it contributes to the attainment and maintenance of PFC. NMFS defines PFC as the sustained presence of a watershed's habitat-forming processes that are necessary for the long-term survival of salmonids through the full range of environmental variation. Actions that affect salmonid habitat must not impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC. Periodically, NMFS will evaluate an approved program for its effectiveness in maintaining and achieving habitat function that provides for conservation of the listed salmonids. Whenever warranted, NMFS will identify to the jurisdiction ways in which the program needs to be altered or strengthened. Changes may be identified if the program is not protecting desired habitat functions, or where even with the habitat characteristics and functions originally targeted, habitat is not supporting

population productivity levels needed to conserve the ESU. If any jurisdiction within the limit does not make changes to respond adequately to the new information in the shortest amount of time feasible, but not longer than one year, NMFS will publish notification in the Federal Register announcing its intention to withdraw the limit so that take prohibitions would then apply to the program as to all other activity not within a limit. Such an announcement will provide for a comment period of not less than 30 days, after which NMFS will make a final determination whether to subject the activities to the ESA section 9(a)(1) prohibitions.

(iv) Prior to approving any city, county, or regional government ordinances or plans as within this limit, or approving any substantive change in an ordinance or plan within this limit, NMFS will publish notification in the Federal Register announcing the availability of the ordinance or plan or the draft changes for public review and comment. Such an announcement will provide for a comment period of no less than 30 days."

Submittal Instructions

Early Involvement

NMFS strongly recommends that entities considering submitting a program for qualification under the MRCI limit contact NMFS early to discuss the substance of their program, its appropriateness for coverage under the limit, and relevant references for effects analysis and conservation planning. NMFS can also provide information regarding the priority that a particular submittal might receive, and may suggest pursuing ESA coverage under § 7 or § 10 or a larger-scope 4(d) submittal. NMFS will generally not be able to provide intensive technical support for conservation planning or effects analysis. Entities thinking of applying should have professional biological staff (or contractors) to analyze the effects of their programs upon listed salmon and their habitat and to modify those programs as necessary to provide for salmon conservation.

As a submittal package nears completion, the applicant should coordinate closely with NMFS technical staff to ensure that the program, as submitted, is likely to be approved. Submittals for programs that NMFS' biologists are familiar with and believe will conserve listed salmon habitat can move more rapidly to the *Federal Register* notice and comment stage of the qualification process.

The Submittal Package

An application package for qualification under limit 12 for municipal, residential, commercial and industrial development and redevelopment shall include:

(1) A cover letter from an appropriate official to the Regional Administrator (RA) requesting qualification of the submitted program pursuant to limit 12.

(2) A detailed description of the program to be considered and all covered activities, including identification of the responsible entity and legal authority for the program.

(3) A description of the specific geographic area to which the program applies or within which covered activities are conducted, and any designated critical habitat that may be affected by the activities. Maps with appropriate data layers should be included. Existing habitat quality and quantity (*i.e.*, the environmental baseline) should be illustrated in terms of migration barriers, structural elements, channel characteristics, water quality, instream flow, riparian condition, and watershed health.

(4) A description of any listed species that may be affected by the activities, and their distribution and status within the program area.

(5) A description of the manner in which the covered activities may affect listed species or critical habitat, and an analysis of the effects of the program on those species and habitats—including short-term and long-term effects, indirect and cumulative effects. This analysis should address each of the 12 considerations individually.

(6) Relevant reports, including any environmental impact statement, environmental assessment, or biological assessment prepared; and any other relevant available information on the program, the affected listed species, or critical habitat.

(7) An affirmative conclusion for each of the 12 considerations, and a general conclusion that the program will not impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward PFC. These conclusions should be explicitly supported by the effects analysis of #5, above.

Qualification Process

Because staff resources are limited, NMFS will prioritize the submittals being considered. They may be prioritized for consideration based upon: Potential conservation benefit to listed fish, legal authority of the submitted program, geographic scope of the submitted program, activity scope of the submitted program, quality and completeness of the submittal package, consistency with NMFS' recommendations and conservation standards, or other criteria.

The RA will provide NMFS' findings in a response letter to the submittal. Such letters may be signed by the RA or by an Assistant Regional Administrator and may either approve or disapprove the submittal.

Letters of approval must be preceded by notification in the *Federal Register* announcing the availability of the program for public review and a 30-day (minimum) comment period. Comments received may be shared with the applicant. The program may subsequently be approved with minor modifications based upon the comments received. Major modifications to the program will require another *Federal Register* notice and comment period before the program can be approved.

NMFS' Assistance

INFORMATION ABOUT 4(d) RULE PROGRAMS AND ESA PERMIT OPTIONS		
TOPIC/TYPE OF ACTIVITY	**NMFS DIVISION**	**FOR MORE INFORMATION**
•Habitat Restoration •Routine Road Maintenance Activities •City of Portland Integrated Pest Management •Municipal, Residential, Commercial and Industrial Development (and Redevelopment) •Washington State Forest Practices •Section 10 Incidental Take Permit •Section 7 Consultation	Habitat Conservation	**State of Washington** Steve Landino (360/753-6054) **State of Oregon** Michael Tehan (503/231-2224) **State of Idaho** Ted Meyers (208/378-5698) **State of California** Craig Wingert (562/980-4021) Patrick Rutten (707/575-6059) Mike Aceituno (916/498-6498)

EXHIBIT BBB

Healthy Stream

MAJOR PROCESS STEP	1 Project Start	2 Project Scoping / IGA Negotiation	3 Watersheds 2000 Inventory (see detailed mpp's)	4 Scientific Data Analysis
Project Management Technical Analysis	1. CWA requires surface waters to meet water quality standards. ESA requires preservation of threatened and endangered species listed in the Tualatin Basin. 2. Prepare a project concept and model planning process for review. Develop an internal team to regularly review status and integration of project (IWRM Team) 3. Deliver process to the Board and CWAC for review. 4. Have Board approve process. 5. Prepare comments on 4(d) rule. Have review and concurrence from internal review team. Send to cities/county as FYI / concurrence. Submit to NMFS.	1. Prepare project concepts and mpp's for each element of the overall plan. Have LT review and approve. Circulate to existing relevant committees as appropriate for topic. 2. Meet with City staff and Councils to explain the Plan process as requested and needed. 3. Revise HSP mpp as needed to address changing needs of the planning process. Revisit the mpp with the Baord. 1. Prepare language for IGA's and cost shares with cooperating partners. 2. Have Board approve the IGA's. 3. Collect funds from partners for the project.	1. Review existing watershed plans. Develop scope and process for Watersheds 2000. Have mpp reviewed and approved by the Board. 2. Utilize consultants to assist with comprehensive stream inventory and hydrology / hydraulics modeling update. Have Board approve contracts. 3. Utilize Project Committees to help guide the review of the technical information and provide criteria for prioritization of projects. Have Baord approve Committee representation. 4. Generate a preliminary capital improvement project list - enhancements, culverts, preservation strategies, etc. 5. Conduct open house to present preliminary results. 6. Prepare summary report of the inventory work.	1. Complete data management and quality control of the data set. 2. Develop a mechanism for delivery of the data. Post appropriate information on the web. 3. Take data collected from Watersheds 2000 and conduct analysis. Review historic information in the basin. 4. Develop properly functioning condition of landscape scale reach types. Negotiate the parameters with regulators 5. Compare data with preliminary PFC, continue to refine PFC and complete data analysis. 6. Coordinate PFC and other analyses with TMDL compliance and Goal 5 programming.
Timeline	Jan-Feb 2000	Ongoing	Fall 2000 - Jan 2001	January 2001 - August 2001
Public Involvement Communications	1. Following LT and Board, submit mpp to city staff and councils. Make presentation to councils and city managers. Secure verbal commitment of their participation 2. Update the watershed council, USAAC on the mpp. Develop mailing list of interested parties.	1. Have Healthy Streams Plan a feature of CWS web page. Post updates, mpps, meeting notices, meeting notes, etc on page. 1. Meet with partner staff to negotiate IGA's. Present mpp to local Boards and Councils as requested.	1. Follow public involvement process outlined in Watershed 2000 project	1. Provide updates on progress as requested to existing committees, citizen groups, etc. 2. Post technical information on the web. Send out public notice of release of information.
At a Glance				
Board of Directors	4,5	2,5	2	2
CWAC	4	2	2	2,3
Interagency groups*	1	2,4	2,3	2,3
Parties of Interest (POI's)**	1	2	2	2
IWRM Team	1	2,6	2,6	2,6
Project / Advisory Committees	1	1	2,3,4	1
CWS Staff	6	6	6	6

* Interagency groups include: planning directors, city committee, water managers, natural resources coordinating committee, legal coordinating committee, wash co managers, parks providers, TB PAC

Codes: 1) no involvement 2) receive written info / updates 3) sounding board 4) develop formal group recommendation 5) take formal action to accept or approve 6) staff work

**Parties of Interest include:CPO's, NAC's, friends groups, misc. interested citizens, and all committee/group members of all listed groups in mpp

***Each governing body will have authority over portions of the plan exclusive to their jurisdiction.