

**LOCAL WETLAND INVENTORY
LAPINE/WICKIUP JUNCTION
RURAL SERVICE DISTRICTS
DESCHUTES COUNTY, OR**

Prepared for:

Oregon Division of State Lands

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION	2
<u>Site Physiography</u>	3
<i>Topography</i>	3
<i>Land-Use</i>	3
<i>Climate and Hydrology</i>	4
<i>Vegetation</i>	4
<i>Geology and Soils</i>	5
METHODS	6
RESULTS AND DISCUSSION	9
<u>Wetland Summaries (Narrative)</u>	11
<i>Area I</i>	11
<i>Area II</i>	11
<i>Area III</i>	12
<i>Area IV</i>	13
<u>Opportunities for Enhancement</u>	14
<i>Area I</i>	14
<i>Area II</i>	14
<i>Area III</i>	15
<i>Area IV</i>	15
APPENDIX	16
Watershed Summary Sheet for the Oregon Method	17
WETLAND SUMMARY SHEET	18
Function & Condition Summary Sheet for the Oregon Method	23
Overall Summary of Wetland Functions by Wetland Area	27
STAFF QUALIFICATIONS	28
Data Sheets	

APPENDIX

April 25, 1997

Nancy Pope-Schlangen, Chair
Deschutes County Commission
1130 NW Harriman
Bend, OR 97701



DIVISION OF
STATE LANDS

Re: Approval of the LaPine - Wickiup Junction Local Wetlands Inventory
and Assessment

STATE LAND BOARD

JOHN A. KITZHABER
Governor

PHIL KEISLING
Secretary of State

JIM HILL
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Dear Ms. Pope-Schlangen:

I am pleased to notify you that the Division of State Lands has approved the local wetlands inventory (LWI) and wetland function assessment for these two urban unincorporated communities. We appreciate the work of your Assistant Planner, Heidi Kennedy, with local notification and coordination between the wetland consultants and your GIS staff. This has helped to ensure that the inventory meets state LWI standards as set forth in OAR 141-86-180 to 240.

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Approval by the Division means that the LWI becomes part of the Statewide Wetlands Inventory. The LWI and the functional assessment form the foundation for your wetland planning under Statewide Planning Goal 5. Also, the LWI must now be used in lieu of the National Wetlands Inventory for the Wetland Land Use Notification Process (ORS 227.350).

Division approval does not guarantee that the wetlands depicted on the maps are the only regulated wetlands in the inventory area, and there may be upland areas within the mapped wetlands. However, after a thorough review, my staff is very pleased with the quality of the LWI and comfortable that it incorporates most wetlands and waterways. Exact wetland boundaries have not been staked and surveyed, and there are inherent limitations in mapping accuracy. For these reasons, the Division advises anyone who proposes land alteration within 25 feet of a mapped wetland to obtain a wetland boundary delineation by a qualified consultant prior to initiating the land alteration.

We are pleased that Deschutes County has made wetlands inventory and planning a high priority, and that we were able to help provide EPA pass-through funding for this important work. We believe the results of this project will be a useful pilot for future planning in the Sunriver area. We look forward to continuing to work with the County on these efforts. Please contact Dana Field, Wetlands Planner, at (503)378-3805 Ext. 238, if you have any questions about the inventory products and their use.

Respectfully,



Paul R. Cleary
Director

cc: Heidi Kennedy, Assistant Planner
Jill Phillips-McLane, LaPine Community Action Team
Martin Schott
Jay Lorenz
Joel Shaich, EPA
Jim Goudzwaard, Corps of Engineers
Jim Anderson, Corps of Engineers
Dennis Peters, FWS Regional Office
Brent Lake, DLCD
Tom Wise, ODFW
Craig Costello, DEQ
Bob Brown, DSL

EXECUTIVE SUMMARY

Martin Schott was contracted by the Oregon Division of State Lands to conduct a Local Wetland Inventory in two rural service districts of Deschutes County, OR: LaPine and Wickiup Junction. The purpose of the inventory was to identify and assess the functions of wetlands to meet statewide Goal 5 and other planning responsibilities. The LaPine study area comprised 1416 acres and the Wickiup Junction study comprised 85.1 acres. Wetlands were identified according to criteria outlined in the *1987 Corps of Engineers Wetlands Manual*.

No wetlands were observed in the Wickiup Junction study area.

In the LaPine study area, 166.03 acres of wetland were mapped. Wetlands were all within the area referred to as the Long Prairie Slough, a tributary of the Little Deschutes River. Historically, the Long Prairie Slough was a continuous wetland. Today, several roads transect the wetland with hydrologic connectivity maintained through culverts. Wetland boundaries closely conform to those mapped on the National Wetland Inventory.

Wetlands were mapped according to the Cowardin classification. Three wetland types were identified in Long Prairie Slough: palustrine emergent, palustrine scrub-shrub, and palustrine forest. Water regime varies and includes areas that are seasonally flooded, semipermanently flooded/saturated, semipermanently flooded, and permanently flooded.

Wetland quality was evaluated using the *Oregon Freshwater Assessment Methodology*. For assessment purposes Long Prairie Slough was divided into 4 areas. Wildlife and fish habitat was degraded throughout the slough. Water quality and hydrologic control functions are intact throughout. All areas are potentially sensitive to impacts and have a high potential for enhancement. Areas I and II in the southern portion of the study area have potential for educational uses. Areas III and IV can provide educational uses. Recreational uses of Long Prairie Slough are generally not available. Area IV has potential for recreational use. The aesthetic quality of Areas I and II, adjacent to Hwy. 97, are not pleasing while Areas III and IV are pleasing.

Wetlands have been affected by logging, grazing, and water diversions. Historically, most of the wetlands were probably scrub-shrub. Today, most of the wetlands are emergent. Wetland enhancement opportunities include restoring trees along the wetland perimeter, grazing management, reducing water diversions, and restoring scrub-shrub vegetation along interior channels.

Long Prairie Slough is not water quality limited. The slough is being watched by the Oregon Department of Environmental Quality as a potential for listing. Downstream, the Little Deschutes River is water quality limited due to elevated water temperatures. Habitat enhancement to Long Prairie Slough would help prevent it from becoming water quality limited and contribute to improving the quality of the Little Deschutes River.

LOCAL WETLAND INVENTORY
LAPINE AND WICKIUP JUNCTION
DESCHUTES COUNTY, OREGON

INTRODUCTION

The purpose of this study was to conduct a Local Wetland Inventory (LWI) and assess wetland functions within two rural service areas of Deschutes County, Oregon: Wickiup Junction and LaPine. Local wetland inventories and assessments provide information sufficient to complete the planning required by state law. Site specific data is collected that can be used to determine development suitability of individual parcels. Once approved by the Division of State Lands, the LWI replaces the National Wetlands Inventory (NWI) and is incorporated into the Statewide Wetlands Inventory. A LWI fulfills the location and quantity information required for Goal 5 analysis, but not quality. A wetland quality assessment was conducted at the time of the LWI to provide information required for Goal 5 analysis and planning. Data collected for the LWI will assist local landowners and planning agencies in making decisions about future development. Thus, it is a planning tool rather than a delineation that may be used in a regulatory context.

The need for wetland planning is apparent as they are protected by state and federal laws. In Oregon, the Division of State Lands (DSL) regulates activities involving fill, removal, or alteration of material in wetlands or waterways under ORS 196.800 to 196.990 and rules 141-85-090. The U.S. Army Corps of Engineers (COE) regulates the discharge of dredged or fill materials into waters and adjacent wetlands of the United States under authority of Section 404 of the Clean Water Act (*Federal Register*, 1986). For purposes of state and federal permitting programs wetlands are defined as follows (*Federal Register*, 1980, 1982):

Those areas that are inundated or saturated by surface or groundwater 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.

Local Wetland Inventories are conducted in planning regions (e.g., city, county, rural service area) where site specific data suggests that wetlands may be present (see **METHODS** for listing of data sources). For example, the National Wetland Inventory (NWI) indicated wetlands were present in the LaPine area (Long Prairie Slough). The Deschutes County Area Soil Survey (draft) maps hydric or wetland soils in Long Prairie Slough. While these are

reliable sources indicating the presence of wetlands, they are not suitable planning tools. The NWI was done in the early 1980s and is now out-of-date in many areas. NWI mapping was done at a coarse scale and resolution that is not particularly useful at a fine scale or parcel based planning resolution. In addition, experience has taught us that the NWI occasionally missed wetlands.

Objectives of this study were to

- provide current mapping of wetland boundaries at a scale suitable for planning,
- determine whether additional wetlands not mapped on the NWI are present,
- calculate the area of wetlands, and
- assess wetland functions and values.

Both the Wickiup Junction and LaPine study areas are located along U.S. Highway 97, south of Bend in Deschutes County, OR. Wickiup Junction is located in Section 36, T. 21 S., R. 10 E. and Section 1, T. 22 S., R. 10 E. The LaPine study area is located in portions of Sections 10, 11, 13, 14, 15, 22, and 23, T. 22 S., R. 10 E.

Site Physiography

Topography

The LaPine study area comprises 1416 acres of nearly level land, about 4200 feet above sea level. Wickiup Junction, an area of 85.1 acres, is also about 4200 feet above sea level. There is less than 20 feet difference in elevation across both the Wickiup Junction and LaPine study areas.

Land-Use

Most of the land within both the Wickiup Junction and LaPine study areas is privately owned. In a sense they are islands of private land surrounded by the Deschutes National Forest. The Bureau of Land Management owns a block of land in the southwest corner of the LaPine study area as well as forest in eastern portions of the site.

In LaPine, land-uses are mixed including forest, agriculture/rangeland, urban, industrial, rural residential and parks. Forested areas are found in the eastern two-thirds of the area, east of Highway 97 while agriculture/rangelands are found west of the Highway. Agricultural activity is primarily cattle grazing with a limited amount of hay production. The urbanized portion of LaPine is a north to south area consisting of schools, medium to low density

housing, and small businesses. Highway 97 bisects the urban area northeast to southwest. Industrial areas are located along the eastern boundary and north central portions of the site.

Land-uses in Wickiup Junction are small businesses along U.S. Highway 97 with rural residential use in the balance of the area.

Climate and Hydrology

The nearest weather station is at Wickiup Dam (4,360 ft. elevation or 160 ft. higher than the study area) where the average annual precipitation is 21.26 inches (Oregon Climate Service, Oregon State University). The major period of precipitation is fall through spring with a portion falling as snow. Ice and snow melt contribute to spring runoff. The Natural Resource Conservation Service states that soils mapped within the region receive between 15 and 35 inches of precipitation annually. At a relatively high elevation, the frost-free period is 10 to 50. Mean annual temperature is 40 to 45 degrees F.

Long Prairie Slough, a tributary (headwater) of the Little Deschutes River, flows south to north through the LaPine study area. The slough is about 5 to 10 feet below the surrounding grade. It is the only drainage in the LaPine study area, found within a watershed of about 125 sq. miles. It is about 9 miles long, only 2 of which transect the study area. Upstream from the study area water is diverted for irrigation. Drainage and irrigation ditches are evident within the slough. According to the Oregon Department of Fish and Wildlife, historically there was a native fishery resource (trout) in the slough. Reduced water levels as a result of upstream diversions and dams downstream blocking passage have eliminated the fishery.

At the upper end of the study area there was no discernable channel. In the mid-portion, water flows through a poorly defined channel (2-3 ft. wide, ≤ 1 ft. deep) and several shallow drainage/irrigation ditches (2-3 ft. wide, < 1 ft. deep). At the lower end of the slough, the channel is fairly well defined, 4-6 ft. wide and about 2 ft. deep. As a result of upstream diversions, there is virtually no flow through the slough during the spring and summer irrigation season, except during periods of no irrigation upstream. Freezing temperatures limit ground and surface runoff during the winter months. Substantial flow through the slough occurs in the spring following snow melt and ground thaw and prior to the onset of the irrigation season.

Vegetation

There are essentially three native plant communities within the LaPine study area: Lodgepole pine (*Pinus contorta*)/bitterbrush (*Purshia tridentata*)/Idaho fescue (*Festuca idahoensis*); willow (*Salix spp.*)/birch (*Betula glandulosa*)/sedges (*Carex spp.*)/rushes (*Juncus spp.*); and a graminoid community including Idaho fescue, bentgrass (*Agrostis spp.*), wheatgrass (*Agropyron spp.*), and bluegrass (*Poa spp.*). The lodgepole pine community is found in the

eastern and western portions of the site while the willow/birch community is found in the northern portions of Long Prairie slough. Grasslands are found along the perimeter of Long Prairie Slough, especially in the southwest corner of the study area.

The historic plant communities have been altered by logging and grazing activities. In the eastern portion of the LaPine study area about 90 percent of the lodgepole pine has been removed between the railroad right-of-way and the study area boundary. Selective cutting has taken place east of Highway 97 to the railroad. Heavy logging activities took place in the north-central portion of the LaPine study area in 1993 or 1994, probably in response to infestation of pine beetles.

Historically, Long Prairie Slough was probably a scrub-shrub community dominated by willows and birches. Today, a remnant scrub-shrub community is located in the northern portion of the site, the area approaching the confluence with the Little Deschutes River. Grazing, possibly hay production, and hydrologic manipulations have transformed most of the slough into a community dominated by sedges and rushes.

Currently, the southwest corner of the LaPine study area is a grassland with very few lodgepole pines remaining. Dominant vegetation consists of wheatgrass (*Agropyron sp.*), timothy (*Phleum pratense*), bentgrass (*Agrostis sp.*), Idaho fescue (*Festuca idahoensis*), and bluegrass (*Poa compressa*). It is managed for grazing and forage production. Most of the northwestern corner of the study area was logged. Lodgepole pines in the northwest corner are generally 10 to 15 feet or less with a grass rather than bitterbrush understory. Lodgepole pines are rapidly invading the higher portions of grassland habitat.

There is one historic plant community in the Wickiup Junction study area: lodgepole pine/bitterbrush/Idaho fescue. Portions of the plant community have been cleared for development along Highway 97. Grassland habitat is now found in a clearing in the southwest portion of the Wickiup Junction study area. An excavated area in Wickiup Junction is no longer forested and generally devoid of vegetation.

Geology and Soils

Landforms around Wickiup Junction and Lapine are the result of volcanic activity. The study areas are on a high plain situated between the Cascade Mountains to the west and Newberry crater to the northeast. The underlying bedrock is rhyolite overlain with recent basalt flows. Pumice and ash, 6 to 10 feet, from Mt. Mazama overlays the bedrock, forming the parent material for the soils.

The Natural Resources Conservation Service maps three soils in the LaPine Study area: Cryaquolls, 0 to 3 percent slopes; Shanahan loamy coarse sand, low, 0 to 3 percent slopes; and Sunriver sandy loam, 0 to 3 percent slopes. Formed in mixed alluvium, Cryaquolls are very poorly and poorly drained soils on pumice-mantled stream terraces. From November to August, Cryaquolls have a high water table, 0 to 2.0 feet from the surface. Shanahan soils

are mixed Xeric Vitricryands found on pumice plains and were formed in ash over buried loamy materials. The Shanahan series are somewhat excessively drained. Sunriver soils are mixed Aquic Vitricryands formed in ash over alluvium and are found on pumice mantled stream terraces. They consist of somewhat poorly drained soils. Depth to the high water table (April to June) is 2 to 4 feet. Of these three soils, Cryaquolls are considered to be hydric.

Soils in the Wickiup Junction study area are Shanahan loamy coarse sand. It is a non-hydric soil.

METHODS

This study was completed by Drs. Martin Schott, Canby, OR and Jay Lorenz, Corvallis, OR. Mapping was provided by C & G White Cartography, Corvallis, OR. (See Appendix for qualifications of the staff.) Field studies were performed on November 2 - 3, 1995.

Methods outlined in the *Corps of Engineers Wetlands Delineation Manual, 1987* were used to determine the presence of wetlands. The manual requires independent evidence of three parameters for an area to be declared as wetland: hydric soils, hydrophytic vegetation, and wetland hydrology. Location of sample points and mapping conventions followed state LWI standards and were not intended to define the limits of regulatory jurisdiction.

The On-Site LWI Option was used over most of the study area where access was permitted. This involved sampling characteristic wetland communities and paired plots to characterize the wetland/upland boundary. Sample plots were also located to characterize changes between major plant communities.

The Off-Site Option was applied to areas where landowners denied access. The Off-Site method involves mapping wetlands on air photos without field verified sample plots. In this study, investigators were able to view wetlands where access was denied from public roads. Ground-truthing areas of restricted access was done by nearby viewing and interpretation based on photo signatures of adjacent wetlands.

An off-site literature review was conducted prior to engaging in field work. Sources included:

- USGS Topographic Maps, 7.5 minute series, 1:24,000, LaPine and Finley Butte quadrangles, photorevised 1981
- National Wetland Inventory, LaPine and Finley Butte quadrangles, based on 1982 photography
- Soil Survey of Deschutes County, OR (unpublished draft), Natural Resources Conservation Service,

- black and white aerial photograph, April 3, 1995, Scale 1"=500', WAC Corporation,
- jurisdictional wetland delineation report, Century West Engineering, August 31, 1992, provided by Oregon Division of State Lands.

In addition to the literature review, a public information meeting was held October 19, 1995 at the fire hall in LaPine providing an opportunity for communication with local citizens.

Hydric soils are soils that are saturated, inundated, or flooded long enough during the growing season to create anaerobic conditions that favor the growth of hydrophytic vegetation. Soil color (chroma 1 or \leq 2 with mottles) and high organic content in the surface horizon are two field indicators of hydric soils. In sandy soils, high organic content in the surface horizon, streaking of subsurface horizons by organic matter, and organic pans are indications of hydric conditions.

Plants specifically adapted for life under saturated or anaerobic conditions are commonly referred to as hydrophytic vegetation. The U.S. Fish and Wildlife Service in cooperation with the National and Regional Interagency Review Panels publishes regional lists estimating the probability of plant species' occurrence in wetlands. Each species is given an *indicator status* which represents the likelihood that it will be found in a wetland. Plant communities dominated by OBL, FACW, or FAC species indicate the presence of wetland vegetation. Categories are defined in Table 1.

Table 1. Plant indicator categories.

<u>Category</u>	<u>Definition</u>
Obligate Wetland: (OBL)	Plants that almost always occur in wetlands under natural conditions (estimated probability > 99%).
Facultative Wetland: (FACW)	Plants that usually occur in wetlands but are occasionally found in nonwetland areas (estimated probability 67 - 99%).
Facultative: (FAC)	Plants that are equally likely to occur in wetlands or nonwetlands (estimated probability 34-67%).
Facultative Upland: (FACU)	Plants that usually occur in nonwetlands (estimated probability 67-99%).
Upland: (UPL)	Plant species that almost always occur in nonwetlands under normal conditions (estimated probability > 99%).
Not Listed: (NL)	No indicator status given to this species.

[From: *National List of Plant Species That Occur in Wetlands: Northwest* (Reed 1988)]

Wetland hydrology occurs in soils that are saturated or inundated for a significant portion of the growing season (5 percent or more). Visual observation of inundation or saturation, watermarks, drift lines, sediment deposits, and drainage patterns are useful field indicators of wetland hydrology.

Soil color (hue, value, and chroma) were determined using the Munsell Color Chart at each sample point. Soil texture and moisture were observed. Dominant vegetation was sampled within a 15 foot radius of each sample point and the percent cover was estimated for each species. Data were recorded on standard data forms. Wetland boundaries and Data Points were mapped in the field on an aerial photograph with a clear plastic cover.

Prior to conducting any field work the Deschutes County Planning Department notified landowners of the impending LWI and requested permission to access property. Some landowners denied access to their land. Those parcels were identified on tax lot maps provided by the Deschutes County Assessor's office and later marked on air photos that were used for field mapping.

In Wickiup Junction investigators searched for wetlands by viewing the landscape from public roads. The road network in Wickiup Junction proved viewing access to all plant communities.

In LaPine, the initial search, including wetlands mapped on the NWI, was performed by viewing the landscape from public roads. The investigators walked the boundary of the wetland, excepting areas where landowners denied access. Areas of restricted access were viewed from adjacent public roads.

The *Oregon Freshwater Assessment Methodology (OFWAM)* was used to evaluate wetlands. This method provides standards for rating 9 categories: wildlife habitat, fish habitat, water quality, hydrologic control, sensitivity to impact, enhancement potential, education, recreation, and aesthetic quality. Factors such as size of wetland, structural and biological diversity, presence of rare or endangered species, land-use, and access are used in the rating system. Data from field notes, referencing the aerial photograph, and information gathered from public agencies were used to complete the wetlands assessment. The following public agencies were contacted:

- Oregon Department of Environmental Quality, Portland, OR,
- Oregon Department of Fish and Wildlife, Bend, OR,
- Oregon Department of Agriculture, Salem, OR,
- Oregon Division of State Lands, Salem, OR,
- U.S. Fish and Wildlife Service, Portland, OR
- Bureau of Land Management, Prineville, OR
- Deschutes County Planning Department, Bend, OR
- Oregon Natural Heritage Program, Portland, OR.

For purposes of evaluation, the Long Prairie Slough wetlands complex was sub-divided at road crossings to form four areas: Area I) southeast of U.S. Highway 97; Area II) northwest of U.S. Highway 97 extending north to 6th St.; Area III) north of 6th St. and south of 3rd St.; and Area IV) north of 3rd St. continuing north to boundary of study area. The sub-division of Long Prairie Slough was arbitrary in the sense that it was historically one continuous wetland and even today, hydrological continuity is maintained through culverts.

Following the field work, a map was created by digitizing the data points, study area and wetland boundaries. This boundary map was then registered to the digital parcel base (State Plane Coordinate System) supplied by the Deschutes County Planning Department.

RESULTS AND DISCUSSION

There are no jurisdictional wetlands within the Wickiup Junction study area (85 acres). There is a developed area of small businesses along U.S. Highway 97. Rural residential development occurs through the balance of the area. The dominant plant community

throughout the Wickiup Junction study area is lodgepole pine/bitterbrush/Idaho fescue, an upland plant community. Non-hydric soils are mapped throughout the area. Data Points WJ01 to WJ04 confirmed the presence of non-hydric soils. Wetland hydrology was not observed at any of the Data Points. There are no wetlands in the Wickiup Junction area because there are no plant communities with hydrophytic vegetation, non-hydric soil is present, and wetland hydrology is lacking.

Wetlands mapped within the LaPine study area are contiguous (166.03 acres), all within the Long Prairie Slough, a tributary to the Little Deschutes River. Several types of wetlands were observed (Table 2), a coarse indication of structural and species diversity. In addition, the diversity of wetland types indicates variations in the seasonal distribution of water.

Table 2. Summary of Wetland Areas According to Cowardin Classification.

Number of polygons	Cowardin Class*	Area (acres)
15	PEMC (seasonally wet meadows)	111.64
3	PEMF (semi-permanently wet meadows)	40.65
5	PEMH (permanently wet meadows)	4.27
3	PFOC (forested wetlands)	2.47
3	PSSC (shrub wetlands)	<u>7.00</u>
TOTAL		166.03

* PEMC - seasonally flooded palustrine emergent, PEMF - semi-permanently flooded palustrine emergent, PEMH - permanently flooded palustrine emergent, PFOC - seasonally flooded palustrine forest, PSSC - seasonally flooded palustrine scrub/shrub.

The location of wetlands in the LaPine study area was in close agreement with wetland mapping on the National Wetland Inventory with several exceptions. Some of the areas mapped as forested wetlands on the NWI were formerly dominated by lodgepole pine (*Pinus contorta*). Lodgepole pines were harvested due to a recent infestation of bark beetles. Thus, their wetland classification changed. Wetland hydrology was marginal in the forested wetlands dominated by lodgepole pine. Based on distribution in central Oregon, lodgepole pines are more indicative of upland than wetland habitat. There is some potential for lodgepole regeneration. The NWI shows a small piece of excavated wetland near the corner of 6th St. and Hwy. 97. This land has been filled under a state permit.

Wetland Summaries (Narrative)

There is one wetland in the LaPine study area, the Long Prairie Slough, herein divided into 4 areas for purposes of discussion and evaluation. Summary sheets for the watershed as well as for each of the 4 wetland areas are provided in the Appendix. Two summary sheets are provided for each wetland: Wetland Summary Sheet and Function & Condition Summary. The Wetland Summary Sheet is an overall summary while the Function & Condition provides the rationale behind the various ratings. In addition, a third summary sheet, compilations of answers from the *OFWAM* are on file at the Oregon Division of State Lands and the Deschutes County Planning Office. The answer sheets are the basis of the Function & Condition ratings. However, they are not presented here because they are meaningless outside the context of the *OFWAM* work book.

Area I

Area I (T. 22 S., R. 10 E., Sect. 15), southeast of Highway 97, contains 25.86 acres of wetland. Access to most of this area was restricted, limiting data collection. Portions of Area I were delineated in a report by Century West Engineering Corporation dated August 31, 1992. Viewing the area was primarily from surrounding roads. One wetland type with two different water regimes appeared to be present: PEMC and PEMF.

Fish and wildlife habitat has been impacted or degraded by upstream water diversions and agriculture. Only one Cowardin class is present, thus there are no internal edge effects. There is no shrub or tree riparian vegetation making waters susceptible to elevated temperatures. Lack of open water habitat reduces habitat quality. There are no fish species present. Trampling damage by livestock is severe. The overall ecological conditions are poor with opportunities for enhancement.

Area I wetlands are located in a floodplain with vegetative cover. Opportunities to filter pollutants, receive and store floodwater are all good. However, adjacent to agricultural lands, the area is potentially sensitive to disturbance.

Area I is not aesthetically pleasing and opportunities for recreation and education are limited.

Area II

Area II (T. 22 S., R. 10 E., Sect. 15), northwest of U.S. Highway 97 and south of 6th St. contains 48.49 acres of wetland. The area includes both public (BLM) and private land. One wetland type with three water regimes are present: PEMC, PEMH, and PEMH. Vegetative communities varied according to water regime. For example, spikerush (*Eleocharis palustris*), sedges (*Carex sp.*), and tufted-hairgrass (*Deschampsia cespitosa*) dominated seasonally flooded areas. Species composition was similar in wetter areas. However, percent cover of sedges increased in wetter portions. Soil color in wetland portions of Area II were

typically 10YR3/1 with 2.5Y4/3 mottles, similar in description to Cryaquolls. Soils were either saturated near the surface or inundated.

Bluegrass, Idaho fescue, bentgrass, wheatgrass, and timothy dominated upland portions outside of Area II. Spikerush and sedges were noticeably absent from upland areas. Soils were bright, 2.5Y4/3 and lacked mottling in upland areas of Area II and they were not saturated near the surface.

Fish and wildlife habitat is impacted or degraded, similar to Area I. Only one Cowardin class is present, thus there are no internal edge effects. Woody riparian vegetation is lacking making waters susceptible to elevated temperatures. Lack of open water habitat reduces habitat quality. There are no fish species present. Trampling damage by livestock is moderate to severe depending on specific pasture. The overall ecological condition is fair with high potential for enhancement.

Wetlands are located in a floodplain with vegetative cover. Opportunities to filter pollutants, receive and store floodwater are all good. However, surrounding development creates the potential for disturbance.

Aesthetic values are reduced because Area II is fairly homogenous with little contrast to surrounding uplands. Recreational and educational opportunities are limited. Roads crossing the wetland do provide viewing access to those with limited mobility.

Area III

Area III (T. 22 S., R. 10 E., Sect. 15), 40.26 acres, was defined as the land north of 6th Street and south of 3rd Street on the west side of Highway 97. Access was restricted to wetland portions of Area III. The investigators viewed Area III from both 6th and 3rd Streets. Wetlands in Area III are all palustrine emergent (PEMC, PEMF, and PEMH). As viewed from adjacent roads, sedges, spikerush, and rushes (*Juncus sp.*) dominated wetlands. Culverts beneath both 6th and 3rd Streets maintain hydrological connectivity to wetlands to the south and north. Cryaquolls soil is mapped for this area. This is likely correct as Cryaquolls were confirmed in Area II to the south and Area IV to the north.

Fish and wildlife habitat is impacted or degraded, similar to Area I. Only one Cowardin class is present, thus there are no internal edge effects. Woody riparian vegetation is of low density and limited to the west side of the wetland. Therefore, shading and contribution of woody debris are limited. Lack of open water habitat reduces habitat quality. There are no fish species present. Grazing by livestock appears to be less severe than in Areas I and II. Ditches for irrigation and drainage impact wetland hydrology. Overall ecological condition is fair with high potential for enhancement.

Wetlands are located in a floodplain with vegetative cover. Opportunities to filter pollutants, receive and store floodwater are all good. Ditches through Area III increases sensitivity to impacts.

Area III is aesthetically pleasing and visible from roads. Educational opportunities exist, however access may be limited by permission of the landowner. Recreational opportunities are limited.

Area IV

Area IV (T. 22 S., R 10 E., Sect. 10), 51.42 acres, was defined as the land north of 3rd Street north to the boundary of the study area. Three wetland classes were observed: PEMC, PEMF, PEMH, PSSC, and PFOC. Tufted hairgrass, sedges, spikerush, and rushes dominated palustrine emergent wetlands. Scrub-shrub wetlands in the lower portions along the creek channel were dominated by willows (*Salix geyeriana*) and bog birch (*Betula glandulosa*) in the overstory with sedges, spikerush, and rushes in the understory. Lodgepole pines were the dominant shrub with tufted hairgrass in the understory in palustrine scrub-shrub wetlands on the west side of Area IV. Soils throughout Area IV were typically 10YR3/1 with 2.5Y4/2 mottling, similar in description to Cryaquolls. Wetland hydrology varied from being saturated to inundated in Area IV.

Lodgepole pine/bitterbrush communities surround wetlands in Area IV.

Fish and wildlife habitat is impacted or degraded. There is moderate interspersions of three Cowardin classes creating some internal edge effects. Riparian cover by trees and shrubs is present in the northern portion of Area IV and provides shading to channels in the center of the wetland. Forested riparian vegetation also exists along the perimeter of the northern portion of Area IV. Riparian vegetation is generally lacking in the southern portion of Area IV. Trees were formerly removed due to pine beetle infestation. Lodgepole pines are regenerating along the western border of Area IV. Lack of open water habitat reduces habitat quality. There are no fish species present. Ditches for irrigation and drainage impact wetland hydrology. Grazing and trampling damage appears to be limited to the southern portion of the area. Overall ecological conditions are fair to good with potential for enhancement.

Wetlands are located in a floodplain with vegetative cover. Opportunities to filter pollutants, receive and store floodwater are all good.

Structural and species diversity create an aesthetically pleasing habitat. There are opportunities for recreation. Educational potential is high, especially considering that the wetland is adjacent to a high school.

Opportunities for Enhancement

According to the Oregon Department of Environmental Quality (DEQ), the Little Deschutes River is water quality limited due to elevated water temperatures. The Long Prairie Slough is not currently water quality limited. However, it is a potential for listing. Enhancing Long Prairie Slough might help prevent it from becoming water quality limited. In addition, enhancing Long Prairie Slough would likely help improve conditions downstream in the Little Deschutes River.

Historically, the dominant plant community along Long Prairie Slough was probably scrub-shrub dominated by willows, birch, Douglas spirea (*Spiraea douglasii*) and lodgepole pine, as represented in the northern portion of Area IV. Plant succession would likely be in the direction of this scrub-shrub community if all human and domestic animal activity were removed from the slough. Wetland hydrology and fish habitat has been impacted by up-stream water diversions. The direction of future plant succession and potential for restoring fish habitat will be dependent on how water is managed up-stream.

Historically, the lodgepole pines probably grew to the wetland or riparian edge. Today, lodgepole pines have essentially been removed through the length of Long Prairie Slough. If lodgepole pines regenerate in the riparian area of the slough the result would be increased edge habitat for wildlife, shading and thereby lower summer water temperatures, and the addition of woody debris to the system. Chris Carey, Oregon Department of Fish and Wildlife, stated that a protective buffer of trees (no homes or roads) along Long Prairie Slough could result in enhanced nesting and cover habitat for Great Gray Owls and Goshawks, two sensitive species.

Area I

Seasonal grazing management provides an opportunity for reducing trampling damage and reducing water contamination. Structural diversity could be enhanced with plantings of willow and birch. However, shrubs would probably encroach the area on their own if the site were completely protected from human activity.

Area II

Wetlands in Area II are contiguous with grasslands to the west. Grazing and forage production appear to maintain grass and emergent vegetation. As in Area I, seasonal grazing management would provide opportunities for reducing trampling damage and improve chances for restoring structural diversity.

Area III

Discontinuing and filling drainage/irrigation ditches as well as seasonal grazing management would provide opportunities for enhancing wetland hydrology and vegetation. Structural diversity could be accelerated with plantings of willow and birch.

Area IV

There are few opportunities for enhancement in wetlands in the northern portion of Area IV as shrubs already dominate the landscape and there appears to be little or no grazing. Grazing and ditches impact the southern two-thirds of Area IV. Seasonal grazing management could reduce trampling damage. Planting additional shrubs would increase structural diversity.

Watershed Summary Sheet for the Oregon Method

Watershed or community identification: Long Prairie Slough, LaPine, OR

Characteristics	Description
Physical characteristics of the watershed	Long Prairie Slough, a tributary of the Little Deschutes River (upper region of Deschutes basin), is found in a watershed of about 125 square miles. The slough and surrounding landscape are all low gradient, 0 - 3 % slope. Main stream reaches upstream of the assessment area are dammed, channelized or leveed. Diking, drainage or irrigation districts are active within the watershed, including upstream of the assessment area. Land use surrounding the assessment area is primarily agriculture. Within the watershed, land use is primarily publicly owned forest.
Biological information	No fish species are known to be present. Bald eagles and occasionally Peregrine falcons pass through the area during spring and fall migration. Great Gray Owls and Goshawks are present. Big game in the watershed includes mule deer. The watershed is largely undeveloped. Highway 97 is the primary hazard to wildlife movement.
Water quality	The watershed is not water quality limited.
Land use	Land use within the 1416 acre LaPine study area is a combination of residential, commercial, agriculture, and forest. About half the study area is developed. Within the watershed land use is primarily agriculture and forest. A majority of the watershed is publicly owned.

WETLAND SUMMARY SHEET

Date of Field Verification: 3 Nov. 1995

Wetland ID: Area I
Data Sheets: None

Location: T22S, R10E, Sect.15; SE of U.S. Highway 97

Tax Lots: 22 10 15 DA, 300, 400; 22 10 Index, 1800, 2802.

Classification: grass wetland, palustrine emergent, seasonally to semi-permanently flooded

Hydrologic Basin: Long Prairie Slough,
Little Deschutes River

Wetland Area: 25.86 ac

Soil: Cryaquolls

Dominant Vegetation:

Species

Stratum(T = tree, Sh = shrub, GC = Ground cover)

*access restricted, wetland vegetation not recorded
similar to Area II based on viewing from road*

Function/Value Summary:

Wildlife Habitat: Degraded

Water Quality: Intact

Sensitivity to Impact: Potentially sensitive

Education: Potential

Aesthetic Quality: Not pleasing

Fish Habitat: Impacted or degraded

Hydrologic Control: Intact

Enhancement Potential: High

Recreation: Does not provide

Comments: Wetland area is a portion of Long Prairie Slough. The wetland and adjacent field are used for grazing livestock. Trampling damage in the wetland is severe. Wildlife and fish habitat are degraded. If livestock grazing was limited, then structural diversity could be increased and likely improved water quality. Opportunities exist for improving riparian habitat.

WETLAND SUMMARY SHEET

Date of Field Verification: 3 Nov. 1995

Wetland ID: Area II
Data Sheets: LAP 9-12

Location: T22S, R10E, Sect.15, NW of U.S.NW of U.S. Highway 97, south of 6th St.

Tax Lots: 22 10 15, 500, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 2801

Classification: grass wetlands, palustrine emergent, seasonally to permanently flooded

Hydrologic Basin: Long Prairie Slough
Little Deschutes River

Wetland Area: 48.49 ac

Soil: Cryaquolls

Dominant Vegetation:

<u>Species</u>	<u>Stratum</u> (T = tree, Sh = shrub, GC = Ground cover)
<i>Eleocharis palustris</i> (OBL)	GC
<i>Carex nebrascensis</i> (OBL)	GC
<i>Carex rostrata</i> (OBL)	GC
<i>Deschampsia cespitosa</i> (FACW)	GC
<i>Poa compressa</i> (FACU+)	GC
<i>Agrostis exarata</i> (FACW)	GC

Function/Value Summary:

Wildlife Habitat: Degraded
Water Quality: Intact
Sensitivity to Impact: Potentially sensitive
Education: Potential
Aesthetic Quality: Not pleasing

Fish Habitat: Impacted or degraded
Hydrologic Control: Intact
Enhancement Potential: High
Recreation: Does not provide

Comments: Wetland Area II is a portion of the Long Prairie Slough. The area includes both public (BLM) and private land. It is sub-divided into several pastures for livestock grazing. Trampling damage is moderate to severe depending on the pasture. Grazing management might be one method for enhancing riparian vegetation.

WETLAND SUMMARY SHEET

Date of Field Verification: 3 Nov. 1996

Wetland ID: Area III

Data Sheets: None

Location: T22S, R10E, Sect. 15; N of 6th St., S of 3rd, W side of U.S. Highway 97

Tax Lots: 11 10 15, 800, 900, 1000, 1100; 22 10 15 AA, 1800, 2700; 22 10 15 AB, 400, 401, 502; 22 10 15 AC, 100, 200, 300, 1200; 22 20 25 AD, 1000, 1100, 1200, 1600, 1700, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600

Classification: grass wetlands, palustrine emergent, seasonally to permanently flooded

Hydrologic Basin: Long Prairie Slough,
Little Deschutes River

Wetland Area: 40.26 ac

Soil: Cryaquolls

Dominant Vegetation:

Species

Stratum (T = tree, Sh = shrub, GC = Ground cover)

*restricted access, vegetation not recorded
similar to Area II based on viewing from road*

Function/Value Summary:

Wildlife Habitat: Degraded

Water Quality: Intact

Sensitivity to Impact: Potentially sensitive

Education: Has uses

Aesthetic Quality: Pleasing

Fish Habitat: Impacted or degraded

Hydrologic Control: Intact

Enhancement Potential: High

Recreation: Does not provide

Comments: Area III is a portion of Long Prairies Slough. Limited riparian cover, side ditches, and livestock grazing have affected this area. Enhancing riparian cover could improve wildlife and fisheries habitat.

WETLAND SUMMARY SHEET

Date of Field Verification: 3 Nov. 1996

Wetland ID: Area IV
Data Sheets: LAP 14, 16, 18-22,
24-26

Location: T22S, R10E, Sect. 10; N of 3rd to study area boundary, west side of U.S.
Highway 97

Tax Lots: 22 10 Index, 101; 22 10 10 AB, 100, 200, 600, 700, 800, 1000, 1100; 22 10 10
DC, 100, 200, 900, 1000, 1100, 1200, 1300; 22 10 15 AA, 1500, 1600, 1700, 1701, 2000,
2001, 2100

Classification: grass wetlands, palustrine emergent; shrub wetland, palustrine scrub/shrub;
forested wetland, palustrine forest; seasonally to permanently flooded

Hydrologic Basin: Long Prairie Slough,
Little Deschutes River

Wetland Area: 51.42 ac

Soil: Cryaquolls

Dominant Vegetation:

<u>Species</u>	<u>Stratum</u> (T = tree, Sh = shrub, GC = Ground cover)
<i>Pinus contorta</i> (FAC)	T
<i>Salix geyerana</i> (FACW+)	Sh
<i>Betula glandulosa</i> (OBL)	Sh
<i>Deschampsia cespitosa</i> (FACW)	GC
<i>Carex rostrata</i> (OBL)	GC
<i>Carex nebrascensis</i> (OBL)	GC
<i>Juncus tenuis</i> (FACW-)	GC
<i>Juncus balticus</i> (OBL)	GC
<i>Eleocharis palustris</i> (OBL)	GC

Function/Value Summary:

Wildlife Habitat: Degraded
Water Quality: Intact
Sensitivity to Impact: Potentially sensitive
Education: Has uses
Aesthetic Quality: Pleasing

Fish Habitat: Impacted or degraded
Hydrologic Control: Intact
Enhancement Potential: High
Recreation: Potential

WETLAND SUMMARY SHEET - AREA IV (cont.)

Comments: Area IV is the northern portion of Long Prairie Slough. Grazing and ditches impact the southern two-thirds of the area. Structural diversity and wildlife habitat is better in Area IV than in Areas I - III. However, limiting grazing and additional riparian plantings could result in improved wildlife and fisheries habitat. There are educational opportunities for students attending the high school adjacent to the wetland.

Function & Condition Summary Sheet for the Oregon Method

Wetland identification: Area I, LaPine, OR, southeast of Hwy. 97

Function	Evaluation Descriptor	Rationale
Wildlife habitat	Degraded	Only one Cowardin class, no internal edge effect. Lacks structural diversity. No open water habitat. Trampling damage by livestock.
Fish habitat	Impacted or degraded	Less than 50% of wetland is shaded by riparian vegetation making waters susceptible to elevated temperatures. No fish species are present.
Water quality	Intact	Wetlands bordering an intermittent stream into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants. Slow velocity increases contact time of the water with vegetation. Dense vegetation cover tends to provide maximum nutrient uptake during the growing season.
Hydrologic control	Intact	Wetlands located within a floodplain have a greater opportunity to receive and store water. Strong indicators of storage function are evident. Large wetland with good ability to store and attenuate flood flows.
Sensitivity to impact	Potentially sensitive	Agricultural land use exposes wetland to disturbance.
Enhancement potential	High enhancement potential	Wetland has enhancement potential because observed functions suggest that structural problems caused by previous environmental impacts can be easily remedied.
Education	Has potential for educational use	Access is limited by permission of landowner. Degraded fish and wildlife habitat reduces educational opportunities. People with limited mobility can view the wetland.
Recreation	Does not provide recreational opportunities	Access near the wetland to enable unloading of boats and equipment and to allow walking to trails or observation areas is not available. There are no opportunities for non-motorized boating.
Aesthetic quality	Not pleasing	There is not a mix of wetland types nor is there contrast with surrounding habitat. Continuous traffic is audible in addition to naturally occurring sounds.

Function & Condition Summary Sheet for the Oregon Method

Wetland identification: Area II, LaPine, OR, northwest of Hwy. 97 and south of 6th St.

Function	Evaluation Descriptor	Rationale
Wildlife habitat	Degraded	Only one Cowardin class, no internal edge effect. Lacks structural diversity. No open water habitat. Trampling damage by livestock.
Fish habitat	Impacted or degraded	Less than 50% of wetland is shaded by riparian vegetation making waters susceptible to elevated temperatures. No fish species are present.
Water quality	Intact	Wetlands bordering an intermittent stream into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants. Slow velocity increases contact time of the water with vegetation. Dense vegetation cover tends to provide maximum nutrient uptake during the growing season.
Hydrologic control	Intact	Wetlands located within a floodplain have a greater opportunity to receive and store water. Strong indicators of storage function are evident. Large wetland with good ability to store and attenuate flood flows.
Sensitivity to impact	Potentially sensitive	Surrounding development exposes wetland to disturbance.
Enhancement potential	High enhancement potential	Wetland has enhancement potential because observed functions suggest that structural problems caused by previous environmental impacts can be easily remedied. Hwy. 97 restricts surface flow from the south.
Education	Has potential for educational use	Access is limited by permission of the landowner. Degraded fish and wildlife habitat reduces educational opportunities. People with limited mobility can view the wetland.
Recreation	Does not provide recreational opportunities	Access near the wetland to enable unloading of boats and equipment and to allow walking to trails or observation areas is not available. There are no opportunities for non-motorized boating.
Aesthetic quality	Not pleasing	There is not a mix of wetland types nor is there contrast with surrounding habitat. Continuous traffic is audible in addition to naturally occurring sounds.

Function & Condition Summary Sheet for the Oregon Method

Wetland identification: Area III, LaPine, OR, north of 6th St. and south of 3rd St.

Function	Evaluation Descriptor	Rationale
Wildlife habitat	Degraded	Only one Cowardin class, no internal edge effect. Lacks structural diversity. No open water habitat.
Fish habitat	Impacted or degraded	Less than 50% of wetland is shaded by riparian vegetation making waters susceptible to elevated temperatures. No fish species are present.
Water quality	Intact	Wetlands bordering an intermittent stream into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants. Slow velocity increases contact time of the water with vegetation. Dense vegetation cover tends to provide maximum nutrient uptake during the growing season.
Hydrologic control	Intact	Wetlands located within a floodplain have a greater opportunity to receive and store water. Strong indicators of storage function are evident. Large wetland with good ability to store and attenuate flood flows.
Sensitivity to impact	Potentially sensitive	Active draining, diking or irrigation limits the amount of water available to replenish the wetland and thus reduces the wetland's capacity to recover from impact.
Enhancement potential	High enhancement potential	Wetland has enhancement potential because observed functions suggest that structural problems caused by previous environmental impacts can be easily remedied. Sixth Street restricts surface flow from the south.
Education	Has educational uses	Access is limited by permission of the landowner. There are no visible safety hazards. People with limited mobility can view the wetland.
Recreation	Does not provide recreational opportunities	Access near the wetland to enable unloading of boats and equipment and to allow walking to trails or observation areas is not available. There are no opportunities for non-motorized boating.
Aesthetic quality	Pleasing	The majority of the wetland area is visible and no visual detractors exist. Natural, pleasant odors exist.

Function & Condition Summary Sheet for the Oregon Method

Wetland identification: Area IV, LaPine, OR, north of 3rd St. extending to north boundary of study area.

Function	Evaluation Descriptor	Rationale
Wildlife habitat	Degraded	Emergent wetlands without open water provide habitat for wetland species to a lesser degree. Cowardin class interspersions is moderate limiting the edge effect.
Fish habitat	Impacted or degraded	Riparian cover is limited making waters susceptible to elevated temperatures. Cover, essential for good fish habitat, is limited. No fish species are present.
Water quality	Intact	Wetlands bordering an intermittent stream into which floodwaters spread during periods of high runoff, enabling the wetlands to remove pollutants. Slow velocity increases contact time of the water with vegetation. Dense vegetation cover tends to provide maximum nutrient uptake during the growing season.
Hydrologic control	Intact	Wetlands located within a floodplain have a greater opportunity to receive and store water. Strong indicators of storage function are evident. Large wetland with good ability to store and attenuate flood flows.
Sensitivity to impact	Potentially sensitive	Active draining, diking or irrigation limits the amount of water available to replenish the wetland and thus reduces the wetland's capacity to recover from impact.
Enhancement potential	High enhancement potential	Wetland has enhancement potential because observed functions suggest that structural problems caused by previous environmental impacts can be easily remedied. Third Street restricts surface flow from the south.
Education	Has educational uses	Access is limited by permission of the landowner. There are no visible safety hazards. Access to other habitats exists or can be created easily. People with limited mobility can view the wetland.
Recreation	Has potential to provide recreational opportunities	An unmaintained access point exists.
Aesthetic quality	Pleasing	A majority of the wetland area is visible and no visual detractors exist. Natural, pleasant odors exist.

Overall Summary of Wetland Functions by Wetland Area

Wetland/Function	Wildlife	Fish	Water Quality	Hydro. Control	Sens. to Impact	Enhance Potent.	Educ.	Rec.	Aesth.
Area I	degraded	degraded	intact	intact	potential	high	potential	none	not pleasing
Area II	degraded	degraded	intact	intact	potential	high	potential	none	not pleasing
Area III	degraded	degraded	intact	intact	potential	high	has uses	none	pleasing
Area IV	degraded	degraded	intact	intact	potential	high	has uses	potential	pleasing

Wildlife- Wildlife Habitat; Fish- Fish Habitat; Hydro. Control- Hydrological Control; Sens. to Impact- Sensitivity to Impact; Enhance Potent.- Enhancement Potential; Educ.- Education; Rec.- Recreation; Aesth.- Aesthetic Quality

STAFF QUALIFICATIONS

Martin Schott, Ph.D. Dr. Schott is an independent consultant who specializes in wetlands, threatened and endangered species, and botany. He has a Ph.D. in plant ecology, a M.S. in range ecology, a B.S. in range science, and a B.S. in biology. He has had extensive plant ecology, plant taxonomy, soils and hydrology training. In addition, he has been trained in wetland delineation and regulation. He has been conducting wetland delineations, threatened and endangered species surveys, wildlife and botanical studies since 1988. Prior to going independent he worked for two of the larger natural resource consulting firms in the Pacific Northwest, and an Alaskan based engineering firm where he was hired to develop the natural resource section of a new environmental division. During the past eight years he has either worked on or managed in excess of 400 projects. They have ranged from small wetland reconnaissances to Environmental Impact Statements. The projects have included, but are not limited to: wetland inventories, housing developments, highways, airports, destination resorts, hydroelectric projects, water storage reservoirs, and landfills. In Central Oregon, Dr. Schott inventoried wetlands on the 640,000 acre Warm Springs Indian Reservation. He is certified as a Professional Wetland Scientist by the Society of Wetland Scientists.

Special Training

Basic Wetland Delineation - 1990

Wetlands in Oregon - 1990

Environmental Law & Management - 1993

Jay Lorenz, Ph.D. Dr. Lorenz has been conducting wetland delineations for the past four years. His Ph.D. was in resource geography, M.S. in zoology, and B.A. in biology. His formal training includes plant ecology, taxonomy, wildlife, cartography, and remote sensing. Prior to becoming a consultant Dr. Lorenz was an Extension Specialist at Oregon State University where he held positions in wildlife management (1984-1989) and watershed management (1990-1991). He has done about 75 wetland delineations over the past two years ranging in size from less than an acre to several hundred acres. Dr. Lorenz assisted Dr. Schott with the 640,000 acre Warm Springs Indian Reservation wetland inventory. He is certified as a Professional Wetland Scientist by the Society of Wetland Scientists.

Special Training

Federal Methodology in Wetland Delineation - 1991

Grasses, Sedges and Rushes Workshop - 1994

Greg White and the C & G White Cartography Company. Mr. White (principal) holds a M.S. in geography from Oregon State University. The C & G White Cartography Company has extensive experience in both manual and computer cartographic principles and conventional cartographic design. They have GIS capabilities and have been involved with several Local Wetland Inventory mapping projects including the Benton County, West Corvallis Planning Area. C & G Cartography holds a contract with the American Automobile Association to produce regional road maps in Oregon. Road maps of the Redmond/Bend area and Deschutes County have already been published. On another project, C & G White Cartography is working with Oregon Department of Fish & Wildlife to map plant communities throughout the state for the Gap Analysis Project. They are preparing complex vegetation maps from satellite imagery.

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-2-95
 Project/Site: Wickiup Junction State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: WJ 02
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>T</u>	<u>FAC</u>	<u>50</u>
2. <u>Purshia tridentata</u>	<u>Bitter-brush</u>	<u>Sh</u>	<u>NL</u>	<u>35</u>
3. <u>Sitanion hystrix</u>	<u>bottlebrush squirrel tail</u>	<u>H</u>	<u>FACU -</u>	<u>20</u>
4. <u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>10</u>
5. <u>Stipa thurberiana</u>	<u>needlegrass</u>	<u>H</u>	<u>NL</u>	<u>10</u>
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 0 1/3
 s the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Shannon loamy coarse sand Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chroma > 2, no mottles

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18"
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: non-hydric soil, upland vegetation, not saturated

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-2-95
 Project/Site: WICKIUP JUNCTION State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: WJ03
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back) Recently logged

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>Tr</u>	<u>FAC</u>	<u>2</u>
2.	<u>Purshia triidentata</u>	<u>bitterbrush</u>	<u>Sh</u>	<u>FACU</u>	<u>5</u>
3.	<u>Stipa thurberiana</u>	<u>Thurbers seedgrass</u>	<u>H</u>	<u>NL</u>	<u>2</u>
4.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>2</u>
5.	<u>Litter</u>				<u>30</u>
6.	<u>Bare ground</u>				<u>60</u>
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 0 ^{1/3}
 the hydrophytic vegetation criterion met? Yes No
 Rationale: < 50% FAC/FACW/OBL - No FACW or OBL

SOILS

Series/phase: Shanahan loamy coarse sand Subgroup: _____
 Is the soil on the hydric soils list? Yes No Undetermined
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: upland vegetation, non-hydric soil, not saturated

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-2-95
 Project/Site: WICKIUP JUNCTION State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: WJ 04
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>Tr</u>	<u>FAC</u>	<u>25</u>
2. <u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
3. <u>Purshia tridentata</u>	<u>bitter brush</u>	<u>Sh</u>	<u>NL</u>	<u>45</u>
4. <u>Sitanion hystrix</u>	<u>bottle brush squirrel tail</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 1/2
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Shanahan loamy coarse sand Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: upland vegetation, non-hydric soil, not saturated

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: Wickiup Junction State: OR County: Deschutes
 Applicant/Owner: LWI Plant Community #/Name: WJOS
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>70</u>
2. <u>Purshia tridentata</u>	<u>bitterbrush</u>	<u>SH</u>	<u>NL</u>	<u>15</u>
3. <u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 1/3
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: SHANAHAN Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 7/8"
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: Non-hydric soil, upland vegetation

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: Wickiup Junction State: OR County: Deschutes
 Applicant/Owner: LWI Plant Community #/Name: WJ-06
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back) Excavated area ✓

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>SH</u>	<u>FAC</u>	<u>5</u>
2.	<u>Sitanion hystrix</u>	<u>bottle brush squirrel tail</u>	<u>H</u>	<u>FAC FACU-</u>	<u>10</u>
3.	<u>BARE GROUND</u>				<u>85</u>
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 0 1/2
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: SHANAHAN MAPPED Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: Not recorded Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: Excavated area - SHANAHAN (non-hydric) mapped in area

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: _____
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: Lacks wetland hydrology, non-hydric soil mapped ✓

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott/J. Lorenz Date: 11-2-95
 Project/Site: La Pine State: OR County: DESHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP01
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>15</u>
2.	<u>Purshia tridentata</u>	<u>Bitter brush</u>	<u>SH</u>	<u>FACU</u>	<u>1</u>
3.	<u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u><1</u>
4.	<u>Bare ground</u>				<u>80-85</u>
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 0
 Is the hydrophytic vegetation criterion met? Yes No
 Rationale: Pinus contorta logged, FACU vegetation heavily grazed
veg. viewed from road

SOILS - ^{Color} Not recorded

Series/phase: Shanahan loamy coarse sand mapped Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: _____ Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No based on mapping by SCS
 Rationale: _____

HYDROLOGY

^{saturation level}
Not recorded
No soil pit

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: _____
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: No wetland hydrology drainage pattern. Data point elevated
above slough

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: FACU vegetation - Elevated ground
above slough

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LA PINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP02

Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?

Yes No (If no, explain on back)

Has the vegetation, soils, and/or hydrology been significantly disturbed? viewed from distance

Yes No (If yes, explain on back) swale behind Electric Loop, W. side Huntington

VEGETATION

Dominant Plant Species

	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>80</u>
2.	<u>Achillea millefolium</u>	<u>Common yarrow</u>	<u>H</u>	<u>FACU</u>	<u><1</u>
3.	<u>Poa sp.</u>	<u>bluegrass</u>	<u>H</u>		<u>10</u>
4.	<u>Bromus tectorum</u>	<u>cheatgrass</u>	<u>H</u>	<u>NL</u>	<u>.5</u>
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 0
 the hydrophytic vegetation criterion met? Yes No

Rationale: Continuation of swale on E. side of Huntington is Fci1, Poa sp., Putr, Pico

SOILS ^{COLOR}
NOT RECORDED

Series/phase: Shenahan leamy coarse sand mapped Subgroup¹: _____

Is the soil on the hydric soils list? Yes No Undetermined _____

Is the soil a Histosol? Yes No Histic epiedon present? Yes No

Is the soil: Mottled? Yes No Gleyed? Yes No

Matrix Color: _____ Mottle Colors: _____

Other hydric soil indicators: _____

Is the hydric soil criterion met? Yes No based on SCS map unit

Rationale: _____

HYDROLOGY - NOT RECORDED

Is the ground surface inundated? Yes No Surface Water depth: _____

Is the soil saturated? Yes No

Depth to free-standing water in pit/soil probe hole: _____

List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No

Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No

Rationale for jurisdictional decision: FACU vegetation

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LAPINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP03
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VIEWED FROM DISTANCE

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>40</u>
2. <u>Purshia tridentata</u>	<u>bitter brush</u>	<u>SH</u>	<u>FACU</u>	<u>40</u>
3. <u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>10</u>
4. <u>bare ground</u>				<u>10</u>
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 33 1/3
 the hydrophytic vegetation criterion met? Yes No

Rationale: _____

SOILS COLOR
NOT RECORDED

Series/phase: Shanahan mapped Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: _____ Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No based on SCS mapping
 Rationale: _____

HYDROLOGY - NOT RECORDED

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: _____
 List other field evidence of surface inundation or soil saturation. _____

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: FACU DOMINANT PLANT COMMUNITY ✓

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LAPINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP04
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
- 1.	<u><i>Pinus contorta</i></u>	<u>Lodgepole</u>	<u>TR</u>	<u>FAC</u>	<u>15</u>
- 2.	<u><i>Purshia tridentata</i></u>	<u>bitter brush</u>	<u>SH</u>	<u>FACU</u>	<u>15</u>
3.	<u><i>Stipa thurberiana</i></u>	<u>needlegrass</u>	<u>H</u>	<u>FACU</u>	<u>21</u>
4.	<u><i>Sitanion hystrix</i></u>	<u>bottle brush squirrel tail</u>	<u>H</u>	<u>FACU</u>	<u>21</u>
5.	<u><i>Festuca idahoensis</i></u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>21</u>
6.	<u><i>Carex geyeri</i></u>	<u>Elk's sedge</u>	<u>H</u>	<u>NL</u>	<u>21</u>
7.	<u>Litter</u>		<u>-</u>	<u>-</u>	<u>80</u>
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 50 1/2
 the hydrophytic vegetation criterion met? Yes No
 Rationale: FAC to FACU PLANT COMMUNITY

SOILS

Series/phase: Shonawa loamy coarse sand Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epipedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chrome > 2, no mottles

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL, UPLAND PLANT COMMUNITY

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LA PINE State: OR County: DESCHUTES
 Applicant/Owner: LWT Plant Community #/Name: LAP05
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species					
Scientific Name	Common Name	Stratum	Indicator	% Cover	
1. <u>Pinus contorta</u>	<u>Lodgepole</u>	<u>TR</u>	<u>FAC</u>	<u>25</u>	
2. <u>Purshia tridentata</u>	<u>bitter brush</u>	<u>SH</u>	<u>FACU</u>	<u>45</u>	
3. _____	<u>grasses</u>	<u>H</u>	_____	<u>21</u>	
4. <u>Carex geyeri</u>	<u>EIK's sedge</u>	<u>H</u>	<u>UPL</u>	<u>25</u>	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	_____	_____	_____	
9. _____	_____	_____	_____	_____	
10. _____	_____	_____	_____	_____	

Percent of dominant species that are OBL, FACW, and/or FAC 1/2 50
 the hydrophytic vegetation criterion met? Yes No
 Rationale: NO FACW/OBL

SOILS

Series/phase: Shenaham loamy coarse sand Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chrome > 2

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL, UPLAND PLANT COMMUNITY

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LA PINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP06
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>60</u>
2. <u>Festuca sp.</u>	<u>fescue</u>	<u>H</u>	<u>NL</u>	<u>5</u>
3. <u>Juncus sp.</u>	<u>rush</u>	<u>H</u>	<u>FACW/OBL</u>	<u>15</u>
4. <u>Eleocharis palustris</u>	<u>spikerush</u>	<u>H</u>	<u>OBL</u>	<u>10</u>
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 3/4 75
 the hydrophytic vegetation criterion met? Yes No
 Rationale: ? 50% FACW/OBL VEG.

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 6/2 0-10", 10YR 4/2 0"-10" Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: Problematic soil - sandy

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No Problem soil - sandy
 Depth to free-standing water in pit/soil probe hole: WET, BUT NOT SATURATED
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: presumed wet (saturated) in growing season

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: Problem area - sandy soil FACW/OBL veg. dominant.

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LA PINE State: OR County: DESCHUTES
 Applicant/Owner: LWT Plant Community #/Name: LAP07
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>	<u>(circled)</u>	<u>80</u>
2. <u>Agrostis sp.</u>		<u>H</u>		
3. <u>Agropyron dasystachyum</u>	<u>thick spike wheatgrass</u>	<u>H</u>	<u>FACU</u>	<u>3</u>
4. <u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC</u>	<u>41</u>
5. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>1</u>
6. <u>Pinus contorta</u>	<u>lodgepole</u>	<u>SH (seedlings)</u>	<u>FAC</u>	<u>1</u>
7. _____				
8. _____				
9. _____				
10. _____				

Percent of dominant species that are OBL, FACW, and/or FAC 0
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Sunriver sandy loam Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epipedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 Y/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chroma 22

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 718 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LAPINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP02
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACW</u>	<u>45 -</u>
2. <u>Agropyron dasystachyum</u>	<u>thick-stalk wheatgrass</u>	<u>H</u>	<u>FALV-</u>	<u>15 -</u>
3. <u>Phleom pratense</u>	<u>timothy</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
4. <u>Achillea millefolium</u>	<u>Common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>3</u>
5. <u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
6. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>		<u>10</u>
7. <u>bare ground</u>				<u>15 -</u>
8. <u>litter</u>				<u>5</u>
9. _____				
10. _____				

Percent of dominant species that are OBL, FACW, and/or FAC 0
 the hydrophytic vegetation criterion met? Yes No
 Rationale: FAL- FACW, no FACU/OBL

SOILS

Series/phase: Sunriver sandy loam Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epipedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chroma > 2

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 718 inches
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL, UPLAND PLANT COMMUNITY

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LA PINE State: OR County: DESCUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP09
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
* 1. <u>Eleocharis palustris</u>	<u>spike rush</u>	<u>H</u>	<u>OBL</u>	<u>90</u>
2. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>5</u>
3. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>		<u>5</u>
4. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACV</u>	<u>21</u>
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 100
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: top 3" black, 2.5y/2 Mottle Colors: 10yR 4/2
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: >16"
 List other field evidence of surface inundation or soil saturation.
IN SWALE - wetland drainage pattern, depression
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. SCHOTT / J. LORENZ Date: 11-3-95
 Project/Site: LePine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP10
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Eleocharis palustris</u>	<u>spikerush</u>	<u>H</u>	<u>DBL</u>	<u>10</u>
2. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>15</u>
3. <u>Carex sp.</u>	<u>sedge</u>	<u>H</u>	<u>FACW/OBL</u>	<u>35</u>
4. <u>Juncus balticus</u>	<u>baltic rush</u>	<u>H</u>	<u>OBL</u>	<u>5</u>
5. <u>Equisetum arvense</u>	<u>field horsetail</u>	<u>H</u>	<u>FAC</u>	<u>5</u>
6. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>		<u>5</u>
7. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 100 3/3
 the hydrophytic vegetation criterion met? Yes No
 Rationale: FACW/OBL dominant

SOILS

Series/phase: Cryagolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR3/1 Mottle Colors: 2.5 4/3
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chroma 1 with mottles

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: < 6 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: LA PINE State: OR County: Deschutes
 Applicant/Owner: LWI Plant Community #/Name: LAP 11
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?

Yes No (If no, explain on back)

Has the vegetation, soils, and/or hydrology been significantly disturbed?

Yes No (If yes, explain on back)

Heavily grazed cows & horses

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
-1. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>20</u>
-2. <u>Carex nebrascensis</u>	<u>Nebraska sedge</u>	<u>H</u>	<u>OBL</u>	<u>20</u>
-3. <u>Carex rostrata</u>	<u>beaked sedge</u>	<u>H</u>	<u>OBL</u>	<u>15</u>
4. <u>Eleocharis palustris</u>	<u>spikerush</u>	<u>H</u>	<u>OBL</u>	<u>5</u>
5. <u>MOSS</u>				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				

Percent of dominant species that are OBL, FACW, and/or FAC 100 3/3
 the hydrophytic vegetation criterion met? Yes No

Rationale: _____

SOILS

Series/phase: Dryaquolls Subgroup¹: _____

Is the soil on the hydric soils list? Yes No Undetermined _____

Is the soil a Histosol? Yes No Histic epiedon present? Yes No However, High organic content

Is the soil: Mottled? Yes No Gleyed? Yes No

Matrix Color: 10YR3/1 Mottle Colors: _____

Other hydric soil indicators: high organic content mineral soil

Is the hydric soil criterion met? Yes No

Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____

Is the soil saturated? Yes No

Depth to free-standing water in pit/soil probe hole: surface

List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No

Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No

Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 12
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Carex rostrata</u>	<u>beaked sedge</u>	<u>H</u>	<u>OBL</u>	<u>10</u>
2.	<u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACU+</u>	<u>25</u>
3.	<u>Agrostis exarata</u>	<u>spike bentgrass</u>	<u>H</u>	<u>FACW</u>	<u>30</u>
4.	<u>Juncus tenuis</u>	<u>slender rush</u>	<u>H</u>	<u>FACW-</u>	<u>25</u>
5.	<u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC</u>	<u>5</u>
6.	<u>Trifolium repens</u>	<u>white clover</u>	<u>H</u>	<u>FAC</u>	<u>5</u>
7.	<u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>3</u>
8.	<u>Asropyron intermedium</u>	<u>Intermediate wheat grass</u>	<u>H</u>	<u>NL</u>	<u>5</u>
9.	<u>Hordeum brachypatherum</u>	<u>meadow barley</u>	<u>H</u>	<u>FACW</u>	<u>1</u>
10.	<u>Litter</u>				<u>10</u>
	<u>Bare ground</u>				<u>10</u>

Percent of dominant species that are OBL, FACW, and/or FAC 2/3
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y 6/2 Mottle Colors: 2.5Y 4/2
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 4 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: LA PINA State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 13
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Agropyron sp.</u>	<u>wheatgrass</u>	<u>H</u>		<u>5</u>
2. <u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACU+</u>	<u>15</u>
3. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
4. <u>Bromus carinatus</u>		<u>H</u>	<u>NL</u>	<u>5</u>
5. <u>Lupinus sp.</u>	<u>lupine</u>	<u>H</u>		<u>25</u>
6. <u>Lesquerella sp.</u>	<u>bladder pod</u>	<u>H</u>	<u>NL</u>	<u>25</u>
7. <u>Sisymbrium irio</u>	<u>triple mustard</u>	<u>H</u>	<u>NL</u>	<u>25</u>
8. <u></u>	<u>UID Composite</u>	<u>H</u>		<u>25</u>
9. <u>bare ground</u>				<u>40</u>
10. <u></u>				

Percent of dominant species that are OBL, FACW, and/or FAC 0
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: SUNRIVER SANDY LOAM Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 Y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18"
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: Non-hydric soil

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott/J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 14
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>1</u>
2. <u>Salix geyerana</u>	<u>geyer willow</u>	<u>SH</u>	<u>FACW+</u>	<u>20</u>
3. <u>Carex sp.</u>	<u>sedge</u>	<u>H</u>	<u>FACW(?)</u>	<u>60</u>
4. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>20</u>
5. <u>Alapecurus pratensis</u>	<u>meadow foxtail</u>	<u>H</u>	<u>FACW</u>	<u>1</u>
6. <u>Agrostis sp.</u>	<u>beardgrass</u>	<u>H</u>		<u>5</u>
7. <u>Spiraea douglasii</u>	<u>Douglas spirea</u>	<u>SH</u>	<u>FACW</u>	<u>1</u>
8. <u>Betula glandulosa</u>	<u>Bog birch</u>	<u>SH</u>	<u>OBL</u>	<u>15</u>
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 100 4/4
 is the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR3/1 Mottle Colors: _____
 Other hydric soil indicators: Hydrogen sulfide odor
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: surface
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: All 3 indicators present

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 15
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?

Yes No (If no, explain on back)

Has the vegetation, soils, and/or hydrology been significantly disturbed?

Yes No (If yes, explain on back)

6 ft. higher than LAP 14
15-20% slope

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Carex sp.</u>	<u>Sedge</u>	<u>H</u>	<u></u>	<u>85</u>
2. <u>Pinus contorta</u>	<u>Lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>15</u>
3. <u>Agropyron intermedium</u>	<u>intermediate wheatgrass</u>	<u>H</u>	<u>NL</u>	<u>1</u>
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC ?

the hydrophytic vegetation criterion met? Yes No

Rationale: Assuming FACW or OBL sedge

SOILS

Series/phase: Shanahan Subgroup¹: _____

Is the soil on the hydric soils list? Yes No Undetermined _____

Is the soil a Histosol? Yes No Histic epiedon present? Yes No

Is the soil: Mottled? Yes No Gleyed? Yes No

Matrix Color: 10YR 4/3 Mottle Colors: —

Other hydric soil indicators: _____

Is the hydric soil criterion met? Yes No

Rationale: chroma > 2

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____

Is the soil saturated? Yes No

Depth to free-standing water in pit/soil probe hole: 718"

List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No

Rationale: Not wetland hydrology drainage pattern

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No

Rationale for jurisdictional decision: Non-hydric soil, not saturated

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 16

Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?

Yes No (If no, explain on back)

Has the vegetation, soils, and/or hydrology been significantly disturbed?

Yes No (If yes, explain on back)

SHALLOW SWALE

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>20</u>
2. <u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC-</u>	<u>15</u>
3. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>	<u>FAC-</u>	<u>20</u>
4. <u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
5. <u>Juncus tenuis</u>	<u>slender rush</u>	<u>H</u>	<u>FACW-</u>	<u>5</u>
6. <u>Elymus glaucus</u>	<u>blue wild-rye</u>	<u>H</u>	<u>FACU</u>	<u>1</u>
7. <u>Pinus contorta</u>	<u>lodgepole</u>	<u>TR</u>	<u>FAC</u>	<u>30</u>
8. <u>Pinus contorta</u>	<u>lodgepole</u>	<u>Seedlings</u>	<u>FAC</u>	<u>1</u>
9. <u>Carex nebrascensis</u>	<u>Nebraska sedge</u>	<u>H</u>	<u>OBL</u>	<u>1</u>
10. <u>Salix sp.</u>		<u>SH</u>		<u>1</u>
<u>Achillea millefolium</u>	<u>Common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>2</u>

Percent of dominant species that are OBL, FACW, and/or FAC 2/4 50

the hydrophytic vegetation criterion met? Yes No

Betula glandulosa in vicinity

Rationale: SUB-DOMINANTS FAVOR WETLAND COMMUNITY

SOILS

Series/phase: Cryaquolls Subgroup¹: _____

Is the soil on the hydric soils list? Yes No Undetermined _____

Is the soil a Histosol? Yes No Histic epiedon present? Yes No

Is the soil: Mottled? Yes No Gleyed? Yes No

Matrix Color: 10YR 3/1 Mottle Colors: 10YR 3/4

Other hydric soil indicators: _____

Is the hydric soil criterion met? Yes No

Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____

Is the soil saturated? Yes No

Depth to free-standing water in pit/soil probe hole: < 6 inches

List other field evidence of surface inundation or soil saturation. _____

Is the wetland hydrology criterion met? Yes No

Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No

Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 17
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Pinus contorta</u>	<u>lodgepole</u>	<u>TR</u>	<u>FAC</u>	<u>40</u>
2.	<u>Purshia tridentata</u>	<u>bitterbrush</u>	<u>SH</u>	<u>NL</u>	<u>20</u>
3.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>4</u>
4.	<u>litter</u>				<u>30</u>
5.	<u>bare ground</u>				<u>3</u>
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 33
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: SUNRIVER Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 Y/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation.

 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL, UPLAND PLANT COMMUNITY

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pila State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 1B
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Juncus tenuis</u>	<u>slender rush</u>	<u>H</u>	<u>FACW-</u>	<u>15</u>
2. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>60</u>
3. <u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC-</u>	<u>2</u>
4. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>2</u>
5. <u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACU</u>	<u>1</u>
6. <u>Carex sp.</u>	<u>sedge</u>	<u>H</u>	<u>0</u>	<u>1</u>
7. <u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>	<u>0</u>	<u>10</u>
8. <u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>stumps</u>	<u>FAC</u>	
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 2/2 100
 the hydrophytic vegetation criterion met? Yes No

Rationale: _____

SOILS

Series/phase: CRYAQUOLLS Subgroup¹: _____

Is the soil on the hydric soils list? Yes No Undetermined _____

Is the soil a Histosol? Yes No Histic epiedon present? Yes No

Is the soil: Mottled? Yes No Gleyed? Yes No

Matrix Color: 2.5 Y 3/2 Mottle Colors: 2.5 Y 4/3

Other hydric soil indicators: _____

Is the hydric soil criterion met? Yes No

Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____

Is the soil saturated? Yes No

Depth to free-standing water in pit/soil probe hole: WET, BUT NOT SATURATED THIS TIME OF YR.

List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No

Rationale: PRESUMED SATURATED IN SPRING

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No

Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 19
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Poa compressa</u>	<u>Canada bluegrass</u>	<u>H</u>	<u>FACU</u>	<u>60</u>
2. <u>Sitanion hystrix</u>	<u>bottle brush squirrel tail</u>	<u>H</u>	<u>FACU-</u>	<u>10</u>
3. <u>Pinus contorta</u>	<u>lodge pole</u>	<u>SH</u>	<u>FAC</u>	<u>5</u>
4. <u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FAC</u>	<u>3</u>
5. <u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC-</u>	<u>1</u>
6. <u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>1</u>
7. <u>Stipa thurberiana</u>	<u>needlegrass</u>	<u>H</u>	<u>FACW</u>	<u>1</u>
8. <u>Festuca sp.</u>	<u>fescue</u>	<u>H</u>		<u>3</u>
9. <u>bare ground</u>				
10. _____				

Percent of dominant species that are OBL, FACW, and/or FAC 0 1/2
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Sunriver Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: NON-HYDRIC SOIL, UPLAND PLANT COMMUNITY ✓

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 20
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
-1.	<u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>SH</u>	<u>FAC</u>	<u>15</u> ✓
-2.	<u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>30</u> ✓
3.	<u>Carex sp.</u>	<u>sedge</u>	<u>H</u>	<u>/</u>	<u>20</u> ✓
4.	<u>Agrostis sp.</u>	<u>bentgrass</u>	<u>/</u>	<u>/</u>	<u>10</u> ✓
5.	<u>Trifolium repens</u>	<u>red clover</u>	<u>H</u>	<u>FACU</u>	<u>15</u> ✓
6.	<u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FAC</u>	<u>1</u>
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 2/2 100 2/3 ✓
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/1 Mottle Colors: 2.5Y 4/2, 10YR 3/3
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 3 inches
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No ✓
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Scholt / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWJ Plant Community #/Name: LAP 21
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
- 1.	<u><i>Eleocharis palustris</i></u>	<u>spikerush</u>	<u>H</u>	<u>OBL</u>	<u>30</u>
- 2.	<u><i>Juncus balticus</i></u>	<u>baltic rush</u>	<u>H</u>	<u>OBL</u>	<u>25</u>
- 3.	<u><i>Deschampsia cespitosa</i></u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>20</u>
4.	<u><i>Phleum pratense</i></u>	<u>timothy</u>	<u>H</u>	<u>FAC</u>	<u>5</u>
5.	<u><i>Achillea millefolium</i></u>	<u>common yarrow</u>	<u>H</u>	<u>FAC</u>	<u>5</u>
6.	<u><i>Agrostis sp.</i></u>	<u>bentgrass</u>	<u>H</u>	<u></u>	<u>5</u>
7.	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
8.	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
9.	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
10.	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

Percent of dominant species that are OBL, FACW, and/or FAC 3/3 100
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: _____ Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epipedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/1 Mottle Colors: 10YR 4/2, 10YR 4/4
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: SURFACE
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: LAPINE State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 22
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back) HEAVILY GRAZED

VEGETATION

Dominant Plant Species

Scientific Name	Common Name	Stratum	Indicator	% Cover
1. <u>Carex rostrata</u>	<u>beaked sedge</u>	<u>H</u>	<u>OBL</u>	<u>25</u>
2. <u>Carex nebrascensis</u>	<u>Nebraska sedge</u>	<u>H</u>	<u>OBL</u>	<u>30</u>
3. <u>Juncus balticus</u>	<u>baltic rush</u>	<u>H</u>	<u>OBL</u>	<u>20</u>
4. <u>Eleocharis palustris</u>	<u>spikerush</u>	<u>H</u>	<u>OBL</u>	<u>15</u>
5. <u>Calamagrostis canadensis</u>	<u>reedgrass, blue-joint</u>	<u>H</u>	<u>FACW+</u>	<u>5</u>
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 4/4 100
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/1 Mottle Colors: 2.5Y 4/2, 10YR 3/2
 Other hydric soil indicators: sandy - prolonged saturation near surface
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: SURFACE
 List other field evidence of surface inundation or soil saturation.

 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LW Plant Community #/Name: LAP 23
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Poa pratensis</u>	<u>Kentucky bluegrass</u>	<u>H</u>	<u>FAC</u>	<u>95</u>
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 100
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: SHANAHAN sandy loam Subgroup: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/2 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: No mottles

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: >18"
 List other field evidence of surface inundation or soil saturation. _____
 Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No ✓
 Rationale for jurisdictional decision: NON-HYDRIC SOIL

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 24
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
#1.	<u>Carex rostrata</u>	<u>beaked sedge</u>	<u>H</u>	<u>OBL</u>	<u>50</u>
#2.	<u>Eleocharis palustris</u>	<u>spike rush</u>	<u>H</u>	<u>OBL</u>	<u>15</u>
3.	<u>Agrostis sp.</u>	<u>bentgrass</u>	<u>H</u>		<u>30</u>
4.	<u>Juncus balticus</u>	<u>Baltic rush</u>	<u>H</u>	<u>OBL FACW+</u>	<u>5</u>
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC: 100 2/2
 Does the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: CRYAQUOLLS Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR4/1 Mottle Colors: 10YR3/4
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: SURFACE
 List other field evidence of surface inundation or soil saturation. _____

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Shott/J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 25
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species

	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Salix geyerana</u>	<u>Geyer willow</u>	<u>SH</u>	<u>FACW+</u>	<u>85</u>
2.	<u>Carex rostrata</u>	<u>beaked sedge</u>	<u>H</u>	<u>DBL</u>	<u>95</u>
3.	<u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>5</u>
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 2/2 100 3/3
 Is the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Cryaquolls Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR3/1 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: surface
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: LA Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 26
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u><i>Pinus contorta</i></u>	<u>lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>40</u>
2.	<u><i>Salix geyerana</i></u>	<u>geyer willow</u>	<u>SH</u>	<u>FACW+</u>	<u>40</u>
3.	<u><i>Betula glandulosa</i></u>	<u>tundra dwarf birch</u>	<u>SH</u>	<u>OBL</u>	<u>35</u>
4.	<u><i>Eleocharis palustris</i></u>	<u>spikerush</u>	<u>H</u>	<u>OBL</u>	<u>70</u>
5.	<u><i>Juncus balticus</i></u>	<u>baltic rush</u>	<u>H</u>	<u>OBL</u>	<u>15</u>
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC: 100 4/4
 Does the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: CRYAQUOLLS Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/1 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: SURFACE
 List other field evidence of surface inundation or soil saturation. _____

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott / J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 27
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
-1.	<u>Pinus contorta</u>	<u>lodgepole pine</u>	<u>TR</u>	<u>FAC</u>	<u>45</u>
-2.	<u>Pinus contorta</u>	<u>"</u>	<u>SH</u>	<u>FAC</u>	<u>15</u>
-3.	<u>Agropyron intermedium</u>	<u>intermediate wheatgrass</u>	<u>H</u>	<u>NL</u>	<u>60</u>
4.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>NL</u>	<u>10</u>
5.	<u>Phleum pratense</u>	<u>timothy</u>	<u>H</u>	<u>FAC-</u>	<u>7</u>
6.	<u>Achillea millefolium</u>	<u>common yarrow</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
7.	<u>Lupinus sp.</u>	<u>lupine</u>	<u>H</u>		<u>2</u>
8.	<u>Elymus cinereus</u>	<u>basin wildrye</u>	<u>H</u>	<u>NI FAC</u>	<u>22</u>
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC: 1/2 50
 Does the hydrophytic vegetation criterion met? Yes No
 Rationale: NO FACW OR OBL Veg. - FAC to FACU

SOILS

Series/phase: SHANAHAN Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5Y 3/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: 718"
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: UPLAND PLANT COMMUNITY

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schott/J. Lorenz Date: 11-3-95
 Project/Site: La Pine State: OR County: DESMUTES
 Applicant/Owner: LWI Plant Community #/Name: LAP 28
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Deschampsia cespitosa</u>	<u>tufted hairgrass</u>	<u>H</u>	<u>FACW</u>	<u>60</u>
2.	<u>Juncus tenuis</u>	<u>slender rush</u>	<u>H</u>	<u>FACW-</u>	<u>20</u>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 100 2/2
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: CLYAQUOLLS Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR3/1 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: SURFACE
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): M. Schutt / J. Lorenz Date: 11-3-95
 Project/Site: Lapine LW1 State: OR County: DESCHUTES
 Applicant/Owner: _____ Plant Community #/Name: LAR29
 Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Carex nebrascensis</u>	<u>Nebraska sedge</u>	<u>H</u>	<u>OBL</u>	<u>90</u>
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____

Percent of dominant species that are OBL, FACW, and/or FAC 100
 the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: CRVAQUOLLS Subgroup¹: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 10YR 3/1 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: _____

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: 2 inches
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: _____
 List other field evidence of surface inundation or soil saturation. _____

Is the wetland hydrology criterion met? Yes No
 Rationale: _____

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: _____

¹Classification according to "Soil Taxonomy".

**FIELD DATA SHEET
WETLANDS DELINEATION
ROUTINE ONSITE DETERMINATION METHOD**

Field Investigator(s): MARTIN SCHOTT/JAY LORENZ Date: 11-2-95
 Project/Site: WICKIUP JUNCTION State: OR County: DESCHUTES
 Applicant/Owner: LWI Plant Community #/Name: WJ 01

Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
 Yes No (If no, explain on back)
 Has the vegetation, soils, and/or hydrology been significantly disturbed?
 Yes No (If yes, explain on back)

VEGETATION

Dominant Plant Species	Scientific Name	Common Name	Stratum	Indicator	% Cover
1.	<u>Poa compressa</u>	<u>Canada Bluegrass</u>	<u>H</u>	<u>FACU+</u>	<u>10</u>
2.	<u>Festuca idahoensis</u>	<u>Idaho fescue</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
3.	<u>Bromus carinatus</u>	<u>Mt. or California brome</u>	<u>H</u>	<u>NL</u>	<u>15</u>
4.	<u>Lolium perenne</u>	<u>Perennial ryegrass</u>	<u>H</u>	<u>FACU</u>	<u>5</u>
5.	<u>Amsinckia sp.</u>	<u>tarweed</u>	<u>H</u>	<u>NL</u>	<u>1</u>
6.	<u>Achillea millefolium</u>	<u>Common Yarrow</u>	<u>H</u>	<u>FACU</u>	<u>1</u>
7.	<u>Sitanion hystrix</u>	<u>bottle brush squirrel-tail</u>	<u>H</u>	<u>FACU-</u>	<u>3</u>
8.					
9.	<u>Bare ground</u>				<u>50</u>
10.					

Percent of dominant species that are OBL, FACW, and/or FAC 0
 Is the hydrophytic vegetation criterion met? Yes No
 Rationale: _____

SOILS

Series/phase: Shonahan loamy coarse sand Subgroup: _____
 Is the soil on the hydric soils list? Yes No Undetermined _____
 Is the soil a Histosol? Yes No Histic epiedon present? Yes No
 Is the soil: Mottled? Yes No Gleyed? Yes No
 Matrix Color: 2.5 y 4/3 Mottle Colors: _____
 Other hydric soil indicators: _____
 Is the hydric soil criterion met? Yes No
 Rationale: chrome > 2, no mottles

HYDROLOGY

Is the ground surface inundated? Yes No Surface Water depth: _____
 Is the soil saturated? Yes No
 Depth to free-standing water in pit/soil probe hole: > 18 inches
 List other field evidence of surface inundation or soil saturation.

Is the wetland hydrology criterion met? Yes No
 Rationale: Not saturated

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No
 Rationale for jurisdictional decision: upland vegetation, non-hydric soil, upland hydrology



Wickiup Junction Area Wetland Inventory

25

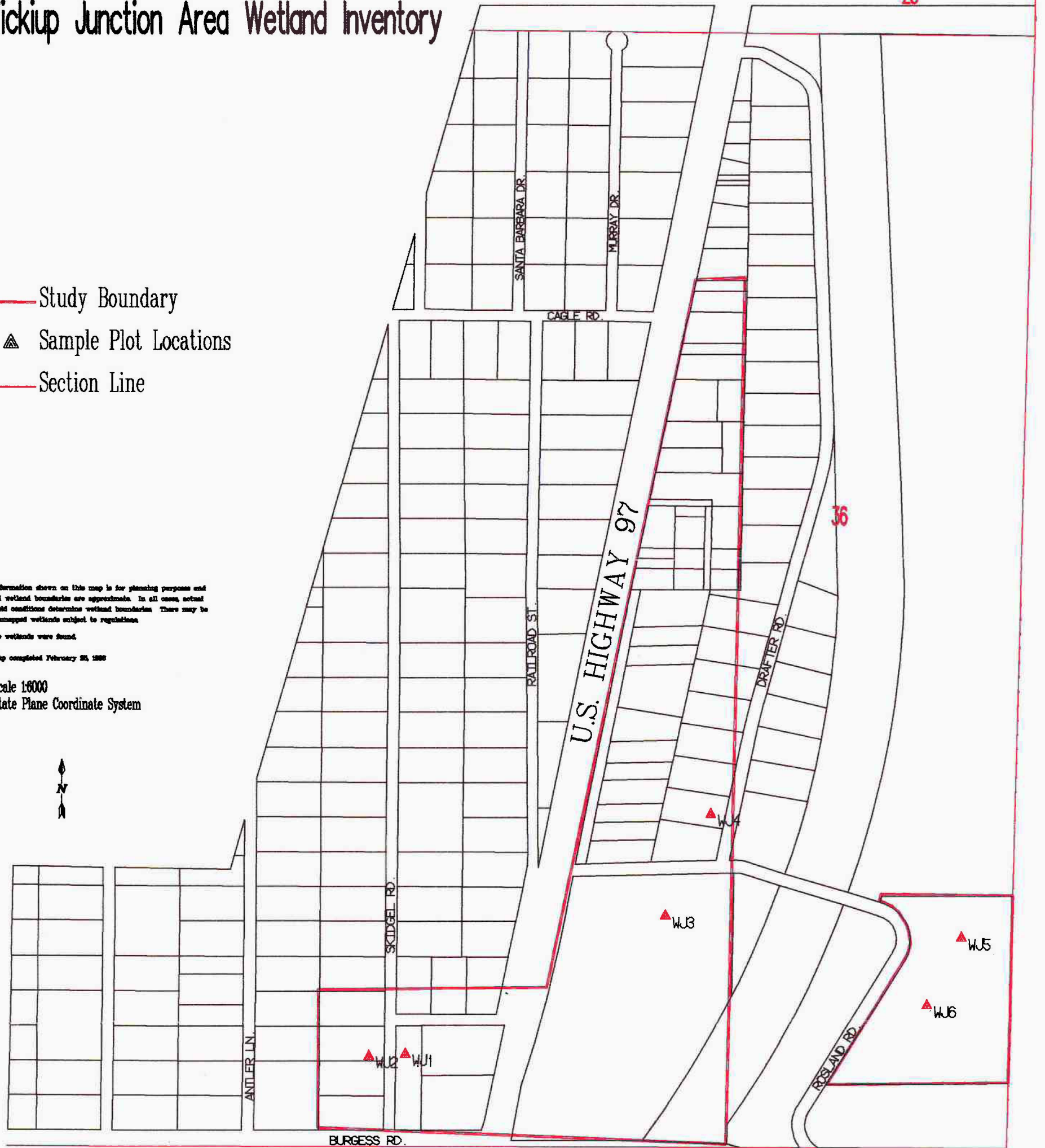
- Study Boundary
- ▲ Sample Plot Locations
- Section Line

Information shown on this map is for planning purposes and all wetland boundaries are approximate. In all cases, actual field conditions determine wetland boundaries. There may be unmapped wetlands subject to regulations.

No wetlands were found.

Map completed February 23, 1999

Scale 1:6000
State Plane Coordinate System

















La Pine LWI

1, 2 near school

3 ~~soil school~~
soils from photo 1

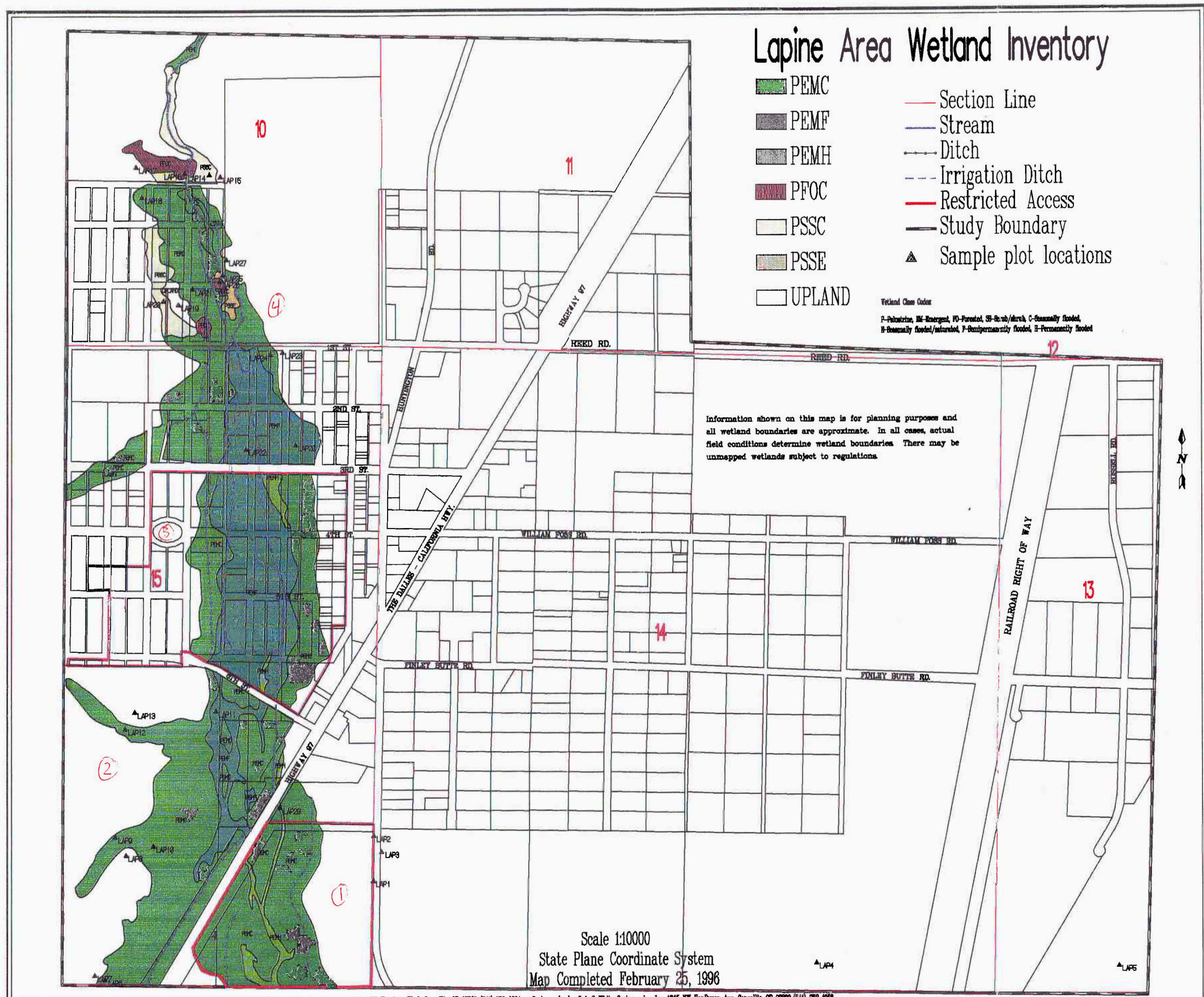
4, 5 S of school

Lapine Area Wetland Inventory

-  PEMC
 -  PEMF
 -  PEMH
 -  PFOC
 -  PSSC
 -  PSSE
 -  UPLAND
-  Section Line
 -  Stream
 -  Ditch
 -  Irrigation Ditch
 -  Restricted Access
 -  Study Boundary
 -  Sample plot locations

Wetland Class Codes
 P-Palustrine, M-Emergent, FO-Forested, SS-Scrub/shrub, C-Seasonally flooded,
 H-Seasonally flooded/saturated, F-Semperannually flooded, B-Permanently flooded

Information shown on this map is for planning purposes and all wetland boundaries are approximate. In all cases, actual field conditions determine wetland boundaries. There may be unmapped wetlands subject to regulations.



Scale 1:10000
 State Plane Coordinate System
 Map Completed February 25, 1996

Data Compiled and Analyzed: Martin Schott, Ph.D. 152 SE 3rd Ave. Canby, OR 97026 (503) 266-6946 and Jay Lorenz, Ph.D. 1522 Harrison Blvd. Corvallis, OR 97330 (541) 750-8394. Cartography by C & G White Cartography, Inc. 1945 NW VanBuren Ave. Corvallis, OR 97330 (541) 752-1266

Answer sheets & summary sheets

Wetland assessment questions: answer sheet

Wetland identifier	I	II	III	IV
Wildlife habitat				
Question 1	C	C	C	A
Question 2	C	C	C	C
Question 3	C	C	C	B
Question 4	C	C	C	C
Question 5	A	A	A	A
Question 6	A	A	A	A
Question 7	A	A	A	A
Question 8	B	B	A	A
Question 9	A	A	A	A
Assessment descriptor	Degraded	Degraded	Degraded	Degraded
Fish habitat				
Question 1	C	C	C	B
Question 2	B	B	A	A
Question 3	C	C	C	B
Question 4	A	A	A	A
Question 5	B	B	A	A
Question 6	C	C	C	C
Assessment descriptor	Impacted or degraded	Impacted or degraded	Impacted or degraded	Impacted or degraded

Answer sheets & summary sheets

Wetland assessment questions: answer sheet

Wetland identifier	I	II	III	IV
Water quality				
Question 1	A	A	A	A
Question 2	A	A	A	A
Question 3	A	A	A	A
Question 4	A	A	A	A
Question 5	B	B	C	C
Question 6	C	C	C	C
Assessment descriptor	Intact	Intact	Intact	Intact
Hydrological control				
Question 1	A	A	A	A
Question 2	A	A	A	A
Question 3	A	A	A	A
Question 4	A	A	A	A
Question 5	B	B	B	B
Question 6	A	A	A	C
Question 7	C	A	A	A
Assessment descriptor	Intact	Intact	Intact	Intact
	control	control	control	control

Answer sheets & summary sheets

Wetland assessment questions: answer sheet

Wetland identifier	I	II	III	IV
Sensitivity to impact				
Question 1	A	A	A	A
Question 2	A	A	A	A
Question 3	C	C	C	C
Question 4	B	B	C	C
Question 5	B	A	A	A
Question 6	B	B	B	B
Assessment descriptor	Potentially sensitive	Potentially sensitive	Potentially sensitive	Potentially sensitive
Enhancement potential				
Question 1	A	A	A	A
Question 2	A	A	A	A
Question 3	A	C	C	C
Question 4	A	A	A	A
Question 5	B	B	A	A
Question 6	B	B	B	B
Assessment descriptor	High enhancement potential	High enhancement potential	High enhancement potential	High enhancement potential

Answer sheets & summary sheets

Wetland assessment questions: answer sheet

Wetland identifier	I	II	III	IV
Education				
Question 1	B	A	B	B
Question 2	B	B	A	A
Question 3	B	B	B	B
Question 4	B	A	B	A
Question 5	C	C	C	B
Question 6	A	A	A	A
Assessment descriptor	Potential for educational use	Potential for educational use	Has educational uses	Has educational uses
Recreation				
Question 1	C	C	C	B
Question 2	C	C	C	C
Question 3	C	C	C	C
Question 4	B	B	B	B
Question 5	A	A	A	A
Question 6	A	A	B	B
Assessment descriptor	Not appropriate for recreation	Not appropriate for recreation	Not appropriate for recreation	Potential for recreation

Answer sheets & summary sheets

Wetland assessment questions: answer sheet

Wetland identifier	I	II	III	IV
Aesthetic quality				
Question 1	C	C	C	B
Question 2	A	A	A	A
Question 3	A	A	A	A
Question 4	C	C	B	B
Question 5	A	A	A	A
Question 6	C	C	B	B
Assessment descriptor	Not pleasing	Not pleasing	Pleasing	Pleasing