

Exhibit “D”

CITY OF CORNELIUS LWI COVER SHEET

Wetland Identification: TD-3	Date of Field Verification: May 8, 2002
Investigators: KV, JG (DSL)	Size (acres): @ 0.30
Data Sheet: TD-3-1	Cowardin Classification: PEM
	HGM Classification: Atypical Wetland

LOCATION

Map # 1S3-04BB Tax Lot # 100, 200, 300

Other: North of Union Pacific Railroad tracks; east of S. 1st Avenue

Basin: Tualatin River

QUALITY

OAR 141-086-0185 states that a wetland function and condition assessment using the *Oregon Freshwater Wetland Assessment Methodology (OFWAM)* shall be conducted to determine the quality and significance of the wetland. *OFWAM* results for TD-3 indicate it does not satisfies the Locally Significant Wetland Criteria identified in OAR 141-86-350.

Soils: **Mapped Series:** Verboort Silty Clay Loam

Hydrology: **Hydrologic Source:** Surface Flow

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Salix sitchensis</i>		<i>Juncus effusus</i>
	<i>Salix lasiandra</i>		<i>Phalaris arundinacea</i>
	<i>Rubus discolor</i>		<i>Carex densa</i>

QUANTITY

The drainage originates in the City of Forest Grove and is immediately altered by road and railroad track construction as it enters the City of Cornelius. This isolated wetland area is less than five (5) acres in size and does not appear to connect to another water body or wetland.

COMMENTS

The source of this drainage ditch is in the City of Forest Grove. The drainage ditch flows southwest into Cornelius and follows along the north side of the Union Pacific railroad tracks.

Wetland Classifications Codes:

PEM – Palustrine Emergent PFO – Palustrine Forested PSS – Palustrine Scrub-Shrub
 PUB – Palustrine Unconsolidated Bottom

**CITY OF CORNELIUS
WETLAND DETERMINATION FORM**

Project: City of Cornelius	Site: TD-3	Plot: TD-3-1
Investigators: KV, JG (DSL)	Watershed: Tualatin River	Date: May 8, 2002
County: Washington	Township/Range: 1S 3W	Section: 04BB

VEGETATION Criteria Met: YES

Dominant Species

Tree Stratum	Shrub Stratum	Herbaceous Stratum
	<i>Salix sitchensis</i> FACW 30%	<i>Juncus effuses</i> FACW 40%
	<i>Salix lasiandra</i> FACW+ 30%	<i>Phalaris arundinace</i> FACW 60%
	<i>Rubus discolor</i> FACU 30%	<i>Carex densa</i> OBL Trace

Percent of dominant species FAC, FACW, or OBL: 4/4 100%

SOILS Criteria Met: YES

Mapped Series: Verboort Silty Clay Loam Hydric Soil List: Yes
 Classification: Fine, mixed, mesic, typic Argialbolls Drainage Class: Poorly drained

Depth (In.)	Matrix Color	Redox Concentrations	Redox Depletions	Texture*/Structure
0-5	10YR 3/2			
5-12	10YR 3/1	7.5YR 4/6	c/f/p	

Hydric Soil Indicators:

Redox feature w/10"
 Gleyed/Low Chroma

Field Data:

Depth of Inundation: 6 inches Depth of Saturation: surface Depth of Free Water:

HYDROLOGY Criteria Met: YES

Primary Indicators

Inundated: Yes
 Drainage Patterns: Yes
 Saturated in Upper 12 Inches: Yes
 Water Marks:
 Drift Lines
 Sediment Deposits:

Secondary Indicators

Oxidized Root Channels:
 FAC-Neutral Test:

COMMENTS: Drainage ditch has been modified by a local street and the railroad tracks. Rubus was rooted on the bank.

DIVISION OF STATE LANDS - WETLAND DETERMINATION DATA FORM

County: Washington Date: 5/8/02 File # JD-3
 Project/Contact: _____ Det. by: KU, JG
 Plant Community: _____ Plot # _____
 Plot location: Drainage Ditch North of RR Line
 Do normal environ. conditions exist? Y N Explain: _____
 Has Veg. _____ Soil _____ Hydrology _____ been significantly disturbed?
 Explain: _____

VEGETATION

Dominant Species	Status	% Cover	Dominant Species	Status	% Cover
<u>Trees Stratum</u>			<u>Herb Stratum</u>		
Total Cover: _____			Total Cover: <u>40%</u>		
1. _____			1. _____		
2. _____			2. <u>Juncus effusus</u>	<u>FACW</u>	<u>40</u>
3. _____			3. <u>Phalaris arundinacea</u>	<u>FACW</u>	<u>60</u>
4. _____			4. <u>Carex diandra</u>	<u>OBL</u>	<u>11</u>
5. _____			5. _____		
<u>Sapling/Shrub Stratum</u>			6. _____		
Total Cover: <u>10%</u>			7. _____		
1. <u>Salixitchinella</u>	<u>FACW</u>	<u>30</u>	8. _____		
2. <u>Salix lasiantha</u>	<u>FACW</u>	<u>30</u>	9. _____		
3. <u>Rubus discolor</u>	<u>FACU</u>	<u>30</u>	10. _____		
4. _____					
5. _____					

Percent of Dominant Species that are OBL, FACW, FAC (not FAC-): 4/4 100%
 Other Notable Species: Rubus noted on Bank
 Criteria Met? YES NO

SOILS

Map Unit Name: Verbeert Silty Clay Loam Drainage Class: partly drained
 Taxonomy: Fine, mixed, calc typic Argialboll On Hydric Soils List? Y N

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
<u>0-5</u>		<u>10YR 3/2</u>				
<u>5-16</u>		<u>10YR 3/1</u>	<u>7.5YR 4/4</u>	<u>C/f/p</u>		

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions/Nodules (w/in 3"; > 2mm) |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High organic content in surface (in Sandy Soils) |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic streaking (in Sandy Soils) |
| <input type="checkbox"/> Reducing Conditions (tests positive) | <input type="checkbox"/> Organic pan (in Sandy Soils) |
| <input checked="" type="checkbox"/> Gleyed / low chroma | <input type="checkbox"/> Listed on Hydric Soils List |
| <input checked="" type="checkbox"/> Redox. features (w/in 10") | Other: _____ |
- Criteria Met? YES NO * abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

Recorded Data
 Recorded Data Available: _____ Aerial Photos Stream gauge Other
 No Recorded Data Available
 Field Data
 Depth of inundation: 6" Depth to Saturation: unfay Depth to free water: _____

Primary Hydrology Indicators:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Inundated | Secondary Hydrology Indicators (2 or more required): |
| <input checked="" type="checkbox"/> Saturated in upper 12 inches | <input type="checkbox"/> Oxidized Root Channels (upper 12") |
| <input type="checkbox"/> Water Marks | <input type="checkbox"/> Water-stained Leaves |
| <input type="checkbox"/> Drift Lines | <input type="checkbox"/> Local Soil Survey Data |
| <input type="checkbox"/> Sediment Deposits | <input type="checkbox"/> FAC-Neutral Test |
| <input checked="" type="checkbox"/> Drainage Patterns | Other: _____ |
- Criteria Met? YES NO

DETERMINATION

WETLAND? YES NO Comments: _____

CITY OF CORNELIUS

OREGON FRESHWATER WETLAND ASSESSMENT METHODOLOGY

Date: May 8, 2002

Wetland Identification: TD-3

Investigators: KV, JG (DSL)

Wildlife Habitat	Fish Habitat - Streams	Fish Habitat - Lakes/Ponds	Water Quality	Hydrologic Control
Q1 - C	Q1 - C		Q1 - A	Q1 - B
Q2 - C	Q2 - C		Q2 - C	Q2 - C
Q3 - C	Q3 - C		Q3 - A	Q3 - B
Q4 - C	Q4 - A		Q4 - B	Q4 - A
Q5 - B	Q5 - C		Q5 - A	Q5 - C
Q6 - B	Q6 - C		Q6 - C	Q6 - A
Q7 - A				Q7 - A
Q8 - C				
Q9 - C				

Sensitivity to Impact	Enhancement Potential	Education	Recreation	Aesthetic Quality
Q1 - A	Q1 - A	Q1 - B	Q1 - A	Q1 - C
Q2 - B	Q2 - A	Q2 - A	Q2 - C	Q2 - A
Q3 - C	Q3 - B	Q3 - B	Q3 - A	Q3 - A
Q4 - A	Q4 - B	Q4 - C	Q4 - B	Q4 - B
Q5 - A	Q5 - C	Q5 - A	Q5 - B	Q5 - B
Q6 - B	Q6 - B	Q6 - A	Q6 - B	Q6 - B

Wildlife Habitat	The wetland provides some wildlife habitat.
Fish Habitat - Streams	The wetland's fish habitat function is impacted.
Fish Habitat - Lakes/Ponds	
Water Quality	The wetland's water quality function is impacted/degraded.
Hydrologic Control	The wetland's hydrologic control function is impacted/degraded.
Sensitivity to Impact	The wetland is potentially sensitive to future impacts.
Enhancement Potential	The wetland has moderate potential for enhancement.
Education	The wetland has potential for educational use.
Recreation	The wetland does provide recreation opportunities.
Aesthetic Quality	The wetland is considered moderately pleasing.

City of Cornelius Wetland Inventory Summary Sheet

Wetland Site: TD-3, UP Railroad Ditch

<u>Function</u>	<u>Evaluation Descriptor</u>	<u>Rationale</u>
Wildlife Habitat	Provides some habitat for wildlife.	One Cowardin class present; emergent vegetation is the dominant cover; wetland is connected to what may be a perennial stream; developed uses in the form of a railroad track abut on the wetland on the south.
Fish Habitat	Fish habitat impacted.	Stream flows north to south; very little stream-side shade; dominant use at wetlands edge is RR Track; no fish present. This is not a fish habitat/
Water Quality	Water quality is impacted or degraded.	Primary source of water is surface flow; no evidence of ponding during growing season; over 60% of the wetland has vegetation cover; wetland is between 0.5 and 5 acres
Hydrologic Control	Hydrology is impacted or degraded.	None of the wetland is located in the 100 yr floodplain; No evidence of flooding during the growing season; wetland area 0.5 - 5 acres; emergent/wet meadow vegetation is dominant cover; dominant downstream uses are urban; dominant upstream use is urban.
Sensitivity to Future Impacts	Potentially sensitive to future impacts.	The adjacent stream bank has been modified by human activities; water is not being taken out upstream; no upstream/adjacent reaches are listed as water quality limited; Commercial development, a state highway and a railroad line are within 500 feet of wetland; emergent vegetation is the dominant vegetation cover.
Enhancement Potential	Moderate potential for enhancement	One or more of the functions is impacted or degraded; surface flow ditch is the primary source of water; a local street w/culvert has restricted the

		flow into the wetland; wetland area is between 0.5 and 5 acres ins size; less than 10% of the wetland's edge is bordered by a vegetative buffer 25 feet or more in width.
Education	Wetland has potential for educational use.	The wetland is not open for direct access, but observation is possible form a public sidewalk; no visible safety hazards exist; the wetland does not meet the criteria for provision of diverse fish & wildlife habitat;
Recreation	Wetland provides recreational opportunities	No access point, trails or boat launching areas exist; some wildlife habitat does exist; fishing is not an applicable activity for this area.
Aesthetic Quality	Wetland is not considered pleasing.	One Cowardin class is visible; over 50% of the wetland is visible from private property or public right-of-way; Visual detractors exist (highway, commercial development, RR tracks) and cannot be easily removed; the visual character of the surrounding area has been landscaped or manipulated by people; Unpleasant odors and audible noise from automobile traffic on the highway is present.

Narrative Description of Overall Wetland Functions and Conditions

This small wetland area has been modified by human activity through construction of a railroad track on the south. The water quality, wildlife habitat and hydrology functions are impacted/degraded and fish habitat is not present.

**CITY OF CORNELIUS
LOCAL SIGNIFICANT WETLAND (LSW) CRITERIA CHECKLIST**

Wetland Identification: TD-3

A. "OUT" Test

Y	N	Wetlands that score "Yes" in any of the following categories do not proceed to Section B.
	X	Wetlands artificially created entirely from upland that is: <ol style="list-style-type: none"> a. created for the purpose of controlling, storing, or maintaining stormwater; b. active surface mining ponds; c. ditches without free and open connection to waters of the state and without fish; d. < 1 acre and unintentionally created from irrigation leak or construction activity; e. of any size and created for the purpose of wastewater treatment, shock watering, settling of sediment, cooling industrial water, or as a golf course hazard.
	X	Documented as being contaminated by hazardous substances, materials or wastes ("Hazmat sites").

B. "IN" Test

Y	N	Wetlands that meet ONE OR MORE of the following criteria are LSWs.
	X	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology: <ul style="list-style-type: none"> ___ <i>diverse</i> wildlife habitat ___ <i>intact</i> fish habitat ___ <i>intact</i> water quality ___ <i>intact</i> hydrologic control
	X	Wetlands that are rated in the second highest functional category for water quality (called <i>impacted or degraded</i> in OFWAM), <u>AND</u> that occur within 1/4 mile of a water quality-limited stream listed by DEQ.
	X	Contain one or more rare/uncommon wetland plant communities in Oregon. (most concise list is found as Appendix G in OFWAM)
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation w/appropriate agency deems the site not important for the maintenance of the species).
	X	Wetland rates in the second highest functional category for fish habitat (called <i>impacted or degraded</i> in OFWAM), and has a surface water connection to stream segment that is mapped by ODFW as habitat for "indigenous anadromous salmoids".
	X	OPTIONAL CRITERION (at discretion of local government): Wetland represents a LOCALLY unique plant community.
	X	OPTIONAL CRITERION (at discretion of local government): Wetland rates highest rank for education potential and there is documented use for educational purposes by a school or organization

* Wetland does not meet the criteria in Section B, "IN" Test for significance.

T1S R3W SECTION 04

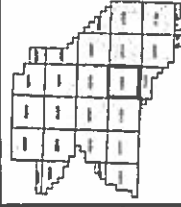
City of Cornelius
Local
Wetland Inventory
Wetland Site: TD-3

Legend

- X Sample Plot
- /— Railroad
- /— Streets
- /— Drainage Ditch
- /— Stream
- Wetland
- Adjacent Parcels
- Tax Lots

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

1:2400
50 0 50 100 Feet



Washington County, Oregon
November 2002

