APPENDIX B: COMMON & TAXONOMIC PLANT NAMES

SPECIES LIST FOR THE LAKEVIEW LOCAL WETLAND INVENTORY

COMMON NAME	SCIENTIFIC NAME	WIS[1]
SHRUBS		
Gray rabbit-brush	*Chrysothamnus nauseosus*	NL
Pacific willow	*Salix lasiandra*	FACW+
HERBS		
Wheatgrass	*Agropyron sp.*	FACU
Short-awn foxtail	*Alopecurus aequalis*	OBL
Meadow foxtail	*Alopecurus pratensis*	FACW
Ragweed	*Ambrosia sp.*	UNK
Aster	*Aster sp.*	UNK
Lamb's quarters	*Chenopodium album*	FAC
Creeping thistle	*Cirsium arvense*	FACU+
Bull thistle	*Cirsium vulgare*	FACU
Saltmarsh bird's beak	*Cordylanthus maritimus*	OBL
Annual hairgrass	*Deschampsia danthonioides*	FACW-
Inland saltgrass	*Distichlis spicata*	FAC+
Downingia	*Downingia sp.*	UNK
Creeping spikerush	*Eleocharis palustris*	OBL
Basin wild-rye	*Elymus cinereus.*	NI
Idaho gumweed	*Grindelia nana*	FACU
Meadow barley	*Hordeum brachyantherum*	FACW-
Fox-tail barley	*Hordeum jubatum*	FAC
Baltic rush	*Juncus balticus*	FACW+
Rush	*Juncus sp.*	FACW
Least navarettia	*Navarettia minima*	FAC
Reed canary grass	*Phalaris arundinacea*	FACW
Knotweed	*Polygonum sp.*	FAC
Northwest cinquefoil	*Potentilla gracilis*	FAC
Western dock	*Rumex occidentalis*	FACW+
Dock	*Rumex sp.*	FAC
Tule	*Scirpus acutus*	OBL
Common threesquare	*Scirpus americanus*	OBL
Clover	*Trifolium sp.*	FACU
Rough cockle-bur	*Xanthium strumarium*	FAC

[1] WIS (Wetland Indicator Status)

OBL	(Obligate): species that almost always occur wetlands under natural conditions (est. probability >99%).
FACW	(Facultative wetland): species that usually occur in wetlands (est. probability 67 to 99%), but are occasionally found in non-wetlands.
FAC	(Facultative): Species that are equally likely to occur in wetlands or non-wetlands (est. probability 34 to 66%).
FACU	(Facultative upland): species that usually occur in non-wetlands (est. probability 67 to 99%), but are occasionally found in wetlands.
UPL	(Upland): species that almost always occur in non-wetlands under normal conditions (est. probability >99%).
NL	(Not listed): species that are not listed and are presumed to be upland species.
UNK	(Unknown): species unknown, indicator status of species unknown
+	indicates a species that is more frequently found in wetlands
-	indicates a species that is less frequently found in wetlands
*	identifies a tentative assignment based upon either limited information or conflicting reviews

APPENDIX C: DATA SHEETS

DATA FORM A1
Routine Wetland Determination
(1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/13/2002 County: Lake State: OR S/T/R: 4/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: A1 Plot ID: A1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Distichlis spicata**	Herb 20%	FAC+	Unknown 1	Herb 5%	--
Scirpus americanus	Herb 10%	OBL	Unknown 2	Herb 3%	--
*Chenopodium album**	Herb 20%	FAC	Bare ground	Other 12%	--
*Juncus balticus**	Herb 20%	FACW+			
Hordeum jubatum	Herb 5%	FAC			
Cordylanthus maritimus	Herb 5%	OBL			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __x__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: Based on 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other: Inundated during June 2001 reconnaissance visit	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Source: hot springs; Inundated during June 2001 reconnaissance visit

SOILS

Map Unit Name Stockdrive fine sandy loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4"		10YR 2/1			Salty; silty loam	
4-18"		7.5YR 2.5/1			Silty loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	X Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, surface has salt deposits

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

No special modifiers

NOTES:

DATA FORM A3
Routine Wetland Determination
(1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/13/2002 County: Lake State: OR S/T/R: 4/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? (Yes) No	Community ID: PEM Transect ID: Plot ID: A3

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Alopecurus pratensis**	Herb 40%	FACW			
*Juncus balticus**.	Herb 30%	FACW+			
*Trifolium sp.**	Herb 20%	FACU			
Potentilla gracilis	Herb 10%	FAC			
Cirsium vulgare	Herb 5%	FACU			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 67%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Grazed area within a topographic depression; Possible source of hydrology is the stream/ditch to south and shallow groundwater. Berm exists on southern border which is an atypical situation that may alter hydrology. Problem area due to seasonal (ephemeral) hydrology within wet meadow.

DATA FORM B1
Routine Wetland Determination
(1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/13/2002 County: Lake State: OR S/T/R: 4/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? (Yes) No	Community ID: PEM Transect ID: Plot ID: A3

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Alopecurus pratensis**	Herb 40%	FACW			
*Juncus balticus**.	Herb 30%	FACW+			
*Trifolium sp.**	Herb 20%	FACU			
Potentilla gracilis	Herb 10%	FAC			
Cirsium vulgare	Herb 5%	FACU			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 67%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) X OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No
Based on: Date

	Water Marks: Yes No	Sediment Deposits: Yes No
	Drift Lines: Yes No	Drainage Patterns: (Yes) No
Dept. of inundation: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No	Local Soil Survey: Yes No
Depth to free water in pit: NA inches	FAC Neutral: (Yes) No	Water-stained Leaves
Depth to saturated soil: NA inches		
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Grazed area within a topographic depression; Possible source of hydrology is the stream/ditch to south and shallow groundwater. Berm exists on southern border which is an atypical situation that may alter hydrology. Problem area due to seasonal (ephemeral) hydrology within wet meadow.

SOILS

Map Unit Name Stockdrive fine sandy loam, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes; Goose Lake silt loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18"		10YR 2/1			Silt loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma

Wetland Determination (circle)

Hydrophytic vegetation present?	(Yes)	No	
Hydric soils present?	(Yes)	No	Is the sampling point within a wetland? (Yes) No
Wetland hydrology present?	(Yes)	No	

Rationale/Remarks:

Grazed pasture; Impounded (berm on south side), problem area/seasonal wet meadow.

NOTES:

DATA FORM C1
Routine Wetland Determination
(1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/13/2002 County: Lake State: OR S/T/R: 9/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: C1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Juncus balticus**	Herb 70%	FACW+			
Unidentified grass	Herb 5%	UNK			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: (Yes) No	Sediment Deposits: (Yes) No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks:

SOILS

Map Unit Name Lakeview silty clay loam, sodic, 0 to 2 percent slopes; Stockdrive fine sandy loam, 0 to 1 percent slopes; Goose Lake silt loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14"		7.5YR 2.5/1			Coarse sand	
14-16"		10YR 2/1			Sandy loam	
16-18"		10YR 4/1			Silty clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, salt deposits in lowest layer

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

Channel

NOTES:

DATA FORM C2a
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/13/2002 County: Lake State: OR S/T/R: 9/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM/mosaic Transect ID: Plot ID: C2A

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Juncus balticus**	Herb 70%	FACW+			
Rumex occidentalis	Herb 5%	FACW+			
Distichlis spicata	Herb 3%	FAC +			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) ___X___ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: within a small swale

SOILS

Map Unit Name Lakeview silty clay loam, sodic, 0 to 2 percent slopes; Stockdrive fine sandy loam, 0 to 1 percent slopes; Goose Lake silt loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-16"		10YR 3/1		Redox concentrations on dead roots		

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

NOTES:

DATA FORM D1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/14/2002 County: Lake State: OR S/T/R: 9/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM excavated Transect ID: Plot ID: D1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Eleocharis palustris**	Herb 40%	OBL			
*Scirpus americanus**	Herb 50%	OBL			
Bare ground	Other 10%				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No
Based on: Date

Water Marks: Yes No	Sediment Deposits: (Yes) No
Drift Lines: Yes No	Drainage Patterns: (Yes) No

Dept. of inundation: NA inches
Depth to free water in pit: NA inches
Depth to saturated soil: NA inches

Oxidized Root (live roots) Channels <12 in. Yes No
FAC Neutral: (Yes) No
Local Soil Survey: Yes No
Water-stained Leaves

Check all that apply & explain below:
Stream, lake or gage data: _____
Aerial photographs: _____
Other:

Other: Algae fibers deposited in depressions

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Algae fibers deposited in depressions, drainage patterns within ditch

SOILS

Map Unit Name Lakeview silty clay loam, 0 to 2 percent slopes; Drews loam, 0 to 5 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8"		10YR 3/1			Silt loam	
8-18"		10YR 4/1			Silty clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, alkaline – salt crystals in soil

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

Channel directed through site. Adjacent to ATV park.

Water-control device at east end of fairground property.

NOTES:

Wetland meets all three criteria. However, extensive ditching has locally altered hydrology.

DATA FORM E1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/14/2002 County: Lake State: OR S/T/R: 16/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: E1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Phalaris arundinacea**	Herb 90%	FACW			
Cirsium arvense	Herb 10%	FACU+			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) X OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: (Yes) No Drainage Patterns: Yes No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Fairly obvious evidence of flooding

SOILS

Map Unit Name Lakeview silty clay loam, sodic, 0 to 2 percent slopes; Lakeview loam, 0 to 2 percent slopes; Thunderegg fine sandy loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18"		10YR 2/2	None		Silt loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low-chroma colors
_____ Concretions
_____ High organic content in surface layer of sandy soils
_____ Organic streaking in sandy soils
_____ Listed on Local Hydric Soils List
_____ Listed on National Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, soil series is moderately to strongly saline and sodic, which may reduce redox. features and mottles.

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No
Hydric soils present? (Yes) No
Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? Yes (No)

Rationale/Remarks:

Plot is about 10 feet from the edge of incised channel.
Thomas Creek is w/in the incised channel.
Wetland is immediately adjacent to incised portions.

NOTES:

DATA FORM F1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/15/2002 County: Lake State: OR S/T/R: 15/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PSS Transect ID: Plot ID: F1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
Phalaris arundinacea	Herb 5%	FACW			
Elymus cinereus	Herb 3%	NI			
*Salix lasiandra**	Shrub 80%	FACW+			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 67%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: (Yes) No Drainage Patterns: Yes No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks:

SOILS

Map Unit Name Malin silty clay loam, 0 to 1 percent slopes; Deter loam, 0 to 5 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18"		10YR 2/1			Silty clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

NOTES:

DATA FORM F2
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI

Applicant/Owner:

Investigator(s): Erin Questad / Patrick Hendrix

Date: 07/15/2002

County: Lake
State: OR
S/T/R: 15/39S/20E

Do normal circumstances exist on the site? (Yes) No
Is the site significantly disturbed (atypical situation)? Yes (No)
Is the area a potential problem area? Yes (No)

Community ID: PEM
Transect ID:
Plot ID: F2

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Phalaris arundinacea**	Herb 60%	FACW			
Juncus balticus	Herb 20%	FACW+			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER ____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No
Based on: Date

Water Marks: Yes No | Sediment Deposits: (Yes) No
Drift Lines: Yes No | Drainage Patterns: (Yes) No

Dept. of inundation: NA inches
Depth to free water in pit: NA inches
Depth to saturated soil: NA inches

Oxidized Root (live roots) Channels <12 in. Yes No | Local Soil Survey: Yes No
FAC Neutral: (Yes) No | Water-stained Leaves

Check all that apply & explain below:
Stream, lake or gage data: _____
Aerial photographs: _____
Other:

Other:

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Hydrology likely from stream to south (Deadman Creek)

SOILS

Map Unit Name Malin silty clay loam, 0 to 1 percent slopes; Deter loam, 0 to 5 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18"		10YR 2/1		Very small concretions and depletions	Silty clay loam with small gravels	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic moisture regime
_____ Reducing conditions
__X__ Gleyed or low-chroma colors

_____ Concretions
_____ High organic content in surface layer of sandy soils
_____ Organic streaking in sandy soils
_____ Listed on Local Hydric Soils List
_____ Listed on National Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, small gravels

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No
Hydric soils present? (Yes) No
Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

NOTES:

DATA FORM H1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix / Dana Field	Date: 07/31/2002 County: Lake State: OR S/T/R: 16/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? (Yes) No	Community ID: PEM Transect ID: Plot ID: H1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Alopecurus aequalis**	Herb 50%	OBL			
Xanthium strumarium	Herb 10%	FAC			
Juncus balticus	Herb 10%	FACW+			
*Grindelia nana**	Herb 15%	FACU+			
Cirsium sp.	Herb 10%	FACU			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) ___X___ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: *Alopecurus aequalis* is 50% of cover in most of wetland and is obligate. This seasonal wetland is a problem area. At the time of site visit, hydrophytic species may have been seasonally replaced by upland species, causing a marginal hydrophytic vegetation indicator.

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: Yes No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Located within a depression/swale. This is a potential seasonal wetland and is a problem area. At the time of site visit, strong hydrology may have been lacking due to seasonal variation.

SOILS

Map Unit Name Malin silty clay loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-10"		10YR 3/2	7.5YR 3/3	Common, faint, medium	Silty clay loam	
10-14"		10YR 3/1			Clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma with redox. concentrations

Wetland Determination (circle)

Hydrophytic vegetation present?	(Yes)	No	
Hydric soils present?	(Yes)	No	Is the sampling point within a wetland? (Yes) No
Wetland hydrology present?	(Yes)	No	

Rationale/Remarks:

NOTES:

This is a seasonal wetland and is a problem area. At the time of site visit, hydrophytic vegetation and hydrology indicators may have been reduced due to seasonal variation.

DATA FORM H2
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix / Dana Field	Date: 07/31/2002 County: Lake State: OR S/T/R: 16/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? (Yes) No	Community ID: PEM/PSS/Mosaic Transect ID: Plot ID: H2

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Distichlis spicata**	Herb 40%	FAC+			
*Chrysothamnus nauseosus**	Shrub 15%	NL			
Unidentified forb*	Herb 15%	UNK			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 66% (unknown species assumed to be hydrophytic)

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: Wetland is a mosaic with small patches of wetland vegetation within shrub community. This wetland is a problem area due to its seasonal variation.

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: Yes No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Evidence of flooding in spring.

SOILS

Map Unit Name Malin silty clay loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3"		10YR 3/2			Sandy, salty	
3-14"		10YR 4/2			Salty	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low-chroma colors
_____ Concretions
_____ High organic content in surface layer of sandy soils
_____ Organic streaking in sandy soils
_____ Listed on Local Hydric Soils List
_____ Listed on National Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? Yes (No)

Rationale for decision/remarks: Salty, alkaline conditions reduce redox features and increase chroma. May be a problem area due to seasonal variation and salty/sodic conditions.

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No
Hydric soils present? Yes (No)
Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

NOTES:

Problem area due to seasonal variation and salty/sodic conditions.

DATA FORM I1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/31/2002 County: Lake State: OR S/T/R: 16/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: I1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Juncus balticus**	Herb 20%	FACW+			
Agropyron sp.	Herb 5%	FACU			
*Alopecurus pratensis**	Herb 60%	FACW			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Drainage pattern within subtle swale.

SOILS

Map Unit Name _____ (Series & Phase)

Drainage Class _____

Taxonomy (subgroup) _____

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14"		10YR 2/1			Silt clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic moisture regime
_____ Reducing conditions
__X__ Gleyed or low-chroma colors
_____ Concretions
_____ High organic content in surface layer of sandy soils
_____ Organic streaking in sandy soils
_____ Listed on Local Hydric Soils List
_____ Listed on National Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No
Hydric soils present? (Yes) No
Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks: Grazed, wetland is less than 0.5 acres and was mapped as PW.

NOTES:

DATA FORM A2
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/31/2002 County: Lake State: OR S/T/R: 4/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: A2

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Scirpus americanus**	Herb 25%	OBL			
*Juncus balticus**	Herb 40%	FACW+			
*Eleocharis palustris**	Herb 30%	OBL			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: (Yes) No Drainage Patterns: Yes No	
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: Yes No	Local Soil Survey: Yes No Water-stained Leaves	
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other: Algae fibers		

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Algae; topographic depression; hot springs are likely source

SOILS

Map Unit Name Stockdrive fine sandy loam, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14"		10YR 2/1			Silty clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
X Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: High organic content in soils

Wetland Determination (circle)

Hydrophytic vegetation present?	(Yes)	No	Is the sampling point within a wetland? (Yes) No
Hydric soils present?	(Yes)	No	
Wetland hydrology present?	(Yes)	No	

Rationale/Remarks:

Hot springs have been excavated and bermed at Hunter's Hot Springs Resort and may have altered hydrology. However, evidence of hydrology still exists.

NOTES:

Wetland meets all three criteria. However, excavation of hot springs pools has altered hydrology in the area.

DATA FORM K1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Erin Questad / Patrick Hendrix	Date: 07/31/2002 County: Lake State: OR S/T/R: 10/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PSS/PAB Transect ID: Plot ID: K1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Salix lasiandra**	Shrub 50%	FACW+			
Open water and rocky fill	Other 50%	--			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 Rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: Yes No
Dept. of inundation: NA inches Depth to free water in pit: 6 inches Depth to saturated soil: 4 inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: (Yes) No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Standing water to edge of pond; saturated soils at 4"

SOILS

Map Unit Name Drews loam, 0 to 5 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6"		10YR 2/1			Sandy, rocky fill	
6-16"		2.5YR 2.5/1			Same as above, but siltier	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic moisture regime
_____ Reducing conditions
__X__ Gleyed or low-chroma colors
_____ Concretions
_____ High organic content in surface layer of sandy soils
_____ Organic streaking in sandy soils
_____ Listed on Local Hydric Soils List
_____ Listed on National Hydric Soils List
_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Fill w/ low chroma

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No
Hydric soils present? (Yes) No
Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

Former excavated log pond.

NOTES:

Wetland meets all three criteria. However, pond has been excavated and causes atypical conditions.

DATA FORM G1
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Dana Field/ Patrick Hendrix/ Erin Questad	Date: 07/31/2002 County: Lake State: OR S/T/R: 22/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: G1

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Polygonum sp.**	Herb 15%	FAC	*Juncus balticus.*	Herb Trace	FACW+
Deschampsia danthonioides	Herb Trace	FACW-	*Rumex sp.*	Herb Trace	FAC
*Navarettia minima**	Herb 15%	FAC	*Hordeum brachyantherum*	Herb Trace	FACW-
Chenopodium album	Herb Trace	FAC			
*Eleocharis palustris**	Herb 30%	OBL			
Hordeum jubatum	Herb Trace	FAC			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) __X__ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: (Yes) No
Rationale for Decision/Remarks: 50/20 rule

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: (Yes) No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. (Yes) No FAC Neutral: Yes No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Salt / algae crust on fence; hoofprints; in depression

SOILS

Map Unit Name Pit silty clay, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes; Malin silty clay loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14"		10YR 2/1			Silty clay loam	

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks: Low chroma, cracks to 8", moist at 10"

Wetland Determination (circle)

Hydrophytic vegetation present? (Yes) No

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? (Yes) No

Rationale/Remarks:

NOTES:

DATA FORM G2
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project Site: Lakeview LWI Applicant/Owner: Investigator(s): Dana Field/ Patrick Hendrix/ Erin Questad	Date: 07/31/2002 County: Lake State: OR S/T/R: 22/39S/20E
Do normal circumstances exist on the site? (Yes) No Is the site significantly disturbed (atypical situation)? Yes (No) Is the area a potential problem area? Yes (No)	Community ID: PEM Transect ID: Plot ID: G2

VEGETATION

Plant Species (* dominant)	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
*Distichlis spicata**	Herb 20%	FAC+			
Chenopodium album	Herb Trace	FAC			
Bare ground	Other 70%				
Unknown forb*	Herb 10%	UNK			
Aster sp.	Herb Trace	UNK			
Agropyron sp.	Herb Trace	FACU			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50%

Check all indicators that apply & explain below:

Regional knowledge of plant communities _____ Wetland Plant List (Natl or regional) _____ OTHER _____
Physiological or reproductive adaptations _____ Morphological adaptations _____
Technical literature _____ Wetland plant data base _____

Hydrophytic vegetation present: Yes (No)
Rationale for Decision/Remarks: Vegetated areas in data plot are marginally hydrophytic according to the 50/20 rule. Surrounding vegetation is dominated by *Agropyron sp.* which is FACU.

HYDROLOGY

Is it the growing season: (Yes) No Based on: Date	Water Marks: Yes No Drift Lines: Yes No	Sediment Deposits: Yes No Drainage Patterns: (Yes) No
Dept. of inundation: NA inches Depth to free water in pit: NA inches Depth to saturated soil: NA inches	Oxidized Root (live roots) Channels <12 in. Yes No FAC Neutral: Yes No	Local Soil Survey: Yes No Water-stained Leaves
Check all that apply & explain below: Stream, lake or gage data: _____ Aerial photographs: _____ Other:	Other:	

Wetland hydrology present? (Yes) No
Rationale for decision/remarks: Depression. Moist at 10". Lessee says the property is muddy through May. However, it is unknown if this specific location remains wet for that long. Hydrology indicator considered marginal.

SOILS

Map Unit Name Pit silty clay, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes; Malin silty clay loam, 0 to 1 percent slopes

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Redox feature abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14"		10YR 3/1				

Hydric Soil Indicators: (Check all that apply)

_____ Histosol	_____ Concretions
_____ Histic Epipedon	_____ High organic content in surface layer of sandy soils
_____ Sulfidic Odor	_____ Organic streaking in sandy soils
_____ Aquic moisture regime	_____ Listed on Local Hydric Soils List
_____ Reducing conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or low-chroma colors	_____ Other (explain in remarks)

Hydric soils present? (Yes) No

Rationale for decision/remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? Yes (No)

Hydric soils present? (Yes) No

Wetland hydrology present? (Yes) No

Is the sampling point within a wetland? Yes (No)

Rationale/Remarks:

Pasture lessee says things green up in April; muddy through end of May. Hasn't heard of any salt problems, lots of areas have alkali. This plot appears to be within a small marginal area that is surrounded by a non-hydrophytic plant community. It is also topographically higher that Wetland G.

NOTES:

Wetland boundary determined to be between data plot G1 and G2. G1 is within the wetland. G2 is outside of the wetland. Boundary determined by the presence of *Grindelia nana,* a FACU+ species.

APPENDIX D: WETLAND SUMMARY SHEETS

Wetland A

Street address: Along Dusenbury Logging Road

Township, range, section, quarter quarter section: T 39S, R 20E, section 4, NW SW, NW NE, NW SE, SW NE

Taxlot(s): 100, 190, 200, 300, 400, 500, 501, 600, 700, 800, 900

Approximate size: Total size – 81.0 acres; A1 - 17.8ac; A2 - 4.0; A3 - 16.4; A4 - 16.6; A5 - 6.6; A6 - 4.1; A7 - 5.6; A8 - 9.9

Cowardin classification: Palustrine emergent (PEM) (A1, A3, A4, A5, A6, A8)/ palustrine aquatic bed (PAB) (A2, A7).

Mapped soil type(s): Stockdrive fine sandy loam, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes; Goose Lake silt loam, 0 to 1 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Flats, Riverine Flow-Through, Excavated Depressions, Springs

Sample plot numbers: A1, A2, A3

Dominant plant species: Inland saltgrass, Lamb's quarters, Baltic rush, meadow foxtail, creeping spikerush, common threesquare

Primary hydrology source: Hot springs on site, high groundwater

Field verification dates: July 13 and 31, 2002

Basis for boundary: topography and vegetation changing to upland grasses and sagebrush

OFWAM assessment summary: Diverse wildlife habitat; fish habitat, water quality, and hydrologic control functions impacted or degraded; sensitive to impact; high enhancement potential; not appropriate for education or recreation; pleasing aesthetics

Comments: No special modifiers for Cowardin classification. Soil surface has salt deposits. Ponds A7 were excavated in 1920s or earlier. Historic photos from 1940s and from county soils survey show wetlands south of ponds even when south pond was dry. Hydric soils area; all ponds and wetlands subject to state jurisdiction. Delineation recommended prior to any development plans. A8 is grazed pasture. Impounded by fill on three sides.

Map sheet number(s): 2

Photos: 1 and 2

Basis for boundary: topography and vegetation – change to upland grasses and sagebrush.

Wetland E

Street address: Along East Branch Thomas Creek

Township, range, section, quarter quarter section: T 39S; R 20E; section 16: SW SW, SW NW, NW NW, NW SW ; section 17: NE NE

Taxlot(s): 100

Approximate size: 8 acres

Cowardin classification: PEM, PEM/PAB

Mapped soil type(s): Lakeview silty clay loam, sodic, 0 to 2 percent slopes; Lakeview loam, 0 to 2 percent slopes; Thunderegg fine sandy loam, 0 to 1 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Riverine flow-through

Sample plot numbers: E1

Dominant plant species: Reed canary grass

Primary hydrology source: East Branch Thomas Creek, also fed by drainage ditches

Field verification date: July 14, 2002

OFWAM assessment summary: Wildlife habitat for some species; fish habitat and hydrologic control functions impacted or degraded; water quality function intact; potentially sensitive to impact; high enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics

Comments: No special modifiers for Cowardin classification. Thomas Creek is within an incised channel. The wetland is immediately adjacent to the incised portion of the channel. Thomas Creek has redband trout.

Map sheet number(s): 5

Photos: 11, 12, 13, and 14

Wetland F

Street address: Soroptimist Park on Park Court

Township, range, section, quarter quarter section: T 39S, R 20E, section 15, SW NW

Taxlot(s): 201

Approximate size: Total size – 2.5 acres, F1 – 2 acres, F2 - 0.3 acres, F3 - 0.2 acres, F4 - 0.03 acres

Cowardin classification: PSS (F1, F4); PEM (F2, F3)

Mapped soil type(s): Malin silty clay loam, 0 to 1 percent slopes; Deter loam, 0 to 5 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Slope/Flat

Sample plot numbers: F1 and F2

Dominant plant species: Pacific willow, reed canary grass, Baltic rush

Primary hydrology source: Deadman Creek, high groundwater

Field verification date: July 15, 2002

OFWAM assessment summary: Diverse wildlife habitat; fish habitat and water quality functions impacted or degraded; hydrologic control function intact; sensitive to impact; high enhancement potential; has educational use; has recreational opportunities; moderately pleasing aesthetics

Comments: No special modifiers for Cowardin classification. Shrub-dominated, high groundwater and surface runoff impounded upslope of railroad tracks.

Map sheet number(s): 5 and 6

Photos: 15, 16, 17, and 18

Wetland G

Street address: Intersection of Highway 395 and County Road 1-14

Township, range, section, quarter quarter section: T 39S, R 20E, section 22, SW SE

Taxlot(s): 100, 200, 600, 800, 7600, 8800

Approximate size: 25 acres

Cowardin classification: PEM, wet meadow

Mapped soil type(s): Pit silty clay, 0 to 1 percent slopes; Drews loam, 0 to 5 percent slopes; Malin silty clay loam, 0 to 1 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Flats

Sample plot numbers: G1 and G2

Dominant plant species: Navarettia, creeping spikerush, inland saltgrass

Primary hydrology source: Precipitation; high groundwater

Field verification date: July 31, 2002

OFWAM assessment summary: Wildlife habitat for some species; fish habitat not applicable; water quality function impacted or degraded; hydrologic control function impacted or degraded; sensitive to impact; moderate enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics

Comments: No special modifiers for Cowardin classification. Delineation in springtime recommended to verify wetland hydrology. Acreage may be smaller. Grazed pasture with alkali deposits. Slight topographic rise to west transitions to sagebrush.

Map sheet number(s): 7

Photo: 19

Wetland K

Street address: Intersection of Missouri Avenue and Dusenbury Logging Road

Township, range, section, quarter quarter section: T 39S, R 20E, section 10, NW SW

Taxlot(s): 100, 800

Approximate size: Total size – 16.3 acres, K1 – 3.5 acres, K2 – 3.8 acres, K3 – 2 acres, K4 – 7 acres

Cowardin classification: PSS (K1), PAB (K2) pond is excavated, PEM (K3, K4)

Mapped soil type(s): Drews loam, 0 to 5 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Excavated Depression

Sample plot numbers: K1

Dominant plant species: Pacific willow, cattail, grasses

Primary hydrology source: As per owner, water is pumped in. Also, may intercept shallow groundwater.

Field verification date: July 31, 2002

OFWAM assessment summary: Wildlife habitat for some species; fish habitat, water quality, and hydrologic control functions impacted or degraded; sensitive to impact; high enhancement potential; not appropriate for education; potential for recreation; not pleasing aesthetics

Comments: Pond was previously used for log storage and is excavated. Historic photos show that K1 and K2 were excavated in upland for a log pond; therefore, non-jurisdictional (Det. 03-0118). Dry channel north of cemetery is not jurisdictional (as per DSL). K3 may be fed by high groundwater.

Map sheet number(s): 3 and 4

Photo: 22

Wetland L (Off-site)

Street address: Along Dusenbery Logging Road

Township, range, section, quarter quarter section: T 39S, R 20E, section

Taxlot(s): 700, 701, 705, 790, 800

Approximate size: Total size – 10.3 acres, L1 – 3.3 acres, L3 – 7 acres

Cowardin classification: PEM

Mapped soil type(s): Drews loam, 0 to 5 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Atypical, Disturbed

Field verification date: No property access

OFWAM assessment summary:
L1 – Wildlife habitat for some species; water quality and hydrologic control functions are impacted or degraded; sensitive to impacts; moderate enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics.

L3 - Wildlife habitat for some species; water quality and hydrologic control functions are impacted or degraded; sensitive to impacts; moderate enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics.

Comments: L1 is a mosaic of wetland pockets with spikerush and Baltic rush in disturbed ground, likely fed by high groundwater. L3 was excavated from upland during remediation of the old uranium mill (Det. 03-0124). The saturated area is densely vegetated with meadow foxtail, sedges, and a few cattails.

Map sheet number(s): 2

Wetland M (Off-site)

Street address: Along M Street South between South 11th and 12th

Township, range, section, quarter quarter section: T 39S, R 20E, section

Taxlot(s): 600

Approximate size: 2.5 acres

Cowardin classification: PEM

Mapped soil type(s): Thunderegg fine sandy loam, 0 to 1 percent slopes

Hydrologic basin: Goose Lake

Dominant plant species: Dock, rush, grasses

Primary hydrology source: Ditch/culvert from northeastern corner of wetland, high groundwater.

Field verification date: No property access, but visible from road.

OFWAM assessment summary: Wildlife habitat for some species; water quality, and hydrologic control functions impacted or degraded; sensitive to impact; moderate enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics.

Comments: Depression

Map sheet number(s): 7

Wetland N (Off-site)

Street address: Along Highway 140

Township, range, section, quarter quarter section: T 39S, R 20E, section 8: SE SE, section 17: NE NE, section 9: SW SW, section 16: NW NW

Taxlot(s): 100, 200, 600, 701, 1100, 2300, 2700

Approximate size: 2 acres

Cowardin classification: PEM

Mapped soil type(s): Lakeview silty clay loam, sodic, 0 to 2 percent slopes; Thunderegg fine sandy loam, 0 to 1 percent slopes; Lakeview silty clay loam, 0 to 2 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Riverine Flow-Through

Dominant plant species: Rushes, meadow foxtail, bluegrass, cattail, reed canary grass, sedges (as reported in DSL Wetland Delineation File WD# 00-0558)

Primary hydrology source: Roadside ditch associated with the East Branch Thomas Creek and Warner Creek, high groundwater.

Field verification date: No property access, but visible from Hwy 140.

OFWAM assessment summary: Wildlife habitat for some species; fish habitat impacted or degraded; water quality functions intact; hydrologic control impacted or degraded; sensitive to impact; high enhancement potential; not appropriate for education or recreation; moderately pleasing aesthetics.

Comments: Inventory concurs with DSL Wetland Delineation File. Wetland N is a series of roadside ditches that connect to Thomas Creek.

Map sheet number(s): 5

Wetland O (Off-site)

Street address: East of Warner Creek (mostly), south of Missouri Avenue, and north of Hwy. 140.

Township, range, section, quarter quarter section: T 39S, R 20E, section 9: SE SE, SE NE, NE SE

Taxlot(s): 101, 201, 400, 701, 2700

Approximate size: 42.4 acres; O1 - 36.5; O2 - 5.9

Cowardin classification: PEM

Mapped soil type(s): Thunderegg fine sandy loam, 0 to 1 percent slopes; Lakeview silty clay loam, sodic, 0 to 2 percent slopes

Hydrologic basin: Goose Lake

HGM classification: Flats

Dominant plant species: Rushes, Grasses.

Primary hydrology source: Warner Creek, Hammersly Creek, and high groundwater.

Field verification date: No property access

OFWAM assessment summary: Wildlife habitat for some species; fish habitat impacted or degraded; water quality functions intact; hydrologic control functions impacted or degraded; sensitive to impact; moderate enhancement potential; not appropriate for education or recreation; not pleasing aesthetics.

Comments: A small portion of the wetland area is visible from public right-of-way on Missouri Ave.

Map sheet number(s): 3

APPENDIX E: OREGON FRESHWATER WETLAND ASSESSMENT METHODOLOGY DATA