Oregon
Theodore R. Kulongoski, Governor

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

NOTICE OF ADOPTED AMENDMENT

06/24/2014

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

FROM: Plan Amendment Program Specialist

SUBJECT: City of Cornelius Plan Amendment
DLCD File Number 002-14

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

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Thursday, July 10, 2014

This amendment was submitted to DLCD for review prior to adoption pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

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

*NOTE: The Acknowledgment or Appeal Deadline is based upon the date the decision was mailed by local government. A decision may have been mailed to you on a different date than it was mailed to DLCD. As a result, your appeal deadline may be earlier than the above date specified. NO LUBA Notification to the jurisdiction of an appeal by the deadline, this Plan Amendment is acknowledged.

Cc: Dick Reynolds, City of Cornelius
Gordon Howard, DLCD Urban Planning Specialist
Anne Debbaut, DLCD Regional Representative
Amanda Punton, DLCD Natural Resources Specialist

<paa> YA

New DB# {19962}

DLCD FORM 2

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE 002-14 (20322) [17911]
File No.:
Received: 6/19/2014

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption**. (*See* OAR 660-018-0040). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use Form 4 for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use Form 5 for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use Form 6 with submittal of an adopted periodic review task.

Jurisdiction: City of Cornelius

Local file no.: **CPA-02-14**

Date of adoption: June 16, 2014 Date sent: 6/19/2014

Was Notice of a Proposed Change (Form 1) submitted to DLCD?
Yes: Date (use the date of last revision if a revised Form 1was submitted): May 2, 2014
No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes (No)
If yes, describe how the adoption differs from the proposal:

Local contact (name and title): Dick Reynolds

Phone: 503-357-3011 E-mail: rreynolds@ci.cornelius.or.us

Street address: 1355 N. Barlow Street City: Cornelius Zip: 97113-

PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

For a change to comprehensive plan text:
Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

Chapter IV, Land Use, Page 21; and Comprehenisve Plan Appendices L, Natural Resources Inventory and Local Wetlands Inventory Map and the Natural Resource Protection Plan. Statewide Planning Goal 5.

For a change to a comprehensive plan map:
Identify the former and new map designations and the area affected:

Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address):

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

If the comprehensive plan map change is a UGB amendment including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

If the comprehensive plan map change is an urban reserve amendment including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

For a change to the text of an ordinance or code:
Identify the sections of the ordinance or code that were added or amended by title and number:

For a change to a zoning map:
Identify the former and new base zone designations and the area affected:

Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation:	Acres added:	Acres removed:

Location of affected property (T, R, Sec., TL and address):

List affected state or federal agencies, local governments and special districts: Department of State Lands, their Concurrence Letter is Exhibit 1.F of the City Council Report.

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

CITY OF CORNELIUS
ORDINANCE NO. 2014-13

AN ORDINANCE OF THE CORNELIUS CITY COUNCIL AMENDING CHAPTER IV, LAND USE AND APPENDICES OF THE COMPREHENSIVE PLAN AND THE NATURAL RESOURCE PROTECTION PLAN

WHEREAS, the City of Cornelius Community Development Department reviewed and analyzed the proposal for compliance with the Comprehensive Plan and Chapter 18 of the City Code (also known as the Development & Zoning Code) and recommended to the Planning Commission to recommend approval of the request to City Council; and

WHEREAS, the City of Cornelius provided public notice consistent with Chapter 18.15.030, Development and Zoning Code 20 days, prior to the Planning Commission Hearing held on June 3, 2014; and

WHEREAS, the City of Cornelius Community Development Department further reviewed and analyzed the proposal for compliance with the Statewide Planning Goals, Oregon Administrative Rules and the Metro Functional Plan; and

WHEREAS, the City of Cornelius Planning Commission has conducted an analysis, including review of reports prepared by the City Community Development Department, and has further considered the matter in a public hearing duly noticed; and

WHEREAS, the City of Cornelius Planning Commission held a public hearing on the proposed amendment and based on the facts, findings and conclusions presented in the staff report and public testimony received, the Planning Commission adopted by motion to recommend to City Council the Comprehensive Plan Amendments for final adoption; and

WHEREAS, the City of Cornelius City Council, after providing the required notices, held a public hearing on June 16, 2014 to review the record of the Planning Commission, and to hear and consider additional evidence and testimony on the matter; and

WHEREAS, the City Council finds the proposed Comprehensive Plan Amendments to be in compliance with the City's Comprehensive Plan, the City's Development & Zoning Code, the Statewide Planning Goals, Oregon Administrative Rules and the Metro Functional Plan; as set forth in the Findings Report and the Planning Commission Recommendation Report, attached hereto as Exhibit # 1.

NOW THEREFORE, BASED ON THE FOREGOING, THE CITY OF CORNELIUS ORDAINS AS FOLLOWS:

SECTION I. The City Council for the City of Cornelius hereby approves the proposed Comprehensive Plan Amendments with conditions listed in the Findings Report (CPA-02-14), see Exhibit # 1.

Section 2. This action shall take effect 30 days from adoption.

SUBMITTED and ADOPTED by the Cornelius City Council and read into the record at a regularly scheduled meeting on the 16th day of June 2014.

By: _____
Jeffrey C. Dalin, Mayor

ATTEST:

By _____
Debby Roth, MMC, City Recorder

CITY COUNCIL REPORT

Amendment of the Comprehensive Plan
North Holladay Industrial Park Natural Resource Assessment
File # CPA-02-14

Date: June 6, 2014

Hearing Date: June 16, 2014

Project: A request for approval of a Comprehensive Plan Amendment to:

- Add the North Holladay Industrial Park Wetland Delineation Report as an Addendum to the City's Natural Resource Inventory, Appendices L of the Comprehensive Plan; and
- Add the Assessment of the North Holladay Wetlands located in the City to the Natural Resource Protection Plan; and
- Update the Local Wetlands Inventory Map; and
- Amend the Text on page 21 of the Comprehensive Plan to reference additions to the Natural Resource Inventory and Protection Plan.

Legal Description: Inside City:

Map # 1N333CA, Tax Lot # 900
Map # 1N333CA, Tax Lot # 400

Inside Urban Growth Boundary:

Map # 1N333B, Tax Lot # 400
Map # 1N333B, Tax Lot # 300
Map # 1N333B, Tax Lot # 100
Map # 1N333, Tax Lot # 200

Process: A request for a comprehensive plan amendment may be initiated by a property owner or his authorized agent by filing an application with the Planning Department on forms prescribed by the Director or designee. Before taking final action on a proposed amendment, the Planning Commission shall hold a public hearing. The Planning Commission (the Commission) shall, within forty (40) days after a hearing, recommend to the City Council (the Council) approval, disapproval, or modification of the proposed amendment. After receipt of the report on the amendment from the Commission, the Council shall hold a public hearing on the amendment. The Council shall make its decision after information from

the hearing has been received. The decision shall become effective by passage of an ordinance, resolution, or order.

Appeal Rights: As mentioned above the Planning Commission will make a recommendation to City Council. City Council will make a decision. An appeal of a decision by City Council shall be made to the State Land Use Board of Appeals (LUBA) per ORS 197.830. In order for an issue to be considered for appeal to the Land Use Board of Appeals, it must be raised before the close of the record of the Public Hearing. Such issues must be raised with sufficient specificity so as to afford the hearings body and the parties an adequate opportunity to respond to each issue. If there is no continuance granted at the hearing, any participant in the hearing may request that the record remain open for at least seven days after the hearing.

APPROVAL CRITERIA: Chapter 18.05 (Introduction and General Provisions); Chapters 18.10 & 18.15 (Application & Review Procedures); Chapter 18.130 (Comprehensive Plan).

BASIC FACTS and BACKGROUND INFORMATION

1. The City applied for and received a Metro Construction Excise Tax (CET) grant in 2012 to conduct research and analysis to prepare an application for State Industrial Site Certification of the North Holladay Industrial Park area.

2. The CET grant included funding for two technical studies one a Natural Resource Assessment and the other a Traffic Impact Analysis.

3. The Traffic Impact Analysis was conducted by MacKenzie and completed in September 2013.

4. The Natural Resource Assessment was conducted by Pacific Habitat Services and completed in July of 2013.

5. The Natural Resource Assessment identified and delineated twelve (12) wetlands in the North Holladay Industrial Park area in the City and its abutting Urban Growth Boundary (UGB).

6. The four (4) of the wetlands are located on two parcels in the City (Map # 1N333CA, Tax Lot #'s 400 & 900).

7. There are eight (8) of the wetlands located on four parcels within the Urban Growth Boundary, but outside of the City (Map # 1N333B, Tax Lot #'s 100, 300 & 400 and Map # 1N333, Tax Lot # 200).

8. The City submitted to the Oregon Department of State Lands (DSL) an application requesting review for the North Holladay Industrial Park Wetland Delineation Report on November 6, 2013.

9. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped (Exhibit F).

10. On April 21, 2014 Staff provided the Oregon Department of Land and Conservation (LCDC) the required Notice of the proposal and the date of the first evidentiary hearing, May 27, 2014.

11. On May 2, 2014, Staff revised the required LCDC Notice changing the first evidentiary hearing to June 3, 2014.

12. Notice of the proposal was published in the local paper regarding the application and upcoming public hearing on May 14, 2014.

13. On May 14, 2014, Public Notice was mailed to property owners within 250 feet of the subject properties regarding the application and scheduled public hearings.

14. On May 14, 2014, Notice of the proposed Comprehensive Plan Amendment was provided to affected agencies.

15. The Planning Commission held a public hearing on June 3, 2014 to review written and oral testimony and evidence and make a recommendation on the request (Exhibit 1).

16. As of this date, the City has received comments from:
    - Remi Taghon, property owner of land abutting the subject site, submitted of a recorded 'Assignment of Sellers Interest in Contract Sale' - Map # 1N333, Tax Lot # 200 (See Exhibit E).
    - Jennifer Finnegan, Owner/Buyer (by purchase contract) of Map # 1N333, Tax Lot # 200 and Map # 1N333B, Tax Lot # 100 submitted email comments concerning ownership and Buyers rights (Exhibit H)
    - Marie Finnegan, Sales Contract - Map # 1N333, Tax Lot # 200 (Exhibit G).

Review Criteria

Section 18.130.010(D) ((1), Approval Criteria:

1. ***The proposed plan and amendments shall conform to the requirements of the Oregon Statewide Planning Goals, and applicable administrative rules of the State Land Conservation and Development Commission.***

Findings: The proposal is to amend the City of Cornelius Comprehensive Plan based on the results of technical studies (Natural Resource Assessment & Traffic Impact Analysis) that were completed for the North Holladay Industrial Park area. The Oregon State Planning Goals and applicable Oregon Revised Statues (OAR's) are addressed within the Planning Commission Recommendation Report, Exhibit, "1". The specific Planning Goals addressed are:

Goal 5, Natural Resources - The North Holladay Industrial Park Planning area is bordered on the north by the Urban Growth Boundary that follows Council Creek and it riparian corridor. State Planning Goal 5 requires the protection, enhancement and management of significant natural resources. The Natural Resource Assessment study resulted in Wetland Delineation Report identifying 12 wetlands in the North Holladay Industrial Park Planning area, 4 are located in the City and 8 are located within the Urban Growth Boundary (not in the City). The Wetland Delineation Report was submitted to the Oregon Department of State Lands (DSL) for review and approval. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped (Exhibit F).

Goal 12, Transportation - A Traffic Impact Analysis (TIA) was conducted by MacKenzie and completed in September 2013 for the North Holladay Industrial Park Planning area. The TIA analyzed land inside the City and within the Urban Growth boundary, approximately 58 acres in size. The analysis addressed the State Transportation Planning Rule (TPR), Metro's Regional Transportation Plan (RTP) and the Cornelius Transportation System Plan (TSP) in consideration of the all the land being zoned and/or rezoned for Industrial uses for the 2025 and 2035 planning horizons.

The Planning Commission concluded that the applicable State Planning Goals have been addressed by registered professionals through the completion of the technical studies with review by staff and other State agencies.

Staff finds the criterion is met.

2. ***The proposed amendments shall comply with all other applicable laws, rules and regulations of the state, city, and other governmental agencies having jurisdiction over land use regulation within the City.***

Findings: The City of Cornelius with funding from a Metro Construction Excise Tax (CET) grant conducted a Natural Resource Assessment and a Traffic Impact Analysis for the North Holladay Industrial Park Planning area. The purpose of these studies is to assist in the aggregation of land and prepare the area for participation in the State Industrial Certification program.

The Natural Resource Assessment identified and delineated twelve (12) wetlands in the North Holladay Industrial Park Planning area. Four (4) of the wetlands are located on two parcels in the City (Map # 1N333CA, Tax Lot #'s 400 & 900) and there are eight (8) of the wetlands located on four parcels within the Urban Growth Boundary, but outside of the City (Map # 1N333B, Tax Lot #'s 100, 300 & 400 and Map # 1N333, Tax Lot # 200). The City submitted to the Oregon Department of State Lands (DSL) an application requesting review for the North Holladay Industrial Park Wetland Delineation Report on November 6, 2013. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped. Staff finds that the North Holladay Wetland Delineation

Report is in compliance with the Department of State Land requirements for mapping, delineation and determination.

The Traffic Impact Analysis (TIA) was conducted by MacKenzie and completed in September 2013. It not only looked at traffic impacts to the area based on industrial uses for approximately 58 acres of land in the North Holladay Industrial Park Planning area, but the TIA also addressed the Oregon Transportation Planning Rule (TPR) as required by the Oregon Department of Transportation. This was also done in preparation of lands that may request annexation and zone change to industrial use in the future.

Staff concludes the criterion is met.

*3. **The proposed amendment shall address the criteria identified in the Chapter 1 of the City Comprehensive Plan.***

Findings: The Planning Commission Recommendation Report, (Exhibit, "1") provides details showing compliance with the review criteria of Chapter 1 (pages 11-12) of the City Comprehensive Plan. In particular, the Planning Commission found that the proposed Comprehensive Plan Amendments will provide benefits to the property owners and the City for the future development of the North Holladay Industrial Park Planning area. The development of this area will help satisfy the need in Cornelius for industrial growth and employment.

Staff finds this criterion is met.

CONCLUSION

The goal of the North Holladay Industrial Park Planning area is to help market and promote the development of industrial use of approximately 58 vacant acres in the northwest part of the City and its Urban Growth Boundary. The City with funding help from the Metro Construction Excise Tax is preparing a State Certified Industrial Site that will be shovel-ready for development. This amendment to the Comprehensive Plan addresses two major requirements of the Site Certification Application Checklist with adoption of a Natural Resource Assessment and completion of a Traffic Impact Analysis. The assessment of the natural resources resulted in the delineation of twelve (12) wetlands. Four (4) wetlands are located on land in the City and eight (8) are located outside of the City in the Urban Growth Boundary. All of the twelve (12) wetlands shall be added to the City's Natural Resource Inventory. The four (4) wetlands located in the City shall be added to the Local Wetland Inventory Map and Natural Resource Protection Plan with analysis on their functional values. The Comprehensive Plan Amendments will specifically:

1) Amend text on Page 21 of the Comprehensive Plan to address the technical studies completed for the North Holladay Park Planning area; and
2) Add the North Holladay Industrial Park Wetland Delineation Report as an Addendum to the City's Natural Resource Inventory, Appendices L of the Comprehensive Plan; and
3) Add the Assessment of the North Holladay Wetlands <u>located in the City</u> to the Natural Resource Protection Plan; and

4) Update the Local Wetlands Inventory Map to include the wetlands that are located in the City.

DECISION

Based on the facts, findings, conclusion presented in the Planning Commission Recommendation Report and public testimony and evidence presented at the Planning Commission public hearing the City of Cornelius City Council, approves CPA-02-14 (North Holladay Natural Resource Assessment) to the City Council, subject to the following conditions:

1. The Comprehensive Plan Amendment is only applicable to the property and parcels identified in the approval,

2. Page 21 of the Comprehensive Plan shall be amended and edited as written in Exhibit A.

3. The North Holladay Industrial Park Wetland Delineation Report shall be added as Section II of the Natural Resource Inventory, Appendices L of the Comprehensive Plan (Exhibit B).

4. Add the analysis completed for Wetlands A, B, C & D that are located in the City to the Natural Resource Protection Plan (Exhibit C).

5. Amend the City of Cornelius Local Wetland Inventory Map to identify wetlands located on Map # 1N333CA, Tax Lot #' s 400 & 900 (Exhibit D).

DATE OF DECISION: June 16, 2014

Jeff Dalin, Mayor

Dick Reynolds, Community Development Director

Exhibit 1 Planning Commission Recommendation Report

EXHIBIT 1

PLANNING COMMISSION RECOMMENDATION REPORT

Amendment of the Comprehensive Plan
North Holladay Industrial Park Natural Resource Assessment
CPA-02-14

Date: May 27, 2014

To: Planning Commission
From: Community Development Department
Applicant: City of Cornelius

Project: A request for approval of a Comprehensive Plan Amendment to:

- Add the North Holladay Industrial Park Wetland Delineation Report as an Addendum to the City's Natural Resource Inventory, Appendices L of the Comprehensive Plan; and
- Add the Assessment of the North Holladay Wetlands located in the City to the Natural Resource Protection Plan; and
- Update the Local Wetlands Inventory Map; and
- Amend the Text on page 21 of the Comprehensive Plan to reference additions to the Natural Resource Inventory and Protection Plan.

Legal Description: Inside City:

Map # 1N333CA, Tax Lot # 900
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Inside Urban Growth Boundary:

Map # 1N333B, Tax Lot # 400
Map # 1N333B, Tax Lot # 300
Map # 1N333B, Tax Lot # 100
Map # 1N333, Tax Lot # 200

Process: A request for a comprehensive plan amendment may be initiated by a property owner or his authorized agent by filing an application with the Planning Department on forms prescribed by the Planning Director or designee. Before taking final action on a proposed amendment, the Planning Commission shall hold a public hearing. The Planning Commission (the Commission) shall, within forty (40) days after a hearing, recommend to the City Council (the Council) approval, disapproval, or modification of the proposed amendment. After receipt of the report on the amendment from the Commission, the Council shall hold

a public hearing on the amendment. The Council shall make its decision after information from the hearing has been received. The decision shall become effective by passage of an ordinance, resolution, or order.

Appeal Rights: As mentioned above the Planning Commission will make a recommendation to City Council. City Council will make a decision. An appeal of a decision by City Council shall be made to the State Land Use Board of Appeals (LUBA) per ORS 197.830. In order for an issue to be considered for appeal to the Land Use Board of Appeals, it must be raised before the close of the record of the Public Hearing. Such issues must be raised with sufficient specificity so as to afford the hearings body and the parties an adequate opportunity to respond to each issue. If there is no continuance granted at the hearing, any participant in the hearing may request that the record remain open for at least seven days after the hearing.

APPROVAL CRITERIA: Chapter 18.05 (Introduction and General Provisions); Chapters 18.10 & 18.15 (Application & Review Procedures); Chapter 18.130 (Comprehensive Plan).

BASIC FACTS and BACKGROUND INFORMATION

1. The City applied for and received a Metro Construction Excise Tax (CET) grant in 2012 to conduct research and analysis to prepare an application for State Industrial Site Certification of the North Holladay Industrial Park area.

2. The CET grant included funding for two technical studies one a Natural Resource Assessment and the other a Traffic Impact Analysis.

3. The Traffic Impact Analysis was conducted by MacKenzie and completed in September 2013.

4. The Natural Resource Assessment was conducted by Pacific Habitat Services and completed in July of 2013.

5. The Natural Resource Assessment identified and delineated twelve (12) wetlands in the North Holladay Industrial Park area in the City and it's abutting Urban Growth Boundary (UGB).

6. The four (4) of the wetlands are located on two parcels in the City (Map # 1N333CA, Tax Lot #'s 400 & 900).

7. There are eight (8) of the wetlands located on four parcels within the Urban Growth Boundary, but outside of the City (Map # 1N333B, Tax Lot #'s 100, 300 & 400 and Map # 1N333, Tax Lot # 200).

8. The City submitted to the Oregon Department of State Lands (DSL) an application requesting review for the North Holladay Industrial Park Wetland Delineation Report on November 6, 2013.

9. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped (Exhibit F).

10. On April 21, 2014 Staff provided the Oregon Department of Land and Conservation (LCDC) the required Notice of the proposal and the date of the first evidentiary hearing, May 27, 2014.

11. On May 2, 2014, Staff revised the required LCDC Notice changing the first evidentiary hearing to June 3, 2014.

12. Notice of the proposal was published in the local paper regarding the application and upcoming public hearing on May 14, 2014.

13. On May 14, 2014, Public Notice was mailed to property owners within 250 feet of the subject properties regarding the application and scheduled public hearings.

14. On May 14, 2014, Notice of the proposed Comprehensive Plan Amendment was provided to affected agencies.

15. As of this date, the City has received comments from:
    - Remi Taghon, property owner of land abutting the subject site, submitted of a recorded 'Assignment of Sellers Interest in Contract Sale' - Map # 1N333, Tax Lot # 200 (See Exhibit E).
    - Jennifer Finnegan, Owner/Buyer (by purchase contract) of Map # 1N333, Tax Lot # 200 and Map # 1N333B, Tax Lot # 100 submitted email comments concerning ownership and Buyers rights (Exhibit H)
    - Marie Finnegan, Sales Contract - Map # 1N333, Tax Lot # 200 (Exhibit G).

Comprehensive Plan Amendment Review Criteria

Section 18.130.010(D)((1), Approval Criteria:

1. ***The proposed plan and amendments shall conform to the requirements of the Oregon Statewide Planning Goals, and applicable administrative rules of the State Land Conservation and Development Commission.***

Findings: The proposal is to amend the City of Cornelius Comprehensive Plan to add the North Holladay Industrial Park Wetlands Report to the Natural Resource Inventory. The State Planning Goals are:

Statewide Planning Goals:

Goal 1 – Citizen Involvement

The North Holladay Industrial Park Planning project has involved not only the owners that have wetlands delineated on their property, but most of the surrounding properties in the City have also been informed about the project and some have participated in the planning effort to different degrees. The City has also provided:

- The Oregon Department of Land and Conservation (LCDC) the required Notice of the proposal and the date of the first evidentiary hearing; and
- Notice of the proposal was published in the local paper regarding the application and upcoming public hearing;
- Public Notice was mailed to property owners within 250 feet of the subject properties regarding the application and scheduled public hearings; and
- Notice of the proposed Comprehensive Plan Amendment was provided to affected agencies.

Staff finds that the City has provided citizens the opportunity to be involved in the review of this request and the planning process.

Staff finds the goal has is met.

Goal 2 – Land Use Planning

The City completed two technical analysis reports for use in planning of the North Holladay Industrial Park area. A Traffic Impact Analysis that considered industrial build-out of the area, which was completed in September 2013. The second analysis was a Natural Resource Assessment that resulted in a Wetland Delineation Report completed in July 2013. These technical studies and Comprehensive Plan 'Text' Amendment will provide implementation tools and language that be used to carry out uses of the North Holladay Industrial Park Planning Area.

Staff finds the goal is met.

Goal 3 – Agricultural Land

The subject area in the City is currently zoned as City General Industrial, M-1 and in the County as Future Development, FD-20 both are Urban zoning designations. No future agricultural uses shall be permitted.

Staff finds this goal is met.

Goal 4 – Forest Land

Staff finds the goal is not applicable.

Goal 5 – Natural Resources, Scenic and Historic Areas, and Open Spaces.

The City of Cornelius has adopted provisions within it's Comprehensive Plan and Zoning Code to protect natural resource, scenic, historical and open spaces areas, when they are identified. The City in compliance with Goal 5 adopted a Natural Resource Inventory (2002), a Natural Resource Protection Plan (2003) and a Local Wetlands Inventory Map. The proposed amendments would update the City plans that protect natural resources in compliance with State Goal 5 by:

1) Adding the North Holladay Industrial Park Wetland Delineation Report as an Addendum to the City's Natural Resource Inventory, Appendices L of the Comprehensive Plan; and
2) Adding the Assessment of the North Holladay Wetlands located in the City to the Natural Resource Protection Plan; and
3) Updating the Local Wetlands Inventory Map to include the wetlands that are located in the City.

The City submitted to the Oregon Department of State Lands (DSL) an application requesting review for the North Holladay Industrial Park Wetland Delineation Report on November 6, 2013. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped.

City staff has met with Clean Water Services staff to determine the significance of the Wetlands A, B, C & D that are located within the City of Cornelius. Both Clean Water Services and the City have determined based on the data collected and the analysis provided in the Wetland Delineation Report (Pacific Habitat Services) the Wetlands A, B, C & D are less than an acres in size and are currently not functional. Therefore, they would not be considered or designated as significant and required to be protected and/or enhanced. Future development of the tax lots where these wetlands are located would be required to comply with City, State, Federal and Clean Water Services requirements for 'fill and removal'.

Wetlands E, F, G, H, I, J, K, L are all located outside of the City, but within the Urban Growth Boundary (UGB). These wetlands as part of the North Holladay Industrial Park Wetland Delineation Report are proposed only to be added to the City's Natural Resource Inventory. Since, all of these wetlands are located in the UGB, but outside of the City there are no proposed City amendments or analysis to be added to the Natural Resource Protection Plan.

Staff finds the goal is met.

Goal 6 – Air, Water and Land Resources Quality

Wetlands A, B, C and D that are located in the City have been determined to be small, not significant and not functional, therefore they are not currently providing beneficial factors to air, water and land quality in the City. Wetlands E, F, G, H, I, J, K, L are all located outside of the City, but within the Urban Growth Boundary (UGB).

Staff finds the goal is met.

Goal 7 – Areas Subject to Natural Disasters and Hazards

Future development of land in the City shall only be possible through the City's implementation of its Development & Zoning Code. The City does identify areas of natural disasters and hazards (i.e. 100 year Floodplain). Floodplain elevations are determined and regulated.

Staff finds the goal is met.

Goal 8 – Economic Development

The City is currently working with property owners in the North Holladay Industrial Park Planning area and Business Oregon to aggregate, vacant land for designation as a State Certified Industrial Site. In preparation for this project the City and Metro Regional Government have funded a Traffic Impact Analysis, Boundary Survey and a Natural Resource Assessment in an effort to ready the North Holladay Industrial Park area for industrial and employment development.

Staff finds the goal is met.

Goal 10 – Housing

The subject land is designated for industrial and employment uses and therefore, is not inventoried or planned for housing use in the City.

Staff finds the goal is not applicable

Goal 12 – Transportation

A Traffic Impact Analysis (TIA) was conducted by MacKenzie and completed in September 2013 for the North Holladay Industrial Park Planning area. The TIA analyzed land inside the City and within the Urban Growth boundary, approximately 58 acres in size. The analysis addressed the State Transportation Planning Rule (TPR), Metro's Regional Transportation Plan (RTP) and the Cornelius Transportation System Plan (TSP) in consideration of the all the land being zoned and/or rezoned for Industrial uses for the 2025 and 2035 planning horizons.

The TIA concluded that all study intersections and segments are not anticipated to exceed the applicable mobility standards, no capacity deficiencies and no additional capital improvement needed for the planning horizons. Therefore, staff finds that specific future development will need to provide Traffic Impact Analysis that is coordinated with their proposal, but this analysis demonstrates compliance with the TPR. Staff's text amendment on page 21 of the Comprehensive Plan shall address this compliance and reference by the TIA.

Staff finds the goal is met.

Goal 13 – Energy Conservation

The retention of large, functional wetlands can provide a moderating influence of local climate and temperatures. The fact that Wetland A, B, C & D are small and not functional means they will not be providing those benefits that may influence less energy consumption by the urban environment.

Staff finds the goal is met.

Goal 14 – Urbanization

Goal 14 states that urbanization shall be based on the orderly and efficient transition from rural to urban land use. The North Holladay Industrial Park Planning project over the last two years has coordinated technical studies that will help support development of an urban environment for industrial and employment uses.

Staff finds the goal is met.

Goal 15 – Willamette River Greenway

Staff finds the goal is not applicable.

Goal 16 – Estuarine Resources

Staff finds the goal is not applicable.

Goal 17 – Coastal Shorelands

Staff finds the goal is not applicable.

Goal 18 – Beaches and Dunes

Staff finds the goal is not applicable.

Goal 19 – Ocean Resources

Staff finds the goal is not applicable.

Based upon the findings above: Staff finds with conditions this criterion is met.

2. ***The proposed amendments shall comply with all other applicable laws, rules and regulations of the state, city, and other governmental agencies having jurisdiction over land use regulation within the City.***

Findings: The City of Cornelius with funding from a Metro Construction Excise Tax (CET) grant conducted a Natural Resource Assessment and a Traffic Impact Analysis for the North Holladay Industrial Park Planning area. The purpose of these studies are to assist in the aggregation of land and prepare the area for participation in the State Industrial Certification program.

The Natural Resource Assessment identified and delineated twelve (12) wetlands in the North Holladay Industrial Park Planning area. Four (4) of the wetlands are located on two parcels in the City (Map # IN333CA, Tax Lot #'s 400 & 900) and there are eight (8) of the wetlands located on four parcels within the Urban Growth Boundary, but outside of the City (Map # 1N333B, Tax Lot #'s 100, 300 & 400 and Map # 1N333, Tax Lot # 200). The City submitted to the Oregon Department of State Lands (DSL) an application requesting review for the North Holladay Industrial Park Wetland Delineation Report on November 6, 2013. DSL issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped. Staff finds that the North Holladay Wetland Delineation Report is in compliance with the Department of State Land requirements for mapping, delineation and determination.

The Traffic Impact Analysis (TIA) was conducted by MacKenzie and completed in September 2013. It not only looked at traffic impacts to the area based on industrial uses for approximately 58 acres of land in the North Holladay Industrial Park Planning area, but the TIA also addressed the Oregon Transportation Planning Rule (TPR) as required by the Oregon Department of Transportation. This was also done in preparation of lands that may request annexation and zone change to industrial use in the future.

Based upon the findings above: Staff finds the criteria are met.

3. ***The proposed amendment shall address the criteria identified in the Chapter 1 of the City Comprehensive Plan.***

Findings: Chapter 1 (pages 11-12) of the City Comprehensive Plan lists the criteria to be used to for approval of an amendment. It states that an amendment need not satisfy all of the criteria, but it reasonably addresses some of the criteria. The criteria for the Comprehensive Plan are:

> a. *The fact that an applicant owns land for which the change is being sought is not in itself sufficient justification for the change or amendment.*

The City of Cornelius is requesting approval of the Comprehensive Plan (text) Amendments. The City has worked with property owners of land in the North Holladay Industrial Park

Planning area to receive permission for 'rights of entry' to conduct the technical studies and surveys. The property owners of three (3) parcels (Map # 1N333B, Tax Lot #'s 500 & 600 and Map # 1N333, Tax Lot # 900) have chosen not participate. Also staff has found that one of the subject parcels, Map # 1N333, Tax Lot # 200 is being purchased from a Trust. The Trust is divided into 'thirds', but the executor of the estate Marie Finnegan has submitted a copy of a Sales Contract for Tax Lot # 200 (Exhibit G) that gives the Buyers (Joseph & Jennifer Finnegan) authority and rights to manage and make decisions concerning the use of the land.

b. *The proposed change or amendment must meet a public need. Such need must be documented by appropriate facts and evidence and should extend from the statewide planning goals, Metro 2040, or the City Comprehensive Plan.*

The City is currently in need of developed industrial land to create jobs for the community and increase revenue to support public services. The amendments that are proposed with this application will help support future industrial use and development of the North Holladay area. Any future use and/or development of these lands would require natural resource assessment and traffic (TPR) analysis by adopting these amendments these existing studies become available to staff and developers for use on future projects.

c. *The amendment is necessary to conform with current state law or regional policy, which requires local compliance.*

As mentioned earlier in this report the proposed Comprehensive Plan Amendments are necessary to help grow the local economy. The City is adhering to regional and state policy/regulations in the process of adopting these amendments.

d. *The amendment is necessary to implement the adopted vision for the community, or to respond to unanticipated local circumstances.*

The overall goal of the North Holladay Industrial Park Planning project is to prepare the area for efficient industrial development and job creation in Cornelius. The adoption of these amendments would address requirements in advance for future developers of this area. It will also help in the completion of the application for State Industrial Certification.

e. *The proposed change or amendment must be in conformance with the unamended goals and policies of the Comprehensive Plan, as well as being consistent with state and regional policies.*

Staff finds that the proposed amendments are addressing the goals and policies of the Comprehensive Plan by preparing land in the City and in its Urban Growth Boundary for industrial development. The process has included direct involvement of the North Holladay area property owners. Surrounding property owners and citizens have been notified of the proposed amendments and encouraged to participate. The Wetland Delineation Report addresses the vision of the City to protect it's significant natural resources in cooperation with local, regional and state requirements. The Traffic Impact Analysis verifies compliance with the goals and

objectives of the Cornelius Transportation System Plan, Metro Regional Transportation Plan and the Oregon Transportation Planning Rule.

f. The amendment must meet the standards and requirements of the zone in which it is located, or proposed to be located.

The amendments are in compliance with the standards and requirements City zoning.

Based upon the findings above; Staff finds this criterion is met.

CONCLUSION

The goal of the North Holladay Industrial Park Planning area is to help market and promote the development of industrial use of approximately 58 vacant acres in the northwest part of the City and it's Urban Growth Boundary. The City with funding help from the Metro Construction Excise Tax is preparing a State Certified Industrial Site that will be shovel-ready for development. This amendment to the Comprehensive Plan addresses two major requirements of the Site Certification Application Checklist with adoption of a Natural Resource Assessment and completion of a Traffic Impact Analysis. The assessment of the natural resources resulted in the delineation of twelve (12) wetlands. Four (4) wetlands are located on land in the City and eight (8) are located outside of the City in the Urban Growth Boundary. All of the twelve (12) wetlands shall be added to the City's Natural Resource Inventory. The four (4) wetlands located in the City shall be added to the Local Wetland Inventory Map and Natural Resource Protection Plan with analysis on their functional values. The Comprehensive Plan Amendments will specifically:

1) Amend text on Page 21 of the Comprehensive Plan to address the technical studies completed for the North Holladay Park Planning area; and
2) Add the North Holladay Industrial Park Wetland Delineation Report as an Addendum to the City's Natural Resource Inventory, Appendices L of the Comprehensive Plan; and
3) Add the Assessment of the North Holladay Wetlands <u>located in the City</u> to the Natural Resource Protection Plan; and
4) Update the Local Wetlands Inventory Map to include the wetlands that are <u>located in the City</u>.

RECOMMENDATION

Based on the facts, findings and conclusion presented in the staff report the Community Development Director recommends that the Planning Commission recommend APPROVAL of CPA-02-14 (North Holladay Natural Resource Assessment) to the City Council, subject to the following conditions:

1. The Comprehensive Plan Amendment is only applicable to the property and parcels identified in the approval,

2. Page 21 of the Comprehensive Plan shall be amended and edited as written in Exhibit A.

3. The North Holladay Industrial Park Wetland Delineation Report shall be added as Section II of the Natural Resource Inventory, Appendices L of the Comprehensive Plan (Exhibit B).

4. Add the analysis completed for Wetlands A, B, C & D that are located in the City to the Natural Resource Protection Plan (Exhibit C).

5. Amend the City of Cornelius Local Wetland Inventory Map to identify wetlands located on Map # 1N333CA, Tax Lot #' s 400 & 900 (Exhibit D).

DATE OF RECOMMENDATION: **June 3, 2014**

Amy Scheckla-Cox, Planning Commission Chair

Dick Reynolds, Community Development Director

Exhibit A:	Comprehensive Plan, Pg. 21 New Text & Edits
Exhibit B:	North Holladay Industrial Park Wetland Delineation Report
Exhibit C:	Protection Analysis of Wetlands A, B, C & D
Exhibit D:	Amended Local Wetlands Inventory Map
Exhibit E:	Assignment of Sellers Interest in Contract Sale (RE: Map # 1N333, Tax Lot # 200)
Exhibit F:	Oregon Department of State Lands Wetland Concurrence Letter (March 24, 2014)
Exhibit G:	Contract of Sale (RE: Map # 1N333, Tax Lot # 200)
Exhibit H:	Jennifer Finnegan, Email testimony on ownership - Map # 1N333, Tax Lot # 200

Natural Resource Assessment for the North Holladay Industrial Park Project in Cornelius, Oregon

(Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lots 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lots 300, 400, 500, 600, and 700)

Prepared for

Mackenzie
Portland, OR

Prepared by

Pacific Habitat Services, Inc.
Wilsonville, Oregon
(503) 570-0800

September 10, 2013

Natural Resource Assessment for the North Holladay Industrial Park Project in Cornelius, Oregon

(Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lots 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lots 300, 400, 500, 600, and 700)

Prepared for

Prepared for

Mackenzie
1515 SE Water Ave, Suite 100
Portland, OR 97214

Prepared by

Tina Farrelly
Amy Hawkins
Shawn Eisner
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(503) 570-0800
(503) 570-0855 FAX
PHS Project Number: 5095

September 10, 2013

TABLE OF CONTENTS

1.0 INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a Natural Resource Assessment (NRA) for the North Holladay Industrial Park. The site is located near the north city limits of Cornelius, west of N 10th Street and south of Council Creek. The generalized location is shown in Figure 1. All figures are in Appendix A.

The property is owned by several individuals and entities. The City of Cornelius is looking to permit and develop additional industrial properties adjoining the existing industrial area. This NRA has been prepared to determine the location of the existing sensitive areas and vegetated corridors so that a master plan for the entire industrial area can be developed.

2.0 EXISTING CONDITIONS

The study area includes properties on both sides of the urban growth boundary north of Baseline Street/Oregon Highway 8 and west of N. 10th Avenue on the northern edge of the City of Cornelius, Oregon. The southern portion of the site is located within the City of Cornelius, and is zoned industrial. Lots 33CA 700, 800, 1800 and 1900 are developed and include two residences; a landscaping supply yard; and an undetermined industrial property. The remaining parcels within the City are currently used for agriculture, and are planted with grass seed crops. The fields are relatively flat, with very little topographic variation. Planted grasses include perennial ryegrass (*Lolium perenne*) and tall fescue (*Festuca arundinacea*). Annual bluegrass (*Poa annua*), barnyard grass (*Echinochloa crus-galli*), an unidentified mustard species (*Brassicaceae sp.*), and other weedy annual species were also present within the planted fields.

The northern portion of the site, located within unincorporated Washington County, north of Cornelius is zoned for future development. Topography is generally sloped towards Council Creek. Land in the northeastern portion of the site is currently planted with grasses and/or row crops. The northwestern portion of the site is undeveloped land covered in areas dominated by herbaceous vegetation, native and non-native shrubs, mature Douglas-fir (*Pseudotsuga menziesii*), and mixed riparian forest. In open/herbaceous areas, dominant species are pasture grasses including meadow foxtail (*Alopecurus pratensis*) and orchardgrass (*Dactylis glomerata*). Reed canarygrass (*Phalaris arundinacea*), creeping buttercup (*Ranunculus repens*), and slough sedge (*Carex obnupta*) are locally dominant, especially in low-lying areas. Woody riparian species include Oregon ash (*Fraxinus latifolia*), willow (*Salix* species), and Pacific ninebark (*Physocarpus capitatus*).

Land use adjacent to the site includes agriculture (including exclusive farm use), industrial, commercial, rural, and single-family residential.

3.0 DISCUSSION OF WATER QUALITY SENSITIVE AREAS

PHS completed field work for the natural resources assessment on June 6, 11, 13, and 19, 2013. Delineated features included the ordinary high water line (OHWL) along the southern bank of Council Creek, as well as the boundaries of twelve wetlands. The total area of wetlands within the study area boundary is 287,409 square feet (6.60 acres), as summarized in the following table.

Table 1. Total wetland and other waters within the study area

Water Feature	Length (linear feet)	Cowardin Class	HGM Class
Council Creek	4,400	R2UBH	Riverine
Wetland Feature	**Area (square feet)**	**Cowardin Class**	**HGM Class**
Wetland A	5,446	PEMEf	Flats
Wetland B	34,434	PEMEf	Flats
Wetland C	20,559	PEMEf	Flats
Wetland D	15,862	PEMEf	Flats
Wetland E	34,713	PEMC	Slope
Wetland F	29,285	PFO/EMC	Slope
Wetland G	58,285	PFO/SS/EMC	Slope
Wetland H	8,097	PEMC	Slope
Wetland I	412	PEMC	Slope
Wetland J	11,165	PEMC	Slope
Wetland K	1,382	PEMC	Slope
Wetland L	67,769	PEMC	Slope
Total Wetland Area	**287,409 (6.60 acres)**		

A detailed discussion of the delineation and its results are located in a separate delineation report: *Wetland Delineation for the North Holladay Industrial Park Project in Cornelius, Oregon*. Figures 2 through 2D of this report include the delineated boundaries of all sensitive areas within the study area.

4.0 VEGETATED CORRIDOR ASSESSMENT

4.1 Vegetated Corridor Width Determination

The regulated widths of vegetated corridors on this site are based upon the perennial nature of flow in the creek, adjacent hill slope, and/or acreage and adjacency of the wetlands. On-site sensitive areas include Council Creek and twelve wetlands (Figures 2 through 2D). The results of the vegetated corridor width determination are presented in Table 2.

Table 2. Summary of Vegetated Corridor Width Determination

On-site Sensitive Area	Streams		Wetland size (acres)		Adjacent slope (%)		Width of Vegetated Corridor (feet)
	Peren.	Inter.	<0.5	>0.5	<25	>25	
Council Creek and contiguous wetlands	✓		✓	✓	✓		**50**
Wetlands A, C and D			✓		✓		**25**
Wetland B				✓	✓		**50**

Continuous flow was observed in Council Creek on each of the delineation field dates. Slopes within the entire study area are generally less than 25 percent resulting in standard minimum widths along each sensitive area. This includes 25 foot corridors for the three isolated wetlands of less than one-half acre and 50 foot corridors for Council Creek, Wetland B, and those wetlands adjoining Council Creek.

4.2 Vegetated Corridor Plant Communities

There are four general plant communities on the site (Figures 3A through 3D). A brief description of each community is included below. Appendix B includes a table of all species documented at each sample point, along with photo documentation of each community.

Community A (79, 163 square feet) is an herbaceous community limited to the grass seed fields that include Wetlands A through D, as well as small area adjacent to Wetland H. It is composed primarily of tall fescue, though ryegrass. (*Lolium sp*.), bluegrass (*Poa sp.*), and common agricultural weeds are locally present.

Community B (106,786 square feet) includes mixed native and non-native grasslands in the hills and floodplain south of Council Creek, as well as a small area west of Wetland C. Common species include reed canarygrass, meadow foxtail, tall fescue, orchardgrass, brome (*Bromus sp.*), fowl bluegrass (*Poa palustris*) and bedstraw (*Galium aparine*). Scattered riparian trees and shrubs are present, but not common in this community.

Community C (98,870 square feet) includes riparian forested areas south of Council Creek and portions of adjoining wetlands, and Wetland H. Common tree and shrub species include big leaf maple (*Acer macrophyllum*), Oregon ash, Douglas fir, western red cedar (*Thuja plicata*), vine maple (*Acer circinatum*), Scouler's willow (*Salix scouleriana*), hazelnut (*Corylus cornuta*), and trailing blackberry (*Rubus ursinus*). The single most common herbaceous species is sword fern (*Polystichum munitum*), though other species such as fringecup (*Tellima grandiflora*), bracken fern (*Pteridium aquilinum*), and short-scale sedge (*Carex leptopoda*) are locally present.

Community D (3,935 square feet) includes a single area south of Wetland H. This community is a thicket of Himalayan blackberry (*Rubus armeniacus*) along a slope bordering the wetland.

4.3 Vegetated Corridor Plant Community Condition

The following table shows the percent composition of native species and tree canopy cover in accordance with Clean Water Services' standards. .

Table 3. Summary of Plant Communities

		Plant Communities			
Corridor Condition		**A**	**B**	**C**	**D**
Good	>80% cover of native plants, and >50% tree canopy			**60% canopy**	
Marginal	50% - 80% cover of native plants, and 26-50% tree canopy			**52% natives**	
Degraded	<50% cover of native plants, and ≤ 25% tree canopy	**0% natives 0% canopy**	**12% natives 0% canopy**		**0% natives 0% canopy**

Communities A, B, and D are in “degraded” condition due to the lack of a tree canopy and native species. Community C is in “marginal” condition. Though it retains a moderately good tree canopy, the percent cover by native species is just over 50 percent; the result of a generally open understory with few native shrubs or herbaceous species. .

4.4 Vegetated Corridor Enhancements

Though no development is planned at this time, it is understood that future development would trigger the enhancement of remaining regulated vegetated corridors. Preceding the installation of plantings, all invasive species as identified by CWS will be removed. Species observed within the study area include Himalayan blackberry, English ivy (*Hedera helix*), Scotch broom (*Cytisus scoparius*), nightshade, Canadian thistle (*Cirsium arvense*), and bull thistle (*C. vulgare*). Corridors will then be planted with native trees, shrubs, and herbaceous vegetation. Enhancement will occur concurrent with future development.

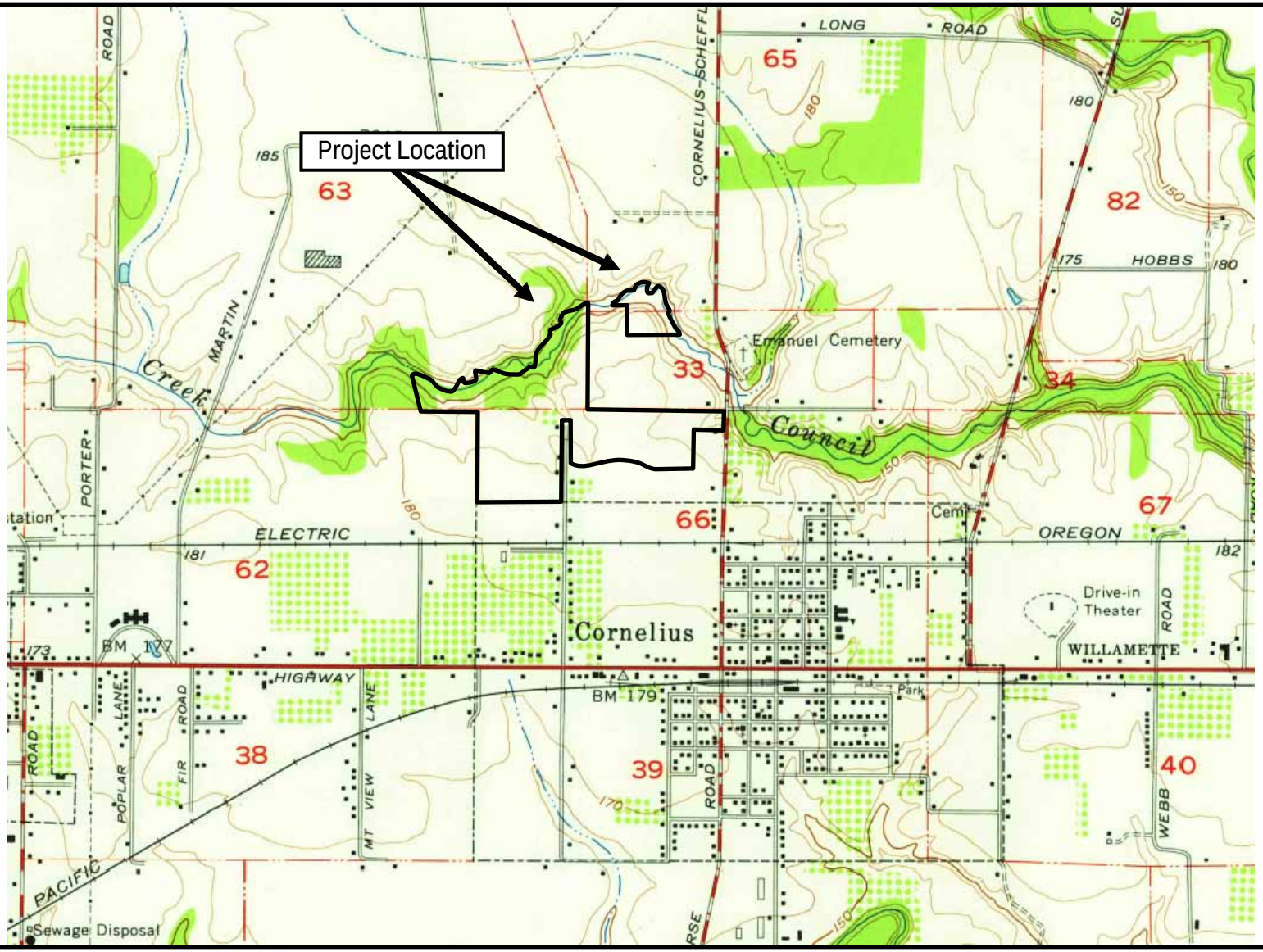
5.0 PROPOSED PROJECT

5.1 Project Overview

The purpose of this NRA is to determine and identify the location and condition of regulated vegetated corridors (VC) on the site; there is no current plan to develop any portion of the study area. The City of Cornelius is investigating development options associated with expansion of an industrial park at this location. It is understood that future development will require submittal of additional documentation for the purposes of obtaining a Service Provider Letter for any and all projects on lots with identified sensitive areas or vegetated corridors.

Appendix A

Figures



5095
7/17/13

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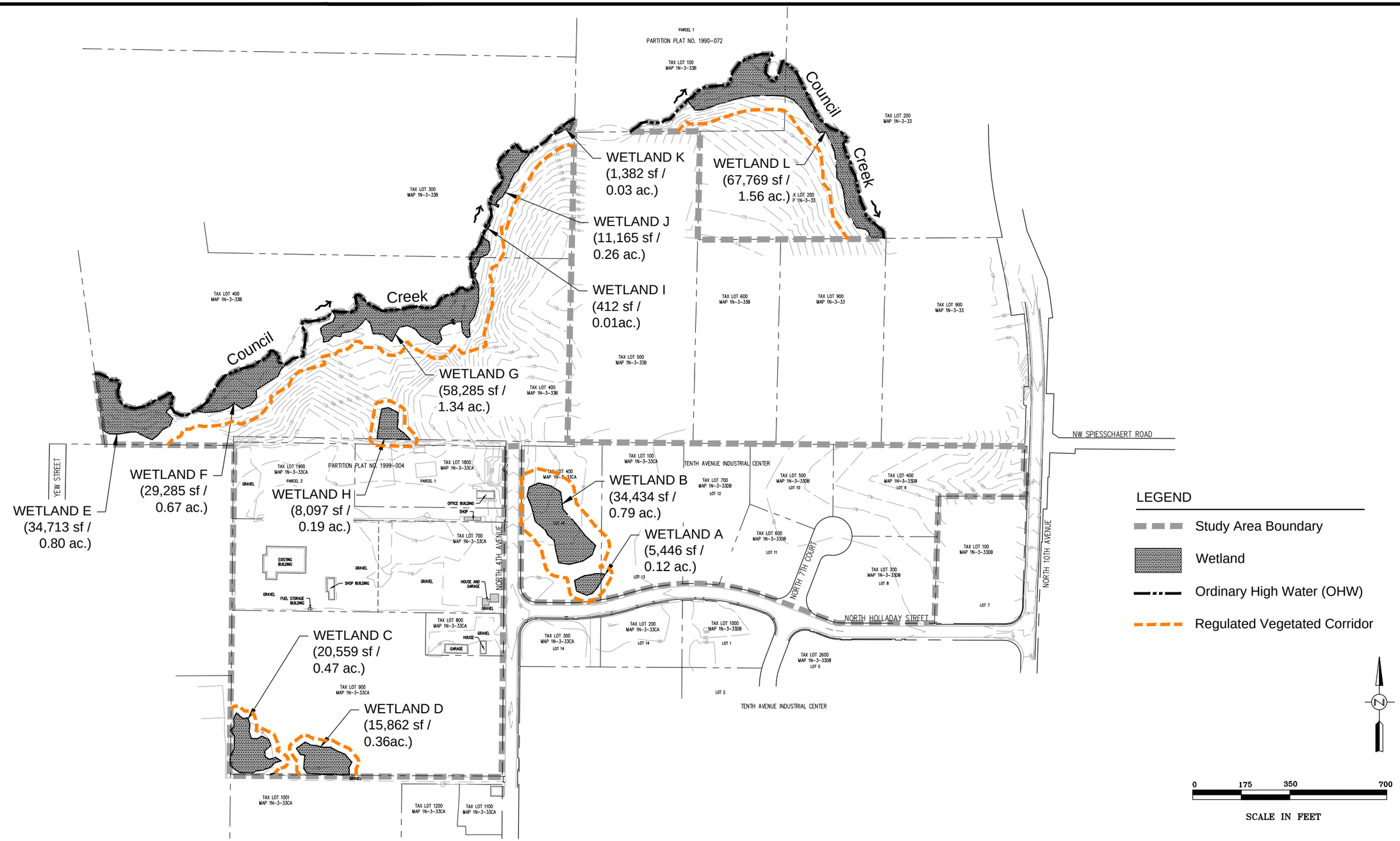
Wilsonville, OR 97070

Topography and General Location for North Holladay Industrial Park
(USGS Forest Grove, OR Quadrangle, 1956)

FIGURE
1



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Survey provided by Northwest Surveying.

Existing Conditions of Overall Study Area
North Holladay Industrial Park

FIGURE
2

07-17-13

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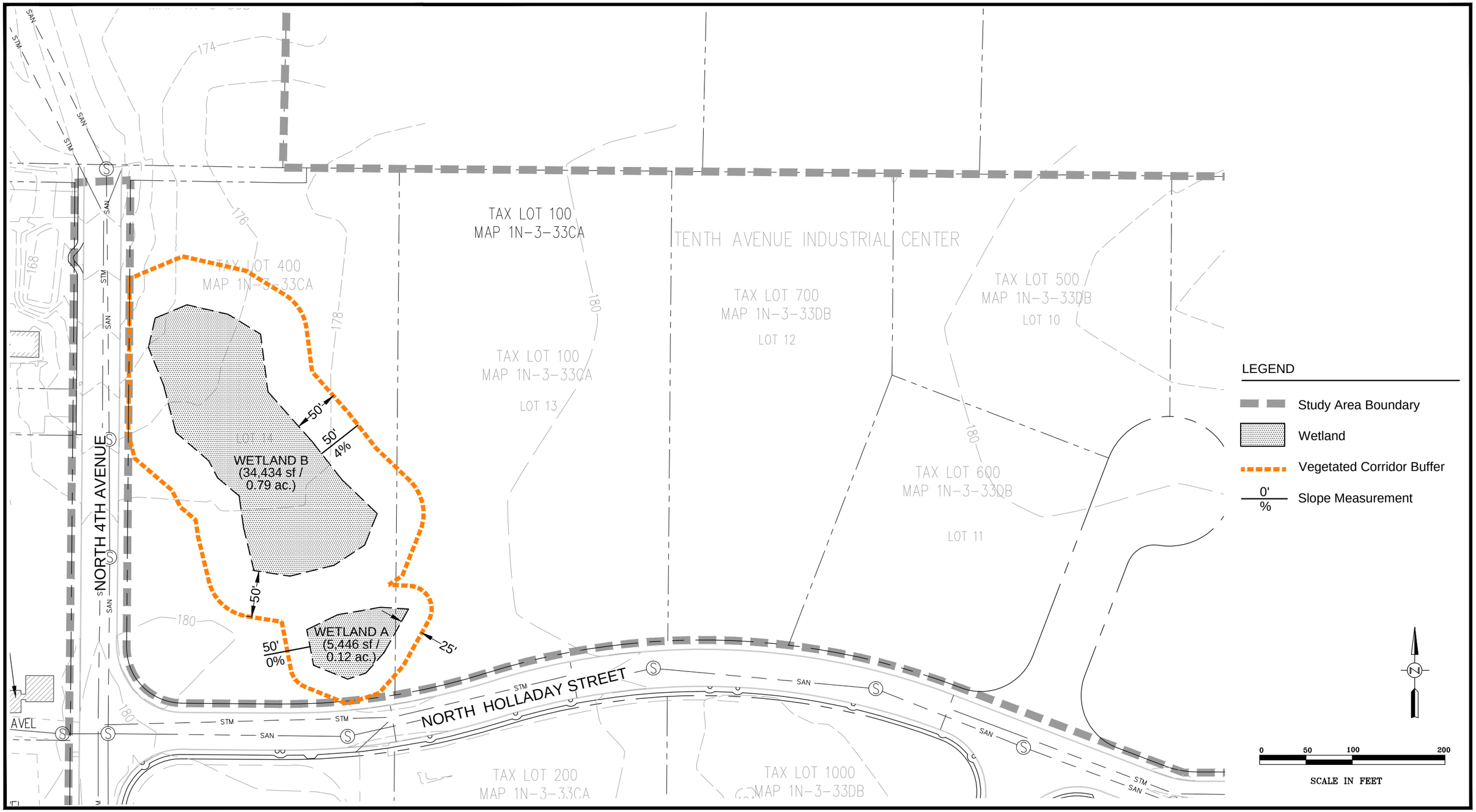

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Existing Conditions
North Holladay Industrial Park

FIGURE
2A

07-17-13

SHOP BUILDING

FUEL STORAGE BUILDING

HOUSE AND GARAGE

178

180

SAN

STM

TAX LOT 800
MAP 1N-3-33CA

HOUSE

GARAGE

NORTH 4TH AVENUE

TAX LOT 900
MAP 1N-3-33CA

25'

50'
0%

WETLAND C
(20,559 sf / 0.47 ac.)

WETLAND D
(15,862 sf / 0.36ac.)

TAX LOT 1001
MAP 1N-3-33CA

TAX LOT 1200
MAP 1N-3-33CA

TAX LOT 1200

TAX LOT 1100

LEGEND

- Study Area Boundary
- Wetland
- Vegetated Corridor Buffer
- 0' / % Slope Measurement

N

0 50 100 200

SCALE IN FEET

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Existing Conditions
North Holladay Industrial Park

FIGURE
2B

07-17-13

X:\Project Directories\5000\5095 Cornelius N Holladay Industrial Park\AutoCAD\Plot Dwgs\NRA Figures\Fig2B ExistCond.dwg, 9/12/2013 4:34:58 PM

LEGEND

- Study Area Boundary
- Wetland
- Ordinary High Water (OHW)
- Vegetated Corridor Buffer
- 0' / % — Slope Measurement

TAX LOT 400
MAP 1N-3-33B

WETLAND I
(412 sf / 0.01ac.)

WETLAND G
(58,285 sf / 1.34 ac.)

WETLAND F
(29,285 sf / 0.67 ac.)

WETLAND E
(34,713 sf / 0.80 ac.)

WETLAND H
(8,097 sf / 0.19 ac.)

Council Creek

50' 12%
50'
50' 16%
50' 4%
50' 9%
50'
50' 4%
25'

SAN
STM

0 50 100 200
SCALE IN FEET

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Existing Conditions
North Holladay Industrial Park

FIGURE
2C

07-17-13

TAX LOT 100
MAP 1N-3-33B

TAX LOT 200
MAP 1N-3-33

WETLAND L
(67,769 sf / 1.56 ac.)

WETLAND J
(11,165 sf /
0.26 ac.)

WETLAND K
(1,382 sf / 0.03 ac.)

WETLAND I
(412 sf / 0.01ac.)

Council Creek

50'
17%

50'
9%

LEGEND

- Study Area Boundary
- Wetland
- Ordinary High Water (OHW)
- Vegetated Corridor Buffer
- 0' / % — Slope Measurement

0 50 100 200
SCALE IN FEET

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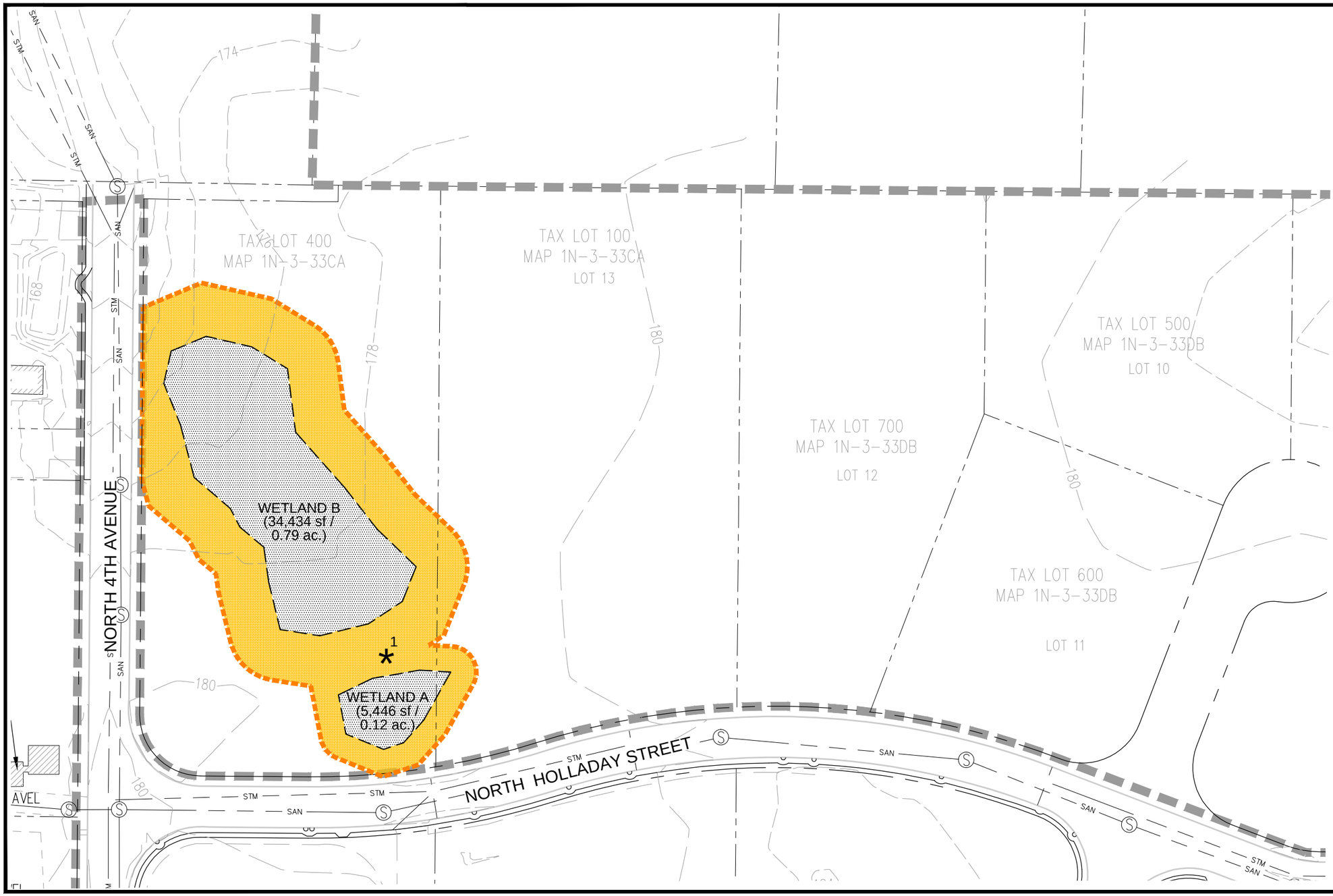
Existing Conditions
North Holladay Industrial Park

FIGURE
2D

07-17-13



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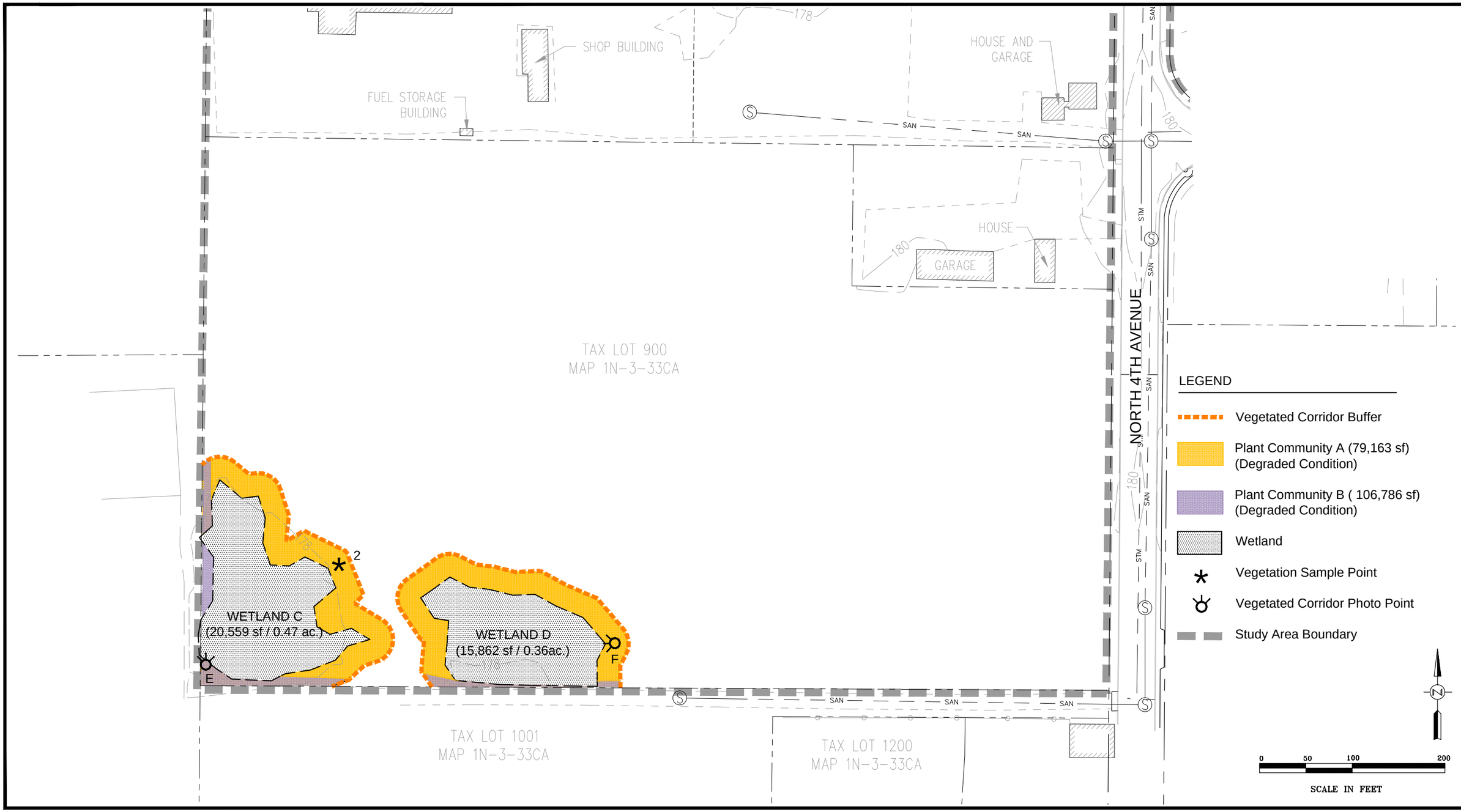
Survey provided by Northwest Surveying.

Existing Vegetated Corridor Plant Communities
North Holladay Industrial Park

FIGURE
3A

07-17-13

X:\Project Directories\5000\5095 Cornelius N Holladay Industrial Park\AutoCAD\Plot Dwgs\NRA Figures\Fig3A VCPlantCom.dwg, 9/12/2013 4:15:14 PM



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Survey provided by Northwest Surveying.

Existing Vegetated Corridor Plant Communities
North Holladay Industrial Park

FIGURE 3B

07-17-13

X:\Project Directories\5000\5095 Cornelius N Holladay Industrial Park\AutoCAD\Plot Dwgs\NRA Figures\Fig3B VCPlantCom.dwg, 9/12/2013 4:16:45 PM

LEGEND

- Vegetated Corridor Buffer
- Plant Community A (79,163 sf) (Degraded Condition)
- Plant Community B (106,786 sf) (Degraded Condition)
- Plant Community C (98,870 sf) (Marginal Condition)
- Plant Community D (3,935 sf) (Degraded Condition)
- Wetland
- Vegetation Sample Point
- Vegetated Corridor Photo Point
- Study Area Boundary

TAX LOT 400
MAP 1N-3-33B

Council Creek

WETLAND I
(412 sf / 0.01ac.)

WETLAND G
(58,285 sf / 1.34 ac.)

WETLAND F
(29,285 sf / 0.67 ac.)

WETLAND E
(34,713 sf / 0.80 ac.)

WETLAND H
(8,097 sf / 0.19 ac.)

SAN

STM

0 50 100 200

SCALE IN FEET

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Survey provided by Northwest Surveying.

Existing Vegetated Corridor Plant Communities
North Holladay Industrial Park

FIGURE 3C

07-17-13

TAX LOT 100
MAP 1N-3-33B

TAX LOT 300
MAP 1N-3-33B

TAX LOT 200
MAP 1N-3-33

TAX LOT 400
MAP 1N-3-33B

TAX LOT 600
MAP 1N-3-33B

TAX LOT 900
MAP 1N-3-33

Council Creek

WETLAND L
(67,769 sf / 1.56 ac.)

WETLAND K
(1,382 sf / 0.03 ac.)

WETLAND J
(11,165 sf /
0.26 ac.)

WETLAND I
(412 sf / 0.01ac.)

10

11

12

G

LEGEND

- Vegetated Corridor Buffer
- Plant Community B (106,786 sf) (Degraded Condition)
- Plant Community C (98,870 sf) (Marginal Condition)
- Wetland
- Vegetation Sample Point
- Vegetated Corridor Photo Point
- Study Area Boundary

0 50 100 200

SCALE IN FEET

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Survey provided by Northwest Surveying.

Existing Vegetated Corridor Plant Communities
North Holladay Industrial Park

FIGURE
3D

07-17-13

Appendix B

Vegetated Corridor Sample Points Table & Photodocumentation

North Holladay Industrial Park NRA - Vegetated Corridor Sample Sites

Plant Community	A			B						C					D
Sample Site	**1**	**2**		**3**	**5**	**6**	**11**	**12**		**4**	**7**	**8**	**10**		**9**
TREES															
Acer macrophyllum										20					
Crataegus monogyna											40				
Pseudotsuga menziesii										80			40		
Quercus garryanna												60			
SHRUBS & SAPLINGS															
Fraxinus latifolia											5				
Rosa nutkana							10								
Rubus armeniacus											1		5		**100**
Symphoricarpos albus							10				45		60		
HERBS															
Agrostis species								40							
Alopecurus pratensis				30		20		10							
Bromus hordeaceus				10				15							
Bromus tectorum												10			
Cirsium arvense							1						5		
Dactylis glomerata				40											
Equisetum arvense				10									30		
Festuca arundinacea	20	75			20	40				30		40			
Galium aparine				10		5		30		5		20			
Geum macropyllum											5				
Holcus lanatus				5	15	30		50		10					
Ranunculus repens										10	3		50		
Phalaris arundinacea							100								
Poa annua	10														
Poa palustris					70										
Poa species		20				5				20		40	20		
Polystichum munitum										20					
Taraxacum officinale		1													
Unidentified grasses											50				
			Average						Average					Average	
Canopy cover	0	0	0	0	0	0	0	0	0	100	40	60	40	60	0
% Native Species	0	0	0	19	0	5	17	21	12	64	37	47	62	52	0
% Invasive Species	0	0	0	0	0	0	83	0	17	0	1	0	5	1	100
Total cover	30	96		105	105	100	121	145		195	149	170	210		100

Photo A:

View of the southwest boundary of Wetland E (to the right) and Plant Community B (to the left). Trees in the background are offsite to the west.

Photo B:

View of the southern wetland boundary along the eastern portion of Wetland F. Left side of the photo shows conditions in Plant Community C.

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Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Both photos taken June 11, 2013.

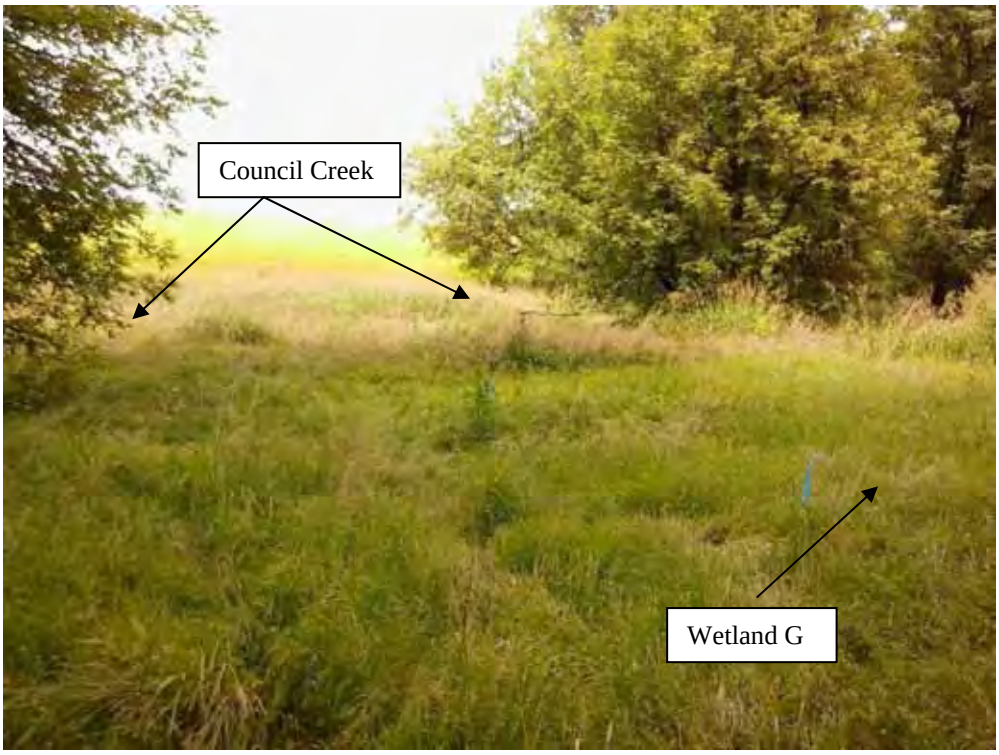

Photo C:

Looking north into a portion of Community B between Council Creek and Wetland G.

Photo D:

View to the south along the northern boundary of Wetland H. Foreground includes Plant Community C; background includes blackberry thicket that is Plant Community D.

#5095
9/10/13

Pacific Habitat Services, Inc.
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Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Photo C taken June 11, 2013. Photo D taken June 6, 2013

Photo E:

View to the north of the west side of Wetland C and the adjoining area of Plant Community B.

Photo F:

View to the west across the east end of Wetland D and adjoining Plant Community A.

#5095
9/10/13

Pacific Habitat Services, Inc.
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Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Both photos taken June 19, 2013.

Photo G:

View to the west showing the upland to wetland transition along the boundary of Wetland L. The far left of the photo shows Plant Community B upslope from the wetland.

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Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Photo G taken June 13, 2013

Appendix C

NRA Definitions and Methodology and References

NATURAL RESOURCE ASSESSMENT (NRA)

Regulatory Jurisdiction

Clean Water Services, as part of their revised Design and Construction Standards, requires that natural resource assessments be conducted for Sensitive Natural Resource Areas within their jurisdiction. Sensitive Natural Resource Areas include intermittent and perennial creeks, wetlands, springs and seeps, and associated vegetated corridors. The intent of these requirements is to "…prevent or reduce adverse impacts to the drainage system and water resources of the Tualatin River Basin" (CWS 2007). CWS requires a wetland determination/delineation and vegetated corridor assessment on projects that contain or are within 200 feet of a Sensitive Area.

Natural Resource Assessment Methodology

The Natural Resource Assessment (NRA) contains two components: a delineation of the water quality sensitive areas and a vegetated corridor evaluation. A detailed discussion of the methodology is included in Chapter 3 of CWS's revised Design and Construction Standards (CWS, 2007). A brief description of each component is included below.

Delineation of water quality sensitive areas

A delineation of all on-site water quality sensitive areas (wetland, intermittent/perennial streams, springs, and natural lakes or ponds) must be conducted. For wetlands, the required criteria and suggested methodologies of the *Corps of Engineers Wetland Delineation Manual Technical Report Y-87-1*, (Environmental Laboratory, 1987) must be used to delineate the boundaries. This manual defines wetlands as requiring indicators of hydric soils, a dominance of hydrophytic vegetation, and wetland hydrology. A determination as to whether streams are intermittent or perennial must be made. The extent of all streams, springs, and natural lakes or ponds must also be determined.

When known sensitive areas exist on adjacent properties, an attempt must be made by the applicant to obtain access to delineate the limits of these off-site features, especially if vegetated corridors associated with an off-site sensitive area may extend onto a proposed development site.

Determine Vegetated Corridor Width and Condition

The width of the vegetated corridor must be determined at least every 100 feet along the boundary of the water quality sensitive area. The corridor width can range between 15 and 200 feet and is measured horizontally from the outer edge of the water quality sensitive area. The boundaries of the sensitive areas and their vegetated corridors must be staked, surveyed, and mapped within the property and within 200 feet of the property line on a base map. The vegetated corridor width is based on the type of water resource (wetland, lake, stream), the size and nature of the water resource (acreage and/or perennial/intermittent), the size of the watershed, and the adjacent slope.

Upon identification of the regulated vegetated corridor boundary, the existing condition of the vegetated corridor must also be determined. This is accomplished by 1) identifying the plant

community types present in the vegetated corridor, 2) documenting representative sample points, 3) characterizing each plant community type, 4) determining the cover by native species, invasive species, and noxious plants, and 5) based on this information determining whether the existing vegetated corridor condition for each plant community is good, marginal, or degraded.

REFERENCES

Clean Water Services, 2007. *Design and Construction Standards (R&O 7-20)*.

US Geologic Survey, 2011. *7.5-minute topographic map, Beaverton, Oregon quadrangle*.

Wetland Delineation
for the
North Holladay Industrial Park Project
in Cornelius, Oregon

(Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lots 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lots 300, 400, 500, 600, and 700)

Prepared for

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July 19, 2013

Wetland Delineation
for the
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(Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lots 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lots 300, 400, 500, 600, and 700)

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PHS Project Number: 5095

July 19, 2013

TABLE OF CONTENTS

I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation for the proposed North Holladay Industrial Park Site in unincorporated Washington County and Cornelius, Oregon (Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lot 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lot 300, 400, 500, 600, and 700). The properties surveyed are proposed for industrial site certification. Field work for the delineation occurred on June 6, 11, 13, & 19, 2013.

This report presents the results of PHS's wetland delineation within the study area. Figures, including a map depicting the location of wetlands within the study area, are located in Appendix A. Data sheets documenting on-site conditions are provided in Appendix B. Ground-level photos of the site are located in Appendix C. A discussion of the wetland delineation methodology is provided for the client in Appendix D.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The study area includes properties on both sides of the urban growth boundary north of Baseline Street/Oregon Highway 8 and west of N. 10th Avenue on the northern edge of the City of Cornelius, Oregon. The southern portion of the site is located within the City of Cornelius, and is zoned industrial. Lots 33CA 700, 800, 1800 and 1900 are developed and include two residences; a landscaping supply yard; and an undetermined industrial property. The remaining parcels within the City are currently used for agriculture, and are planted with grass seed crops. The fields are relatively flat, with very little topographic variation. Planted grasses include perennial ryegrass (*Lolium perenne*, FAC) and tall fescue (*Festuca arundinacea*, FAC). Annual bluegrass (*Poa annua*, FAC), barnyardgrass (*Echinochloa crus-galli*, FAC), an unidentified mustard species (*Brassicaceae sp.*), and other weedy annual species were also present within the planted fields.

The northern portion of the site, located within unincorporated Washington County, north of Cornelius is zoned for future development. Topography is generally sloped towards Council Creek. Land in the northeastern portion of the site is currently planted with grasses and/or row crops. The northwestern portion of the site is undeveloped land covered in areas dominated by herbaceous vegetation, native and non-native shrubs, mature Douglas-fir (*Pseudotsuga menziesii*, FACU), and mixed riparian forest. In open/herbaceous areas, dominant species are pasture grasses including meadow foxtail (*Alopecurus pratensis*, FAC) and orchardgrass (*Dactylis glomerata*, FACU). Reed canarygrass (*Phalaris arundinacea*, FACW), creeping buttercup (*Ranunculus repens*, FAC), and slough sedge (*Carex obnupta*, OBL) are locally dominant, especially in low-lying areas. Woody riparian species include Oregon ash (*Fraxinus latifolia*, FACW), willow (*Salix* species), and Pacific ninebark (*Physocarpus capitatus*, FACW).

Land use adjacent to the site includes agriculture (including exclusive farm use), industrial, commercial, rural, and single-family residential.

B. Site Alterations

A sewer line is present within T1N, R3W, Section 33B, Tax Lot 400. It runs from approximately the northern terminus of N. 4th Avenue north-northwest towards Council Creek. Topography in the area slopes from south to north towards Council Creek. One man-hole is present along the sewer line in this area. Soils along the sewer line are disturbed and fill gravels and other imported soil materials are present. A small area (estimated at 2,500 square feet) near Council Creek along the sewer line is slightly raised relative to the surrounding landscape, with soils containing angular gravel fill. Due to its location along the sewer line, it is likely that this area of fill is associated with the installation of the utility. It is unclear when the sewer line was installed; however, an aerial photo of this area from 1998 shows that N. 4th Avenue was not paved up to the project boundary. It also appears that a potential drainage is present in the location of the sewer line, initiating within Tax Lot 400 (T1N, R3W, Section 33CA). Other air photos suggest the street and sewer line appear to have been constructed/installed by 2003. It is therefore likely that the sewer line and associated fill were placed sometime between 1998 and 2003. However, due to the poor quality of the 1998 photograph, this is uncertain.

No other areas of fill were observed within undeveloped portions of the study area.

C. Precipitation Data and Analysis

The wetland delineation was conducted on June 6, June 11, June 13, and June 19, 2013. Precipitation on the field visit dates and during the two weeks preceding the field visits is shown in Table 1.

Table 1: Precipitation recorded during and immediately preceding field visits

Date of Field Work	Precipitation on Field Date (inches)	Precipitation Previous 2 Weeks (inches)
June 6, 2013	0	2.33*
June 11, 2013	0.06	0.73*
June 13, 2013	0.33	0.53
June 19, 2013	0.03	0.76

*Recorded precipitation from the Portland weather station was used for June 6 and 11, 2013, as these dates had missing data from the Hillsboro weather station.

Precipitation for the months of May and June totaled 4.34 inches and 1.31 inches, respectively (National Weather Service, Hillsboro). May precipitation is 228% of normal and June precipitation is 90% of normal for the respective periods of record. Precipitation for the water year (October 1, 2012 through June 30, 2013) was 33.67 inches*, which is 95% of normal.

Table 2 shows the average monthly precipitation in Hillsboro for the three months prior to the site visit, as well as the upper and lower values that are considered within normal ranges for the period of record (NRCS WETS table for Hillsboro, 2002).

Table 2. Average Monthly Precipitation (NRCS WETS Table)

Month	Average**	30% chance will have		Observed Precipitation***
		Less than	More than	
March 2013	3.93	2.96	4.59	1.81
April 2013	2.46	1.65	2.94	2.33
May 2013	1.90	1.13	2.30	4.34
June 2013	1.46	0.87	1.78	1.31

****Average Monthly Rainfall (NRCS WETS Table for Hillsboro)**
*****Recorded monthly rainfall (National Weather Service) for Portland, 2013**

Precipitation for June was slightly below average, but within a normal range of variation. Recorded precipitation for March 2013 was well below average, but within in normal range. Recorded precipitation for April 2013 was below average but within a normal range. Recorded precipitation in May 2013 was well above average.

The precipitation fluctuations preceding the delineations are not expected to have affected the wetland boundaries because all boundaries within the study area are well defined by topography and/or the presence/absence of hydrologic indicators (i.e. oxidized rhizospheres).

D. Methods

PHS delineated the limits of the wetlands on the site based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y-87-1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. The delineation was conducted on June 6, June 11, June 13, and June 19, 2013.

The entire study area was investigated for the presence of wetlands or other waters. One perennial stream and twelve wetlands were delineated within the study area. In addition, four upland data plots (21, 26, 27, and 28) were recorded in areas with low geomorphic position, unusual vegetation cover patterns, and/or presence of hydrophytic vegetation.

The Ordinary High Water Line (OHWL) of the south bank of Council Creek was determined by signs of high water including water marks, sediment deposits, drift lines, and/or the transition from hydrophytic to drier vegetation. Channel banks were often diffuse, lacking clear signs of ordinary high water, the apparent result of ordinary high water lines that typically exceed bank full flows. In such areas sediment deposits and drift lines were most commonly used, with best professional judgment utilized to ascertain the difference between more recent "ordinary" conditions from evidence of larger historic events.

Wetlands A, B, C, and D are located within agricultural fields planted with grasses. Vegetation and topographic changes are very slight or absent and were not useful in identifying the boundary. Soils are disturbed through recent plow activity and often contained a mixed matrix.

These four wetlands were delineated based primarily on the presence of oxidized rhizospheres (ORs), and, to a lesser extent, the transition from hydric to non-hydric soils. Two paired data plots were deemed sufficient to document the wetland and upland conditions associated with each of these wetlands, though dozens of excavations were made to delineate the boundaries of each of these agriculture wetlands.

Wetland H is located along the southern edge of Tax Lot 400 (of Section 33B). It is found in a low topographic position and was delineated based on changes in vegetation and the presence of ORs. Two paired data points (29 and 30) were deemed sufficient to document the wetland and upland conditions associated with this wetland.

Wetlands E, F, G, I, J, K, and L are associated with Council Creek. A portion of these wetlands may be located within the OHWL of Council Creek. The most common indicators of wetland conditions included the presence of ORs, geomorphic position, dominant wetland vegetation, and hydric soils. Wetlands E and F were documented with four data points each (two sets of paired data points). Wetland G was documented by 8 data points. Data was not collected for Wetland I due to its small size, clear boundary, and similarity to nearby wetlands described in this report. Wetlands J and K were each documented with 1 set of paired data points. Wetland L was documented with 5 data points.

E. Description of all Wetlands and Other Non-Wetland Waters

Within the study area, PHS identified Council Creek and twelve wetlands.

Council Creek

Council Creek is a perennial stream that flows east through the study area and drains to Dairy Creek approximately 2.5 miles east of the site. The Cowardin class is riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) and the HGM class is Riverine. Approximately 4,400 linear feet of OHW was flagged along the southern bank of the two sections of Council Creek within the project area (photographs C, H & I).

Within the study area, Council Creek is low gradient with sluggish flow and often diffuse banks. Beaver (and perhaps nutria) activity was noted during the survey. In the northwestern portion of the site, where more riparian tree species are present, some trees had evidence of recent beaver chew and a dam was present. The southern bank of Council Creek often has a very shallow gradient, but the bank slope is steep in several locations.

Council Creek is not listed as Essential Fish Habitat by the Oregon Department of State Lands, nor does StreamNet show Council Creek as supporting resident or anadromous fish. However, Dairy Creek is mapped as Essential Fish Habitat and supports coho salmon and winter steelhead during rearing and migration.

Agricultural Wetlands: A, B, C, and D

Wetlands A, B, C, and D are located within agricultural fields. Each wetland is located entirely within the project boundary and does not extend off-site. Vegetation is dominated by pasture grasses including tall fescue and perennial ryegrass. Annual bluegrass , bindweed (*Convolvulus* species, NOL), barnyardgrass, pineappleweed (*Matricaria discoidea*, FACU), dandelion (*Taraxacum officinale*, FACU), Queen-Anne's lace (*Daucus carota*, FACU), and rat-tail six-weeks grass (*Vulpia myuros*, FACU) are common sub-dominants. As vegetation is managed within the agricultural fields, there is very little difference between vegetation in the wetland areas and vegetation in the upland areas. The only notable difference is that in some instances vegetation in the upland areas was in a slightly more advanced phonological stage than the same species in the wetland areas at the time of survey. Hydrologic indicators within these wetlands are limited to oxidized rhizospheres (ORs) as no surface water or saturation was present at the time of survey.

Wetland A

Wetland A is located in an agricultural field in the southern half of the site (T 1N, R 3W, Section 33CA, Tax Lot 400). It is approximately 5,446 square feet (0.12 acre) within the study area. The Cowardin class is palustrine, emergent, seasonally flooded/saturated, farmed (PEMEf) and the HGM class is Flats.

Vegetation in and around Wetland A (data points 33 and 34) is planted with tall fescue. Annual bluegrass is also dominant and is present within and between the rows of tall fescue. In addition, barnyardgrass, pineappleweed, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland A meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland A has a mixed matrix and does not meet any hydric soil criteria.

Wetland B

Wetland B is located north of Wetland A in an agricultural field in the southern half of the site (T 1N, R 3W, Section 33CA, Tax Lot 400). It is approximately 34,434 square feet (0.79 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland B (data points 31 and 32) is planted with tall fescue. Annual bluegrass is also dominant and is present within and between the rows of tall fescue. In addition, barnyardgrass, bindweed, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland B meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland B was gravelly (10 percent of the matrix) and does not meet any hydric soil criteria.

Wetland C

Wetland C is located in an agricultural field in the southern half of the site (T 1N, R 3W, Section 33CA, Tax Lot 900). It is approximately 20,559 square feet (0.47 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland C (data points 37 and 38; photograph K) is planted with tall fescue. Annual bluegrass and perennial ryegrass are also locally dominant and are present within and between the rows of tall fescue. In addition, pineappleweed, dandelion, Queen-Anne's lace, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland C meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland C has a mixed matrix and does not meet any hydric soil criteria.

Wetland D

Wetland D is located east of Wetland C in an agricultural field in the southern half of the site (T1N, R 3W, Section 33CA, Tax Lot 900). It is approximately 15,862 square feet (0.36 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland D (data points 39 and 40; photograph L) is planted with tall fescue. Annual bluegrass and ryegrass are also locally dominant and present within and between the rows of tall fescue. In addition, pineappleweed, rat-tail six-weeks grass, Queen-Anne's lace, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland D meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland D does not meet any hydric soil criteria.

Wetland H (Isolated)

Wetland H is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lot 400) and is approximately 8,097 square feet (0.19 acre). The Cowardin class is palustrine, emergent, seasonally flooded (PEMC), and the HGM class is Slope. The wetland is located immediately north of the property boundary at the base of a steep slope from the south and two gentle slopes from the east and west. The landscape, from the north end of the wetland, continues to slope down towards Council Creek to the north.

Vegetation within Wetland H and in the adjacent upland (data points 29 and 30; photograph J) is dominated by tall fescue and an unidentified *Poa* species (assumed FAC), with a sub-dominant component of cheatgrass (*Bromus tectorum*, NOL). Reed canarygrass is a common subdominant in the wetland area and bedstraw (*Galium aparine*, FACU) is a common sub-dominant in the upland area. Oregon ash and Douglas-fir are in the vicinity of the wetland.

Soils within Wetland H meet the definition for redox dark surface (F6) and are considered hydric. Soils in the upland area do not satisfy any of the hydric soil criteria. The presence of ORs and a low geomorphic position relative to the surrounding landscape indicates wetland hydrology is present within the wetland area. The upland sample location had a similar low geomorphic position (a secondary indicator of wetland hydrology), but lacked other indicators of wetland hydrology. The location of the paired plots for this wetland was selected on the north side because of the common low geomorphic position. Along the eastern and western wetland boundary, upland areas do not have a low geomorphic position.

Wetlands Adjacent to Council Creek: E, F, G , I, J, K, L

These wetlands are all adjacent to the south side of the Council Creek channel. A portion of the boundary of these wetlands is defined by the OHWL of Council Creek.

Wetland E

Wetland E is located in the northwestern portion of the site (T 1N, R 3W, Section 33B, Tax Lot 400), and is approximately 34,713 square feet (0.80 acre). The Cowardin class is PEMC, and the HGM class is Slope. Wetland E extends west, outside of the study area.

Vegetation within Wetland E (data points 1, and 3; photograph A) consists primarily of tall fescue, meadow foxtail, velvetgrass (*Holcus lanatus*, FAC), and orchardgrass. Reed canarygrass, an unidentified *Poa* species (assumed FAC), and bedstraw are also common in the wetland area. The surrounding upland is dominated by the same species but lacks reed canarygrass. Subdominant vegetation in the upland includes soft brome (*Bromus hordeaceus*, FACU).

Soils within Wetland E are considered hydric as they meet the definition for redox dark surface (F6). One upland sample location meets the depleted matrix (F3) hydric soil indicator. The other upland plot does not meet any of the hydric soil criteria. Oxidized rhizospheres (ORs) and geomorphic position are indicators of wetland hydrology.

Wetland F

Wetland F is located in the northwestern portion of the site (T 1N, R 3W, Section 33B, Tax Lot 400), east of Wetland E, and is approximately 29,285 square feet (0.67 acre). The Cowardin class is palustrine forested/emergent, seasonally flooded (PFO/EMC), and the HGM class is Slope. Wetland F is located entirely within the study area.

Vegetation within Wetland F (data points 5, and 7; photograph B) consists primarily of Oregon ash, creeping buttercup, an unidentified *Poa* species (assumed FAC), tall fescue, meadow foxtail, and velvetgrass. The upland areas are dominated by Douglas-fir, tall fescue, meadow foxtail, an unidentified *Agrostis* species (assumed FAC), swordfern (*Polystichum munitum*, FACU), and an unidentified *Poa* species (assumed FAC).

Soils within Wetland F are considered hydric as they meet the definition for depleted matrix (F3) or redox dark surface (F6). Upland soils do not meet any of the hydric soil criteria. One upland sample plot contains a mixed matrix. The wetland area has the "geomorphic position" wetland hydrology indicator (secondary). Wetland sample plot 5 also has ORs. Wetland sample plot 7 passes the FAC-neutral test (a secondary indicator of wetland hydrology).

Wetland G

Wetland G is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lots 300 and 400), and is approximately 58,285 square feet (1.34 acres). The Cowardin class is palustrine forested/scrub-shrub/emergent, seasonally flooded (PFO/SS/EMC), and the HGM class is Slope. Wetland G is located entirely within the study area.

Vegetation within Wetland G (data points 9, 13, 18, 19; photographs D, E and F) consists primarily of Oregon ash, creeping buttercup, an unidentified *Poa* species (assumed FAC), velvetgrass, tall fescue, meadow foxtail, and sharp dock (*Rumex conglomeratus*, FACW). A small community within the larger wetland area, documented by data plot 18, includes Oregon ash, Pacific ninebark, Douglas meadow-sweet (*Spiraea douglasii*, FACW), slough sedge (*Carex obnupta*, OBL), skunk cabbage (*Lysichiton americanus*, OBL), and tall manna grass (*Glyceria elata*, OBL). The upland areas are dominated by Oregon ash, one-seed hawthorn (*Crataegus monogyna*, FAC), snowberry (*Symphoricarpus albus*, FACU), fowl bluegrass (*Poa palustris* FAC), orchardgrass, tall fescue, meadow foxtail, velvetgrass, and an unidentified grass species. Although Himalayan blackberry (*Rubus armeniacus*, FACU) appears as a dominant species in one wetland plot and one upland plot, its overall cover is very small (less than 5 percent).

Soils within Wetland G are considered hydric as they meet the definition for redox dark surface (F6) or had a hydrogen sulfide odor (A4). One upland sample plot (data point 20) has gleyed soils in the upper 12 inches. This sample location is near a sub-surface sewer line and soils are disturbed with gravel fills and other imported/disturbed soil material. Other upland soils do not meet any of the hydric soil criteria. Primary indicators of wetland hydrology including saturation, a high water table, ORs and secondary indicators including geomorphic position and the FAC-neutral test were used to satisfy the wetland hydrology criteria.

Wetland I

Wetland I is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lot 300), and is approximately 412 square feet (0.01 acre). The Cowardin class is PEMC, and the HGM class is Slope. Wetland I is located entirely within the study area.

Wetland I is dominated by emergent, hydrophytic vegetation and has visible signs of wetland hydrology including drift deposits and water stained leaves. The wetland/non-wetland boundary was determined based on a distinct change in topography and a change in vegetation from hydrophytic to upland species. Due to its small size, clear boundary, and similarity to nearby wetlands, no data was collected for this wetland. However, undocumented soil probes confirmed the absence of hydric soil and wetland hydrology indicators in the upland area surrounding the wetland.

Wetland J

Wetland J is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lot 300), and is approximately 11,165 square feet (0.26 acre). The Cowardin class is PEMC, and the HGM class is Slope. Wetland J is located entirely within the study area.

Vegetation within Wetland J (data point 17) consists primarily of creeping buttercup and reed canarygrass. The upland areas are dominated by Himalayan blackberry, fowl bluegrass, tall fescue, and velvetgrass.

Soils within Wetland J are considered hydric as they meet the definition for depleted matrix (F3). Upland soils do not meet any of the hydric soil criteria. Geomorphic position and the FAC-neutral test (secondary indicators of wetland hydrology) were used to satisfy the wetland hydrology criteria.

Wetland K

Wetland K is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lot 300), and is approximately 1,382 square feet (0.03 acre). The Cowardin class is PEMC, and the HGM class is Slope. Wetland K is located entirely within the study area.

Vegetation within Wetland K (data point 15; photograph G) consists primarily of creeping buttercup and reed canarygrass. The upland areas are dominated by Douglas-fir, snowberry, field horsetail (*Equisetum arvense*, FAC), and creeping buttercup. An unidentified bluegrass species and Himalayan blackberry are also common in the upland area surrounding Wetland K.

Soils within Wetland K are considered hydric as they meet the definition for depleted matrix (F3). Upland soils do not meet any of the hydric soil criteria. Both the wetland and upland soil profiles had a mixed matrix. Geomorphic position and the FAC-neutral test (secondary indicators of wetland hydrology) were used to satisfy the wetland hydrology criteria.

Wetland L

Wetland L is located in the northern half of the project area (T 1N, R 3W, Section 33B, Tax Lot 100 and T 1N, R 3W, Section 33, Tax Lot 200), and is approximately 67,769 square feet (1.56 acres). The Cowardin class is PEMC, and the HGM class is Slope. Wetland L extends south beyond the study area.

Vegetation within Wetland L (data points 23, 25, and 35; photographs H and I) consists primarily of an unidentified *Agrostis* species (assumed FAC), an unidentified *Poa* species (assumed FAC), reed canarygrass, velvetgrass, garden bird's-foot trefoil (*Lotus corniculatus*, FAC), and meadow foxtail. The upland areas are dominated by snowberry, nootka rose (*Rosa nutkana*, FAC), an unidentified *Agrostis* species (assumed FAC), reed canarygrass, meadow foxtail, tall fescue, velvetgrass, and bedstraw. Although snowberry appears as a dominant species in one wetland plot, its overall cover in the wetland is very small (less than 1 percent).

Soils within Wetland L are considered hydric as they meet the definition for redox dark surface (F6). Upland soils do not meet any of the hydric soil criteria. ORs and geomorphic position were indicators of wetland hydrology.

F. Deviation from LWI or NWI

The City of Cornelius's Local Wetland Inventory (LWI) includes the southern portion of the study area. LWI maps are generated through air photo interpretation and "ground truthing" when access is granted. No wetlands are mapped within the study area; however, during the LWI "ground truthing" component, two sample data plots were collected within the study area within or very near PHS's delineated Wetlands A and C. One sample is located in T 1N, R 3W, Section 33CA, Tax Lot 400, the other is in T 1N, R 3W, Section 33CA, Tax Lot 900. Agricultural wetlands like those mapped by PHS in these tax lots are difficult to determine because vegetation is highly managed, soils are often disturbed, and hydrology may be affected by current and/or historic drainage tiles or ditches. It is important to delineate agricultural wetlands during the early growing season to maximize the potential to identify signs of wetland hydrology. The difficult nature of agricultural wetland delineation and/or the time of LWI field survey are possible reasons for the discrepancy with PHS's findings.

The NWI maps a palustrine, emergent, seasonally flooded (PEMC) wetland adjacent to Council Creek in the location of Wetland L. The NWI did not map any other wetlands within the project area.

G. Mapping Method

PHS flagged the limits of the OHWL and wetlands within the study area with blue tape flagging and/or blue pin flags. Northwest Survey then performed a professional land survey of the delineated boundaries. The accuracy of the survey and data points is sub-centimeter, with the exception of data points 19, 21, 26, 27, 28, 35 and 36, which were not surveyed. These points were placed on the wetland delineation map using field notes; their accuracy is +/- 3 feet.

H. Additional Information

Council Creek is not listed as Essential Fish Habitat by the Oregon Department of State Lands, nor does StreamNet show Council Creek as supporting resident or anadromous fish. However, Dairy Creek is both Essential Fish Habitat and supports coho salmon and winter steelhead during rearing and migration.

I. Results and Conclusions

PHS delineated the OHWL of the southern bank of one perennial stream and twelve wetlands within the study area. The total length of the OHWL is 4,400 feet. The total area of wetlands within the study area boundary is 287,409 square feet (6.60 acres), as summarized in the following table.

Table 3. Total wetland and other waters within the study area

Water Feature	Length (linear feet)	Cowardin Class	HGM Class
Council Creek	4,400	R2UBH	Riverine
Wetland Feature	**Area (square feet)**	**Cowardin Class**	**HGM Class**
Wetland A	5,446	PEMEf	Flats
Wetland B	34,434	PEMEf	Flats
Wetland C	20,559	PEMEf	Flats
Wetland D	15,862	PEMEf	Flats
Wetland E	34,713	PEMC	Slope
Wetland F	29,285	PFO/EMC	Slope
Wetland G	58,285	PFO/SS/EMC	Slope
Wetland H	8,097	PEMC	Slope
Wetland I	412	PEMC	Slope
Wetland J	11,165	PEMC	Slope
Wetland K	1,382	PEMC	Slope
Wetland L	67,769	PEMC	Slope
Total Wetland Area	**287,409 (6.60 acres)**		

J. Required Disclaimer

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

III. REFERENCES

Adamus, P.R. and D. Field. 2001 *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites. Willamette Valley Ecoregion, Riverine Impounding and Slopes/Flats Subclasses*. Oregon Division of State Lands, Salem, OR.

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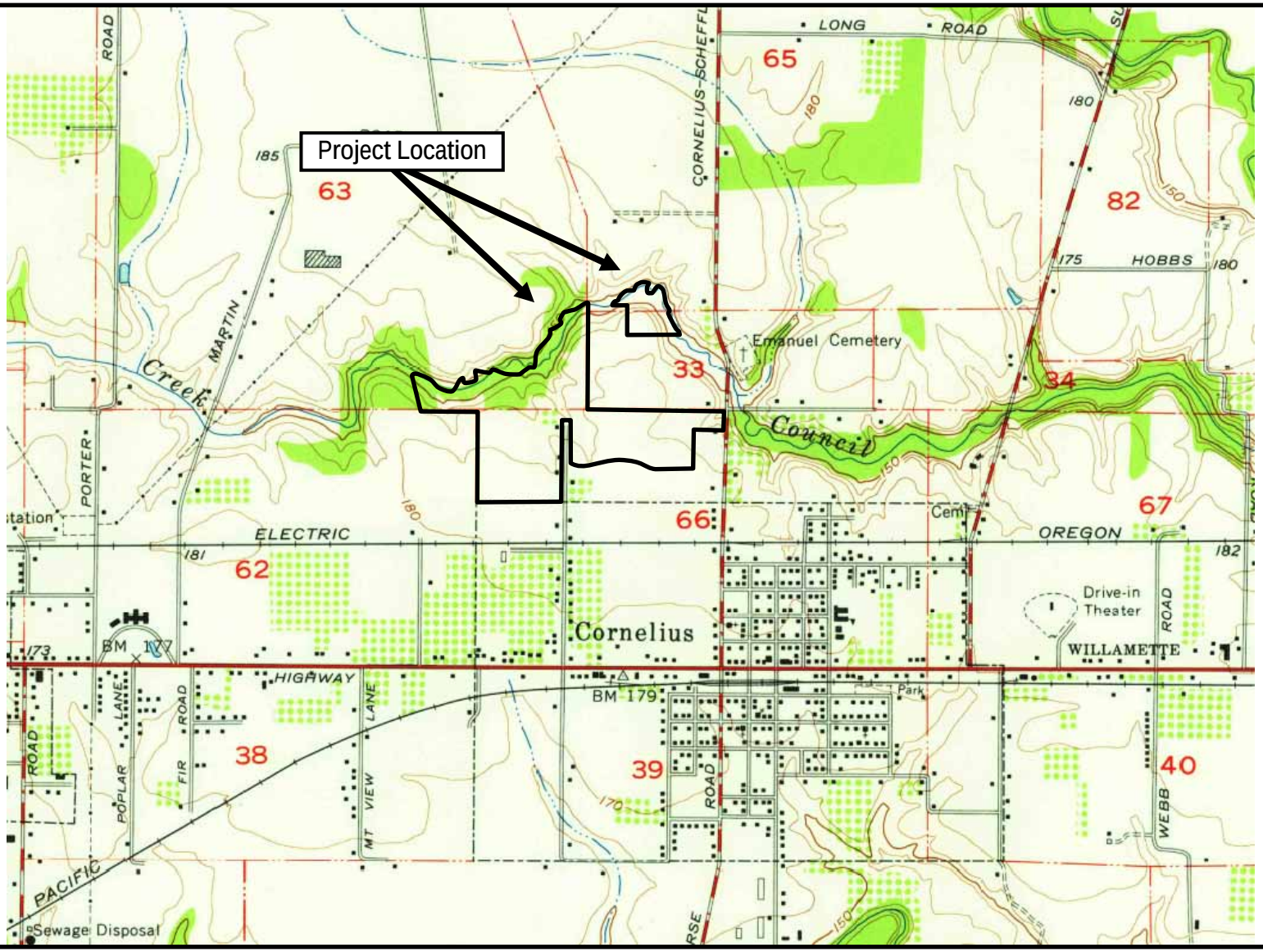
US Geologic Survey, 1956. *7.5-minute topographic map, Forest Grove, Oregon quadrangle*.

Appendix A

Figures



5095
7/17/13

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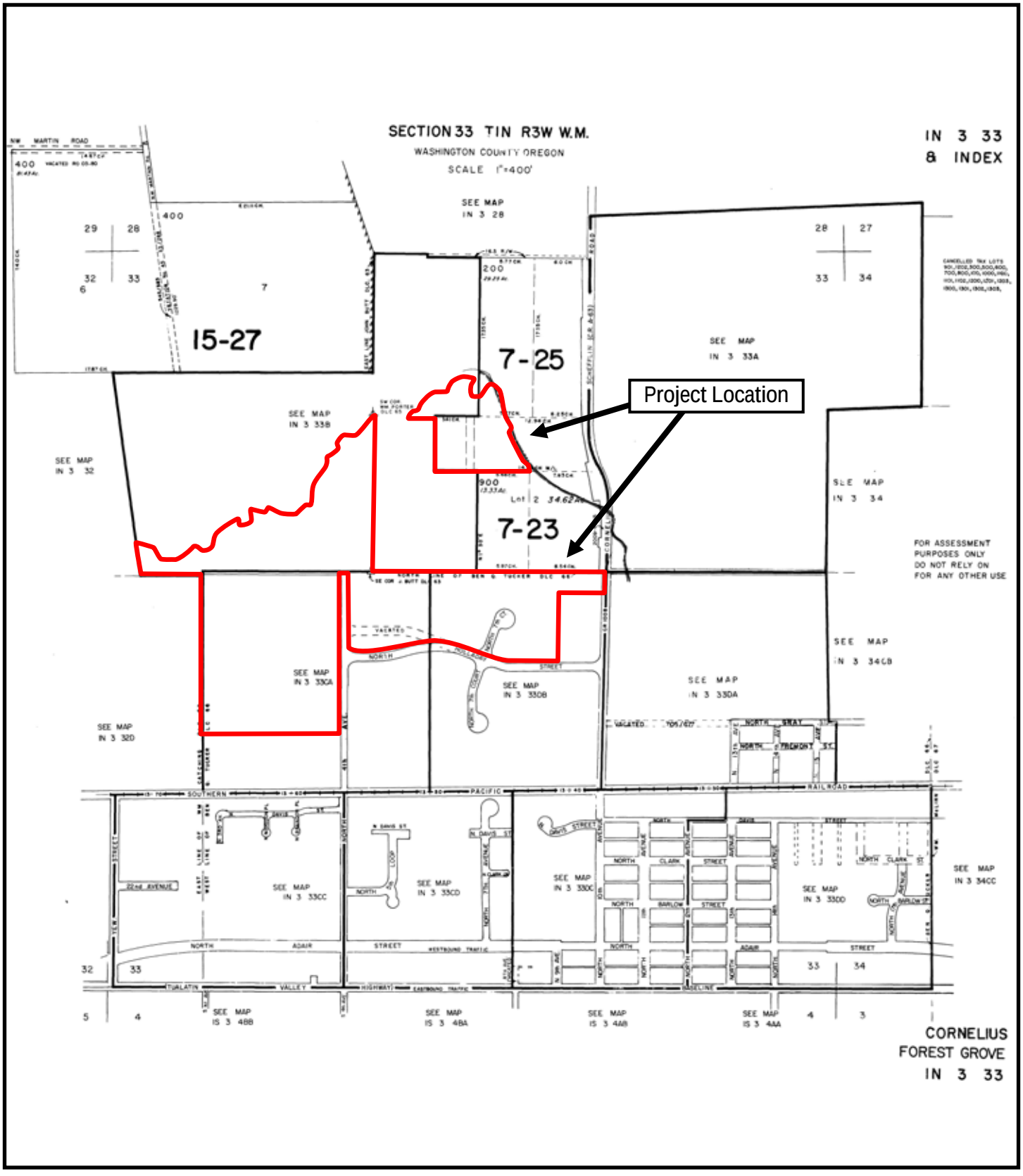
Wilsonville, OR 97070

Topography and General Location for North Holladay Industrial Park
(USGS Forest Grove, OR Quadrangle, 1956)

FIGURE
1



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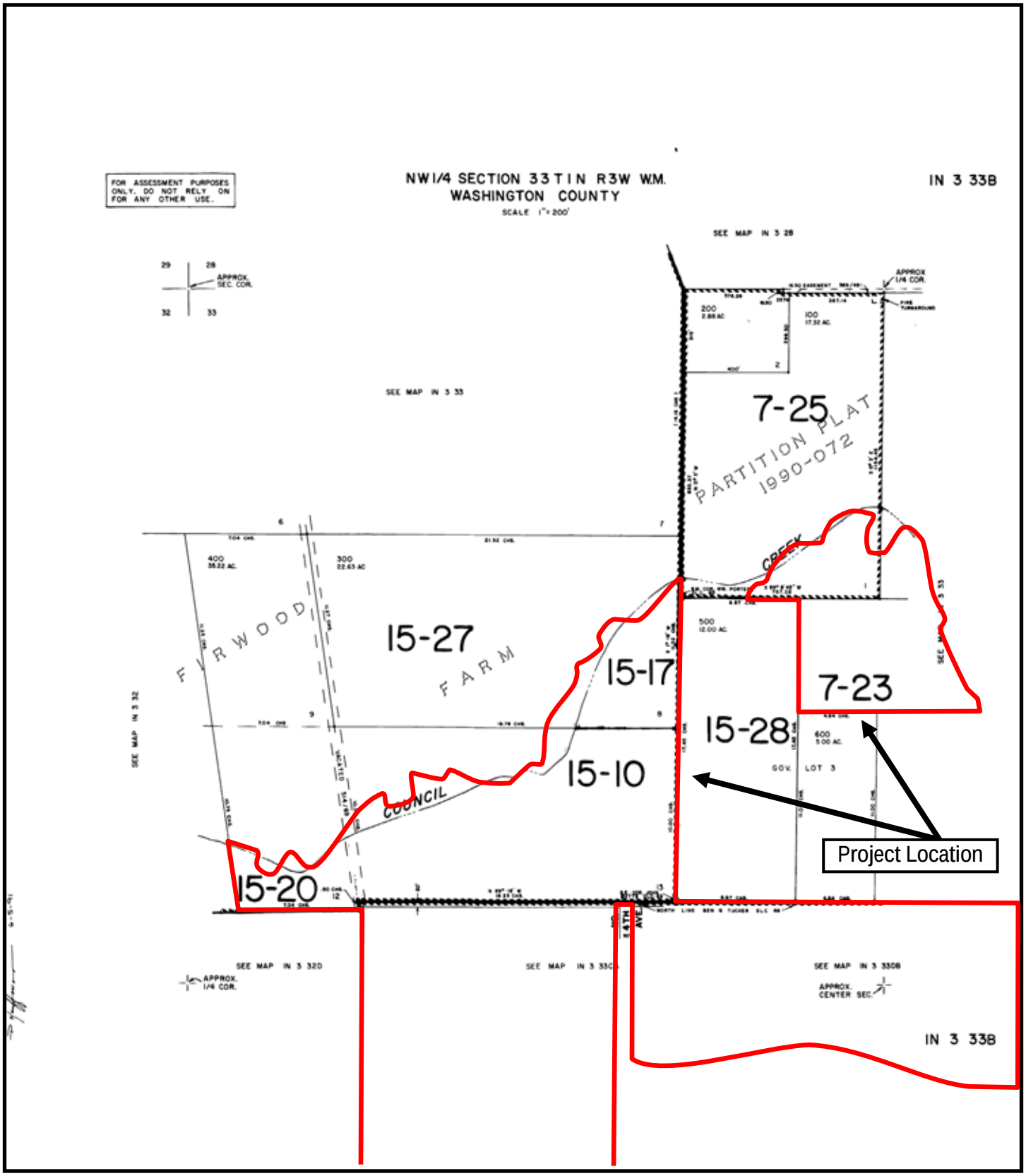
Tax lot overview map for North Holladay Industrial Park
Tax lot map 1N 3 33 (ormap.net, 1991)

FIGURE
2



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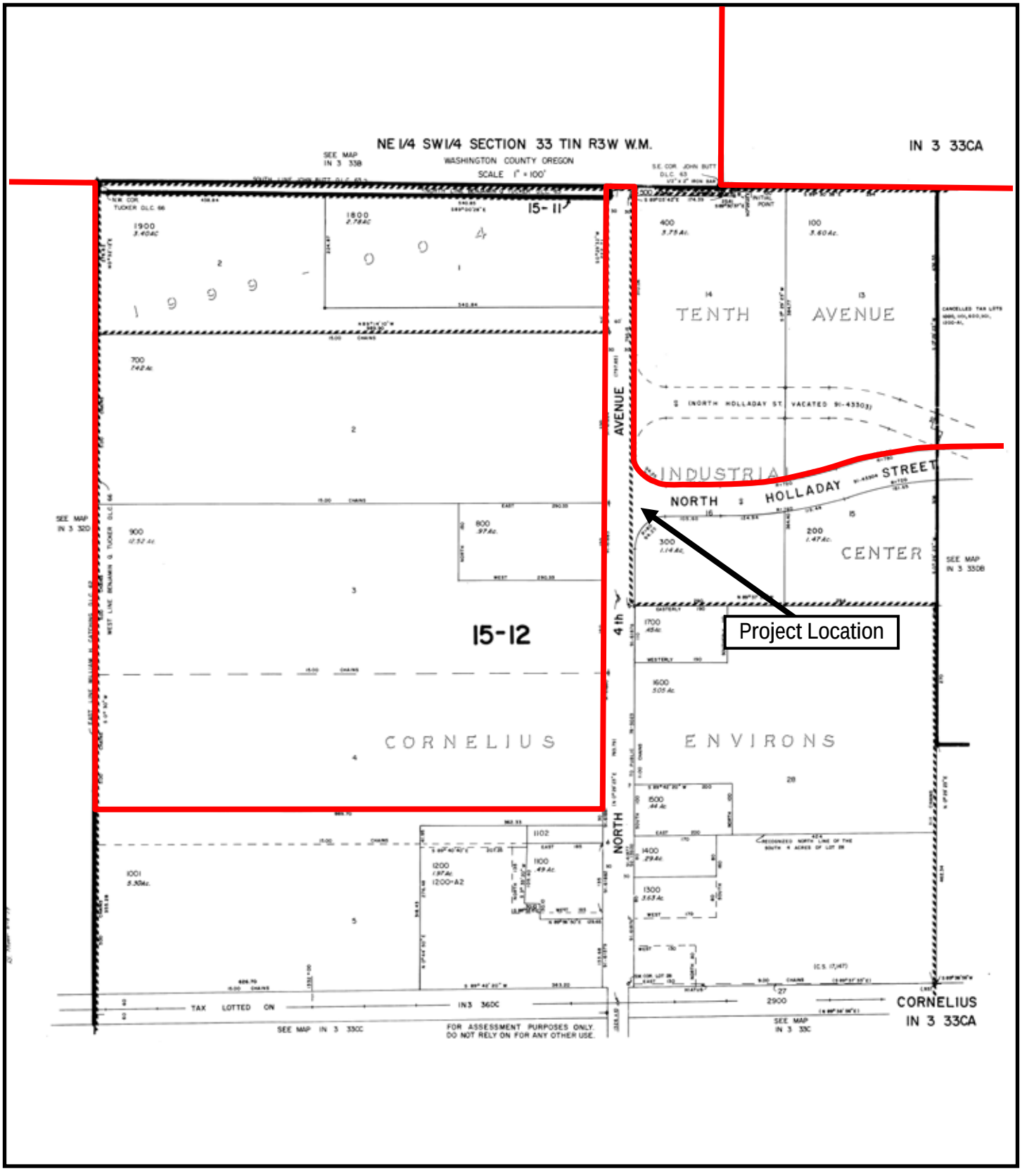
Wilsonville, OR 97070

Tax lot map for North Holladay Industrial Park
Tax lot map 1N 3 33B, portions of tax lots 100, 300 and 400
(ormap.net, 1991)

FIGURE
2A



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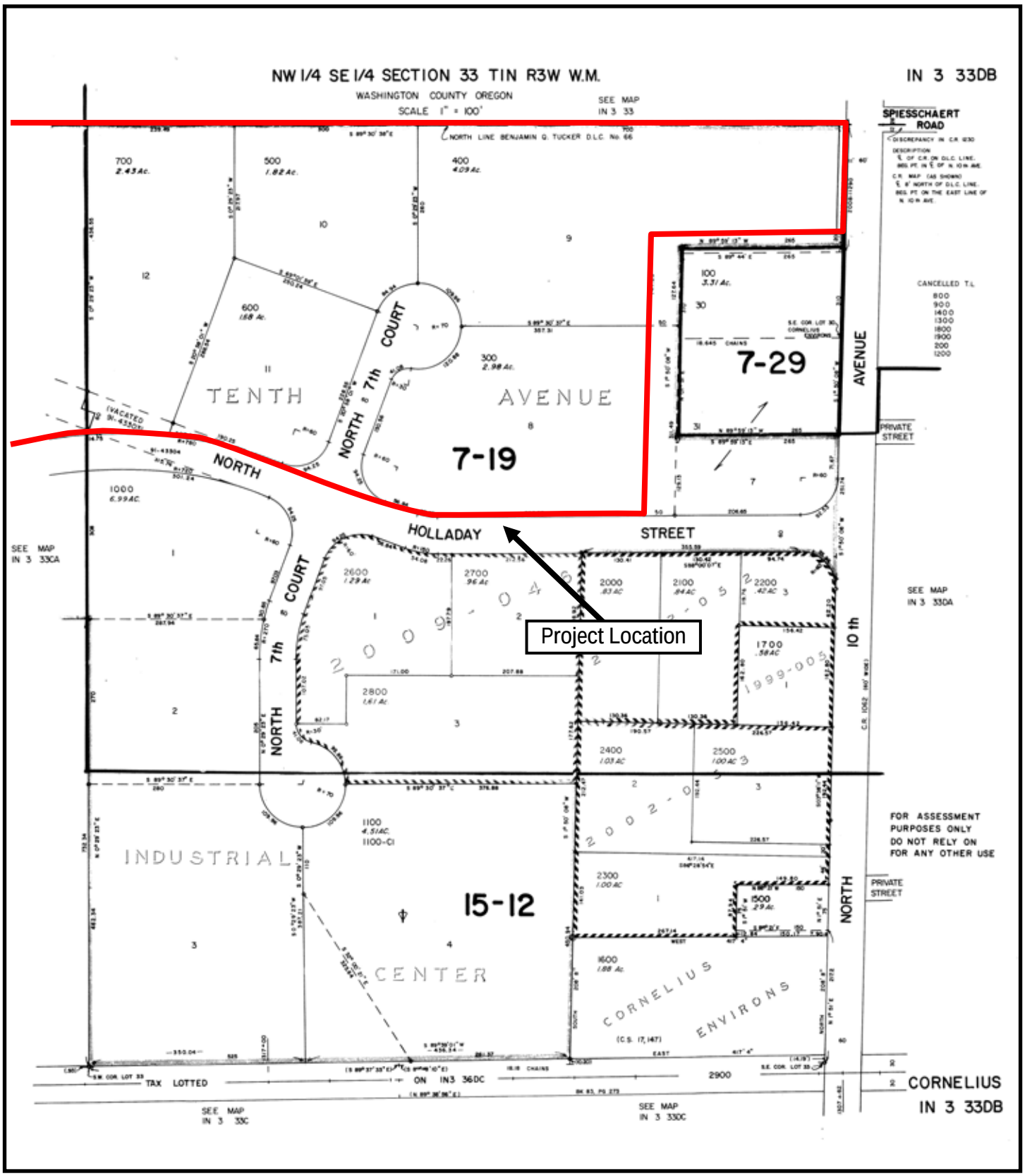
Tax lot map for North Holladay Industrial Park
Tax lot map 1N 3 33CA, tax lots 100, 400, 700, 800,900, 1800 and 1900
(ormap.net, 1974)

FIGURE
2B



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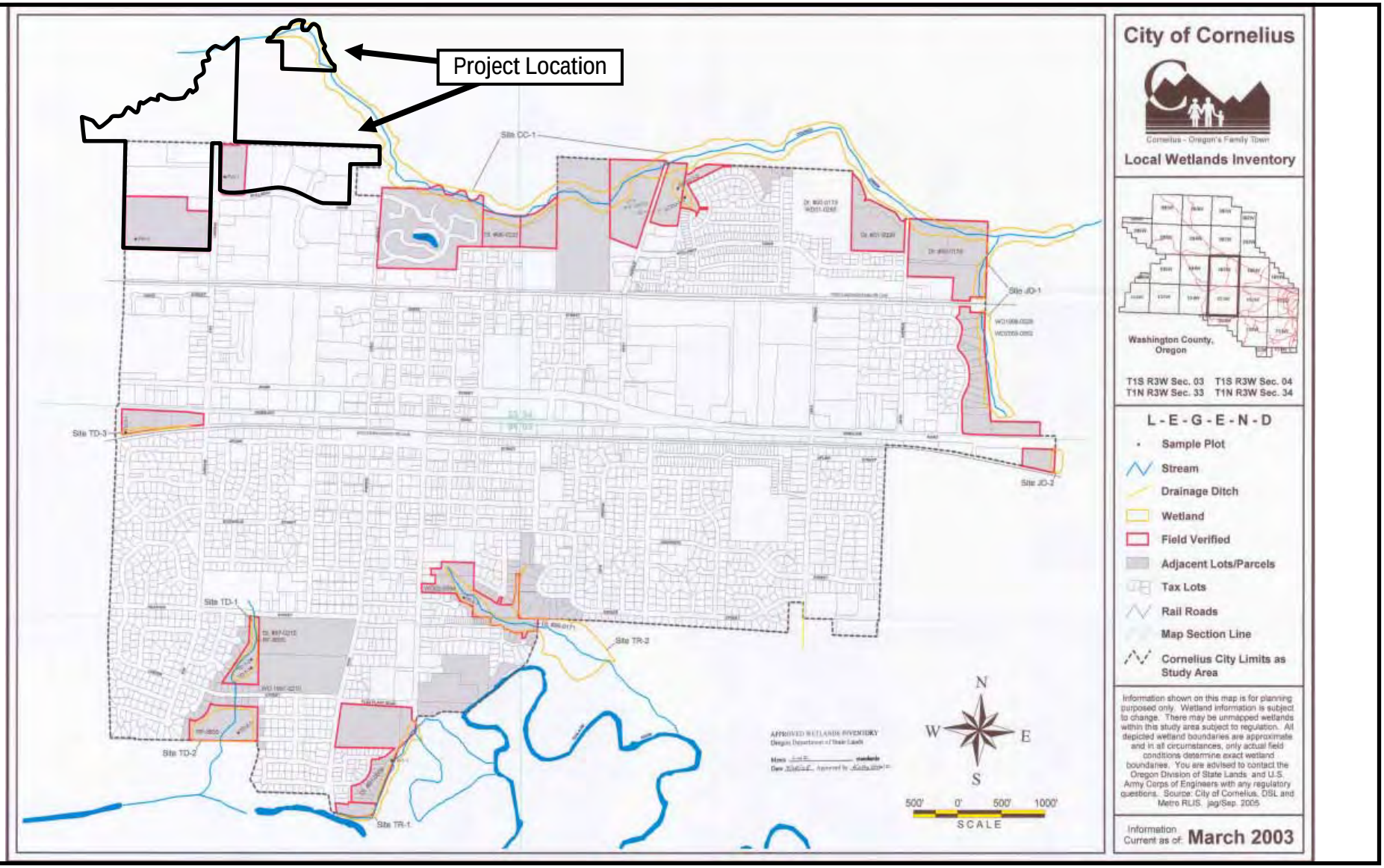
Wilsonville, OR 97070

Tax lot map for North Holladay Industrial Park
Tax lot map 1N 3 33DB, tax lots 300, 400, 500, 600 and 700 (ormap.net, 1979)

FIGURE
2C



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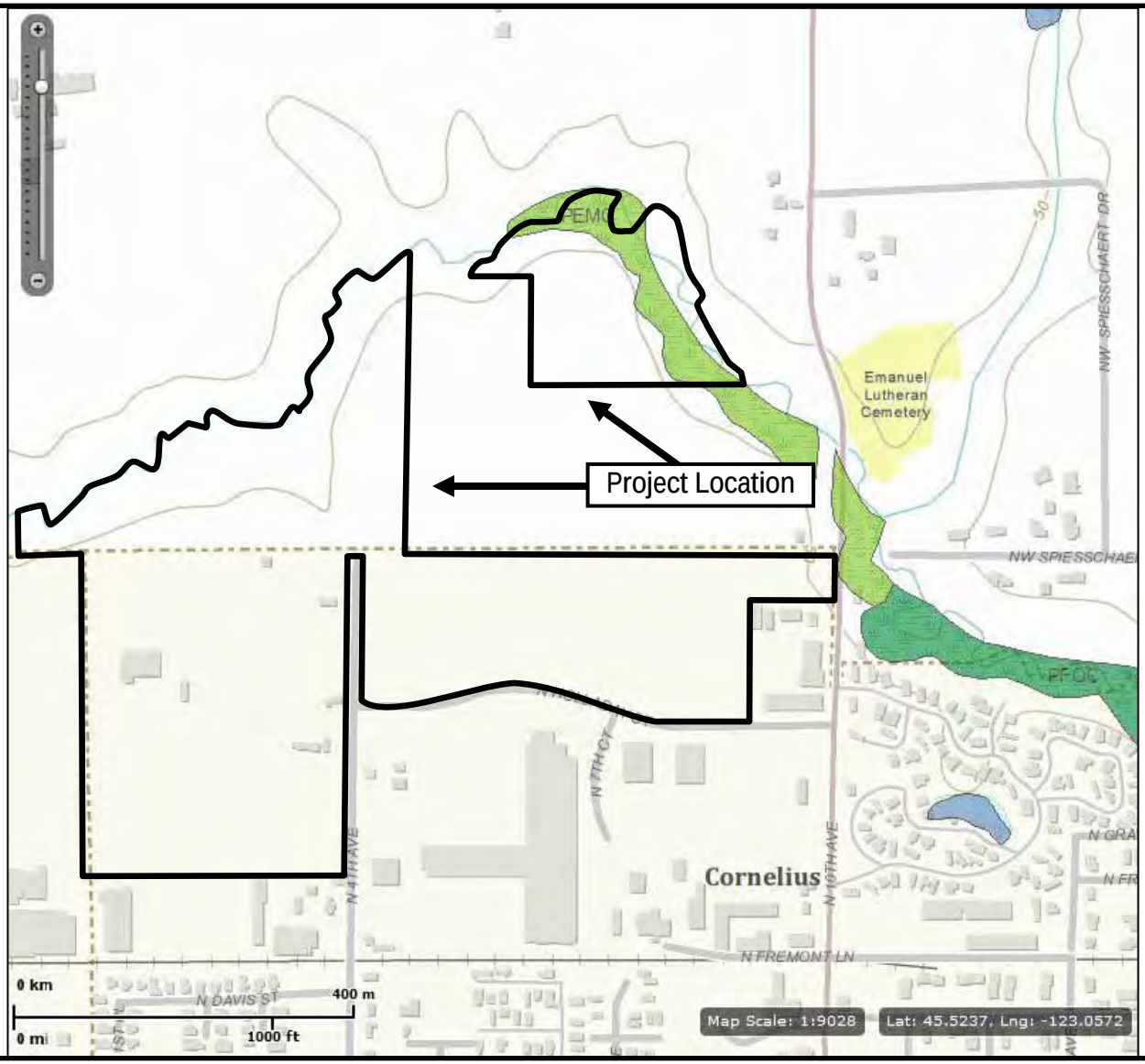
Local Wetlands Inventory map for North Holladay Industrial Park
(Oregon Department of State Lands, 2008)

FIGURE
3A



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

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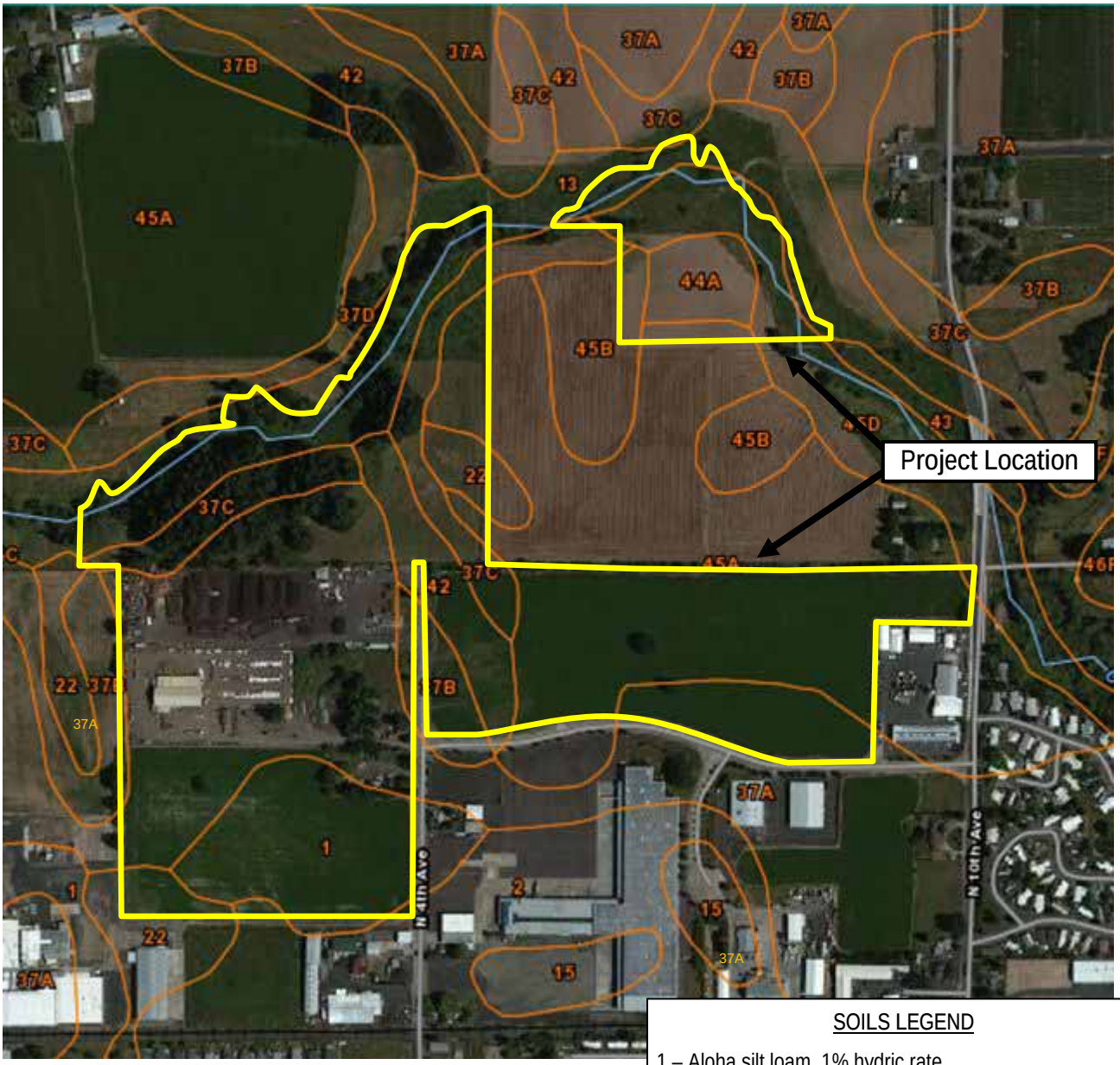
National Wetlands Inventory map for North Holladay Industrial Park
(USFWS Wetlands Mapper, 2013)

FIGURE
3B



SOILS LEGEND

1 – Aloha silt loam, 1% hydric rate
2 – Amity silt loam, 4% hydric rate
13 – Cove silty clay loam, 100% hydric rate
22 – Huberly silt loam, 93% hyric rate
37A Quatama loam, 0-3% slopes, 4% hydric rate
37B – Quatama loam, 3-7% slopes, 4% hydric rate
37C – Quatama loam, 7-12% slopes, 4% hydric rate
42 – Verboort silty clay loam, 100% hydric rate
44A – Willamette silt loam, 0-3% slopes, 3% hydric rate
45A – Woodburn silt loam, 0-3% slopes, 1% hydric rate
45B – Woodburn silt loam, 3-7% slopes, 1% hydric rate
45D – Woodburn silt loam, 12-20% slopes, 1% hydric rate

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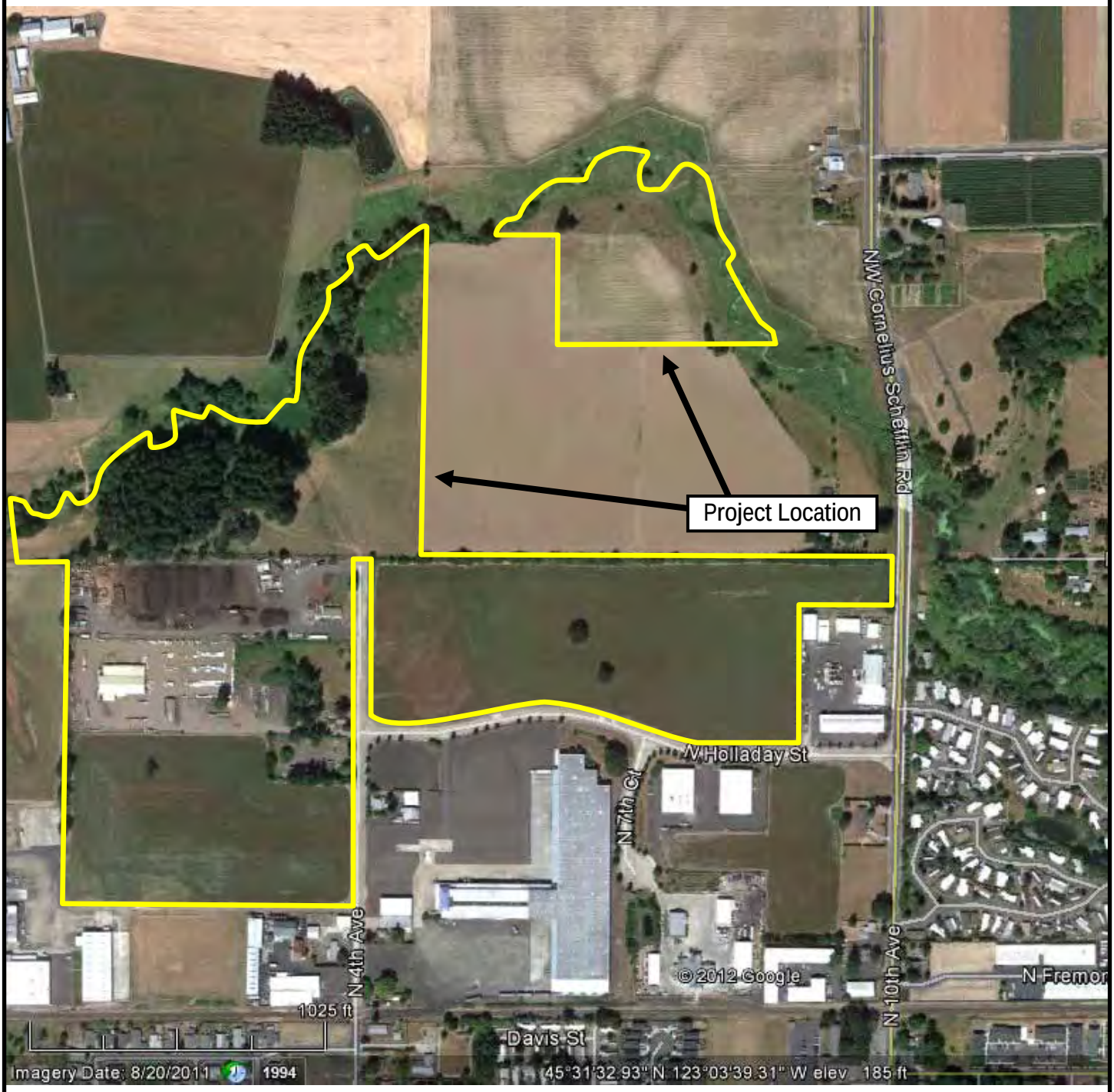
Soils map for North Holladay Industrial Park
(NRCS Web Soil Survey, 2013)

FIGURE
4



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7/17/13

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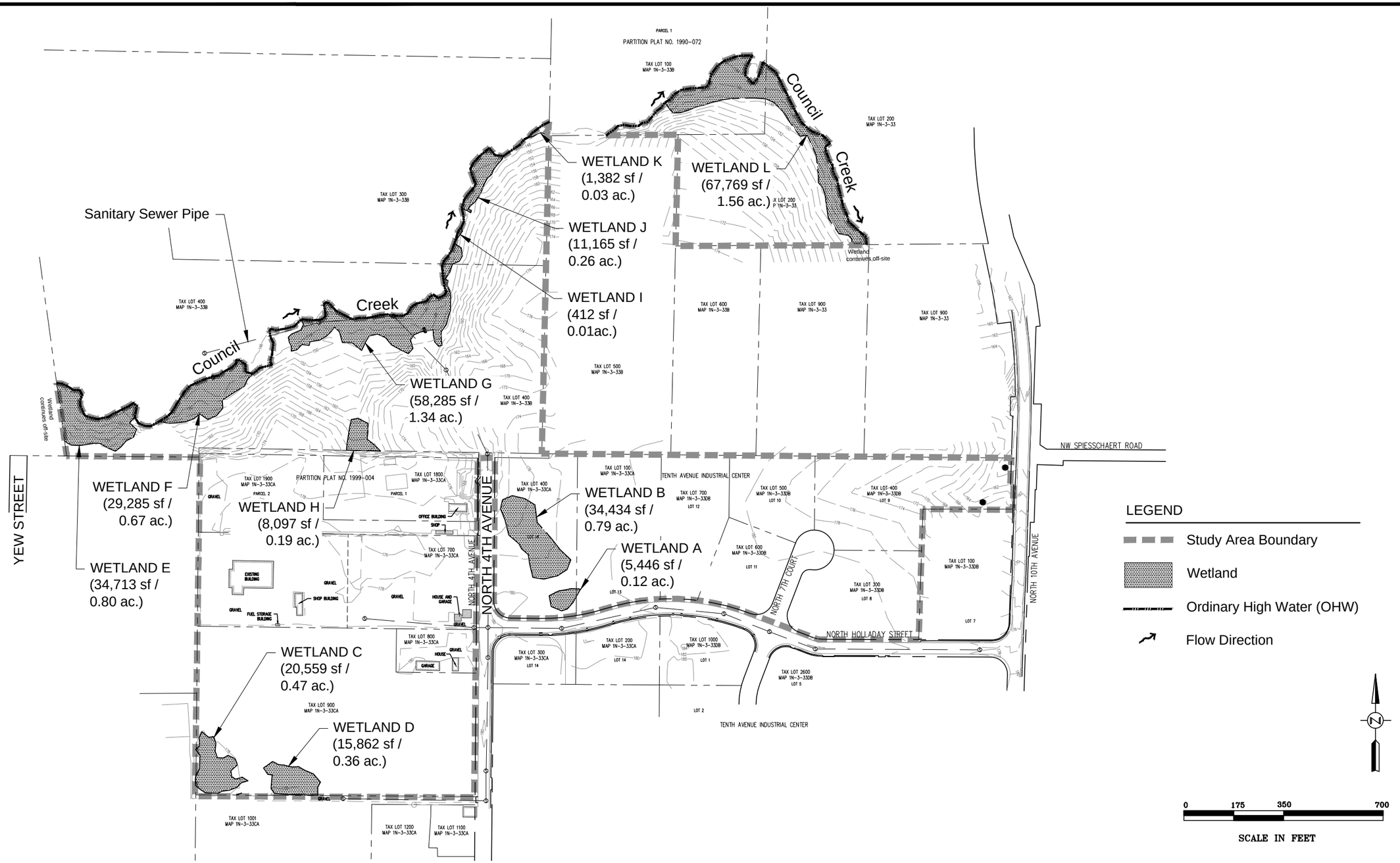
Wilsonville, OR 97070

Recent aerial photo for North Holladay Industrial Park
(Google Earth, 2011)

FIGURE
5



PHS
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Phone: (503) 570-0800 Fax (503) 570-0855

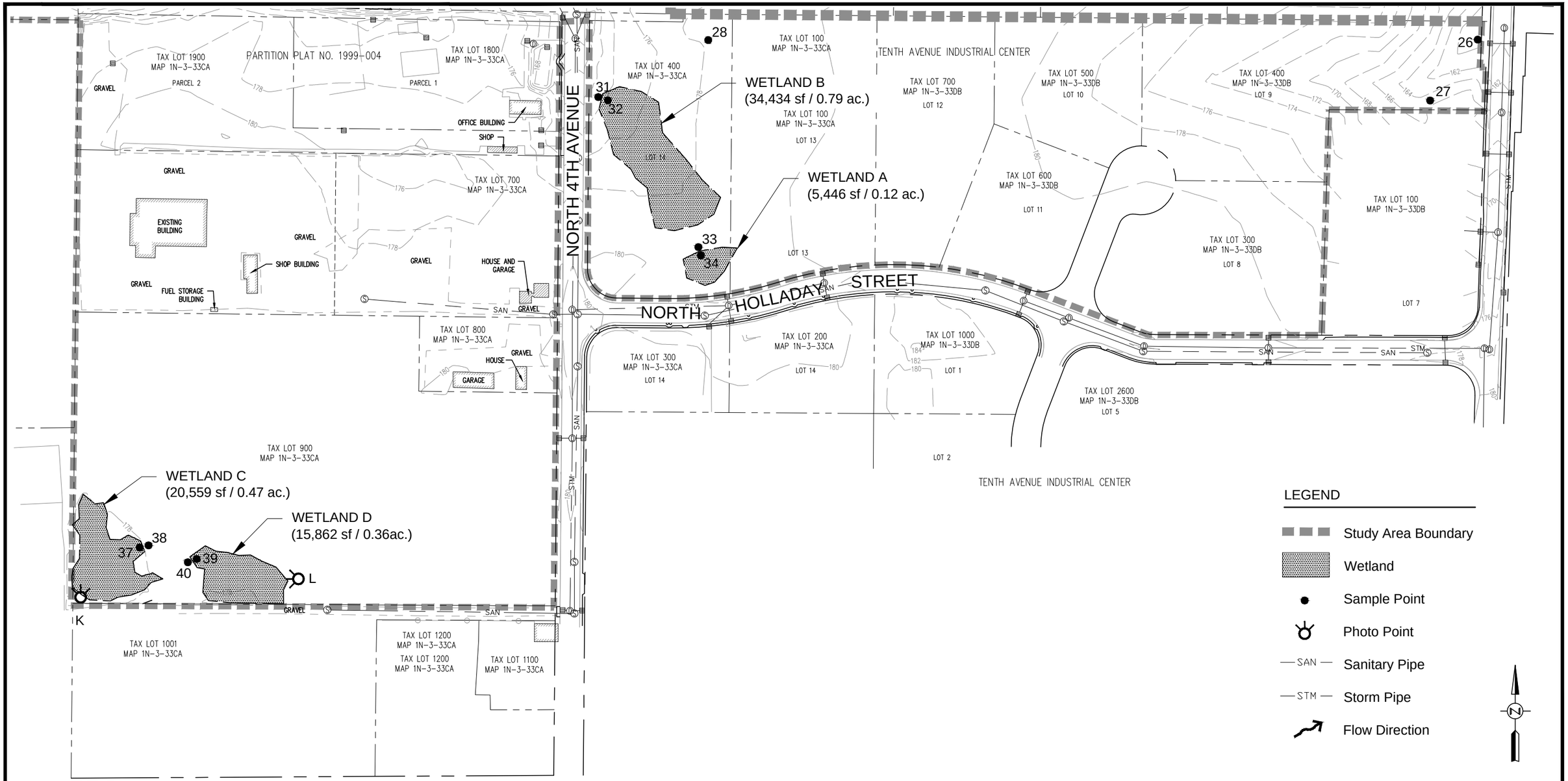
Survey provided by Northwest Surveying.
Survey accuracy is sub-centimeter.

Wetland Delineation Overall Study Area
North Holladay Industrial Park; Cornelius, Oregon

FIGURE
6

07-17-13

X:\Project Directories\5000\5095 Cornelius N Holladay Industrial Park\AutoCAD\Plot Dwgs\Fig6 WetDelOverall.dwg, 8/2/2013 10:20:33 AM



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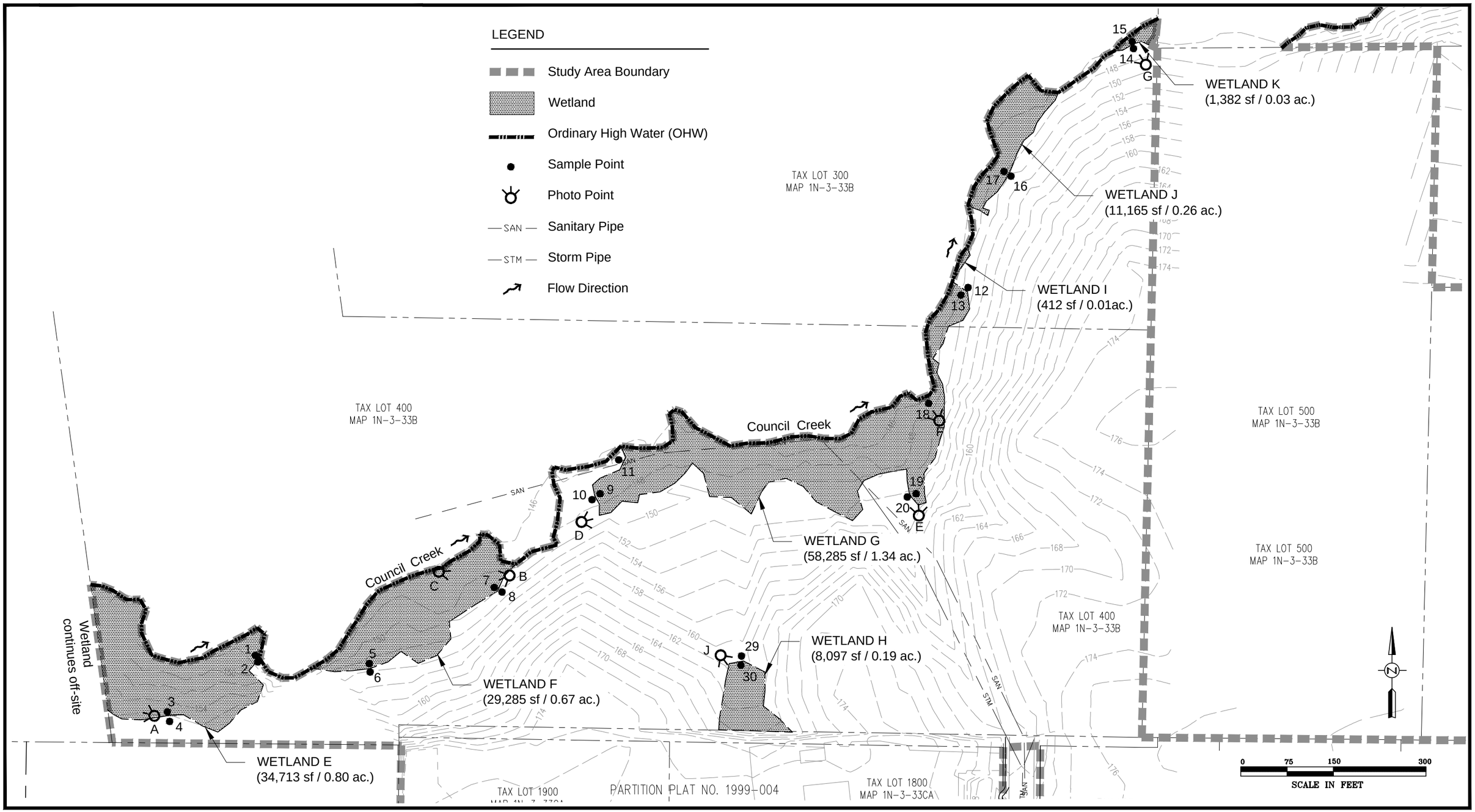
Survey provided by Northwest Surveying.
Survey and Sample point accuracy is sub-centimeter;
Accuracy for sample points 26, 27 and 28 is +/- 3 feet.

Wetland Delineation
North Holladay Industrial Park; Cornelius, Oregon

FIGURE
6A

07-17-13

X:\Project Directories\5000\5095 Cornelius N Holladay Industrial Park\AutoCAD\Plot Dwgs\Fig6A WetDel.dwg, 8/2/2013 10:19:33 AM



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Survey provided by Northwest Surveying. Survey and Sample point accuracy is sub-centimeter. Accuracy for sample point 19 is +/- 3 feet.

Wetland Delineation
North Holladay Industrial Park; Cornelius, Oregon

FIGURE
6B

07-17-13

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PARCEL 1

PARTITION PLAT NO. 1990-072

TAX LOT 100
MAP 1N-3-33B

TAX LOT 200
MAP 1N-3-33

Council Creek

WETLAND K
(1,382 sf / 0.03 ac.)

WETLAND L
(67,769 sf / 1.56 ac.)

WETLAND J
(11,165 sf / 0.26 ac.)

TAX LOT 200
MAP 1N-3-33

Wetland
continues off-site

TAX LOT 500
MAP 1N-3-33B

TAX LOT 600
MAP 1N-3-33B

TAX LOT 900
MAP 1N-3-33

TAX LOT 500
MAP 1N-3-33B

TAX LOT 900
MAP 1N-3-33

LEGEND

- Study Area Boundary
- Wetland
- Ordinary High Water (OHW)
- Sample Point
- Photo Point
- Flow direction

0 75 150 300

SCALE IN FEET

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Survey provided by Northwest Surveying. Survey and Sample point accuracy is sub-centimeter. Accuracy for sample points 21, 35 and 36 is +/- 3 feet.

Wetland Delineation
North Holladay Industrial Park; Cornelius, Oregon

FIGURE
6C

07-17-13

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Appendix B

Wetland Determination Data Sheets

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **1**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Alopecurus pratensis***	**50**	**X**	**FAC**
2 ***Festuca arundinacea***	**30**	**X**	**FAC**
3 ***Poa pratensis***	**10**		**FAC**
4 ***Phalaris arundinacea***	**10**		**FACW**
5			
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	**10YR 3/2**	**92**	**5YR 3/4**	**5**	**C**	**M**	**Silt Loam**	**Fine**
0-5			**5YR 3/4**	**3**	**C**	**PL**	**Silt Loam**	**OR's**
5-16	**10YR 3/1**	**98**	**7.5YR 3/4**	**2**	**C**	**M**	**Silt Loam**	**No OR's, fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- **X** Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **2**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes ____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: ____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: ____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**40**	**X**	**FAC**
2 ***Alopecurus pratensis***	**40**	**X**	**FAC**
3 ***Poa pratensis***	**30**	**X**	**FAC**
4			
5			
6			
7			
8			
	110	= Total Cover	
Woody Vine Stratum (plot size: ____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- ____ 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ____ 5- Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** ____

Remarks:

SOIL PHS # **5095** Sampling Point: **2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	**10YR 3/2**	**99**	**10YR 3/4**	**1**	**C**	**M**	**Silty Clay Loam**	**Fine**
7-16	**10YR 3/1**	**100**					**Silty Clay Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **3**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**50**	**X**	**FAC**
2 ***Alopecurus pratensis***	**25**	**X**	**FAC**
3 ***Dactylis glomerata***	**20**		**FACU**
4 ***Holcus lanatus***	**20**		**FAC**
5 ***Galium aparine***	**15**		**FACU**
6			
7			
8			
	130	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **3**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/2**	**40**	**10YR 3/5**	**5**	**C**	**PL**	**Silty Clay Loam**	**mixed matrix**
0-6	**10YR 3/3**	**55**					**Silty Clay Loam**	**mixed matrix**
6-16	**10YR 4/2**	**90**	**10YR 3/6**	**10**	**C**	**M**	**Silty Clay Loam**	**Medium**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)	**X**	Depleted Matrix (F3)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **4**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Dactylis glomerata***	**40**	**X**	**FACU**
2 ***Alopecurus pratensis***	**30**	**X**	**FAC**
3 ***Bromus hordeaceus***	**10**		**FACU**
4 ***Galium aparine***	**10**		**FACU**
5 ***Festuca arundinacea***	**10**		**FAC**
6 ***Holcus lanatus***	**5**		**FAC**
7			
8			
	105	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species	**0**	x 1 =	**0**
FACW species	**0**	x 2 =	**0**
FAC Species	**45**	x 3 =	**135**
FACU Species	**60**	x 4 =	**240**
UPL Species	**0**	x 5 =	**0**
Column Totals	**105** (A)		**375** (B)

Prevalence Index =B/A = **3.57**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL PHS # **5095** Sampling Point: **4**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 4/2**	**90**	**10YR 4/3**	**10**	**C**	**M**	**Silt Loam**	**Medium**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No OR's, no geomorphic position upslope from boundary.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **5**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Alopecurus pratensis***	**60**	**X**	**FAC**
2 ***Festuca arundinacea***	**30**	**X**	**FAC**
3 ***Holcus lanatus***	**25**	**X**	**FAC**
4			
5			
6			
7			
8			
	115	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **5**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	**10YR 3/2**	**82**	**10YR 4/6**	**10**	**C**	**M**	**Silt Loam**	**Fine-medium**
0-9			**10YR 2/1**	**5**				**Black concretions**
0-9			**10YR 4/6**	**3**	**C**	**PL**		**OR's**
9-16	**10YR 4/1**	**75**	**10YR 3/6**	**25**	**C**	**M**	**Silty Clay Loam**	**Medium**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- **X** Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	**X**	Depth (inches):	___
Water Table Present?	Yes	___	No	**X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes	___	No	**X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **6**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**40**	**X**	**FAC**
2 ***Alopecurus pratensis***	**40**	**X**	**FAC**
3 ***Agrostis sp.***	**30**	**X**	**(FAC)**
4 ***Cirsium arvense***	**20**		**FAC**
5			
6			
7			
8			
	130	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **6**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/2**	**96**	**7.5YR 3/4**	**1**	**C**	**M**	**Silt Loam**	**Coarse**
0-16			**10YR 3/1**	**5**				**Black concretions**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **7**

Investigator(s): **TF/AH/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Fraxinus latifolia***	**40**	**X**	**FACW**
2			
3			
4			
	40	= Total Cover	
Sapling/Shrub Stratum (plot size: ____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Poa sp.***	**50**	**X**	**(FAC)**
2 ***Ranunculus repens***	**40**	**X**	**FAC**
3 ***Festuca arundinacea***	**15**		**FAC**
4 ***Bromus hordeaceus***	**10**		**FACU**
5 ***Dactylis glomerata***	**5**		**FACU**
6 ***Epilobium ciliatum***	**1**		**FACW**
7 ***Rumex crispus***	**1**		**FAC**
8			
	122	= Total Cover	
Woody Vine Stratum (plot size: ____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **7**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/2**	**100**					**Silty Clay Loam**	
6-16	**10YR 4/2**	**90**	**10YR 5/6**	**9**	**C**	**M**	**Silty Clay Loam**	**Fine-medium**
6-16			**10YR 4/6**	**1**	**C**	**PL**		**OR's**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)	**X**	Depleted Matrix (F3)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)	**X**	Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Too few roots in 6-16 inch layer, so not enough OR's.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **8**

Investigator(s): **TF/AH/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Pseudotsuga menziesii***	**60**	**X**	**FACU**
2			
3			
4			
	60	= Total Cover	
Sapling/Shrub Stratum (plot size: ____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**30**	**X**	**FAC**
2 ***Polystichum munitum***	**20**	**X**	**FACU**
3 ***Poa sp.***	**20**	**X**	**(FAC)**
4 ***Holcus lanatus***	**10**		**FAC**
5 ***Ranunculus repens***	**10**		**FAC**
6 ***Galium aparine***	**5**		**FACU**
7 ***Moss sp.***	**5**		**(FAC)**
8			
	100	= Total Cover	
Woody Vine Stratum (plot size: ____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **4** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL **PHS #** **5095** Sampling Point: **8**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	**10YR 3/2**	**100**					**Silty Clay Loam**	
5-16	**10YR 4/2**	**60**					**Silty Clay Loam**	
5-16	**10YR 4/3**	**40**					**Silty Clay Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No** **X**

Remarks:

5-16" is A mixed matrix.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **9**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Terrace** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Poa sp.***	**40**	**X**	**(FAC)**
2 ***Ranunculus repens***	**35**	**X**	**FAC**
3 ***Holcus lanatus***	**20**	**X**	**FAC**
4 ***Alopecurus pratensis***	**5**		**FAC**
5			
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **9**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/1**	**99**	**7.5YR 4/4**	**1**	**C**	**M**	**Silty Clay Loam**	**Fine**
6-18	**10YR 3/1**	**97**	**5YR 3/4**	**1**	**C**	**M**	**Silty Clay Loam**	**Medium**
6-18			**5YR 3/4**	**2**	**C**	**PL**		**OR's**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>18**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils moist with small pockets of saturation.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **10**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes		No	**X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Poa palustris***	**70**	**X**	**FAC**
2 ***Festuca arundinacea***	**20**		**FAC**
3 ***Holcus lanatus***	**15**		**FAC**
4			
5			
6			
7			
8			
	105	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **10**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/1**	**100**					**Silt Loam**	
6-16	**10YR 3/1**	**98**	**10YR 3/3**	**2**	**C**	**M**	**Silty Clay Loam**	**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **11**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Fraxinus latifolia***	**30**	**X**	**FACW**
2			
3			
4			
	30	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Rubus armeniacus***	**2**	**X**	**FACU**
2			
3			
4			
5			
	2	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Dactylis glomerata***	**50**	**X**	**FACU**
2 ***Festuca arundinacea***	**50**	**X**	**FAC**
3 ***Poa palustris***	**30**	**X**	**FAC**
4 ***Galium aparine***	**10**		**FACU**
5			
6			
7			
8			
	140	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **60%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **11**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/2**	**100**					**Silt Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/11/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **12**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Crataegus monogyna***	**40**	**X**	**FAC**
2			
3			
4			
	40	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Symphoricarpos albus***	**45**	**X**	**FACU**
2 ***Rubus armeniacus***	**1**		**FACU**
3			
4			
5			
	46	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Unidentified grass***	**50**	**X**	**(FAC)**
2 ***Geum macrophyllum***	**5**		**FAC**
3 ***Fraxinus latifolia***	**5**		**FACW**
4 ***Ranunculus repens***	**3**		**FAC**
5 ***Rumex crispus***	**1**		**FAC**
6			
7			
8			
	64	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **30**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **12**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	**10YR 3/2**	**100**					**Silt Loam**	
8-14	**10YR 3/2**	**97**	**10YR 3/4**	**3**	**C**	**M**	**Silt Loam**	**Medium**
14+								**Shovel refusal - tree roots**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>14**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>14**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: North Holladay Industrial Park | City/County: Cornelius/Washington | Sampling Date: 6/11/2013

Applicant/Owner: City of Cornelius | State: OR | Sampling Point: 13

Investigator(s): TF/AH | Section, Township, Range: Section 33, T 1 North, R 3 West

Landform (hillslope, terrace, etc.): Slope | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR): LRR A | Lat: | Long: | Datum:

Soil Map Unit Name: Cove silty clay loam | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks)

Are vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ___ Soil ___ or Hydrology ___ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is Sampled Area within a Wetland?**	Yes X No
Wetland Hydrology Present?	Yes	X	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Fraxinus latifolia*	30	X	FACW
2			
3			
4			
	30	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Rubus armeniacus*	5	X	FACU
2			
3			
4			
5			
	5	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Poa sp.*	35	X	(FAC)
2 *Ranunculus repens*	25	X	FAC
3 *Festuca arundinacea*	20	X	FAC
4 *Carex densa*	10		OBL
5 *Phalaris arundinacea*	5		FACW
6 *Juncus tenuis*	5		FAC
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- X 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL PHS # **5095** Sampling Point: **13**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	**10YR 3/2**	**93**	**10YR 4/4**	**3**	**C**	**M**	**Silty Clay Loam**	**Fine**
0-12			**5YR 3/4**	**2**	**C**	**M**		**Medium**
0-12			**5YR 3/4**	**2**	**C**	**PL**		**OR's**
12+								**Shovel refusal**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Many large roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- **X** Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	**X**	Depth (inches):	___
Water Table Present?	Yes	___	No	**X**	Depth (inches):	**>12**
Saturation Present? (includes capillary fringe)	Yes	___	No	**X**	Depth (inches):	**>12**

Wetland Hydrology Present?

Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **14**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is Sampled Area within a Wetland?** Yes		No	**X**
Hydric Soil Present?	Yes		No	**X**				
Wetland Hydrology Present?	Yes		No	**X**				

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Pseudotsuga menziesii***	**40**	**X**	**FACU**
2			
3			
4			
	40	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Symphoricarpos albus***	**60**	**X**	**FACU**
2 ***Rubus armeniacus***	**5**		**FACU**
3			
4			
5			
	65	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Ranunculus repens***	**50**	**X**	**FAC**
2 ***Equisetum arvense***	**30**	**X**	**FAC**
3 ***Poa sp.***	**20**		**(FAC)**
4 ***Cirsium arvense***	**5**		**FAC**
5			
6			
7			
8			
	105	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **4** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species	**0**	x 1 =	**0**
FACW species	**0**	x 2 =	**0**
FAC Species	**105**	x 3 =	**315**
FACU Species	**105**	x 4 =	**420**
UPL Species	**0**	x 5 =	**0**
Column Totals	**210** (A)		**735** (B)

Prevalence Index =B/A = **3.50**

Hydrophytic Vegetation Indicators:

1- Rapid Test for Hydrophytic Vegetation

2- Dominance Test is >50%

3-Prevalence Index is ≤ 3.0[1]

4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

5- Wetland Non-Vascular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** **X**

Remarks:

SOIL **PHS #** **5095** Sampling Point: **14**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	**10YR 3/3**	**100**					**Silt Loam**	
4-16	**10YR 3/3**	**40**					**Silt Loam**	**Mixed matrix**
4-16	**10YR 3/2**	**60**					**Silt Loam**	**Mixed matrix**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **15**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes **X**	No
Hydric Soil Present?	Yes **X**	No			
Wetland Hydrology Present?	Yes **X**	No			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**60**	**X**	**FACW**
2 ***Ranunculus repens***	**40**	**X**	**FAC**
3			
4			
5			
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **15**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	**10YR 3/2**	**85**	**10YR 4/6**	**15**	**C**	**M**	**Silty Clay Loam**	**Fine**
9-18	**10YR 3/2**	**20**	**10YR 4/6**	**20**	**C**	**M**	**Silty Clay Loam**	**Fine-medium**
9-18	**10YR 4/1**	**60**					**Silty Clay Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- Shallow Aquitard (D3)
- **X** Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>18**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **16**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Rubus armeniacus***	**15**	**X**	**FACU**
2			
3			
4			
5			
	15	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**30**	**X**	**FAC**
2 ***Holcus lanatus***	**30**	**X**	**FAC**
3 ***Poa palustris***	**20**	**X**	**FAC**
4 ***Galium aparine***	**15**		**FACU**
5 ***Cirsium vulgare***	**2**		**FACU**
6 ***Rumex crispus***	**2**		**FAC**
7			
8			
	99	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **4** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **75%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL **PHS #** **5095** Sampling Point: **16**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	**10YR 3/3**	**100**					**Silt Loam**	
5-16	**10YR 3/4**	**100**					**Silt Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **17**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**80**	**X**	**FACW**
2 ***Ranunculus repens***	**40**	**X**	**FAC**
3			
4			
5			
6			
7			
8			
	120	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **17**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	**10YR 3/3**	**99**	**10YR 4/4**	**1**	**C**	**M**	**Silt Loam**	**Fine**
3-16	**10YR 4/1**	**85**	**10YR 3/6**	**15**	**C**	**M**	**Silty Clay Loam**	**Medium and coarse**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)	**X**	Depleted Matrix (F3)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
X	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)	**X**	Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes	**X**	No	Depth (inches):	**14**
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	**12**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **18**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Flat/terrace** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Cove silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes	**X**	No		

Is Sampled Area within a Wetland? Yes **X** No _____

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: **30**)			
1 ***Fraxinus latifolia***	**40**	**X**	**FACW**
2			
3			
4			
	40	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Physocarpus capitatus***	**80**	**X**	**FACW**
2 ***Spiraea douglasii***	**5**		**FACW**
3			
4			
5			
	85	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Lysichiton americanus***	**40**	**X**	**OBL**
2 ***Carex obnupta***	**15**	**X**	**OBL**
3 ***Glyceria elata***	**5**		**FACW**
4			
5			
6			
7			
8			
	60	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **4** (A)

Total Number of Dominant Species Across All Strata: **4** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **18**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 2/2**	**100**					**Silty Clay Loam**	**Some organic**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
X	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Faint mottles go away with wetting

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
X	High Water Table (A2)				
X	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)	**X**	Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):		
Water Table Present?	Yes	**X**	No	Depth (inches):	**12**	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	**8**	**Yes X No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **19**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**30**	**X**	**FACW**
2 ***Holcus lanatus***	**30**	**X**	**FAC**
3 ***Alopecurus pratensis***	**20**	**X**	**FAC**
4			
5			
6			
7			
8			
	80	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **19**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	**10YR 3/1**	**92**	**10YR 4/4**	**8**	**C**	**M**	**Silty Clay Loam**	**10-20% gravel in profile**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
X	High Water Table (A2)				
X	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)	**X**	Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):		
Water Table Present?	Yes	**X**	No	Depth (inches):	**8**	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	**Surface**	**Yes X No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **20**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**40**	**X**	**FAC**
2 ***Holcus lanatus***	**30**	**X**	**FAC**
3 ***Alopecurus pratensis***	**20**	**X**	**FAC**
4 ***Galium aparine***	**5**		**FACU**
5 ***Poa sp.***	**5**		**(FAC)**
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL **PHS #** **5095** Sampling Point: **20**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	**10YR 3/2**	**90**					**Silt Loam**	**10% gravels**
8-16	**Gley1 4/N**	**70**	**10YR 4/4**	**5**	**C**	**M**	**Clay**	**15% gravels**
8-16	**10YR 3/2**	**10**					**Silty Clay Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)	**X**	Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes **X** **No**

Remarks:

Fill/disturbance from underground utility.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No OR's, slightly upslope from WL lobe.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **21**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Quatama silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**100**	**X**	**FACW**
2 ***Galium aparine***	**5**		**FACU**
3 ***Equisetum arvense***	**2**		**FAC**
4			
5			
6			
7			
8			
	107	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL **PHS #** **5095** Sampling Point: **21**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**7.5YR 3/2**	**98**	**7.5YR 3/3**	**2**	**C**	**M**	**Silt Loam**	**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- **X** Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **22**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Quatama silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Symphoricarpos albus***	**10**	**X**	**FACU**
2 ***Rosa nutkana***	**10**	**X**	**FAC**
3			
4			
5			
	20	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**100**	**X**	**FACW**
2 ***Cirsium arvense***	**1**		**FAC**
3			
4			
5			
6			
7			
8			
	101	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **22**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	**10YR 3/2**	**100**					**Silty Clay Loam**	
11-18	**10YR 3/2**	**95**	**10YR 3/4**	**5**	**C**	**M**	**Silty Clay Loam**	**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>18**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **23**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope/terrace** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Quatama silty clay loam** NWI Classification: **PEMC**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: **5**)			
1 ***Symphoricarpos albus***	**15**	**X**	**FACU**
2			
3			
4			
5			
	15	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**35**	**X**	**FACW**
2 ***Poa sp.***	**25**	**X**	**(FAC)**
3 ***Alopecurus pratensis***	**25**	**X**	**FAC**
4 ***Holcus lanatus***	**20**		**FAC**
5 ***Cirsium arvense***	**5**		**FAC**
6			
7			
8			
	110	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **4** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **75%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **23**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	**10YR 3/2**	**98**	**10YR 4/6**	**2**	**C**	**PL**	**Silt Loam**	**OR's**
7-16	**10YR 3/2**	**85**	**10YR 4/2**	**15**	**C**	**M**	**Silt Loam**	**Medium**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	X	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	X	Oxidized Rhizospheres along Living Roots (C3)	X	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)	X	Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	X	Depth (inches):	
Water Table Present?	Yes		No	X	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

There is no Sample Point 24

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **25**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **PEMC**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Hydric Soil Present?	Yes	**X**	No		
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Holcus lanatus***	**40**	**X**	**FAC**
2 ***Lotus corniculatus***	**20**	**X**	**FAC**
3 ***Juncus tenuis***	**10**		**FAC**
4 ***Alopecurus pratensis***	**10**		**FAC**
5 ***Carex densa***	**5**		**OBL**
6 ***Phalaris arundinacea***	**5**		**FACW**
7			
8			
	90	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **25**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	**10YR 3/2**	**95**	**7.5YR 4/6**	**5**	**C**	**PL**	**Silty Clay Loam**	**OR's**
4-7	**10YR 5/2**	**80**	**7.5YR 4/6**	**10**	**C**	**M**	**Silt Loam**	**Medium**
7-16	**10YR 3/2**	**94**	**7.5YR 4/6**	**5**	**C**	**M**	**Silty Clay Loam**	**medium**
			7.5YR 4/6	**1**	**C**	**PL**		**OR's**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

4-7 has 10% of hard, orange (10YR 4/6) material; resembles broken field tile or brick

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **26**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope bottom** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Phalaris arundinacea***	**30**	**X**	**FACW**
2 ***Lolium perenne***	**15**	**X**	**FAC**
3 ***Equisetum arvense***	**5**		**FAC**
4			
5			
6			
7			
8			
	50	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **55**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **26**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/3**	**100**					**Silty Clay Loam**	**Disturbed**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

Soil disturbed right under utility line.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- Shallow Aquitard (D3)
- **X** Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Low area, but no primary indicators of hydrology.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **27**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Lolium perenne***	**35**	**X**	**FAC**
2 ***Festuca arundinacea***	**20**	**X**	**FAC**
3			
4			
5			
6			
7			
8			
	55	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **50**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **27**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/3**	**99**	**10YR 3/4**	**<1**	**C**	**M**	**Silt Loam**	**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Low area in field but no evidence of primary hydrology indicators.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **28**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Flat** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:
Apparently disturbed area within grass seed field. Soils include high percentage of gravels at the surface.

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Lolium perenne***	**30**	**X**	**FAC**
2 ***Poa annua***	**7**		**FAC**
3 ***Festuca arundinacea***	**3**		**FAC**
4			
5			
6			
7			
8			
	40	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **60**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:
Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **28**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	**10YR 3/3**	**100**						**Many gravels 5-10%**
14-18	**10YR 3/3**	**40**						
14-18	**10YR 3/2**	**59**	**10YR 4/4**	**1**	**C**	**M**	**Silt Loam**	**Fine, 10% gravels**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- _____ Loamy Gleyed Matrix (F2)
- _____ Depleted Matrix (F3)
- _____ Redox Dark Surface (F6)
- _____ Depleted Dark Surface (F7)
- _____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- _____ 2 cm Muck (A10)
- _____ Red Parent Material (TF2)
- _____ Very Shallow Dark Surface (TF12)
- _____ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _____ Surface Water (A1)
- _____ High Water Table (A2)
- _____ Saturation (A3)
- _____ Water Marks (B1)
- _____ Sediment Deposits (B2)
- _____ Drift Deposits (B3)
- _____ Algal Mat or Crust (B4)
- _____ Iron Deposits (B5)
- _____ Surface Soil Cracks (B6)
- _____ Inundation Visible on Aerial Imagery (B7)
- _____ Sparsely Vegetated Concave Surface (B8)
- _____ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- _____ Salt Crust (B11)
- _____ Aquatic Invertebrates (B13)
- _____ Hydrogen Sulfide Odor (C1)
- _____ Oxidized Rhizospheres along Living Roots (C3)
- _____ Presence of Reduced Iron (C4)
- _____ Recent Iron Reduction in Plowed Soils (C6)
- _____ Stunted or Stressed Plants (D1) **(LRR A)**
- _____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- _____ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- _____ Drainage Patterns (B10)
- _____ Dry-Season Water Table (C2)
- _____ Saturation Visible on Aerial Imagery (C9)
- _____ Geomorphic Position (D2)
- _____ Shallow Aquitard (D3)
- _____ Fac-Neutral Test (D5)
- _____ Raised Ant Mounds (D6) **(LRR A)**
- _____ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	_____	No **X**	Depth (inches):	_____
Water Table Present?	Yes	_____	No **X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes	_____	No **X**	Depth (inches):	**>18**

Wetland Hydrology Present?

Yes _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **29**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Quatama silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**40**	**X**	**FAC**
2 ***Poa sp.***	**40**	**X**	**(FAC)**
3 ***Galium aparine***	**20**		**FACU**
4 ***Bromus tectorum***	**10**		**UPL**
5			
6			
7			
8			
	110	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **29**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	**10YR 3/1**	**99**	**10YR 3/3**	**1**	**C**	**M**	**Silty Clay Loam**	**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

Some coarse chunks of 5YR 4/6 - not mottles - looks like old drain tiles?

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- **X** Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>18**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

An occasional OR less than 1%.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **30**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Quatama silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes **X**	No
Hydric Soil Present?	Yes **X**	No			
Wetland Hydrology Present?	Yes **X**	No			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**60**	**X**	**FAC**
2 ***Poa sp.***	**30**	**X**	**(FAC)**
3 ***Phalaris arundinacea***	**10**		**FACW**
4 ***Bromus tectorum***	**5**		**UPL**
5			
6			
7			
8			
	105	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **30**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/1**	**93**	**5YR 3/4**	**1**	**C**	**M**	**Silty Clay Loam**	**Medium**
0-16			**10YR 4/4**	**3**	**C**	**M**	**Silty Clay Loam**	**Medium**
0-16			**10YR 4/6**	**3**	**C**	**PL**		**OR's**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- **X** Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **31**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: _____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: _____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**30**	**X**	**FAC**
2 ***Convolvulus sp.***	**10**	**X**	**UPL**
3			
4			
5			
6			
7			
8			
	40	= Total Cover	
Woody Vine Stratum (plot size: _____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **60**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species	**30**	x 3 =	**90**
FACU Species	**10**	x 4 =	**40**
UPL Species		x 5 =	**0**
Column Totals	**40** (A)		**130** (B)

Prevalence Index =B/A = **3.25**

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test for Hydrophytic Vegetation

_____ 2- Dominance Test is >50%

_____ 3-Prevalence Index is ≤ 3.0[1]

_____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ 5- Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL **PHS #** **5095** Sampling Point: **31**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	**10YR 3/3**	**90**					**Silty Clay Loam**	
10-16		**10**					**gravel**	
10-16	**10YR 4/2**	**85**	**10YR 3/3**	**5**	**C**	**M**	**Silty Clay Loam**	
10-16		**10**					**gravel**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	_____	No **X**	Depth (inches):	_____
Water Table Present?	Yes	_____	No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes	_____	No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **32**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes **X**	No
Hydric Soil Present?	Yes **X**	No			
Wetland Hydrology Present?	Yes **X**	No			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**30**	**X**	**FAC**
2 ***Poa annua***	**20**	**X**	**FAC**
3 ***Echinocloa crus-galli***	**3**		**FAC**
4			
5			
6			
7			
8			
	53	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **50**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **32**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/1**	**88**	**10YR 4/4**	**5**	**C**	**M**	**Silt Loam**	**Fine**
0-6			**10YR 3/6**	**5**	**C**	**M**		**Fine**
0-6			**10YR 3/6**	**2**	**C**	**PL**		**OR's**
6-15	**10YR 3/1**	**87**	**7.5YR 3/4**	**10**	**C**	**M**	**Silty Clay Loam**	**Medium-coarse**
6-15			**10YR 4/4**	**3**	**C**	**M**		**Fine**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)	Sandy Redox (S5)
Histic Epipedon (A2)	Stripped Matrix (S6)
Black Histic (A3)	Loamy Mucky Mineral (F1) **(except MLRA 1)**
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)
Thick Dark Surface (A12)	**X** Redox Dark Surface (F6)
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10)
Red Parent Material (TF2)
Very Shallow Dark Surface (TF12)
Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)	Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
High Water Table (A2)	
Saturation (A3)	Salt Crust (B11)
Water Marks (B1)	Aquatic Invertebrates (B13)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)
Drift Deposits (B3)	**X** Oxidized Rhizospheres along Living Roots (C3)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)
Iron Deposits (B5)	Recent Iron Reduction in Plowed Soils (C6)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) **(LRR A)**
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)
Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
Drainage Patterns (B10)
Dry-Season Water Table (C2)
Saturation Visible on Aerial Imagery (C9)
Geomorphic Position (D2)
Shallow Aquitard (D3)
Fac-Neutral Test (D5)
Raised Ant Mounds (D6) **(LRR A)**
Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>15**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>15**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **33**

Investigator(s): **AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes ____ No **X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: ____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: ____)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**20**	**X**	**FAC**
2 ***Poa annua***	**10**	**X**	**FAC**
3 ***Echinocloa crus-galli***	**1**		**FAC**
4			
5			
6			
7			
8			
	31	= Total Cover	
Woody Vine Stratum (plot size: ____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **70**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- ____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- ____ 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ____ 5- Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **33**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/3**	**88**	**10YR 3/6**	**2**	**C**	**M**	**Silt Loam**	**Fine mottles; mixed matrix**
0-16	**10YR 3/2**	**10**					**Silt Loam**	**mixed matrix**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/6/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **34**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Flat** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Verboort silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**15**	**X**	**FAC**
2 ***Poa sp.***	**10**	**X**	**(FAC)**
3 ***Echinocloa crus-galli***	**5**		**FAC**
4 ***Matricaria discoidea***	**1**		**FACU**
5			
6			
7			
8			
	31	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **70**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

Recently seeded field; bare ground reflects conditions between rows.

SOIL PHS # **5095** Sampling Point: **34**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	**10YR 3/2**	**78**	**10YR 4/4**	**5**	**C**	**M**	**Silty Clay Loam**	**medium-fine**
0-18			**7.5YR 4/6**	**2**	**C**	**PL**		**OR's**
0-18		**15**					**gravel**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

Very little living vegetation, so very few living roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	**>18**
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	**>18**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **35**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Slope** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **PEMC**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Holcus lanatus***	**35**	**X**	**FAC**
2 ***Alopecurus pratensis***	**30**	**X**	**FAC**
3 ***Agrostis sp.***	**20**		**(FAC)**
4 ***Juncus effusus***	**10**		**FACW**
5 ***Phalaris arundinacea***	**5**		**FACW**
6 ***Lotus corniculatus***	**5**		**FAC**
7			
8			
	105	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **35**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	**10YR 3/2**	**90**	**7.5YR 4/4**	**7**	**C**	**M**	**Silty Clay Loam**	**Fine**
0-8			**7.5YR 4/6**	**3**	**C**	**PL**		**OR's**
8-16	**10YR 3/2**	**85**	**7.5YR 4/4**	**5**	**C**	**M**	**Silty Clay Loam**	**Fine-medium**
8-16	**10YR 4/2**	**10**					**Silty Clay Loam**	**Dark, burnt material in the 8-16 layer**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

0-8 inches - 3% ORs 7.5YR 4/6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Secondary Indicators (2 or more required)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):		
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**	**Yes X No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **36**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **PEMC**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Holcus lanatus***	**50**	**X**	**FAC**
2 ***Agrostis sp.***	**40**	**X**	**(FAC)**
3 ***Galium aparine***	**30**	**X**	**FACU**
4 ***Bromus hordeaceus***	**15**		**FACU**
5 ***Alopecurus pratensis***	**10**		**FAC**
6 ***Prunus sp.***	**1**		**UPL**
7			
8			
	146	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **36**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/3**	**100**					**Silt Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Very dry relative to wetland plot.

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **37**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **None** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Huberly silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**80**	**X**	**FAC**
2 ***Poa annua***	**10**		**FAC**
3 ***Daucus carota***	**2**		**FACU**
4 ***Matricaria discoidea***	**1**		**FACU**
5			
6			
7			
8			
	93	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** _____

Remarks:

SOIL PHS # **5095** Sampling Point: **37**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	**10YR 3/2**	**100**					**Silt Loam**	
3-8	**10YR 3/1**	**77**	**7.5YR 3/4**	**20**	**C**	**M**	**Silt Loam**	**Fine-medium**
3-8			**7.5YR 4/6**	**3**	**C**	**PL**		**OR's**
8-15	**10YR 3/2**	**100**					**Silt Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	**X**	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)				
	Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)	**X**	Oxidized Rhizospheres along Living Roots (C3)	**X**	Geomorphic Position (D2)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Iron Deposits (B5)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>15**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>15**

Wetland Hydrology Present?

Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **38**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Huberly silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**75**	**X**	**FAC**
2 ***Poa sp.***	**20**	**X**	**(FAC)**
3 ***Taraxacum officinale***	**1**		**FACU**
4 ***Matricaria discoidea***	**1**		**FACU**
5			
6			
7			
8			
	97	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **15**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **38**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	**10YR 3/3**	**60**	**7.5YR 4/6**	**1**	**C**	**PL**	**Silt Loam**	
0-8	**10YR 3/2**	**38**	**7.5YR 4/6**	**1**	**C**	**M**	**Silt Loam**	**Medium, plow layer**
8-16	**10YR 3/3**	**90**					**Silt Loam**	
8-16	**10YR 3/2**	**9**	**7.5YR 4/6**	**1**	**C**	**M**	**Silt Loam**	**Fine-medium**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Not enough ORs

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **39**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) **Flat** Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): **LRR A** Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: **Aloha silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No _____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		
Hydric Soil Present?	Yes	**X**	No	**Is Sampled Area within a Wetland?**	Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**60**	**X**	**FAC**
2 ***Poa sp.***	**30**	**X**	**(FAC)**
3 ***Matricaria discoidea***	**10**		**FACU**
4			
5			
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- _____ 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- _____ 3-Prevalence Index is ≤ 3.0[1]
- _____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- _____ 5- Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL **PHS #** **5095** Sampling Point: **39**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	**10YR 3/2**	**98**	**7.5**	**2**	**C**	**PL**	**Silt Loam**	
6-16	**10YR 3/2**	**93**	**7.5YR 4/6**	**5**	**C**	**M**	**Silt Loam**	**Fine**
6-16			**7.5YR 4/6**	**2**	**C**	**PL**		**OR's**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- **X** Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- **X** Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/19/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **40**

Investigator(s): **TF/SE** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Aloha silty clay loam** NWI Classification: **None**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No	**Is Sampled Area within a Wetland?**	Yes	No **X**
Hydric Soil Present?	Yes	No **X**			
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Festuca arundinacea***	**70**	**X**	**FAC**
2 ***Poa annua***	**15**		**FAC**
3 ***Daucus carota***	**2**		**FACU**
4 ***Vulpia myuros***	**1**		**FACU**
5 ***Matricaria discoidea***	**1**		**FACU**
6			
7			
8			
	89	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **10**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **40**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	**10YR 3/2**	**100**					**Silt Loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) **(except MLRA 1)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes _____ **No X**

Remarks:

7 inches down is an inclusion the size of a quarter width - 10YR 3/2 80% 7.5YR 3/2 20% C M Silt Loam.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Stunted or Stressed Plants (D1) **(LRR A)**
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Fac-Neutral Test (D5)
- Raised Ant Mounds (D6) **(LRR A)**
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	**>16**
Saturation Present? (includes capillary fringe)	Yes		No **X**	Depth (inches):	**>16**

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None.

Remarks:

PHS # 5095

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: **North Holladay Industrial Park** City/County: **Cornelius/Washington** Sampling Date: **6/13/2013**

Applicant/Owner: **City of Cornelius** State: **OR** Sampling Point: **24**

Investigator(s): **TF/AH** Section, Township, Range: **Section 33, T 1 North, R 3 West**

Landform (hillslope, terrace, etc.:) Local relief (concave, convex, none): Slope (%):

Subregion (LRR): **LRR A** Lat: Long: Datum:

Soil Map Unit Name: **Woodburn silty clay loam** NWI Classification: **PEMC**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (if no, explain in Remarks)

Are vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? (Y/N) **Y**

Are vegetation Soil or Hydrology naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is Sampled Area within a Wetland?** Yes		No	**X**
Hydric Soil Present?	Yes		No	**X**	
Wetland Hydrology Present?	Yes		No	**X**	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size:)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size:)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb Stratum (plot size: **5**)			
1 ***Alopecurus pratensis***	**40**	**X**	**FAC**
2 ***Festuca arundinacea***	**35**	**X**	**FAC**
3 ***Holcus lanatus***	**30**	**X**	**FAC**
4 ***Hypochaeris radicata***	**15**		**FACU**
5 ***Vicia hirsuta***	**10**		**UPL**
6 ***Taraxacum officinale***	**10**		**FACU**
7 ***Rumex acetosella***	**5**		**FACU**
8			
	145	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum **0**

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	**0**
FACW species		x 2 =	**0**
FAC Species		x 3 =	**0**
FACU Species		x 4 =	**0**
UPL Species		x 5 =	**0**
Column Totals	**0** (A)		**0** (B)

Prevalence Index =B/A = **#DIV/0!**

Hydrophytic Vegetation Indicators:

- 1- Rapid Test for Hydrophytic Vegetation
- **X** 2- Dominance Test is >50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- 5- Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No**

Remarks:

SOIL PHS # **5095** Sampling Point: **24**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	**10YR 3/2**	**98**	**10YR 4/6**	**1**	**C**	**PL**	**Silty Clay Loam**	**Fine-medium**
0-5			**10YR 4/6**	**1**	**C**	**M**		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)
- _____ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- _____ Loamy Gleyed Matrix (F2)
- _____ Depleted Matrix (F3)
- _____ Redox Dark Surface (F6)
- _____ Depleted Dark Surface (F7)
- _____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- _____ 2 cm Muck (A10)
- _____ Red Parent Material (TF2)
- _____ Very Shallow Dark Surface (TF12)
- _____ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _____ Surface Water (A1)
- _____ High Water Table (A2)
- _____ Saturation (A3)
- _____ Water Marks (B1)
- _____ Sediment Deposits (B2)
- _____ Drift Deposits (B3)
- _____ Algal Mat or Crust (B4)
- _____ Iron Deposits (B5)
- _____ Surface Soil Cracks (B6)
- _____ Inundation Visible on Aerial Imagery (B7)
- _____ Sparsely Vegetated Concave Surface (B8)
- _____ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- _____ Salt Crust (B11)
- _____ Aquatic Invertebrates (B13)
- _____ Hydrogen Sulfide Odor (C1)
- _____ Oxidized Rhizospheres along Living Roots (C3)
- _____ Presence of Reduced Iron (C4)
- _____ Recent Iron Reduction in Plowed Soils (C6)
- _____ Stunted or Stressed Plants (D1) **(LRR A)**
- _____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- _____ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- _____ Drainage Patterns (B10)
- _____ Dry-Season Water Table (C2)
- _____ Saturation Visible on Aerial Imagery (C9)
- _____ Geomorphic Position (D2)
- _____ Shallow Aquitard (D3)
- _____ Fac-Neutral Test (D5)
- _____ Raised Ant Mounds (D6) **(LRR A)**
- _____ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present?

Yes _____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C

Site Photos

Photo A:

View of the southwest boundary of Wetland E.

Photo B:

View of the southern wetland boundary along the western portion of Wetland F.

#5095
7/25/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Both photos taken June 11, 2013.

Photo C:

Looking downstream along Council Creek where it defines the northern boundary of Wetland F.

Photo D:

View to the east along the southern boundary of Wetland G.

#5095
7/25/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Both photos taken June 11, 2013.

Photo E:

View to the north into
Wetland G

Photo F:

View to the northwest of streamside wetlands
in the eastern portion of Wetland G.

#5095
7/25/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Photo E taken June 11, 2013; Photo F taken June 13, 2013.

Photo G:

View to the northwest of the upland to wetland transition along the boundary of Wetland K.

Photo H:

View to the southeast across the channel of Council Creek as seen from the north-central portion of Wetland L. Blue flag in photo delineates the ordinary high water line of the creek.

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Photo G taken June 11, 2013; Photo H taken June 13, 2013.

Photo I:

View to the east including the southern (onsite) limits of Wetland L and Council Creek.

Photo J:

Wetland H, as seen from just southwest of the wetland. Yellow flags denote Sample Points 29 and 30.

#5095
7/25/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Photo I taken June 19, 2013; Photo J taken June 6, 2013.

Photo K:

Western limits of Wetland C, and adjoining upland to the west.

Photo L:

Wetland D as seen from just east of the wetland boundary.

#5095
7/25/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation for the North Holladay Industrial Park Project
in Cornelius, Oregon
Both photos taken June 19, 2013.

Appendix D

Wetland Definitions and Methodology and References

WATERS OF THE STATE AND WETLAND DEFINITION AND CRITERIA

Regulatory Jurisdiction

Wetlands and water resources in Oregon are regulated by the Oregon Department of State Lands (DSL) under the Removal-Fill Law (ORS 196.800-196.990) and by the U.S. Army Corps of Engineers (COE) through Section 404 of the Clean Water Act.

The primary source documents for wetland delineations within Oregon is the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (U.S. Army Corps of Engineers, 2010), which are required by both DSL and COE.

Waters of This State and Wetland Definition

Waters of This State are defined as "all natural waterways, tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and nonnavigable bodies of water in this state and those portions of the ocean shore …" (DSL, 2009).

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (DSL 2009).

Wetland Criteria

Based on the above definition, three major factors characterize a wetland: hydrology, substrate, and biota.

Wetland Hydrology

Wetland hydrology is related to duration of saturation, frequency of saturation, and critical depth of saturation. The 1987 manual defines wetland hydrology as inundation or saturation within a major portion of the root zone (usually above 12 inches), typically for at least 12.5% of the growing season. The wetland hydrology criterion can be met, however, if saturation within the major portion of the root zone is present for only 5% of the growing season, depending on other evidence.

The growing season is defined as the portion of the year when soil temperatures at 12.0 inches below the soil surface are higher than biological zero (41 degrees Fahrenheit, 5 degrees Celsius), but also allows approximation from frost free days, based on air temperature. The growing season for any given site or location is determined from US Natural Resources Conservation Service, (formerly Soil Conservation Service) data and information.

Wetland hydrologic indicators include the following: visual observation of inundation or saturation, watermarks, drift lines, sediment deposits, and/or oxidized rhizospheres with living roots. Oxidized rhizospheres are defined as yellowish-red zones around the roots and rhizomes of some plants that grow in frequently saturated soils. Other indicators of hydrology, including algal mats or crust, iron deposits, surface soil cracks, sparsely vegetated concave surface, salt crust, aquatic invertebrates, hydrogen sulfide odor, reduced iron, iron reduction in tilled soils, and stunted or stressed plants can also be used to determine the presence of wetland hydrology.

Wetland Substrate (Soils)

Most wetlands are characterized by hydric soils. Hydric soils are those that are ponded, flooded, or saturated for long enough during the growing season to develop anaerobic conditions. Periodic saturation of soils causes alternation of reduced and oxidized conditions, which leads to the formation of redoximorphic features (gleying and mottling). Mineral hydric soils will be either gleyed or will have bright mottles and/or low matrix chroma. The redoximorphic feature known as gley is a result of greatly reduced soil conditions, which result in a characteristic grayish, bluish or greenish soil color. The term mottling is used to describe areas of contrasting color within a soil matrix. The soil matrix is the portion of the soil layer that has the predominant color. Soils that have brightly colored mottles and a low matrix chroma are indicative of a fluctuating water table.

Hydric soil indicators include: organic content of greater than 50% by volume, and/or presence of redoximorphic features and dark soil matrix, as determined by the use of a Munsell Soil Color Chart. This chart establishes the chroma, value and hue of soils based on comparison with color chips. Mineral hydric soil must meet one of the 16 definitions for hydric soil indicators, or be classified as a “problem soil” in the Interim Regional Supplement.

Wetland Biota (Vegetation)

Wetland biota is defined as hydrophytic vegetation. A hydrophyte is a plant species that is capable of growing in substrates that are periodically deficient in oxygen as a result of saturated soil conditions. The U.S. Fish and Wildlife Service, in the *National List of Plant Species that Occur in Wetlands*, has established five basic groups of vegetation based on their frequency of occurrence in wetlands. These categories, referred to as the "wetland indicator status”, are as follows: obligate wetland plants (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL). Table 1 gives a definition of the plant indicator codes.

Table 1. Description of Wetland Plant Indicator Status Codes

Indicator Code	Status
OBL	Obligate wetland. Estimated to occur almost exclusively in wetlands (>99%)
FACW	Facultative wetland. Estimated to occur 67-99% of the time in wetlands.
FAC	Facultative. Occur equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland. Usually occur in non-wetlands (67-99%).
UPL	Obligate upland. Estimated to occur almost exclusively in non-wetlands (>99%). If a species is not assigned to one of the four groups described above it is assumed to be obligate upland.
NI	Has not yet received a wetland indicator status, but is probably not obligate upland.

Observations of hydrology, soils, and vegetation, were made using the "Routine On-site" delineation method as defined in the 1987 manual and the Interim Regional Supplement for areas that were not currently in agricultural production. One-foot diameter soil pits were excavated to 20 inches and soil profiles were examined for hydric soil and wetland hydrology field indicators. In addition, a visual absolute-cover estimate of the dominant species of the plant community was performed using soil pit locations as a center of reference. Dominant plant species are based on estimates of absolute cover for herbaceous, and shrub species within a 5 foot radius of the sample point, and basal area cover for tree and woody vine species within a 30 foot radius of the sample point. Plant species in each vegetative layer, which are estimated at less than 20% of the total cover, are not considered to be dominant. The wetland indicator status is then used to determine if there is an overall dominance (greater than 50%) of wetland or upland plant species. If less than 50% of the dominant species are hydrophytic, then the prevalence index may be used to determine if the subdominant species are hydrophytic. If the prevalence index is less than or equal to 3, hydrophytic vegetation criterion is met.

During data collection, the soil profiles were examined for hydric soil and wetland hydrology field indicators. Plant species and cover were recorded. Data was recorded on standard data sheets which contain the information specified in the 1987 Corps Manual and the Interim Regional Supplement.

EXHIBIT A

NORTH HOLLADAY INDUSTRIAL PLANNING AREA

The North Holladay Planning Area is approximately 56 acres in size. It is located abutting the north City boundary in the northwest corner of Cornelius (Appendices N). This land is currently outside of the City, but inside the Urban Growth Boundary. This Urban Growth Boundary expansion was approved in November of 2005 when Metro Regional Government adopted Ordinance No. 05-1070A. This action amended the Urban Growth Boundary to increase capacity to accommodate growth in industrial employment.

Therefore, upon annexation of the Planning Area or parts of, into the City it shall be designated and mapped for industrial uses in the City Comprehensive Plan. Prior to development of this land it shall also be approved for the appropriate zoning district to support industrial uses. The North Holladay Industrial Area has been planned and prepared for annexation and development by:

- Completion of a natural resource assessment of the area in 2013. The assessment delineates wetlands and identifies the Council Creek floodplain that have been added to the City of Cornelius Natural Resource Inventory. The assessment also identifies protection buffers based on Clean Water Services standards. The Natural Resource Protection Plan shall be amended to analyze protection measures for wetlands located within the City. The delineated wetlands that are located in the Urban Growth Boundary and are not located in the City shall be analyzed for City protection measures once they are annexed into the City.

- A Transportation Impact Analysis (TIA) for the North Holladay Planning Area was completed in 2013. The main focus of the (TIA) was to address the State Transportation Planning Rule. The analysis confirmed the findings and conclusions of the 2005 Transportation System Plan, which found the traffic impacts resulting from full industrial build out of the area will be managed by the City transportation system without significantly affecting the transportation facility. Streets shall be built to City Industrial Street standards.

- City utilities (water, storm and sanitary sewer) are available and abut the Planning Area. Extension of utilities shall be designed to City standards and extended through the development process.

NORTH HOLLADAY INDUSTRIAL PLANNING AREA

The North Holladay Planning Area is approximately 56 acres in size. It is located abutting the north City boundary in the northwest corner of Cornelius (Appendices N). This land is currently outside of the City, but inside the Urban Growth Boundary. This Urban Growth Boundary expansion was approved in November of 2005 when Metro Regional Government adopted Ordinance No. 05-1070A. This action amended the Urban Growth Boundary to increase capacity to accommodate growth in industrial employment.

Therefore, upon annexation of the Planning Area or parts of, into the City it shall be designated and mapped for industrial uses in the City Comprehensive Plan. Prior to development of this land it shall also be approved for the appropriate zoning district to support industrial uses. The North Holladay Industrial Area has been planned and prepared for annexation and development by: ~~In coordination with the City's designation of the Planning Area for industrial uses, the Comprehensive Plan process shall include:~~

- Completion of a ~~A~~ natural resource assessment of the area ~~to be completed with~~ in 2013. ~~emphasis given to the protection and enhancement of the Council Creek corridor consistent with the City Natural Resource Protection Plan.~~ The assessment delineates wetlands and identifies the Council Creek floodplain that have been added to the City of Cornelius Natural Resource Inventory. The assessment also identifies protection buffers based on Clean Water Services standards. The Natural Resource Protection Plan shall be amended to analyze protection measures for wetlands located within the City. The delineated wetlands that are located in the Urban Growth Boundary and are not located in the City shall be analyzed for City protection measures once they are annexed into the City.

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- A Transportation Impact Analysis (TIA) for the North Holladay Planning Area was completed in 2013. The main focus of the (TIA) was to address the State Transportation Planning Rule. The analysis confirmed the findings and conclusions of the 2005 Transportation System Plan, which found the traffic impacts resulting from full industrial build out of the area ~~The street system shall be designed in compliance with the City Transportation System Plan,and will connect to existing City streets. Traffic impacts~~ will be managed by the City transportation system without significantly affecting the transportation facility. Streets shall be built to City Industrial Street standards.

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- City utilities (water, storm and sanitary sewer) are available and abut the Planning Area. Extension of ~~U~~utilities shall be designed to City standards and extended through the development process.

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EXHIBIT B

NATURAL RESOURCE INVENTORY

SECTION II - NHIP AREA

NORTH HOLLADAY INDUSTRIAL PARK (NHIP) NATURAL RESOURCE INVENTORY

The North Holladay Industrial Park Wetland Delineation Report is added to the Comprehensive Plan as Section II of the Natural Resource Inventory.

The North Holladay Industrial Park Natural Resource Assessment was conducted as part of the analysis needed for application to the State for a Certified Industrial Site. The project area included land located inside the City and land within the Cornelius Urban Growth Boundary in Washington County.

The natural resources identified in the project area by the Assessment were wetlands and the abutting Council Creek. There were twelve (12) wetlands delineated and four were located within the City and eight (8) were located outside the City, but within the Urban Growth Boundary.

The North Holladay Industrial Park Wetland Delineation was completed by Pacific Habitat Services in July 2013. The City of Cornelius submitted the report to the Department of State Lands for review and concurrence. On March 24, 2014 the Department of State Lands issued a concurrence letter for the twelve (12) wetlands and Council Creek.

Wetland Delineation
for the
North Holladay Industrial Park Project
in Cornelius, Oregon

(Township 1 North, Range 3 West, Section 33, Tax Lot 200 south of Council Creek; Section 33B, Tax Lots 100, 300, and 400 south of Council Creek; Section 33CA, Tax Lots 100, 400, 700, 800, 900, 1800, 1900; and Section 33DB, Tax Lots 300, 400, 500, 600, and 700)

Prepared for

Mackenzie
Portland, Oregon

Prepared by

Pacific Habitat Services, Inc.
Wilsonville, Oregon 97070
(503) 570-0800
(503) 570-0855 FAX

July 19, 2013

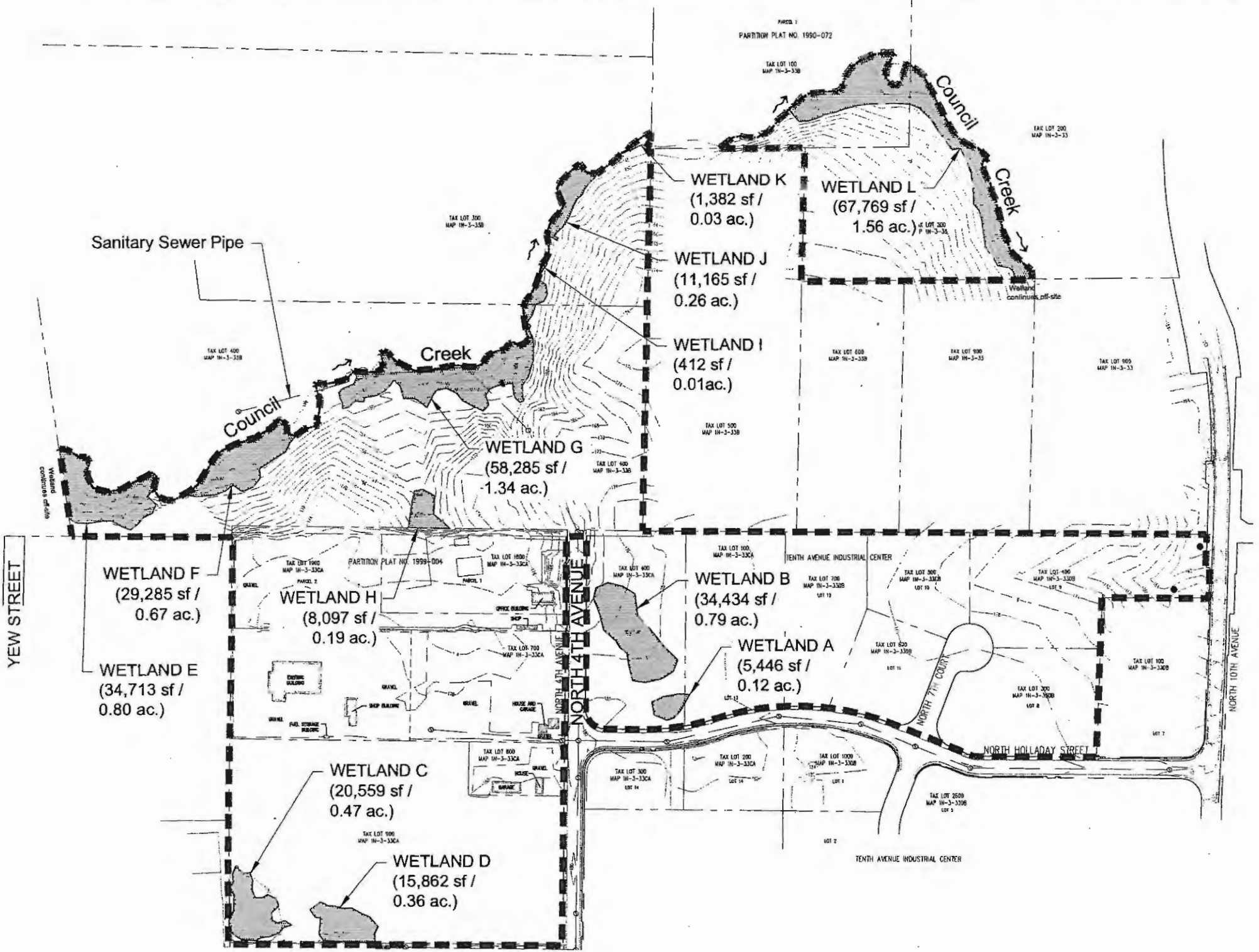

PARTITION PLAT NO. 1990-072
Council Creek
WETLAND K
(1,382 sf /
0.03 ac.)
WETLAND L
(67,769 sf /
1.56 ac.)
Wetland continues off-site
Sanitary Sewer Pipe
WETLAND J
(11,165 sf /
0.26 ac.)
WETLAND I
(412 sf /
0.01ac.)
Council Creek
WETLAND G
(58,285 sf /
1.34 ac.)
Wetland continues off-site
YEW STREET
WETLAND F
(29,285 sf /
0.67 ac.)
WETLAND H
(8,097 sf /
0.19 ac.)
WETLAND E
(34,713 sf /
0.80 ac.)
PARTITION PLAT NO. 1999-004
NORTH 4TH AVENUE
WETLAND B
(34,434 sf /
0.79 ac.)
WETLAND A
(5,446 sf /
0.12 ac.)
TENTH AVENUE INDUSTRIAL CENTER
NORTH 7TH COURT
NORTH HOLLADAY STREET
NORTH 10TH AVENUE
WETLAND C
(20,559 sf /
0.47 ac.)
WETLAND D
(15,862 sf /
0.36 ac.)
TENTH AVENUE INDUSTRIAL CENTER

EXHIBIT C

NATURAL RESOURCE PROTECTION PLAN

SECTION II - NHIP AREA

NORTH HOLLADAY INDUSTRIAL PARK (NHIP) NATURAL RESOURCE ASSESSMENT AND PROECTION PLAN

ESEE SITE ANALYSIS AND FINDINGS

The North Holladay Industrial Park Natural Resource Assessment was conducted as part of the analysis needed for application to the State for a Certified Industrial Site. The project area included land located inside the City and land in the Cornelius Urban Growth Boundary in Washington County.

The natural resources identified in the project area by the Assessment were wetlands and the abutting Council Creek. There were twelve (12) wetlands delineated and four were located within the City and eight (8) were located outside the City, but within the Urban Growth Boundary. The Department of State Lands (DSL) issued a Concurrence Letter on March 24, 2014 stating that they concurred with the wetland and waterway boundaries as mapped.

The update and amendment to the Natural Resource Protection Plan shall only address resources and land the City has jurisdiction over and located within the City boundary. The protection measures for the other wetlands located in the Cornelius UGB, but not in the City shall be addressed after they annexed into the city. The wetlands currently located in the City are identified as NHIP Wetlands A, B, C & D.

Wetlands A & B

Basin: Council Creek
Size of Sites: 3.75 acres & 3.60
Location: Vacant farmed land, near N. 4th Avenue & N. Holladay Street
Legal Description: Map # 1N3-33CA Tax Lot # 100
Map # 1N3-33CA Tax Lot # 400

Field Verification: June 2013

Habitat Classification: Cowardian class: Palustrine, emergent, seasonally-flooded/saturated, farmed (PEMEf) HGM class: Flats

Resource Description:

Wetland A
Wetland A is located in an agricultural field in the southern half of the site (T 1N, R 3W,

Section 33CA, Tax Lot 400). It is approximately 5,446 square feet (0.12 acre) within the study area. The Cowardin class is palustrine, emergent, seasonally flooded/saturated, farmed (PEMEf) and the HGM class is Flats.

Vegetation in and around Wetland A (data points 33 and 34) is planted with tall fescue. Annual bluegrass is also dominant and is present within and between the rows of tall fescue. In addition, barnyardgrass, pineappleweed, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland A meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland A has a mixed matrix and does not meet any hydric soil criteria.

Wetland B
Wetland B is located north of Wetland A in an agricultural field in the southern half of the site (T 1N, R 3W, Section 33CA, Tax Lot 400). It is approximately 34,434 square feet (0.79 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland B (data points 31 and 32) is planted with tall fescue. Annual bluegrass is also dominant and is present within and between the rows of tall fescue. In addition, barnyardgrass, bindweed, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland B meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland B was gravelly (10 percent of the matrix) and does not meet any hydric soil criteria.

Impact Area: The impact area includes the existing adjacent City streets and abutting vacant industrially zoned land.

ANALYSIS

Conflicting Uses: Conflicting agricultural uses exist and have been practiced for many years on this site. This land is zoned GeneralINdustrial,M-1 and development on this site.is a permitted use.

Agricultural Wetlands: A, B, C, and D
Wetlands A, B, C, and D are located within agricultural fields. Each wetland is located entirely within the project boundary and does not extend off-site. Vegetation is dominated by pasture grasses including tall fescue and perennial ryegrass. Annual bluegrass , bindweed (*Convolvulus*species, NOL), barnyardgrass, pineappleweed (*Matricaria discoidea*, FACU), dandelion (*Taraxacum officinale*, FACU), Queen-Anne's lace (*Daucus carota*, FACU), and rat-tail six weeks grass (*Vulpia myuros*, FACU) are common sub-dominants. As vegetation is managed within the agricultural fields, there is very little difference between vegetation in the wetland areas and vegetation in the upland areas. The only notable difference is that in some

instances vegetation in the upland areas was in a slightly more advanced phonological stage than the same species in the wetland areas at the time of survey. Hydrologic indicators within these wetlands are limited to oxidized rhizospheres (ORs) as no surface water or saturation was present at the time of survey.

Consequences of Allowing Conflicting Uses:

In general development that includes the construction of impervious surfaces of this site would negatively impact the floodwater storage capacity and increase flood conditions downstream from the site. Water quality would be degraded from the addition of impervious surface to the site. Fish and wildlife habitat would be lost, if the site is filled for development. Recreational and educational opportunities would be lost.

Due to the degraded nature of Wetlands A and B from years of agricultural use the benefits of floodwater storage capacity seem limited to non-existent. Water quality is already compromised by the agricultural practices that introduce fertilizer, herbicide and related chemicals into the system. The benefit of filtration of sediment and chemicals has already been lost or compromised by the agricultural uses. Fish and wildlife habitat at this point does not appear to exist in Wetland A or B. Recreational and educational opportunities do not currently exist either at these wetlands.

Consequences of Limiting or Prohibiting Conflicting Uses:

Economic Consequences:

In general wetlands function as natural-water storage areas during periods of high run-off and stream flooding. When wetlands are filled for development, floodwater storage capacity is lost. Protection of wetlands may result in positive consequences by storing potential flood water and helping to discourage flooding of developed land.

Environmental Consequences:

Protection and enhancement of a wetland generally benefits wildlife by providing food, cover and habitat. Protection and total restoration would be needed to provide positive wildlife habitat.

Protection of the wetland and riparian area would retain it's capability and capacity for storage of floodwater and high-water run-off. This temporary storage reduces the amount of water downstream during floods, thereby reducing peak flows. Resource protection would provide positive consequences for flood and high water storage..

Resource protection would also result in positive consequences for water quality, which include sediment/nutrient filtration, slow release for stored groundwater and groundwater recharge.

Social Consequences:

Wetlands have the potential for recreation and educational opportunities with a variety of native vegetation and wildlife habitat. Protection of a wetland would provide an opportunity for the community to explore the recreation and education potential of the resource. Development of the site would eliminate those opportunities.

Energy Consequences:

Wetland protection would result in positive impacts for the consumption of energy. Water warms and cools more slowly over wetlands in comparison to land areas with developed structures. These moderating effects can reduce energy demands for cooling and heating of urban areas located next to a resource site. Trees and shrubs can also act as a wind break that may divert winter winds. This could reduce heat loss in structures from infiltration and convection, resulting in lower energy needs.

Conclusion:

Wetland A (.79 acres) and B (.12 acres) are small in size and have extremely low to no natural resource value. Natural resource values of floodwater storage/control, wildlife habitat, energy savings, recreation/education opportunities, and aesthetics have been degraded through years of agricultural practices in the production of field crops. The dominate vegetation is tall fescue, annual bluegrass and ryegrass all of which are agricultural field crops. The wetlands also may have been compromised by the construction/installation of adjacent City streets and utilities. The benefits of the wetlands are very marginal or do not exist. The historic drainage of this area has been rerouted by the construction of City streets and public utilities. The Wetland Delineation Report does not state there is any functional value of these wetlands.

FINDINGS AND DECISION

Wetlands A & B

The total area for Wetland A and B is less than 1 acre (0.12 + 0.79 = .91). These wetlands have been degraded through agriculture use and practices. They do not provide functional wetland value. They also do not provide significant energy, economic, social or environmental benefits that support restoration and/or protection. These wetlands are not designated as Significant Natural Resources by the City of Cornelius. Therefore, there are two options for both Wetland A and B:

1. **Fill, removal and development of these wetlands may be permitted when in compliance with the laws and regulations of the City of Cornelius, Clean Water Services, the Division of State Lands and the U.S. Army Corps of Engineers; or**

2. **Protection and enhancement may occur in compliance with the City of Cornelius Development Code, Clean Water Services regulations and any applicable State Division of State Lands rules.**

Wetlands C & D

Basin: Council Creek
Size of Site: 12.5 acres
Location: Vacant farmed land, near N. 4th Avenue & N. Holladay Street
Legal Description: Map # 1N3-33CA Tax Lot # 900

Field Verification: June 2013

Habitat Classification: Cowardian class: Palustrine, emergent, seasonally-flooded/saturated, farmed (PEMEf) HGM class: Flat

Resource Description:

Wetland NHIP - C

Wetland C is located in an agricultural field in the southern half of the site (T 1N, R 3W, Section 33CA, Tax Lot 900). It is approximately 20,559 square feet (0.47 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland C (data points 37 and 38; photograph K) is planted with tall fescue. Annual bluegrass and perennial ryegrass are also locally dominant and are present within and between the rows of tall fescue. In addition, pineappleweed, dandelion, Queen-Anne's lace, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland C meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland C has a mixed matrix and does not meet any hydric soil criteria.

Wetland D

Wetland D is located east of Wetland C in an agricultural field in the southern half of the site (T1N, R 3W, Section 33CA, Tax Lot 900). It is approximately 15,862 square feet (0.36 acre) within the study area. The Cowardin class is PEMEf and the HGM class is Flat.

Vegetation in and around Wetland D (data points 39 and 40; photograph L) is planted with tall fescue. Annual bluegrass and ryegrass are also locally dominant and present within and between the rows of tall fescue. In addition, pineappleweed, rat-tail six-weeks grass, Queen-Anne's lace, and other weedy species are scattered within the wetland and surrounding upland areas.

Soils within Wetland D meet the definition for redox dark surface (F6), and are considered hydric. The upland area surrounding Wetland D does not meet any hydric soil criteria.

Impact Area: The impact area includes the existing adjacent City streets and abutting vacant industrially zoned land.

ANALYSIS

Conflicting Uses: Conflicting agricultural uses exist and have been practiced for many years on this site. Industrial development has occurred on the abutting property to the west.

Agricultural Wetlands: A, B, C, and D

Wetlands A, B, C, and D are located within agricultural fields. Each wetland is located entirely within the project boundary and does not extend off-site. Vegetation is dominated by pasture grasses including tall fescue and perennial ryegrass. Annual bluegrass , bindweed (*Convolvulus*species, NOL), barnyardgrass, pineappleweed (*Matricaria discoidea*, FACU), dandelion (*Taraxacum officinale*, FACU), Queen-Anne's lace (*Daucus carota*, FACU), and rat-tail six weeks grass (*Vulpia myuros*, FACU) are common sub-dominants. As vegetation is managed within the agricultural fields, there is very little difference between vegetation in the wetland areas and vegetation in the upland areas. The only notable difference is that in some instances vegetation in the upland areas was in a slightly more advanced phonological stage than the same species in the wetland areas at the time of survey. Hydrologic indicators within these wetlands are limited to oxidized rhizospheres (ORs) as no surface water or saturation was present at the time of survey.

Consequences of Allowing Conflicting Uses:

Due to the degraded nature of Wetlands C and D from years of agricultural use there does not appear to be many opportunities for floodwater storage capacity that may benefit flood conditions downstream from the site. Water quality would be degraded from the addition of impervious surface to the site. There is no fish and wildlife habitat directly associated with these wetlands, if the site is filled for development. Wetland recreational and educational opportunities do not appear to exist under the current conditions.

Consequences of Limiting or Prohibiting Conflicting Uses:

Economic Consequences:

In general wetlands function as natural-water storage areas during periods of high run-off and stream flooding. When wetlands are filled for development, floodwater storage capacity is lost. Protection of wetlands may result in positive consequences by storing potential flood water and helping to discourage flooding of developed land.

Environmental Consequences:

Protection and enhancement of a wetland generally benefits wildlife by providing food, cover and habitat. Protection and total restoration would be needed to provide positive wildlife habitat.

Protection of the wetland and riparian area would retain it's capability and capacity for storage of floodwater and high-water run-off. This temporary storage reduces the amount of water downstream during floods, thereby reducing peak flows. Resource protection would provide positive consequences for flood and high water storage.

Resource protection would also result in positive consequences for water quality, which include sediment/nutrient filtration, slow release for stored groundwater and groundwater recharge.

Social Consequences:

Wetlands have the potential for recreation and educational opportunities with a variety of native vegetation and wildlife habitat. Protection of a wetland would provide an opportunity for the community to explore the recreation and education potential of the resource. Development of a wetland site would eliminate those opportunities.

Energy Consequences:

Wetland protection would result in positive impacts for the consumption of energy. Water warms and cools more slowly over wetlands in comparison to land areas with developed structures. These moderating effects can reduce energy demands for cooling and heating of urban areas located next to a resource site. Trees and shrubs can also act as a wind break that may divert winter winds. This could reduce heat loss in structures from infiltration and convection, resulting in lower energy needs.

Conclusion:

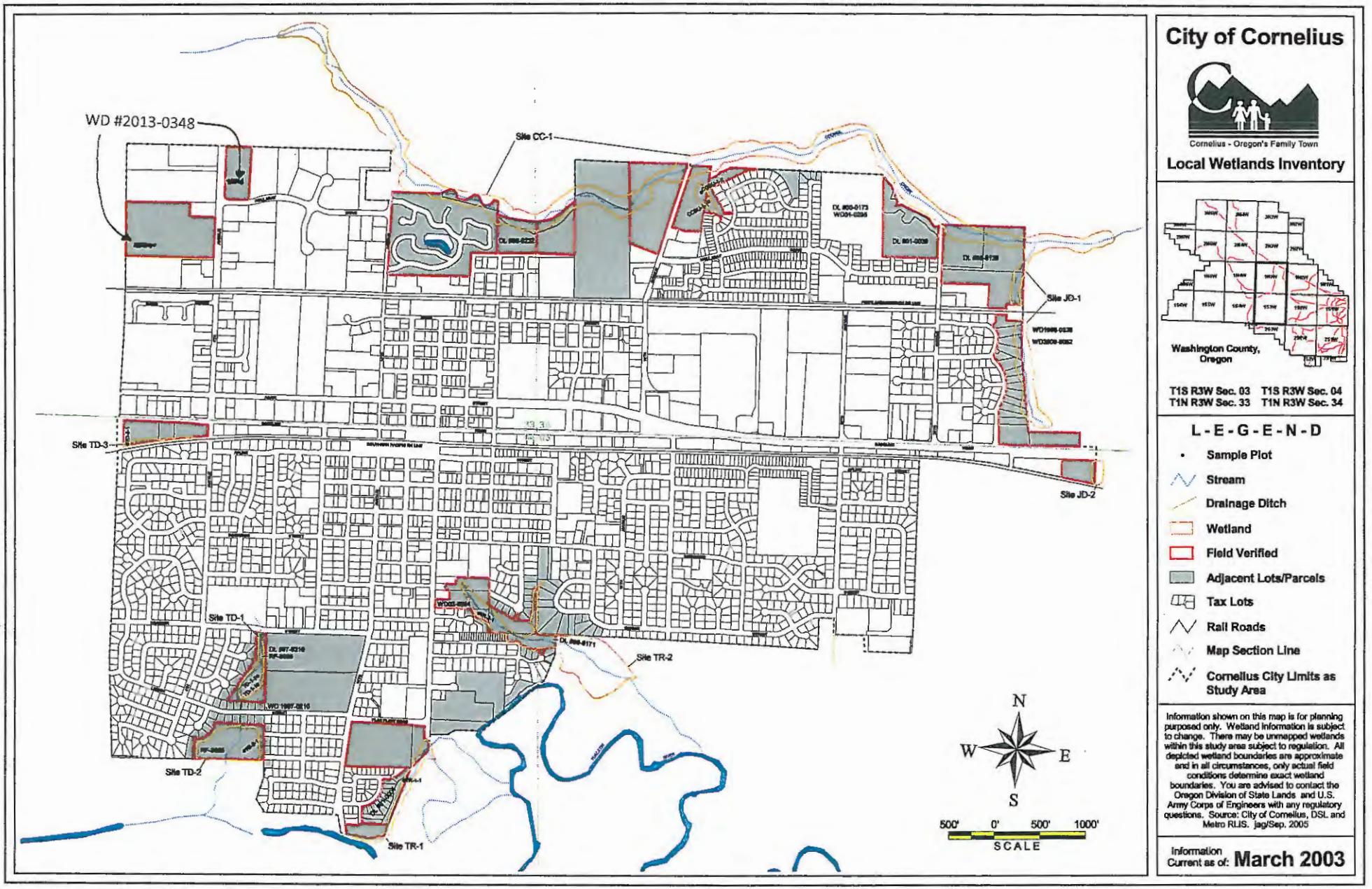
Wetland C (0.47 acres) and D (0.36 acres) are small in size and have extremely low resource value. Natural resource values of floodwater storage/control, wildlife habitat, energy savings, recreation/education opportunities, and aesthetics have been degraded or lost through years of agricultural practices in the production of field crops. The wetlands also may have been compromised by the development of private property to the east of the City boundary. The benefits of the wetlands are very marginal or do not exist. The historic drainage of this area may have been rerouted by development and agricultural practices.

FINDINGS AND DECISION

Wetlands C & D

The total size of Wetland C and D is less than 1 acre (0.47 + 0.36 = 0.83). These wetlands have been degraded through agriculture use and practices. They do not provide any functional wetland value. They also provide no significant energy, economic, social or environmental benefits that support restoration and/or protection. Therefore, fill and removal of these wetlands may be permitted when in compliance with the laws and regulations of Clean Water Services, the State Division of State Lands and the U.S. Army Corps of Engineers.

EXHIBIT D



City of Cornelius

Cornelius - Oregon's Family Town

Local Wetlands Inventory

T1S R3W Sec. 03 T1S R3W Sec. 04
T1N R3W Sec. 33 T1N R3W Sec. 34

L - E - G - E - N - D

- Sample Plot
- Stream
- Drainage Ditch
- Wetland
- Field Verified
- Adjacent Lots/Parcels
- Tax Lots
- Rail Roads
- Map Section Line
- Cornelius City Limits as Study Area

Information shown on this map is for planning purposed only. Wetland information is subject to change. There may be unmapped wetlands within this study area subject to regulation. All depicted wetland boundaries are approximate and in all circumstances, only actual field conditions determine exact wetland boundaries. You are advised to contact the Oregon Division of State Lands and U.S. Army Corps of Engineers with any regulatory questions. Source: City of Cornelius, DSL and Metro RLIS. jag/Sep. 2005

Information Current as of: **March 2003**

EXHIBIT E

5
31

Washington County, Oregon 2011-072662
10/19/2011 10:10:44 AM
D-CAS Cnt=1 Stn=12 S PFEIFER
$5.00 $5.00 $11.00 $15.00 - Total = $36.00

01640474201100726620010016

I, Richard Hobernicht, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.

Richard Hobernicht, Director of Assessment and Taxation, Ex-Officio County Clerk

AFTER RECORDING RETURN TO:

STEPHANIE M. LOMMEN
ATTORNEY AT LAW
2026 PACIFIC AVENUE
FOREST GROVE, OR 97116

COPY

SEND TAX STATEMENTS TO:

NO CHANGE

ASSIGNMENT OF SELLERS' INTEREST IN CONTRACT OF SALE

MARIE P. FINEGAN, Successor Trustee of the HENRY T. TAGHON REVOCABLE LIVING TRUST dated October 20, 2004, does hereby transfer and assign, unto LOUISE R. JOHNSON, as to an undivided one-third interest; REMI J. TAGHON, as to an undivided one-third interest; and MELVIN J. FINEGAN and MARIE P. FINEGAN, Co-Trustees of the MELVIN J. FINEGAN and MARIE P. FINEGAN FAMILY TRUST dated June 9, 2009, and any amendments thereto, as to an undivided one-third interest, all as tenants in common, all right, title and interest which the Trustee of the HENRY T. TAGHON REVOCABLE LIVING TRUST now has in that certain Contract of Sale executed on April 15, 2005, between HENRY T. TAGHON, Trustee of the HENRY T. TAGHON REVOCABLE LIVING TRUST, as Seller and JOSEPH R. FINEGAN and JENNIFER C. FINEGAN, husband and wife, as Purchaser, a Memorandum of which was recorded on April 18, 2005, in the real property records of Washington County, Oregon as Document No. 2005-042330, which Contract was Amended by Amendment to Contract of Sale between the same parties on October 4, 2006, a Memorandum of Amendment to Contract of Sale being recorded on October 5, 2006, in the real property records of Washington County, Oregon as Document No. 2006-118968.

The true consideration for this conveyance is $0. This conveyance is given as a part of the final distribution of the HENRY T. TAGHON REVOCABLE LIVING TRUST following the death of Henry T. Taghon, to his three children.

Marie P. Finegan

Marie P. Finegan, Trustee of the HENRY T. TAGHON REVOCABLE LIVING TRUST dated October 20, 2004

STATE OF OREGON)
) ss. October 18, 2011
County of Washington)

Personally appeared the above named Marie P. Finegan, as Trustee and acknowledged the foregoing instrument to be her voluntary act and deed.

Before me:

Stephanie M. Lommen

Notary Public for Oregon

OFFICIAL SEAL
STEPHANIE M LOMMEN
NOTARY PUBLIC-OREGON
COMMISSION NO. 443399
MY COMMISSION EXPIRES NOVEMBER 26, 2013

EXHIBIT F

Oregon
John A. Kitzhaber, MD, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us

March 24, 2014

City of Cornelius
Attn: Dick Reynolds
1355 N Barlow Street
Cornelius, OR 97113

Re: Wetland Delineation Report for the Proposed North Holladay Industrial Park, Washington County; T 1N R 3W S 33 Portion of Tax Lot 200; S 33B Portion of Tax Lots 100, 300 & 400; S 33CA Tax Lots 100, 400, 700, 800, 900, 1800 & 1900; S 33DB Tax Lots 300, 400, 500, 600 & 700; WD #2013-0348; City of Cornelius Local Wetlands Inventory, Probable Wetlands 1 and 2

Dear Mr. Reynolds:

The Department of State Lands has reviewed the wetland delineation report prepared by Pacific Habitat Services, Inc. for the site referenced above. [Please note that the study area includes only a portion of some of the tax lots described above (see the attached map)]. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in Figures 6A through 6C of the report. Within the study area, twelve wetlands (totaling approximately 6.6 acres) and several segments of Council Creek were identified. The wetlands and creek are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in a wetland or below the ordinary high water line (OHWL) of a waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter, unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity, or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5232 if you have any questions.

Sincerely,

Peter Ryan, PWS
Wetland Specialist

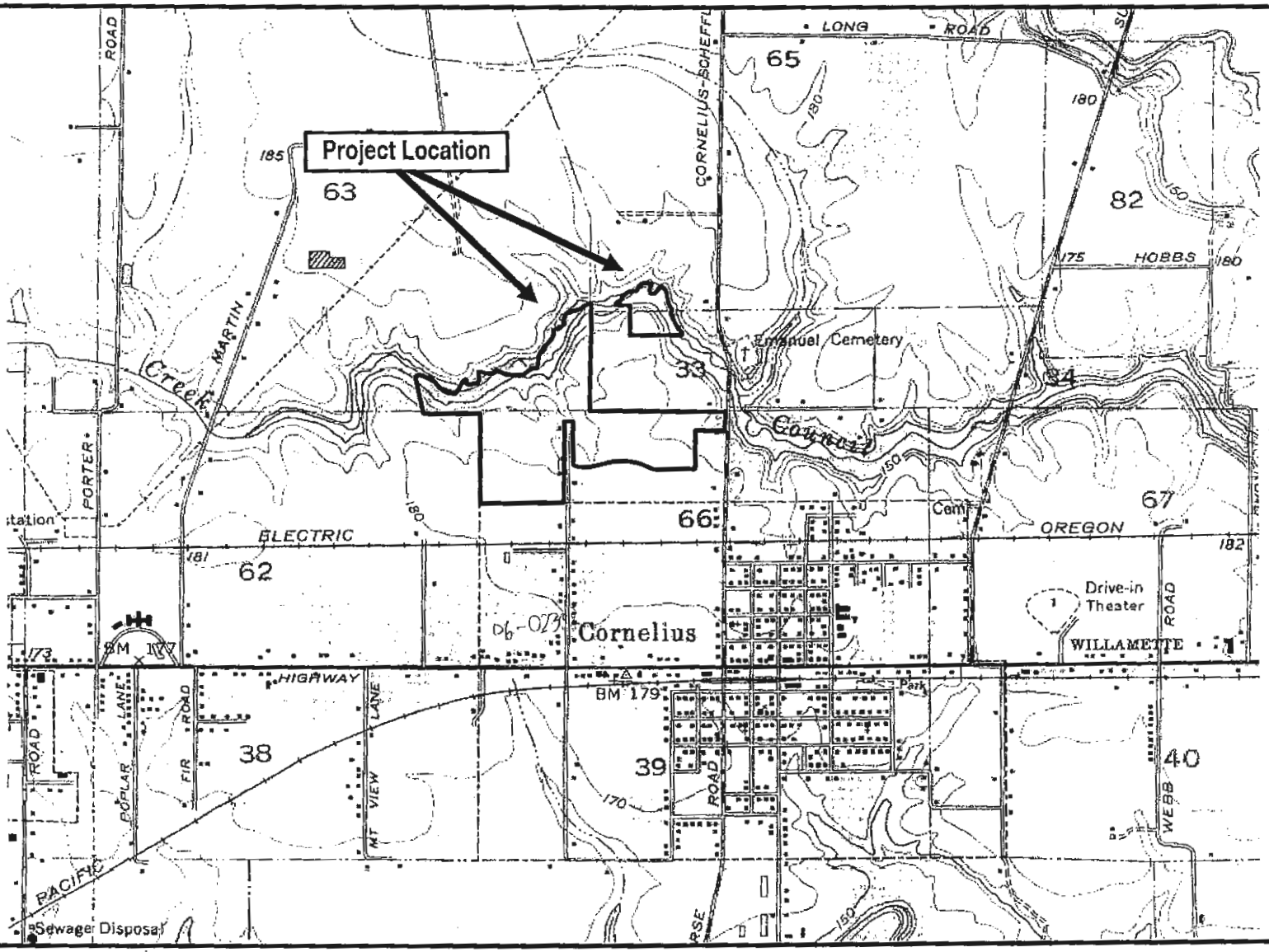
Approved by

Kathy Verble, CPSS
Acting Wetlands Program Manager

Enclosures

ec: Shawn Eisner, Pacific Habitat Services, Inc.
City of Cornelius Planning Department (Maps enclosed for updating LWI)
Mike Turaski, Corps of Engineers (Portland Eugene LaGrande office)
Charles Redon, DSL
Amber Wierck, Clean Water Services

WWH#13-0348

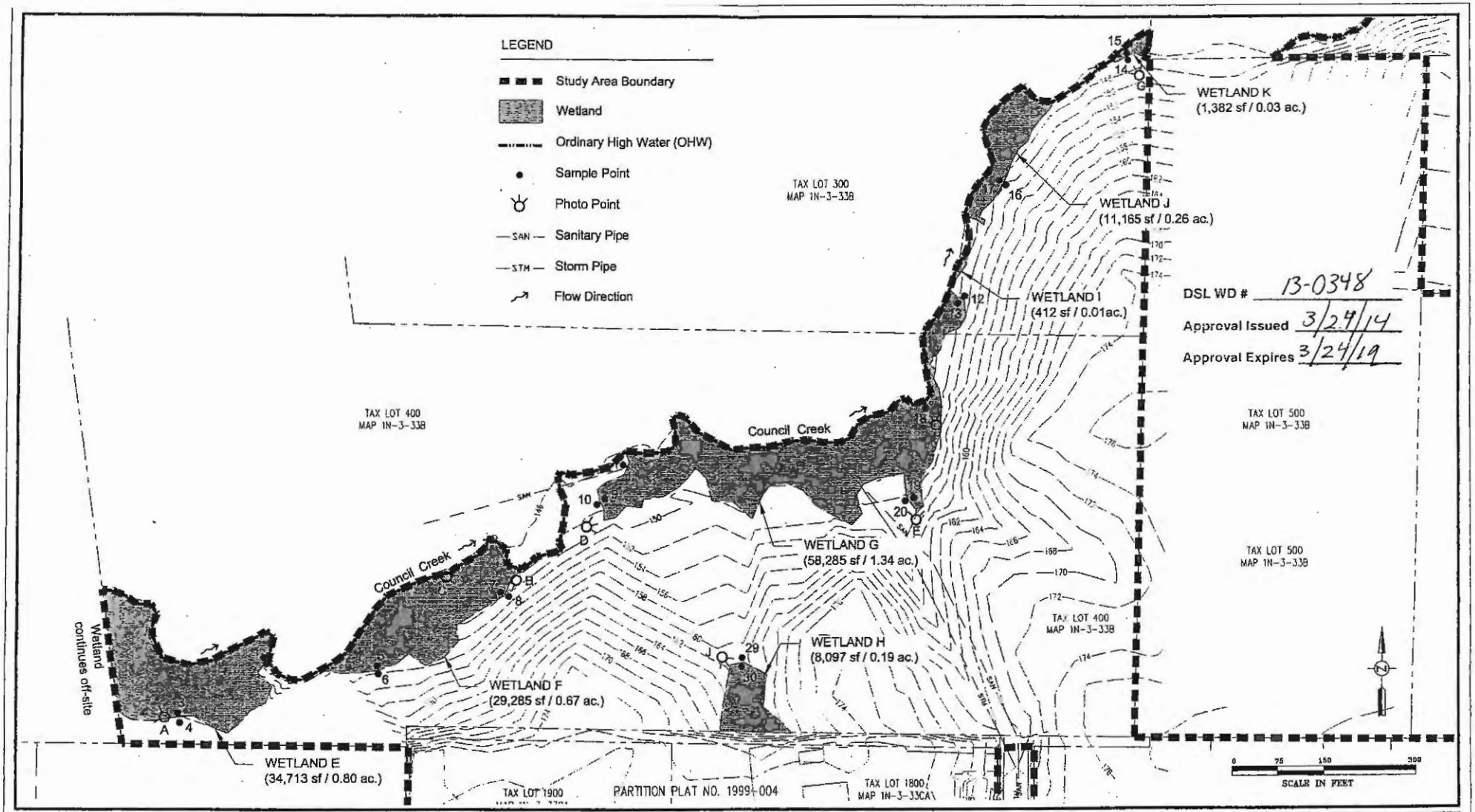


5095
7/17/13

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Topography and General Location for North Holladay Industrial Park
(USGS Forest Grove, OR Quadrangle, 1956)

FIGURE
1



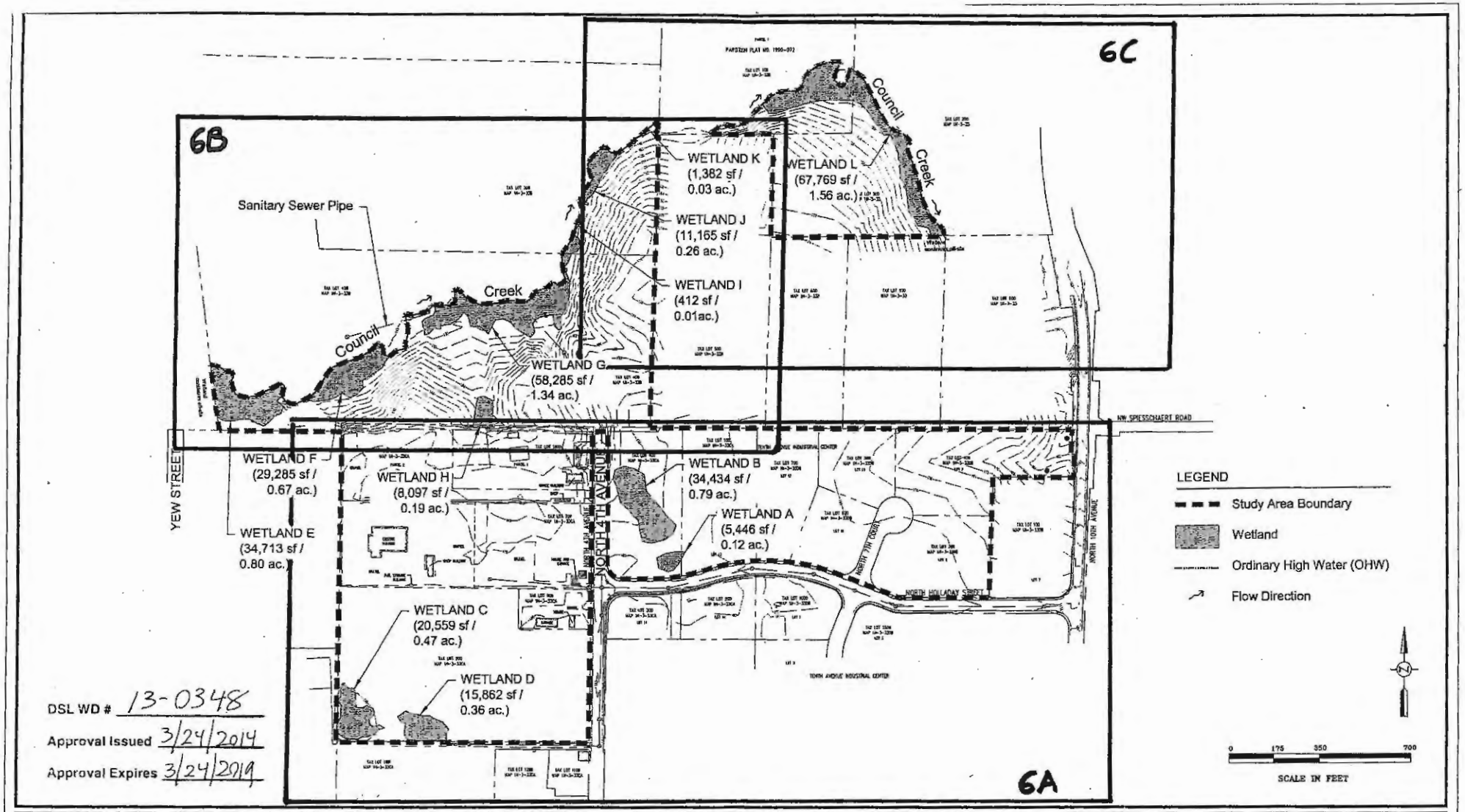
Pacific Habitat Services, Inc.

Survey provided by Northwest Surveying.
Survey and Sample point accuracy is sub-centimeter. Accuracy for sample point 19 is +/- 3 feet.
Datum: NGVD29

Wetland Delineation
North Holladay Industrial Park; Cornelius, Oregon

FIGURE 6B

07-17-13



DSL WD # 13-0348

Approval Issued 3/24/2014

Approval Expires 3/24/2019

PHS

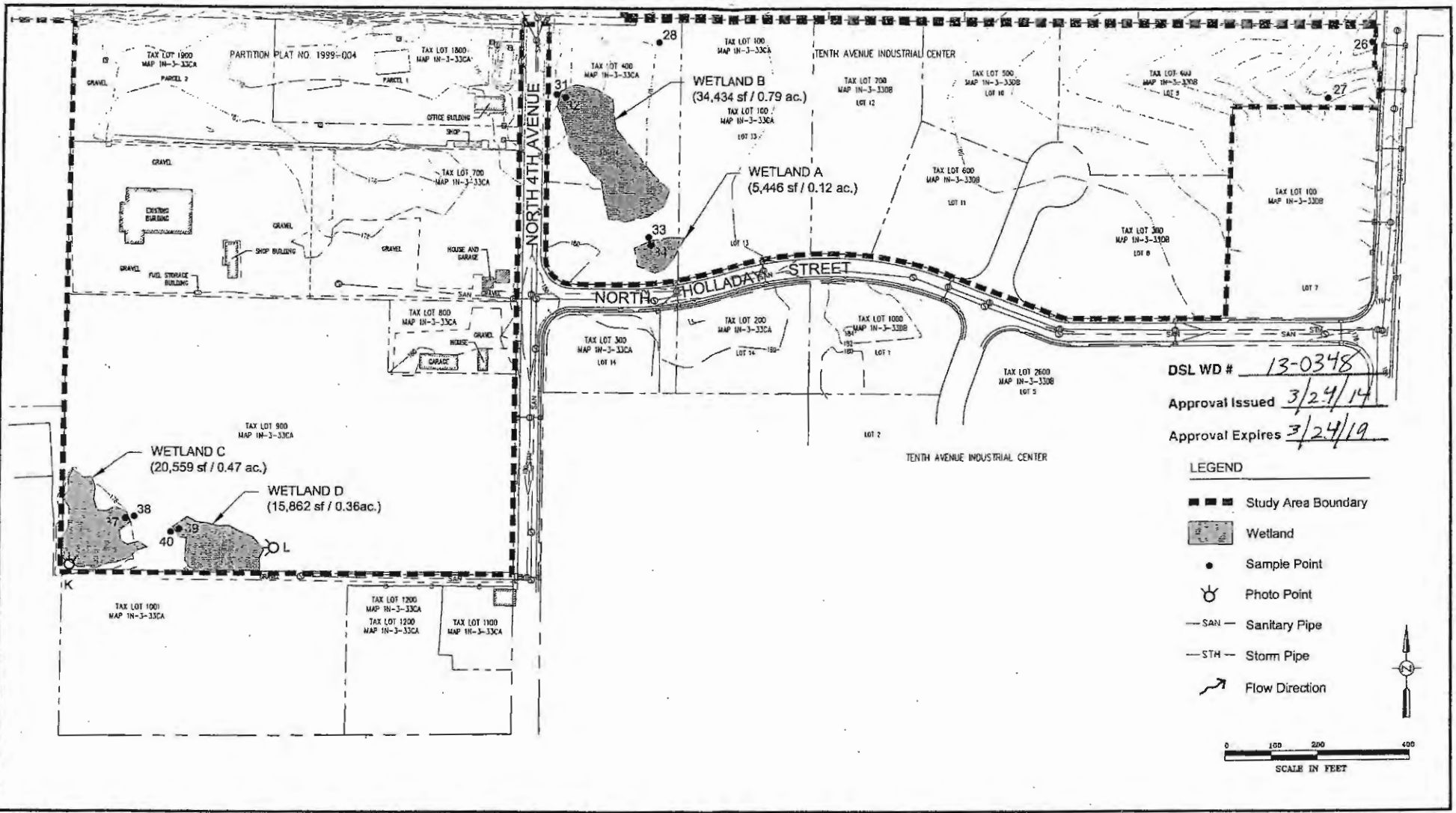
Pacific Habitat Services, Inc.

Survey provided by Northwest Surveying.
Survey accuracy is sub-centimeter.

Datum: NGVD 29

Wetland Delineation Overall Study Area
North Holladay Industrial Park
Index Map WD#13-0348 07-17-13

FIGURE 6



Pacific Habitat Services, Inc.

Survey provided by Northwest Surveying.
Survey and Sample point accuracy is sub-centimeter;
Accuracy for sample points 26, 27 and 28 is +/- 3 feet.

Datum : NGVD 29

Wetland Delineation
North Holladay Industrial Park

FIGURE 6A

07-17-13

EXHIBIT G

CONTRACT OF SALE

DATED: April 15, 2005

BETWEEN: HENRY T. TAGHON, Trustee ("Seller")
of the HENRY T. TAGHON REVOCABLE
LIVING TRUST dated October 20, 2004
1645 NW Cornelius-Schefflin Rd.
Cornelius, Oregon 97113

AND: JOSEPH R. FINEGAN and ("Purchaser")
JENNIFER C. FINEGAN, husband and wife
3775 NW Cornelius-Schefflin Rd.
Cornelius, Oregon 97113

Seller owns the real property located in Washington County, Oregon, and described in attached Exhibit A subject to those encumbrances described in attached Exhibit B (the "Property"). The following tangible personal property shall be included in the sale of the Property: all irrigation equipment, pipe, fittings, trailer, household appliances and wood-burning kitchen stove.

Seller agrees to sell the Property to Purchaser and Purchaser agrees to buy the Property from Seller for the price and on the terms and conditions set forth below:

Section 1. Purchase Price; Payment

1.1 Total Purchase Price. Purchaser promises to pay Seller as the total purchase price for the Property the sum of $544,080.00 (US).

1.2 Payment of Total Purchase Price. The total purchase price shall be paid as follows:

1.2.1 Down Payment. Purchaser shall pay on or before the Closing Date, as defined in Section 3.1, the sum of $54,408.00 in immediately available funds as a down payment on the purchase price.

1.2.2 Interest Rate and Scheduled Payment Dates. Interest on the remaining balance of $489,672.00 shall accrue at the rate of 5% per annum from the Closing Date.

The unpaid balance of the purchase price shall be paid in ten annual principal installments of $48,967.20 plus interest, with the first installment due on November 15, 2006 and with subsequent installments due on the same day of each year thereafter. Purchaser shall pay the interest accrued for the first partial year (from the Closing Date through November 15, 2005) on November 15, 2005. Each payment shall be applied first to interest to date of payment, then to amounts past due to Seller under this contract other than principal or interest, and the balance to principal.

1.2.3 Maturity Date. All unpaid principal and all accrued but unpaid interest shall be paid in full on or before the November 15, 2015.

1.3 Prepayments. Purchaser may prepay all or any portion of the unpaid principal without penalty. All prepayments shall be applied first to accrued but unpaid interest to date, then to amounts due Seller under this Contract other than principal or interest, then to the last installment of principal scheduled under this Contract, and shall not excuse Purchaser from making the regular annual payments when due under this Contract until the remaining balance has been paid in full.

1.4 Payments to Third Parties. If Purchaser fails to pay when due any amounts required under this Contract to be paid to third parties by Purchaser, Seller may, but shall not be obligated to, pay any or all such amounts directly to such third parties or otherwise to cure any such failure. If Seller makes any such payments, the amounts so paid shall be immediately due and payable by Purchaser to Seller. Until paid, such amounts shall be secured by this Contract and shall bear interest at the rate of 10% per annum. Seller's election to make any payments pursuant to this paragraph shall not constitute a waiver of Seller's right to declare Purchaser to be in default of this Contract and to exercise any remedies described in Section 11.2.

WARNING

Unless you, purchaser, provide us, seller, with evidence of the insurance coverage as required by our contract or loan agreement, we may purchase insurance at your expense to protect our interest. This insurance may, but need not, also protect your interest. If the collateral becomes damaged, the coverage we purchase may not pay any claim you make or any claim made against you. You may later cancel this coverage by providing evidence that you have obtained property coverage elsewhere.

You are responsible for the cost of any insurance purchased by us. The cost of this insurance may be added to your contract or loan balance. If the cost is added to your contract or loan balance, the interest rate on the underlying contract or loan will apply to this added amount. The effective date of coverage may be the date your prior coverage lapsed or the date you failed to provide proof of coverage.

The coverage we purchase may be considerably more expensive than insurance you can obtain on your own and may not satisfy any need for property damage coverage or any mandatory liability insurance requirements imposed by applicable law.

1.5 Place of Payments. All payments to Seller shall be made to Seller at the address of Seller shown above or to such other place or person as Seller may designate by written notice to Purchaser.

Section 2 Taxes and Liens

2.1 Obligation to Pay. All ad valorem real property taxes and all governmental or other assessments levied against the Property for the current tax year shall be prorated between Seller and Purchaser as of the Closing Date. So long as Seller continues to reside in the residence located on the Property, Seller shall pay all taxes and assessments that are levied against the residence and the portion of the Property that the residence is situated on. Purchaser shall pay when due all taxes and assessments that are levied against the farm land portion of the Property after the Closing Date, but Purchaser may elect to pay taxes and assessments in accordance with any available installment method.

2.2 Right to Contest. If Purchaser objects in good faith to the validity or amount of any tax, assessment, or lien, Purchaser, at Purchaser's sole expense, may contest the validity or amount of the tax or assessment or lien, provided that Seller's security interest in the Property is not jeopardized. Purchaser shall otherwise keep the Property free from all liens that may be imposed on the Property after the Closing Date, other than the lien of current taxes not yet due.

2.3 Classification. The Property is classified and specially assessed as Farm use. Purchaser shall be responsible for and shall pay when due any

additional taxes, penalties, or interest resulting from any disqualification of the Property from such classification and special assessment arising from or after the Closing Date.

2.4 Tax Statements. Purchaser shall provide Seller with written evidence reasonably satisfactory to Seller that all taxes and assessments have been paid when due. Purchaser shall submit this evidence after each required payment of taxes and assessments.

Section 3. Closing

3.1 Closing Date. This transaction shall be closed on April 15, 2005. As used in this Contract the "Closing Date" means the date on which this Contract is signed.

3.2 Responsibility of Parties. At closing Purchaser shall pay the amount of cash specified in Section 1.2.1 above, and Seller shall have received a commitment for the issuance of a purchaser's policy of title insurance as described in Section 9.

3.3 Prorates and Closing Costs. Except as otherwise provided in this Contract, all items to be prorated shall be prorated as of the Closing Date. Seller shall be responsible for payment of the title insurance premium, and one-half of the transfer tax. Purchaser shall be responsible for payment of the recording fees for recording this Contract or a memorandum thereof, and one-half of the transfer tax assessed on the sale contemplated by this Contract.

Section 4. Possession; Existing Tenancies

4.1 Possession. Purchaser shall be entitled to possession of the Property from and after the Closing Date, subject to Henry Taghon's (hereinafter "Taghon") right to continue to occupy and use the residence, garage, utility shed and outbuildings for Taghon's personal use as set forth in Section 4.2 below; provided, however, that Seller and Seller's agents may enter on the Property after Taghon has vacated the Property at reasonable times for the purpose of inspecting the Property. In no event shall Seller or Seller's agent interfere with the rights of any tenant of all or part of the Property.

4.2 Taghon's Possession and Obligations. This Contract is subject to Taghon's right to continue to occupy and use the residence, garage and utility shed

located on the Property for so long as Taghon shall choose to use the residence as his primary residence and without the payment of any rent or other charge to Purchaser. Taghon shall be responsible for keeping the residence insured and for payment of all utility services and routine repairs provided to the residence, garage and utility shed and the payment of ad valorem real property taxes assessed on the residence and the portion of the real property allocated to residential use for so long as he occupies the residence. Taghon shall be responsible to pay for the pumping of the septic system, if required during Taghon's occupancy of the residence. During Taghon's occupancy, Taghon and Purchaser shall share equally in any major repairs, including but not limited to, roof replacement or major septic work. Taghon shall also have the right to occupy and use the outbuildings for a period of up to one year after the Closing Date. Taghon, or Taghon's agents shall vacate and remove all personal property from the residence, garage and utility shed within 60 days after Taghon ceases to occupy the residence. Taghon or Taghon's agents shall vacate and remove all personal property from the outbuildings on or before the first anniversary of the Closing Date. All aluminum pipe, fittings, and the pipe trailer together with any other personal property left on the Property by Seller or Taghon shall become the property of the Purchaser and Purchaser shall have no duty to account for or protect the personal property.

Section 5. Maintenance; Alterations

5.1 Maintenance. After Taghon has vacated the outbuilding and after Taghon has vacated the residence, garage and utility shed, Purchaser shall keep all buildings, other improvements, and landscape now existing or that shall be placed on the Property in good condition and repair, and shall not permit any waste or removal of the improvements, nor make any substantial improvements or alterations that reduce the value of the Property for security purposes without the prior written consent of Seller, which consent shall not be unreasonably withheld. Purchaser shall farm and maintain the Property in accordance with the principles of good husbandry, shall conserve its resources, and maintain it in a high state of cultivation.

5.1.1 Improvements. If Purchaser desires to alter or further improve all or any portion of the Property, Purchaser shall first obtain Seller's written consent before proceeding to do or permit any work or to order any services or materials with respect to such work, which consent shall not be unreasonably withheld. All alterations and improvements constructed by or for Purchaser shall be completed in a good and workmanlike manner, lien-free, and in strict compliance with plans, specifications, and drawings approved beforehand in writing by Seller as provided

above. No approval by Seller shall be deemed a representation or warranty of Seller that the approved items or conduct are otherwise lawful, safe, or appropriate, or relieve Purchaser from strict compliance with all other provisions of this Contract and all applicable law.

5.1.2 Prohibited Activities. Purchaser shall not use or suffer the use of all or any of the Property for any "nuisance" as defined in ORS 105.555, or so as to constitute an "illegal drug manufacturing site" as that term is defined in ORS 453.858, as those statutes may now or hereafter be amended, supplemented, or superseded, or otherwise do or allow any act or omission on or about the Property that could subject the Property or Seller's or Purchaser's interest therein to forfeiture or the risk of forfeiture.

5.1.3 Governmental Damage. If any damage or destruction of the Property or any portion thereof is caused by any governmental or quasi-governmental authority and to the extent the same is not a compensable taking under the state or federal constitution, or directly caused by the act or omission of Seller, Purchaser shall promptly repair and restore the same at its expense.

5.1.4 Hazardous Substances. Purchaser shall comply fully with all laws pertaining to the protection of human health and the environment, including but not limited to employee and community right-to-know laws and all laws regarding the use, generation, storage, transportation, treatment, disposal, or other handling of hazardous substances. Purchaser shall promptly advise Seller in writing of any hazardous substances regulated by such laws that are used, generated, manufactured, stored, transported, or otherwise handled on the Property. Purchaser shall exercise extreme care in handling any hazardous substances and shall not cause or permit hazardous substances to be spilled, leaked, disposed of, or otherwise released on the Property.

5.1.5 Water Rights. Purchaser shall make sufficient use of the water on the Property as necessary to maintain water or irrigation rights and shall file all reports with the appropriate water bureau to maintain such rights. Seller shall cooperate in transferring any water rights to Purchaser to allow Purchaser to maintain such rights.

Section 6. Insurance

6.1 Property Damage Insurance. For so long as Taghon occupies the residence, Seller shall procure and maintain policies of fire insurance covering the

residence and other improvements on the Property that Taghon occupies and uses. Once Taghon has vacated the residence, Purchaser shall procure and maintain policies of fire insurance with standard extended coverage endorsements on a full insurable value basis covering all improvements on the Property in an amount sufficient to avoid application of any coinsurance clause and with loss payable to Seller (under a standard mortgagee's clause) and Purchaser as their respective interests may appear. The policies shall be primary with respect to all covered risks, and shall be written in such form with such terms and by such insurance companies reasonably acceptable to Seller. Purchaser shall deliver to Seller certificates of coverage from each insurer containing a stipulation that coverage will not be canceled or diminished without a minimum of 10 days' written notice to Seller. In the event of loss, Purchaser shall give immediate notice to Seller. Seller may make proof of loss if Purchaser fails to do so within 15 days of the casualty.

6.2 Liability Insurance. During the term of this Contract, Purchaser or Purchaser's Lessee shall maintain public liability and property damage insurance with a combined single limit of not less than $2,000,000.00. Such insurance shall be written on an occurrence basis and shall be primary with respect to all other insurance covering any of the insured risks; shall cover all risks arising directly or indirectly out of Purchaser's activities on or any condition of the Property, whether or not related to an occurrence caused or contributed to by Seller's negligence; shall include a contractual liability clause to protect Purchaser against the claims of Seller on account of the obligations assumed by Purchaser under Section 7; and shall protect Seller and Purchaser against claims of third persons. Such policies shall be written in such form, with such terms and by such insurance companies reasonably acceptable to Seller. Purchaser shall deliver to Seller certificates of coverage from each insurer containing a stipulation that coverage will not be canceled or diminished without a minimum of 10 days' written notice to Seller.

6.3 Application of Proceeds. All proceeds of any insurance on the Property shall be paid to and held by Seller. If Purchaser elects to restore the Property, Purchaser shall repair or replace the damaged or destroyed improvements in a manner satisfactory to Seller. On satisfactory proof of lien-free restoration of the Property to at least its condition and value immediately before the damage or destruction, Seller shall pay or reimburse Purchaser from the proceeds (net of Seller's cost of recovering and administering such proceeds and monitoring Purchaser's restoration activities) for the reasonable cost of repair or restoration to the extent of such proceeds received by Seller. If Purchaser elects not to restore the Property, and the net proceeds are sufficient to pay all amounts owed Seller under

this Contracts, Seller shall retain a sufficient amount of the proceeds to pay all amounts owed Seller under this Contract, and shall pay the balance to Purchaser. Any proceeds that have not been paid out within 90 days after their receipt and that Purchaser has not committed to the repair or restoration of the Property shall be used to prepay first accrued interest and then principal of Purchaser's indebtedness.

Section 7. Indemnification

7.1 Purchaser's Indemnification of Seller. Purchaser shall forever indemnify, reimburse, and hold Seller harmless and, at Seller's election, defend Seller for, from, and against any and all claims, costs, expenses (including attorney fees), losses, damages, fines, charges, actions, or other liabilities of any description arising out of or in any way connected with (1) Purchaser's possession or use of the Property, (2) Purchaser's conduct with respect to the Property, (3) any condition of the Property to the extent the same arises from or after the Closing Date and is not caused or contributed to by Seller, or (4) Purchaser's breach of any warranty or representation made by Purchaser in this Contract. In the event of any litigation or proceeding brought against Seller and arising out of or in any way connected with any of the above events or claims, against which Purchaser agrees to defend Seller, Purchaser shall, on notice from Seller, vigorously resist and defend such actions or proceedings in consultation with Seller through legal counsel reasonably satisfactory to Seller.

7.2 Seller's Indemnification of Purchaser. Seller shall forever indemnify, reimburse, and hold Purchaser harmless and, at Purchaser's election, defend Purchaser for, from, and against any and all claims, costs, expenses (including attorney fees), losses, damages, fines, charges, actions, or other liabilities of any description arising out of or in any way connected with (1) Seller's possession or use of the Property, (2) Seller's conduct with respect to the Property, (3) any condition of the Property to the extent the same exists on the Closing Date and is not caused or contributed to by Purchaser, or (4) Seller's breach of any warranty or representation made by Seller in this Contract. In the event of any litigation or proceeding brought against Purchaser and arising out of or in any way connected with any of the above events or claims, against which Seller agrees to defend Purchaser, Seller shall, on notice from Purchaser, vigorously resist and defend such actions or proceedings in consultation with Purchaser through legal counsel reasonably satisfactory to Purchaser.

7.3 Indemnification Scope. Wherever this Contract obligates a party to indemnify, hold harmless, or defend the other party, the obligations shall run to the

family members, invitees, agents, and employees of such other party and shall survive any termination or satisfaction of this contract. Such obligations with respect to the acts or omissions of either party shall include the acts or omissions of any director, officer, partner, agent, employee, contractor, tenant, invitee, or permittee of such party.

Section 8. Representations, Warranties, and Covenants of Seller

8.1 Covenants of Title. Seller warrants that Seller is the owner of insurable title to the Property free of all liens and encumbrances except those referred to on attached Exhibit B and will defend such title from the lawful claims of persons claiming superior title.

8.2 Authority. Seller represents that Seller has all requisite authority for the execution and delivery by Seller of this Contract and the performance of the transactions contemplated by this Contract, and that the execution and delivery of this Contract are made pursuant to such authorizations.

8.3 No Brokers. Seller has not employed any broker or finder in connection with the transactions contemplated by this Contract and has taken no action, which action would give rise to a valid claim against Purchaser for a brokerage commission, finder's fee, or other like payment.

8.4 Nonforeign Status. Seller is not a "foreign person" as defined in IRC §1445(f)(3).

8.5 No Warranties; As Is. Seller makes no other warranties, express or implied, regarding the Property or the condition or state of repair thereof, it being understood by all parties that the Property will be conveyed to the Purchaser AS IS, except such warranties as may arise by law under the Deed.

8.6 Survey. Seller will arrange for and pay the expenses of having a professional surveyor identify and mark the property line between the Property and the adjacent property owned by Remy Taghon. The property lines shall be identified on or before the Closing Date.

Section 9. Title Insurance (Purchaser's Policy). Seller shall furnish at Seller's expense a purchaser's title insurance policy in the amount of the full purchase price within 10 days after the Closing Date, insuring Purchaser against loss or

damage sustained by Purchaser by reason of the unmarketability of Seller's title, or liens or encumbrances affecting the Property, excepting matters contained in the usual printed exceptions in such title insurance policies, those created or suffered by Purchaser, and those referred to on attached Exhibit B.

Section 10. Deed. On payment of the total purchase price for the Property as provided in this Contract and performance by Purchaser of all other terms, conditions, and provisions of this Contract, Seller shall forthwith deliver to Purchaser a good and sufficient special warranty deed conveying the Property free and clear of all liens and encumbrances, except those referred to on attached Exhibit B and all liens or encumbrances suffered by or placed on the Property by Purchaser subsequent to the date of this Contract.

Section 11. Default

11.1 Events of Default. Time is of the essence of this Contract. A default shall occur under any of the following circumstances:

(1) Failure of Purchaser to make any payment within 10 days after written notice that it is due. No notice of default and no opportunity to cure shall be required if Seller has already sent a previous notice to Purchaser concerning nonpayment or late payment under this Contract.

(2) Failure of Purchaser to perform any other obligations contained in this Contract within 20 days after notice from Seller specifying the nature of the default or, if the default cannot be cured within 20 days, failure within such time to commence and pursue curative action with reasonable diligence. No notice of default and no opportunity to cure shall be required if during any 12-consecutive-month period Seller has already sent a previous notice to Purchaser concerning default in the performance of the same Contract provision.

(3) Dissolution, termination of existence, insolvency on a balance sheet basis, or business failure of Purchaser; the commencement by Purchaser of a voluntary case under the federal bankruptcy laws or under other federal or state law relating to insolvency or debtor's relief; the entry of a decree or order for relief against Purchaser in an involuntary case under the federal bankruptcy laws or under any other applicable federal or state law relating to insolvency or debtor's relief; the appointment or the consent by Purchaser to the appointment of receiver, trustee, or custodian of Purchaser or of any of

Purchaser's property; an assignment for the benefit of creditors by Purchaser or Purchaser's failure generally to pay its debts as such debts become due. If one of the parties collectively referred to as Purchaser suffers an event of default under this subsection, such event of default shall be considered the default of Purchaser.

(4) The making or suffering by Purchaser of a fraudulent transfer or conveyance under applicable federal or state law; concealment by Purchaser of any of its property from creditors; the making or suffering by Purchaser of a preference within the meaning of the federal bankruptcy law; or the imposition of a lien through legal proceedings or distraint on any of the property of Purchaser. If one of the parties collectively referred to as Purchaser suffers an event of default under this subsection, such event of default shall be considered the default of Purchaser.

11.2 Remedies of Default. In the event of a default, Seller may take any one or more of the following steps:

(1) Seller may declare the entire balance of the purchase price and interest immediately due and payable.

(2) Seller may foreclose this Contract by suit in equity.

(3) Seller may specifically enforce the terms of this Contract by suit in equity.

(4) If Purchaser fails to make any payment within 15 days after it is due, Seller may elect to impose a late charge not to exceed five cents per dollar of the installment, in addition to and not in lieu of any and all other rights and remedies available to Seller. Demand or acceptance by Seller of such a late charge by Seller shall not cure or waive Purchaser's default.

(5) After complying with the notice requirements and affording Purchaser the right to cure the default contained in ORS 93.905–93.940 as the same may be amended or superseded from time to time, as long as the same is applicable, Seller may declare this Contract forfeited and retain the amount of the payments previously made under this Contract. On recordation of the affidavit required by Oregon law, this Contract shall be extinguished and canceled, and Purchaser shall have no further right, title, or interest in and to the real property or to any return or

compensation for payments previously made under this Contract, as though this Contract and such payments had never been made. In that event, Purchaser agrees to surrender the Property to Seller. If Purchaser fails to do so, Seller may elect to treat Purchaser as a tenant holding over unlawfully after the expiration of a lease, and Purchaser may be ousted and removed as such, without affecting Seller's right to pursue other rights and remedies contained in this Contract or permitted by law.

(6) Seller shall be entitled to the appointment of a receiver as a matter of right whether or not the apparent value of the Property exceeds the amount of the balance due under this Contract, and any receiver appointed may serve without bond. Employment by Seller shall not disqualify a person from serving as a receiver. On taking possession of all or any part of the Property, the receiver may:

(a) Use, operate, manage, control, and conduct business on the Property and make expenditures for all maintenance and improvements as in its judgments are proper;

(b) Collect all rents, revenues, income, issues, and profits (the "Income") from the Property and apply such sums to the expenses of use, operation, and management;

(c) At Seller's option, complete any construction in progress on the Property, and in that connection pay all bills, borrow funds, employ contractors, and make any changes in plans and specifications as Seller deems appropriate.

If the revenues produced by the Property are insufficient to pay expenses, the receiver may borrow, from Seller or otherwise, such sums as the receiver deems necessary for the purposes stated in this paragraph, and repayment of such sums shall be secured by this Contract. Amounts borrowed from or advanced by Seller shall bear interest at the same rate as the balance of the purchase price under this Contract from the date of expenditure until repaid and shall be paid by Purchaser on demand.

(7) Purchaser hereby assigns to Seller all the Income from the Property, whether now or hereafter due. Before default, Purchaser may operate and manage the Property and collect the Income from the Property. In the event of default and at any time hereafter, Seller may revoke Purchaser's right to collect the Income from the Property and may, either itself or through a receiver, collect the same. To facilitate collection, Seller may notify any tenant or other user to make payments

of rents or use fees directly to Seller. If the Income is collected by Seller, then Purchaser irrevocably designates Seller as Purchaser's attorney in fact with full power of substitution and coupled with an interest to endorse instruments received in payment thereof in the name of Purchaser and to negotiate the same and collect the proceeds. Payments by tenants or other users to Seller in response to Seller's demand shall satisfy the obligation for which the payments are made, whether or not any proper grounds for the demand existed. Seller shall apply the Income first to the Seller's expenses of renting or collection and the balance (if any) to the payment of sums due from Purchaser to Seller under this Contract.

11.3 Remedies Not Exclusive. The remedies provided above shall be nonexclusive and in addition to any other remedies provided by law.

Section 12. Waiver. Failure of either party at any time to require performance of any provision of this Contract shall not limit the party's right to enforce the provision except to the extent expressly set forth in a writing signed by such party, nor shall any waiver of any breach of any provision constitute a waiver of any succeeding breach of that provision or a waiver of that provision itself.

Section 13. Successor Interests. This Contract shall be binding on and inure to the benefit of the parties, their successors, and assigns; but no interest of Purchaser shall be assigned, subcontracted, or otherwise transferred, voluntarily or involuntarily, without the prior written consent of Seller which consent shall not be unreasonably withheld. Consent by Seller to one transfer shall not constitute consent to other transfers or waiver of this section. As a condition to such consent, Seller may elect to increase the interest rate under this Contract by not more than 2% per annum from the date of the transfer. Any increase in the interest rate under this Contract shall entitle the Seller to increase annual payments to the amount necessary to retire the obligation within the stipulated time provided for in this Contract. Purchaser and any other person at any time obligated for the performance of the terms of this Contract hereby waive notice of and consent to any and all extensions and modifications of this Contract or the release of any person or persons from liability under the Contract granted by Seller. Any such extensions or modifications or releases will not in any way release, discharge, or otherwise affect the liability of any person at any time obligated under this Contract.

Section 14. Prior Agreements. This document is the entire, final, and complete agreement of the parties pertaining to the sale and purchase of the Property, and

supersedes and replaces all prior or existing written and oral agreements (including any earnest money agreement) between the parties or their representatives relating to the Property.

Section 15. Notice. Any notice under this Contract shall be in writing and shall be effective when actually delivered in person or when deposited in the U.S. mail, registered or certified, return receipt requested, postage prepaid and addressed to the party at the address stated in this Contract or such other address as either party may designate by written notice to the other.

Section 16. Applicable Law. This Contract has been entered into in Oregon and the Property is located in Oregon. The parties agree that the laws of the state of Oregon shall be used in construing the Contract and enforcing the rights and remedies of the parties.

Section 17. Costs and Attorney Fees

17.1 No Suit or Action Filed. If this Contract is placed in the hands of an attorney due to a default in the payment or performance of any of its terms, the defaulting party shall pay, immediately on demand, the other party's reasonable attorney fees, collection costs, costs of either a litigation or a foreclosure report (whichever is appropriate), even though no suit or action is filed thereon, and any other fees or expenses incurred by the nondefaulting party.

17.2 Arbitration or Mediation; Trial and Appeal. If any arbitration, mediation, or other proceeding is brought in lieu of litigation, or if suit or action is instituted to enforce or interpret any of the terms of this Contract, or if suit or action is instituted in a Bankruptcy Court for a United States District Court to enforce or interpret any of the terms of this Contract, to seek relief from an automatic stay, to obtain adequate protection, or to otherwise assert the interest of Seller in a bankruptcy proceeding, the party not prevailing shall pay the prevailing party's costs and disbursements, the fees and expenses of expert witnesses in determining reasonable attorney fees pursuant to ORCP 68, the actual cost of a litigation or foreclosure report, and such sums as the court may determine to be reasonable for the prevailing party's attorney fees connected with the trial and any appeal and by petition for review thereof; in addition, the Court shall award the prevailing party attorney fees of $1,500.00, which the parties agree is a reasonable attorney fee for collecting any resulting judgment.

17.3 Definitions. For purposes of this Contract, the term *attorney fees* includes all charges of the prevailing party's attorneys and their staff (including without limitation legal assistants, paralegals, word processing, and other support personnel) and any postpetition fees in a bankruptcy court. For purposes of this Contract, the term *fees and expenses* includes but is not limited to long-distance telephone charges; expenses of facsimile transmission; expenses for postage (including costs of registered or certified mail and return receipts), express mail, or parcel delivery; mileage and all deposition charges, including but not limited to court reporters' charges, appearance fees, and all costs of transcription; costs incurred in searching records; and the cost of title reports or surveyor's reports.

Section 18. Number, Gender, and Captions. As used herein, the singular shall include the plural, and the plural the singular. The masculine and neuter shall each include the masculine, feminine, and neuter, as the context requires. All captions used herein are intended solely for convenience of reference and shall in no way limit any of the provisions of this Contract.

Section 19. Survival of Covenants. Any covenants the full performance of which is not required before the closing or final payment of the purchase price and delivery of the deed shall survive the closing and the final payment of the purchase price and the delivery of the deed and be fully enforceable thereafter in accordance with their terms.

Section 20. Condition of Property. Purchaser accepts the land, buildings, improvements, and all other aspects of the Property in their present condition, AS IS, WHERE IS, including latent defects, without any representations or warranties from Seller or any agent or representative of Seller, expressed or implied, except to the extent expressly set forth in this Contract. Purchaser agrees that Purchaser has ascertained, from sources other than Seller or any agent or representative of Seller, the condition of the Property and its suitability for Purchaser's purposes, the applicable zoning, building, housing, and other regulatory ordinances and laws, and that Purchaser accepts the Property with full awareness of these ordinances and laws as they may affect the present use or any intended future use of the Property, and Seller has made no representations with respect to such condition or suitability of the Property or such laws or ordinances.

Section 21. Memorandum of Contract. On the Closing Date the parties shall cause a memorandum of this contract to be signed and recorded in the real

property records of Washington County, Oregon, in form and content reasonably acceptable to both parties.

Section 22. Statutory Disclaimer

The following disclaimer is made pursuant to ORS 93.040(2):

THE PROPERTY DESCRIBED IN THIS INSTRUMENT MAY NOT BE WITHIN A FIRE PROTECTION DISTRICT PROTECTING STRUCTURES. THE PROPERTY IS SUBJECT TO LAND USE LAWS AND REGULATIONS, WHICH, IN FARM OR FOREST ZONES, MAY NOT AUTHORIZE CONSTRUCTION OR SITING OF A RESIDENCE AND WHICH LIMIT LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930 IN ALL ZONES. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND EXISTENCE OF FIRE PROTECTION FOR STRUCTURES.

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

IN WITNESS WHEREOF, the parties have caused this Contract to be executed in duplicate as of the day and year first above written.

Seller:

Henry T. Taghon

Henry T. Taghon, Trustee of the Henry T. Taghon Revocable Living Trust dated October 20, 2004

Purchaser:

Joseph R. Finegan

Joseph R. Finegan

Jennifer C. Finegan

Jennifer C. Finegan

Exhibit "A"

Real property in the County of Washington, State of Oregon, described as follows:

PARCEL I:

Beginning at a point marked by a stone in the middle of the public road and 23.49 chains East from the Southwest corner of the D.L.C. No. 65 in Sections 27, 33, 28 and 34, Township 1 North, Range 3 West of the Willamette Meridian as described in donation certificate No. 251 issued to William Porter and Susannah Porter his wife; thence West 6.25 chains; thence North 17.35 chains; thence East 6.00 chains; thence South 17.35 chains to the point of beginning.

PARCEL II:

Beginning at a point on the South line of the above described William Porter Donation Land Claim 11.47 chains East of the Southwest corner of said claim; thence North 17.35 chains; thence East 5.77 chains; thence South 17.35 chains; thence West 5.77 chains to the place of beginning.

TOGETHER WITH a right-of-way 16.5 feet wide lying North of the land last above described and extending Easterly to the public road as conveyed and described in deed book 102 at page 351 of the deed records of Washington County, Oregon.

PARCEL III:

Beginning at a point on the North line of the Donation Land Claim of H.H. Hendrix and Zelda J. Hendrix, his wife, in Section 33, Township 1 North, Range 3 West of the Willamette Meridian, said beginning point being the Southeast corner of land formerly owned by A. Hauck and is 23.12 chains East from the Northwest corner of said Hendrix D.L.C. and running thence West on the North line of said Hendrix D.L.C. 12.94 chains, more or less, to a corner of land formerly owned by one Lund; thence South 5.90 chains, more or less, to an inner corner of said Lund's land; thence East parallel with the North line of said Hendrix D.L.C. 14.35 chains, more or less, to the center of the county road; thence Northwesterly along the center of said road to the place of beginning.

PARCEL IV:

Parts of Lot 3, Section 33, Township 1 North, Range 3 West, of the Willamette Meridian, beginning on the South line of the William Porter Donation Land Claim as defined by the Southwest corner of the same and a stone in the center of the county road, at the Northwest corner of the M. Peterson tract, at the Northeast corner of the Joseph Klinger tract, 6.87 chains east of the Southwest corner of said claim, and running thence East along said line 3.41 chains to the Northwest corner of the land formerly owned by Wallace Yates; thence South along the West line of said Yates original tract 5.92 chains to the Southwest corner; thence west parallel with the South line of said Porter claim 3.45 chains to the East line of the Klinger land; thence North 1°30' East along said Klinger land 5.92 chains to the place of beginning.

PARCEL V:

That portion of the following described property lying North of the centerline of Council Creek.

Part of Lot 2, in Section 33, Township 1 North, Range 3 West of the Willamette Meridian, in the County of Washington and State of Oregon, more particularly described as follows:

Beginning on the North line of B.Q. Tucker Donation Land Claim No. 66 at a point 17.13 chains East of the Southeast corner of John Butt Donation Land Claim No. 63, and running North 10.98 chains to the South line of the line of the land owned by Yates; thence Eastward along said Yates line 7.83 chains, more or less, to a point in the center of Cornelius Schefflin Road; thence Southerly along the center line of said Cornelius Schefflin Road to a point on the North line of said Tucker claim; thence West along same 8.54 chains to the place of beginning.

PARCEL VI:

Beginning in the center of county Road No. A63 and distant 363 feet North 0°34' East from a stone on the South line of the William Porter D.L.C. No. 65, Township 1 North, Range 3 West, Willamette Meridian, in the County of Washington and State of Oregon, and running thence on a line parallel with the South line of said Porter D.L.C. North 88°22' East 2380 feet to the West line of Geo. Susbauer's land; thence on said Susbauer's West line North 0°48' East 551.6 feet to an iron; thence on a line parallel with the South line of said Porter D.L.C. South 88°22' West 2380 feet, more or less, to the center of County Road No. A63 from which an iron bears North 88°22' East 30 feet; thence South 0°34' West 551.6 feet to the place of beginning.

PARCEL VII:

Being part of the Wm. Porter D.L.C. No. 65, Township 1 North, Range 3 West, Willamette Meridian, in the County of Washington and State of Oregon, and being more particularly described as follows:

Beginning at a point in the center of County Road No. A63 in Section 33, Township 1 North, Range 3 West, Willamette Meridian, in the County of Washington and State of Oregon, said beginning point being North 0°34' East 264.0 feet from a stone in said road and on the South line of the Wm. Porter D.L.C. No. 65, said stone being described as being 23.61 chains East from the Southwest corner of said Porter Claim; running thence on a line parallel with the South line of said Porter D.L.C. North 88°22' East 823.3 feet to an iron pipe; thence South 0°34' West 264.0 feet to an iron pipe on the South line of said Porter Claim; thence along the South line of said Porter Claim North 88°22' East 1555.2 feet to a stone on said claim line and being the Southwest corner of the George Susbauer land in said Porter Claim; thence along the West line of said Susbauer land, North 0°48' East 363.0 feet to an iron; thence on a line parallel with the South line of said Porter Claim, South 88°22' West 2380.0 feet to a point in the center of said Road No. A63; thence along the center of said road, South 0°34' West 99.00 feet to the place of beginning.

Tax Parcel Number: R2044035 and R750930 and R750949

Exhibit B

1. The assessment roll and the tax roll disclose that the within described premises were specially zoned or classified for Farm use. If the land has become or becomes disqualified for such use under the statute, an additional tax or penalty may be imposed.

2. Easement, including terms and provisions contained therein:

Recording Information:	May 27, 1955 in Book 369, page 461
In Favor of:	James B. Cook and Lucille Cook, as tenants by the entirety
For:	Ingress and egress
Affects:	North 16.5 feet of Parcel I and Parcel II

3. Easement, including terms and provisions contained therein:

Recording Information:	June 11, 1975 in Book 1033, page 376
In Favor of:	The United States of America
For:	Survey, construct, reconstruct, operate, inspect and maintain a water pipeline or conduit and appurtenances
Affects:	Parcel I and Parcel IV

4. Easement, including terms and provisions contained therein:

Recording Information:	February 27, 1991 as Fee No. 91009580
In Favor of:	Unified Sewerage Agency of Washington County
For:	Lay down, construct and perpetually maintain a sewer (s)
Affects:	Parcel I and Parcel III

5. The rights of the public in and to that portion of the premises herein described lying within the limits of streets, roads and highways.

6. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of Council Creek.
Parcels II, III and V

7. Any adverse claim based upon the assertion that some portion of said land has been removed from or brought within the boundaries thereof by an avulsive movement of the Council Creek or has been formed by the process of accretion or reliction or has been created by artificial means or has accreted to such portion so created.
Parcel V

EXHIBIT H

Dick Reynolds

From: Jennifer Finegan <fineganfarms@msn.com>
Sent: Friday, May 23, 2014 9:51 AM
To: Dick Reynolds
Subject: RE: North Holladay Industrial Park Planning Project

Feel free to include this email to the planning commission.

Marie Finegan was going to contact you to go over ownership/trustee status with you.

The meeting taking place on June 3rd, is this something that is open to the landholders to attend? Should Joe and I plan on being present since there is some issues going on with our tax lot?

Jennifer Finegan
Finegan Farms, Inc.- Office Manager
503.961.4449-Mobile
503.357.3613-Office
503.359.9989-Fax
fineganfarms@msn.com

From: rreynolds@ci.cornelius.or.us
To: fineganfarms@msn.com
Subject: RE: North Holladay Industrial Park Planning Project
Date: Fri, 23 May 2014 15:01:51 +0000

Thanks Jennifer for your response and explanation. I kind of thought from reading through some of the recorded documents that Marie Finnegan might be the executor. If it is OK with you and Joe I'd like to include your email (below) in the record to the Planning Commission? I am sorry this issue came up, but it did and like I said I felt I needed to let you folks know. If Marie Finnegan wants to add any comments that may also be helpful for the Planning Commission.

Thanks again,

Dick Reynolds
Community Development Director
City of Cornelius

From: Jennifer Finegan [mailto:fineganfarms@msn.com]
Sent: Thursday, May 22, 2014 8:42 PM
To: Dick Reynolds
Subject: RE: North Holladay Industrial Park Planning Project

This contract was put into place after Henry Taghon died, he was the loan holder on the property and we were making yearly payments to him. After his passing this document states that we will now be paying the 3 surviving children and the the contract of sale is binding with them.

Joe and I are the owners and make all decisions on our property. Furthermore, he is not the executor of the Henry Taghon estate, Marie Finegan is and she makes all the decisions.

Remi has no legal rights to tell Joe and I what to do with our property. We would like to proceed with the original plan to include it in the study.

We will contact Marie the trustee of this estate and have them review what their legal rights are. Remi can not speak on their behalf.

We are not willing to higher attorneys and have legal fees regarding this matter, so if it gets denied at your hearing, we will just move on.

Thank you,

Jennifer Finegan
Finegan Farms, Inc.- Office Manager
503.961.4449-Mobile
503.357.3613-Office
503.359.9989-Fax
fineganfarms@msn.com

From: rreynolds@ci.cornelius.or.us
To: fineganfarms@msn.com
Subject: North Holladay Industrial Park Planning Project
Date: Thu, 22 May 2014 22:38:04 +0000
Hi Joe & Jennifer,

I know that you folks are probably pretty busy with farm business this time of year, but I wanted to touch bases with you concerning the upcoming Planning Commission hearing concerning the addition of the North Holladay Wetlands Report to the City Comprehensive Plan. Recently, the City sent out public notices about the upcoming Planning Commission hearing on June 3, 2014 to amend the Comprehensive Plan by adding the Wetlands Report to it. The Notices are required to go to property owners and also to property owners within 250' of the subject site(s). Therefore, we did send a Notice to Remi Taghon and he came into the office on Tuesday (2/20/14) to discuss the Notice, but mostly to inform me of his 1/3 interest in the Henry Taghon Trust and Tax Lot # 200, Map # 1N333. He provided me with a copy of a recorded document - 'Assignment of Sellers Interest', which I have attached. I researched the referenced documents in the 'Assignment' and it appears that they only relate to Tax Lot # 200, Map # 1N333 of the North Holladay area. He was adamant about not having Tax Lot # 200 included in our Natural Resource Inventory, especially since he never agreed to have a wetland study done on the property. Currently, I am preparing the staff report for the hearing on June 3rd and I will have to include the information that Remi has provided. This may result in the Planning Commission removing Tax Lot # 200 and it's Wetland from the Comprehensive Plan and Inventory.

Sorry about this, but I felt like I needed to let you know this information. Let me know if you have any questions.

Thanks again for your participation in this project,