

# Site Design Review Application

## Riverbend Expansion - Modules 10 and 11

Prepared for:



Riverbend Landfill Company  
13469 SW Highway 18  
McMinnville, OR 97218  
Contact: Paul Burns

November 5, 2014

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## Summary Information

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Property Description: Map 5501, Tax Lots 101, 200, 400, and 401

Application Submitted For: Site Design Review for Riverbend Expansion – Modules  
10 and 11

# Table of Contents

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I. Introduction .....	1
II. History and Prior Approvals .....	2
III. Site Design Review .....	3
1101. <i>SITE DESIGN REVIEW PROCESS AND STANDARDS</i> .....	6
1101.01 <i>Purpose</i> .....	6
1101.02 <i>Evaluation of Site Development Plans</i> .....	6
1101.03 <i>Site Develop Plan Review Procedures</i> .....	18
1101.04 <i>Preliminary Site Development Plan Requirements</i> ...	19
1101.05 <i>Final Site Plan Requirements</i> .....	24
1101.06 <i>Compliance with Site Development Plans</i> .....	25
IV. ORS 215.296(1)(a) and (b) .....	25
V. Conclusion.....	28

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## Figures

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Figure 1. Overview Map and Aerial Photo

Figure 2. Soil Survey Map

Figure 3. Current Yamhill County Zoning

Figure 4. Demolition Plan - Buildings and Trees to be Removed

## Attachments

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Attachment A ..... Preliminary Site Development Plans

Drawing A-1..... Existing Site Conditions

Drawing A-2..... Existing Site Conditions: Entrance Facilities

Drawing A-3..... Base Grading Plan

Drawing A-4..... Final Grading Plan

Drawing A-5..... Vegetated Screening Buffers

Drawing A-6..... Berm Buffer Planting Layout

Attachment B..... Farm Impacts Assessment

Attachment C..... Photo Simulations

Attachment D..... Surrounding Properties/Summary of Existing Easements

# I. Introduction

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Riverbend Landfill Company (“RLC”) presents this development application for the enhancement and expansion of Riverbend Landfill (“Riverbend”). If approved, the application will allow the landfill to continue operating by reconfiguring portions of the existing landfill, and by expanding operations to adjacent RLC-owned land as other areas of the existing landfill go into final closure.

This specific development proposal seeks site design approval for a total of 37 new acres of landfill area that will be directly incorporated into the existing landfill. The proposed design includes a perimeter berm with a traditional earth fill design containing shallow outside slopes. The proposal does not use a mechanically stabilized earthen berm as RLC used for its most recent expansion. As proposed, the height of the landfill will not increase from the current permitted height of 286 feet above mean sea level. Other than the additional landfill area and a reconfiguration of portions of the existing berm, no other changes to RLC’s site are being proposed in this application.

The expansion and enhancement areas are defined by the development of two new modules (see Figure 1 and Drawing A-1 [Attachment A]):

1. Module 10 is an eight-acre disposal cell adjacent to the north slope of the existing landfill and just east of the existing Renewable Energy Facility. Module 10 will be constructed as a contiguous extension of the existing landfill. When this area reaches capacity, it will be capped, closed and planted with grasses and shrubs to blend with the natural landscape.
2. Module 11 is a 29-acre group of disposal cells to be located west of the existing landfill and adjacent to Highway 18, and includes a reconfiguration of the existing berm on the south side of the landfill. This module will be constructed in multiple phases and will also be a contiguous extension of the existing landfill with tree plantings and other landscape features along the newly constructed and reconfigured berms to provide a year-round visual screen. This area, too, will be capped, closed, and planted with grasses and shrubs to blend with the natural landscape when it reaches capacity.

As explained in more detail in this Narrative, the landfill use is an allowed use in the Exclusive Farm Use (“EFU”) zone. That use, however, is subject to the County’s Site Design Review regulations contained in Yamhill County Zoning Ordinance (“YCZO” or “Code”) Section 1100. When such a use is enhanced or expanded, it must also satisfy state standards limiting potential impacts on farm practices, which the County has adopted by reference in the EFU section of the Code. RLC’s development proposal includes a limited amount of development in the

floodplain. As such, a Floodplain Development Permit (“FDP”) under YCZO Section 902 will also be required. The purpose of this Narrative is to address the approval standards for Site Design Review and to address potential farm impacts. RLC is concurrently submitting an application and narrative for the FDP portion of this proposal.

## **II. History and Prior Approvals**

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The County initially approved the siting and development of Riverbend in 1980 as part of a Comprehensive Plan Amendment and Zone Change (“PA/ZC”). The result of the 1980 PA/ZC was to rezone RLC’s property from the EFU zone to the Public Works/Safety (“PWS”) zone. At the time, although solid waste disposal sites were permissible uses in an EFU zone under state law, the County’s 1976 zoning ordinance allowed landfills as an outright permitted use only in the PWS zoning district.

Riverbend began operating at its present location in 1982 in accordance with Oregon Department of Environmental Quality (“DEQ”) Solid Waste Disposal Permit No. 345. In 2009, RLC anticipated that the landfill would reach capacity by 2014 and applied for land use approval to expand onto adjacent property. In granting that application, the County determined there was a demonstrated need for the continued presence of a landfill in the County and approved another PA/ZC through an “Exception” to Statewide Planning Goal (“Goal”) 3. On appeal, the Land Use Board of Appeals (“LUBA”) reversed the County’s decision on the basis that an Exception to Goal 3 is not available to allow a use that is already authorized by the statutory EFU zone (Oregon Revised Statute [ORS] Chapter 215). In doing so, LUBA stated, “[i]f the county wishes to allow landfills on agricultural land, it must amend its EFU zone to allow them under the standards set forth in the statutory EFU zone, with any supplementary regulation that the county wishes to adopt.” The Court of Appeals upheld that decision based on the same reasoning.

Implicit in the decisions from LUBA and the Court of Appeals was that the County should have originally approved development of Riverbend in 1980 through the normal zoning process on EFU land rather than through the Goal Exception process. In response, the County amended the Code and adopted a text amendment to the EFU zone district in 2011 that mirrors the statutory use in ORS 215.283(2)(k) and allows solid waste sites to be maintained, enhanced or expanded within the EFU zone in some, but not all, of the specific circumstances allowed by state law:

#### 402.02 Permitted Uses

*In the Exclusive Farm Use District, the following uses shall be permitted subject to the standards and limitations set forth in subsection 402.09 and any other applicable provisions of this ordinance:*

\* \* \*

*V. The maintenance, enhancement or expansion of an existing site on the same tract for the disposal of solid waste for which a permit has been granted under ORS 459.245 by the Department of Environmental Quality, together with equipment, facilities or buildings necessary for its operation. The use must satisfy the standards set forth in ORS 215.296(1)(a) and (b) and the standards set forth in section 1101, Site Design Review. The maintenance, enhancement or expansion of an existing use on the same tract on high-value farmland is permissible only if the existing use is wholly within a farm use zone. No other Yamhill County Zoning Ordinance criteria or Comprehensive plan goal or policy shall apply as an approval standard for this use.*

Earlier this year, the County approved a third PA/ZC and rezoned the PWS portions of RLC's property to EF-80 (part of the EFU zoning district) through County Ordinance 887 ("Ordinance 887" or "Zone Change"). In doing so, the County made a finding that, by changing the zoning on RLC's property back to the EFU zone, the County was "restoring the property's original zone designation and putting RLC in the same position it would have been if the County had permitted the landfill in the manner that LUBA and the Court of Appeals suggested it should have." Those findings also expressly stated that the Zone Change would "provide the property owner with flexibility to continue or expand the current" landfill use.

Although the landfill and some of its existing equipment and facilities were previously in two separate zones – PWS and EFU – the property and the existing use is now wholly within a farm use zone as a result of the Zone Change finalized earlier this year. The enhancement and expansion of Riverbend is therefore permissible under the Code as amended in 2011 and is consistent with the statutory farm zone. Under those Code and statutory provisions, RLC must still demonstrate that development proposals satisfy the County's site design review standards, as well as the farm impacts standards set forth in ORS 215.296.

### **III. Site Design Review**

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YCZO Section 1100 outlines the site design review ("Site Design Review" or "SDR") process and standards. The SDR process focuses on "how" a site is developed, not "whether" it should be developed for a particular use. Some of the considerations for SDR (such as natural resources and hazards) are relevant to, and are addressed by, RLC's application and narrative for a FDP. RLC is requesting a consolidated review of its SDR application and its FDP application.

The information included in the FDP application is incorporated into this Narrative by this reference to address the overlapping portions of the two applications.

YCZO Section 1100 establishes a two-step process for Site Design Review. In the first step, the applicant provides a Preliminary Site Development Plan for review by the County. Following review, if the County concludes that changes are warranted, the applicant will provide a Final Site Development Plan. If no changes are warranted, the Preliminary Site Development Plan can serve as the Final Site Development Plan.

RLC's development proposal includes two components not typically required in the SDR process. First, as required by Ordinance 887, RLC must hold at least one community meeting to present its expansion plan and to collect public comments before the County takes final action on this SDR application. Second, RLC's proposal must also be reviewed and approved by DEQ. DEQ is responsible for assuring compliance with state and federal environmental statutes and administrative rules for landfills. DEQ's issuance of a solid waste disposal permit pursuant to ORS 459.245 ultimately determines whether the use is allowed in the EFU zone under state statute and the YCZO. RLC is submitting the Preliminary Site Development Plan that will be presented at the community meeting and included as part of RLC's application to DEQ for a permit modification. If the Preliminary Site Development Plan must be revised, RLC is proposing to wait to submit the Final Site Development Plan until DEQ approves the plans and required modifications to Solid Waste Disposal Permit No. 345 to incorporate the expansion proposal.

Unlike many of RLC's earlier land use applications, the Preliminary Site Development Plan in this application contains only an enhancement and expansion of the existing landfill and a reconfiguration of some of the roads around the site used for maintenance and access. The application does not propose any new ancillary facilities or structures. The recent addition of some facilities and structures on the site, such as the Renewable Energy Facility and the Recycling/Public Drop facilities, received approval through prior SDR applications. Future facilities, such as the Green Technology Facility that is required as a condition of approval for the Zone Change, will similarly be part of a separate application to the County when any new facility is proposed.

Attachment A provides the following drawings for the Preliminary Site Development Plan Set and which are referenced throughout this Narrative:

- Existing Site Conditions (Drawing A-1)
- Existing Site Conditions for Entrance Facilities (Drawing A-2)

- Subgrade Plan (Drawing A-3)
- Proposed Site Improvements at Completion ((Drawing A-4)
- Berm Buffer Plan and Narrative (Drawing A-5)
- Berm Buffer Planting Layout (Drawing A-6)

When the County approved the PWS zoning for Riverbend in 1980, the Code did not require Site Design Review for the landfill use or for the ancillary facilities proposed at that time. After that initial approval, the County implemented the Code's SDR provisions, but those provisions applied only to new facilities on the Riverbend site that were not part of the original site plan. With respect to the continued development of the landfill, the County on multiple occasions determined that the landfill could continue to expand under its original authorization without Site Design Review. That determination was confirmed by the LUBA and the Oregon Court of Appeals in 2012 when RLC proposed to continue developing the landfill within the PWS zone utilizing a mechanically stabilized earthen berm ("MSE Berm"). Because the continued development of the landfill and the use of berms was part of Riverbend's original approval, the County, LUBA, and the Court of Appeals allowed the MSE Berm without requiring RLC to go through the SDR process.

The majority of RLC's development proposal in this application lies within areas that have always been zoned EFU and that were not part of RLC's original approval. Those areas, therefore, require SDR approval. Smaller portions of RLC's development proposal are within the area formerly zoned PWS, and RLC seeks SDR approval for that portion of its development proposal as well so that the County can comprehensively review all of the changes being proposed on the site. For those areas of the existing landfill not subject to any enhancement or expansion, RLC is not seeking SDR approval, nor is SDR approval required for those previously approved and developed areas.

This Narrative addresses the criteria in YCZO Section 1101 below. Each criterion is set forth in italics, followed by RLC's response in regular text.

## 1101. SITE DESIGN REVIEW PROCESS AND STANDARDS

### 1101.01 Purpose.

*The site design review process is intended to guide future growth and development in accordance with the Comprehensive Plan and other related county ordinances, to provide for an effective process and framework to review commercial and industrial development proposals, to insure safe, functional, energy-efficient developments which are compatible with the natural and man-made environment, and to resolve potential conflicts that may arise between proposed developments and adjacent uses. This section shall apply to all development in all Commercial, Industrial, and Public Facilities Districts, all development in the PRO District, and all other uses as may be required by this ordinance in the AF, EF, F-80, AF-10, VLDR and LDR Districts.*

**Response:** The first sentence in YCZO Section 1101.01 is not an approval standard. Rather, that portion of this section describes the purpose of the remaining language in YCZO Section 1101.

The second sentence in YCZO Section 1101.01 states the kinds of applications to which the SDR provisions apply. RLC's development proposal is for the expansion and enhancement of Riverbend. The existing landfill is currently zoned EF-80 and is therefore part of an EF zone, which is governed by YCZO Section 402. YCZO Section 402.02(V) specifically provides that the expansion or enhancement of an existing solid waste disposal site is allowed if it satisfies the County's SDR standards. The County's SDR process therefore applies to RLC's development proposal, which is the purpose of this application.

### 1101.02 Evaluation of Site Development Plans.

A. *The review of a site development plan shall be based upon consideration of the following:*

*1. Characteristics of adjoining and surrounding uses;*

**Response:** The Preliminary Site Development Plan takes into consideration the characteristics of adjoining and surrounding uses.

Riverbend is located in unincorporated Yamhill County south of the McMinnville Urban Growth Boundary. Topography in the general vicinity is relatively gentle, with productive agricultural fields in the level valley lands abutting Highway 18, transitioning up to hills and mixed agricultural and woodlots to the northwest, and down to the Yamhill River floodplain to the southeast.

Natural resources define the County in general and the Riverbend area specifically. The County's agricultural sector makes use of fertile soils, ready availability of irrigation water, and a favorable

climate. Forestry lands comprise over half the County land area and provide jobs, clean water, and habitat for many plants and animals. Natural resource-based industries provide a large percentage of total business revenues for the County.

The predominant soils on the broad valley terraces in the vicinity of Riverbend include Amity silt loam (Am) and Woodburn silt loam (WuB) (see Figure 2). With the exception of small areas of Class III and IV soils associated with creeks and steeper slopes, soils in the project vicinity are categorized as high value farm lands. Most of the acreage is cultivated and the general capability unit is Class II. As part of its application, and as addressed in more detail below, RLC has submitted a Farm Impacts Assessment that describes the agricultural crops and practices in this area. According to that analysis, typical agricultural crops include grass seed, grain and hay, nut orchards, and vegetable crops.

Even before Riverbend began operating in the 1980s, the County operated the Whiteson Landfill in the area on the other side of the South Yamhill River from Riverbend beginning in 1973. Riverbend began operating as Whiteson Landfill reached capacity. A landfill use has therefore been a continuous part of the surrounding area for more than forty years.

The County's Comprehensive Plan was the first comprehensive plan to be acknowledged by the Land Conservation and Development Commission. That acknowledgement occurred in the early 1980s, around the same time Riverbend began operating, and the character and density of development in the surrounding areas have not changed substantially since that time. With high-value agricultural soils, relatively large farm operations and minimum lot size restrictions associated with EFU zoning, the surrounding area has been largely maintained in agricultural uses and relatively large parcels.

The only significant exception to the relatively homogenous agricultural zoning pattern in this area was the period of time between 1980 when the County approved the Goal 3 Exception that rezoned the Riverbend parcels from EFU to PWS and earlier this year when the County rezoned the landfill back to EFU. The former PWS zoning designation allowed a more intensive development than surrounding areas. The redesignation of that land back to the EFU as part of the Zone Change restored the site's original zoning to make it the same as the surrounding parcels, and also put into place more protections for nearby agricultural lands (see Figure 3). Specifically, RLC's development proposals must now include a Farm Impacts Assessment to meet the statutory requirements in ORS 215.296, ensuring specific development proposals do not cause substantial changes in farm practices or in the costs of farm practices.

Now that Riverbend is within the EFU, ORS 459.055 will apply to DEQ's permitting process. That statute requires certain reclamation standards for landfills in the EFU zone. In essence, the current EFU zone, in conjunction with ORS 459.055, recognizes that the landfill will be an

interim use and that, as part of the ultimate closure of the landfill, RLC will have to work with DEQ to determine how the site will be rehabilitated to a condition comparable to its original use.

It remains unknown what specific farm uses DEQ will allow or even require as part of the post-closure process. ORS 459.055 does not require any specific farm use or farm practice to occur following closure of a landfill. Instead, the statute requires the site to be restored to a “condition comparable to its original use.” The original application for land use approval of Riverbend identified the current uses as grazing, turkey farming, and other general farm uses. RLC has since developed a conceptual post-closure plan that describes some of the uses it intends to seek DEQ approval for and relies on conditions being comparable to the site’s original use. That conceptual post-closure plan includes anticipated farm uses such as hay or seed production, pollinator gardens, apiculture, plantings for wildlife habitat, grazing, and the creation, restoration and enhancement of wetlands that are clearly among uses comparable to the original use of the landfill property. Regardless of what specific activities occur on site, the requirement to restore Riverbend to a condition comparable to its original use will help ensure the site’s long-term compatibility with the surrounding agricultural area.

Another characteristic of the areas surrounding Riverbend is the open space provided by agricultural uses and a nearby park. As part of the Zone Change, the County concluded that the County’s Parks Master Plan recognizes the unique characteristics of landfills that allow development of passive open space once closed, and that the continued operation of the landfill would be consistent with those open space characteristics.

The continued operation of Riverbend will remain compatible with adjoining and surrounding agricultural and open space uses. The long history of landfill operations at this particular site served in part as the basis for the County to conclude during the Zone Change process that the continued operation of a landfill at this site is compatible with adjoining and surrounding uses. For these reasons, this Preliminary Site Development Plan appropriately considers the characteristics of adjoining and surrounding uses and is appropriate in the context of surrounding uses and the density and pattern of development in the area.

## *2. Economic factors relating to the proposed use;*

**Response:** The economic importance of the continued operation of Riverbend has been acknowledged by the County on multiple occasions and can no longer be in dispute. As part of the Zone Change earlier this year, the County made the following factual findings:

(1) The record supports a conclusion that there is an existing need for the continued operation of a local disposal option generally and for Riverbend specifically – a particular use allowed by the requested EFU zone. The Board bases this conclusion on a combination of all three need factors. As [RLC] has indicated, the County has previously determined a market need for the continued operation of Riverbend. The County arrived at that conclusion as part of [RLC's] earlier request for a Goal 3 Exception and reconfirmed that conclusion when the County amended the Zoning Ordinance in 2011 to allow landfills in the farm zone through Ordinance 867. Those decisions were based on information similar to the information presented to the County in this proceeding, including an economic market analysis referred to as the “Zia Report,” an update to which appears in this record as the Yamhill County Waste Disposal/Management Alternatives Update 2014 (the “Zia Report Update”). Both the Zia Report and the Zia Report Update were undertaken by the County as independent analyses to augment other information being submitted to the record.

(2) The record demonstrates that a local disposal option is of high importance to the citizenry of the County through the economic benefits that the landfill generates for the community. These benefits are realized through the following: (1) lower disposal costs for individuals and businesses; (2) revenue to the County through the license fee; (3) greater direct and indirect employment income from the construction and operation of the landfill; (4) increased opportunities for local electricity generation; and (5) a reduction of fuel costs (and air emissions) that would otherwise result from trucking waste to distant sites.

(3) The record also demonstrates that there is a market need for the continued operation of a local disposal option in the County. Specifically, residents and businesses in the County currently generate between 150,000 and 200,000 tons of municipal solid waste every year that require disposal.

RLC's expansion proposal implements the economic goals the County set out to achieve through the Zone Change. The expansion will allow Riverbend to continue operating and, if all other conditions from the Zone Change are met, those operations will continue for approximately 15 years based on current waste volume and density calculations. Any continued operation of the landfill will bring continued economic benefits to the County in the form of (1) lower disposal costs for individuals and businesses; (2) revenue to the County through the license fee; (3) greater direct and indirect employment income from the construction and operation of the landfill; (4) increased opportunities for local electricity generation; and (5) a

reduction of fuel costs (and air emissions) that would otherwise result from trucking waste to distant sites.

RLC's development proposal also continues to rely on its existing accessory uses and facilities, which have largely been consolidated to the north of the active landfill. Recent changes to the Recycling/Public Drop facilities (see Attachment A, Drawing A-2) enhance the overall efficiency, economic factors, and safety for the commercial and public users of the site. The relocated scales include separate driveways for "commercial" and "public" vehicles and improve on-site circulation and safety, as well as reducing waits at the entry – with related economic benefits for commercial disposal costs and the cost of associated air emissions.

### *3. Traffic safety, internal circulation and parking;*

**Traffic Safety Response:** The County has adopted a Transportation System Plan ("TSP") that is coordinated with the transportation system plans of the cities and the State Transportation System Plan. Riverbend has an approved direct access point to the state highway system (Highway 18) that includes a left turn pocket for vehicles entering the landfill and a right turn acceleration lane for vehicles leaving the facility. This existing access meets ODOT standards for sight distance and safety.

As part of the Zone Change, RLC submitted a Traffic Study to show how the eventual expansion of Riverbend would be consistent with the TSP specifically, and consistent with the State's Transportation Planning Rule in general. The Traffic Study was based on several assumptions regarding the level of development that would occur on this site, including development that is more intense than what is currently being proposed. A copy of the Traffic Study Assessment used to support the Zone Change is attached as an exhibit to the Farm Impacts Assessment that is provided in Attachment B of this application.

Based on the Traffic Study, the County made a factual finding supporting the Zone Change that "the existing primary access would be retained and can accommodate the [Zone Change] area and contemplated future expansion area and maintain compliance with ODOT access, safety, and level of service standards for Highway 18." The Board also made the following finding:

As documented in the Traffic Study, the trips associated with the landfill constitute a very small portion of overall traffic volumes on the state highway. The [Zone Change] and contemplated future expansion would not result in a significant change in the percentage of trips relative to the overall background traffic on Highway 18.

The fact that the expansion proposal is consistent with the expansion as contemplated by the County as part of the Zone Change process, and the fact that RLC's proposed development is

not as intense as the scenarios considered during the Zone Change, the County can determine that RLC's application maintains traffic safety.

**Internal Circulation and Parking Response:** RLC's application does not make any changes to the internal circulation and parking plans that have already been approved by the County. As part of RLC's SDR application for the new Recycling/Public Drop facilities, the County approved additional improvements to enhance the overall safety and efficiency of on-site circulation and parking. Specifically, the main entrance route now parallels the south side of the ancillary facilities on Tax Lot 101, including the Renewable Energy Facility, the Recycling/Public Drop facilities and the Maintenance Building (see Attachment A, Drawing A-2).

A new location for the scale house was also approved, which now provides about 500 feet of queuing length to accommodate up to 33 vehicles, well in excess of the previous queuing length of 380 feet. Vehicles are weighed when entering and leaving the site and are directed to the appropriate facility (public dropoff, recycling center and/or active landfill disposal area). By locating the Recycling/Public Drop facilities near the scale house and paved entry road, public customers will have a clean, safe area to drop off recyclables and other materials without having to drive onto the active landfill face or mix with heavier trucks and equipment.

Relative to parking, the YCZO did not specify parking requirements for the PWS zone when the Recycling/Public Drop facilities were approved, nor does it do so for the current EFU zone. Most of the traffic Riverbend generates does not require parking. For the parking that is necessary, the current configuration includes 44 spaces to support the administrative office use, the maintenance building, Recycling/Public Drop facilities, and Renewable Energy Facility (see Attachment A, Figure A-2).

RLC's development proposal does not result in increased use of the site. Rather, the expansion will allow the current level of use to continue. As shown in the site plan (see Attachment A, Drawing A-3), only minor changes are being made to the internal circulation of the site to allow for some maintenance access around the site. The existing internal circulation and parking are therefore sufficient for the expansion proposal.

*4. Provisions for adequate noise and/or visual buffering from noncompatible uses;*

**Response:** The County has already concluded that the continued operation of Riverbend is compatible with other uses in the vicinity of the landfill. As part of its findings supporting the Zone Change, for example, the County expressly concluded that the anticipated end-uses for this site "are compatible with development on other EFU parcels in the vicinity." The County also made the following finding:

The Board finds that Riverbend Landfill has a 20-year track record of compatibility with uses adjacent to the existing landfill. In fact, landfill operations are very similar to other agricultural operations and create similar conditions. Although some owners of agricultural property adjacent to the existing landfill have opposed the future expansion and have complained about impacts from current operations, very little to no real evidence was received to support a conclusion that the actual farming or agricultural operations on farms adjacent to the current landfill have been significantly impacted by the existing landfill. The zone change and contemplated future expansion will not increase existing impacts. Following the zone change, existing operations will continue without significant change. Any subsequent expansion will merely shift the operations to other areas as the existing disposal areas are closed.

Riverbend's long record of compatibility is the result, in part, of the requirements in Oregon statutes and DEQ rules addressing the operations of a solid waste disposal facility. For example, those rules establish standards limiting noise impacts. The County has not adopted noise control regulations, but instead relies on DEQ enforcement of the state noise standards.

Riverbend is located in a rural area and next to a busy state highway. Background (ambient) noise is dominated by highway traffic. The noise characteristics associated with the continued operation of Riverbend should not change relative to existing conditions because RLC will not be increasing activities at the site. RLC also owns several large surrounding parcels which serve as a substantial buffer around portions of the active landfill, including the expansion area. Additionally, the density of houses within a 1-mile radius of the landfill is very low. Therefore, it is reasonable to conclude that RLC will continue to comply with DEQ noise regulations.

RLC acknowledges that it has received complaints from neighbors in the past regarding noise levels at the site. Although RLC's investigation of noise levels revealed that state standards were being met, RLC implemented a change in hours at the landfill. These changes also addressed neighbors' concerns regarding the amount of light emanating from the site. Historically, Riverbend was open to the public from 5 am to 5 pm, Monday through Friday, and 6 am to 4 pm on Saturday. In June 2012, the public hours were reduced to 6 am to 4:30 pm, Monday through Friday and 7 am to 3:00 pm on Saturday, and closed on Sunday. This change in hours required numerous conversations and coordination with customers, who in turn agreed to adjust their haul schedules to fit the new schedule. RLC made other changes such as replacing a large Caterpillar dozer with a smaller dozer and reducing the size of the compactor on site. RLC also relocated its maintenance shop to a location closer to the office and highway.

With respect to visual screening, RLC will continue to develop this site to limit the largest potential visual impact, which is to auto traffic along Highway 18. RLC recognizes that Highway 18 is an important linkage between the Portland metro area and portions of the Oregon coast. The berm RLC proposes along Highway 18 will be planted with trees and shrubs to screen views

of the landfill from travelers on Highway 18. RLC will also retain several rows of the existing poplar stand that runs along Highway 18 (see Attachment A, Drawing A-5).

Photographic simulations are provided in Attachment C to depict selected views of the landfill during different phases of development. The purpose of these simulations is to show how the landfill, including the existing landfill area and the expansion areas, will look to passersby and neighbors over time. The simulations show views from three viewpoints at different stages of the site's development and at closure. The locations of the viewpoints are as follows:

- The intersection of Highway 18 and Durham Lane (the view as seen when traveling from McMinnville).
- Two miles southwest of Riverbend on Highway 18 (the view when traveling from Sheridan).
- An elevated area in front of McCabe Chapel approximately one mile east of Riverbend.

The views are shown at three stages: present day; five years after construction begins for the expansion (2021); and when the expansion areas are closed and planted with grasses and shrubs (approximately 15 years after construction begins [2031]).

Vegetated buffers will consist mainly of evergreen trees with a mix of native deciduous trees and shrubs. A 35-foot wide buffer will be developed between the Highway 18 right-of-way and the Module 11 berm, as well as along the northern side of the southern utility access road (which is the current access road to the RV Park). Additionally, the western berm for Module 11 facing Highway 18 will be planted with a 90-foot buffer consisting of similar vegetation (see Attachment A, Drawings A-5 and A-6). Tree species selected are expected to exhibit vertical growth rates of between two and six feet per year depending on the species, microsite conditions, and weather. Growth rates will be enhanced with irrigation and regular vegetation maintenance during the two to four year establishment period.

Existing wooded and riparian areas around the site will be retained and enhanced for multiple values, including visual and noise buffers. Because RLC is not proposing any new ancillary facilities with this application, and because the intensity of the use of the site will not change, surrounding properties will not be subject to any additional potential noise or visual impacts from the existing facilities.

### *5. Retention of existing natural features on site;*

**Response:** The site has several existing natural features, including heavily wooded areas, riparian vegetation, and scattered large trees (see Figure 1). RLC's application not only retains many of these existing natural features on site, it enhances some of those features.

As described in more detail below, the development of this site is subject to riparian area protections through conditions of approval imposed as part of the Zone Change. Those protections establish a 100-ft setback from the tributary creeks on the property and from the South Yamhill River. In areas where development has already taken place, new construction will occur only within the portion of the riparian area that is less than 50 percent of the width of that area as measured from the upland edge. In order to provide equal or better protection of the riparian resource, RLC is proposing to restore and enhance approximately 3.8 acres of riparian habitat of the southern tributary reach south of Module 11, as detailed in the Riverbend South Tributary Channel and Floodplain Enhancement Plan included with the Floodplain Development Permit Application narrative. No development is proposed in the vicinity of the riparian area setback associated with the South Yamhill River.

As noted above, RLC will retain the heavily wooded areas located on site for screening and buffering purposes. Those areas will be augmented by the additional plantings along the berm and in buffer areas. RLC will remove the majority of the poplar stand on the site, but those trees were established as part of an agricultural operation and have always been slated for harvest at maturity. Even so, RLC will retain several rows of the poplar stand for screening purposes.

### *6. Problems that may arise due to development within potential hazard areas.*

**Response:** RLC's Site Development proposal includes development within two potential hazard areas: the 100-yr floodplain and a seismic zone. The County regulates development in the 100-yr floodplain through YCZO Section 902, which requires an FDP. RLC's development proposal includes a minor amount of development within the 100-yr floodplain. RLC has submitted an application and narrative for an FDP which demonstrates the proposed development satisfies all the criteria for obtaining an FDP and, therefore, avoids creating any problems that might otherwise arise due to development within that hazard area.

RLC is required to design and construct the landfill in adherence to modern seismic standards. The seismic design for municipal solid waste landfills is governed, in Oregon, by the following: (i) Solid Waste Landfill Guidance Document, State of Oregon, Department of Environmental Quality (ODEQ, 2013); (ii) United States Environmental Protection Agency, RCRA Subtitle D (40 CFR 258); and (iii) Seismic Design Guidance for Municipal Solid Waste Landfill Facilities

(USEPA, 1995). These provisions define the basis for design ground motions with a 10 percent probability of exceedance (i.e., a 90 percent chance of not being exceeded) in 250 years.

On the basis of RLC's site-specific seismic hazard analyses, supplemented with the results of the 2008 and 2014 USGS National Seismic Hazard Mapping Program ("NSHMP") with values presented in the 2014 USGS NSHMP United States National Seismic Hazard Maps, RLC has determined that for the Riverbend site, the regional seismic hazard reflects the contribution of three primary sources: (i) Crustal Earthquakes, (ii) Intraslab Subduction Earthquakes, and (iii) Interface Subduction Earthquakes. The contributions of all of these sources to the ground motions, having an average return period of approximately 2,500 years, have been thoroughly evaluated for the development of Module 10 and Module 11, and the ground motions have been characterized for use in engineering analyses. The applicable ground motions from those sources will be selected for the seismic design of the planned development of Module 10 and Module 11 at Riverbend. Furthermore, as outlined in the Oregon Resilience Plan (February, 2013), the likely impacts of a magnitude 9.0 Cascadia Subduction Zone earthquake will also be considered in the seismic design. DEQ will confirm these design standards as part of its approval process for any modification to RLC's permit.

*7. Comments and/or recommendations of adjacent and vicinity property owners whose interests may be affected by the proposed use.*

**Response:** The County's process for SDR approval will allow multiple opportunities for adjacent and vicinity property owners to provide comments and recommendations relating to RLC's development proposal. First, County Planning Staff has indicated that it will process this application as a Type B process along with the FDP, but including a public hearing before the Planning Commission. Second, the conditions of approval from the Zone Change require RLC to have a Public Meeting where it presents the application, collects comments, and submits those comments to the record. That public meeting is currently scheduled to be held on November 11th. RLC will submit the comments it collects at that meeting for inclusion in the record. The County will therefore be able to ensure that comments and recommendations from adjacent property owners and others in the vicinity of Riverbend will be taken into consideration.

*B. All development applications for site design review are subject to the development standards of the underlying zoning district and may be modified pursuant to satisfaction of the considerations provided in subsection 1101.02(A). The Director may waive submittal requirements consistent with the scale of the project being reviewed, upon determining that requirements requested to be waived are not necessary for an effective evaluation of the site development plan.*

**Response:** RLC is not requesting the modification of any applicable development standards or the waiver of any submittal requirement as part of its development application. The applicable development standards, as determined by the underlying EFU zone, are set forth in YCZO Section 402.09. As applied to landfills in general, and RLC's particular proposal, however, none of the development standards in YCZO Section 402.09 are applicable. For example, those standards set limits on dwelling density, changes to parcel sizes, building setbacks, parcel coverage for parcels less than one acre, access to dwellings, building height, and occupancy of recreational vehicles. RLC's application does not propose any dwellings or other structures and, therefore, these standards do not apply.

One development standard potentially applicable to the site is YCZO 402.09(D) relating to clear vision areas. That standard, however, only applies where there is an intersection of a public road with another public road or with a private road that serves more than four parcels. The only potential intersection on RLC's property subject to the SDR application is the driveway used to access the landfill from Highway 18. That driveway is not a private road and, even if it were, it serves only one parcel. If the County concludes that the driveway is the type of intersection required to meet the clear vision area requirements, RLC can maintain landscaping near that access point to assure compliance with those requirements.

Another development standard potentially applicable to the site is YCZO 402.09(I), which addresses off-street parking. That standard, however applies only to dwellings or to other uses which may generate traffic beyond what is normally expected in the EFU. As noted above addressing traffic safety and internal circulation, RLC's proposal will not generate abnormal levels of traffic that require parking. Most users of Riverbend stop temporarily on the site to unload waste. For those portions of the use that do require parking, such as the office, adequate spaces are provided and are indicated in Drawing A-2 (see Attachment A)

In addition to the development standards in YCZO 402.09, the County imposed additional standards that apply specifically to the development of RLC's property as conditions of approval for the Zone Change. The conditions of approval that relate to the development of the site are as follows:

Condition 3 – Areas Where Landfilling Prohibited. Condition of Approval 3 from Ordinance 887 prohibits the landfill disposal of solid waste on certain portions of RLC's property subject to the Zone Change. Those include Tax Lots 5501-300, 5501-401, 5501-500, 5511-100, 5511-600, 5512-100, 5512-200, 5512-400, 5512-500, the southern portion of 5501-400, the eastern portion of 5501-101, and any portion of 5501-200 that lies south of the Yamhill River. RLC's development application does not propose to allow the landfill disposal of solid waste in any of these prohibited areas.

Condition 4 – Area Reserved for Alternative Disposal Technology. In addition to preventing the landfill disposal of solid waste on the southern portion of Tax Lot 5501-400, Condition of Approval 4 from Ordinance 887 prohibits all solid waste disposal activities that would prevent the siting and construction of an alternative solid waste disposal technology on that portion of RLC’s property. RLC’s development application does not propose any development in this area, and any related activities, such as operational support, that would occur in that area will be temporary in nature and not prevent use of that site in the future for an alternative technology.

Condition 7 – Alternative Disposal Technology. Condition of Approval 7 from Ordinance 887 requires RLC to establish a Green Technology Facility on site. Construction of the Green Technology Facility must commence no later than seven years after RLC obtains a DEQ permit for solid waste disposal outside of the former PWS zone. The facility must be operational within 18 months after the commencement of construction unless the County extends that timeline.

RLC is not proposing a specific Green Technology Facility as part of this development application. As Condition of Approval 7 acknowledges, the construction of any particular facility depends on many factors and will take time to develop. RLC and its parent company, Waste Management, continue to invest resources into developing alternative technologies that can be operated on a commercial scale and operate economically as part of the solid waste system that is served by Riverbend. The availability of such a technology has not changed in the eight months since the County adopted Ordinance 887.

RLC’s development proposal preserves its ability to meet this condition within the applicable time period. As noted above, RLC is not proposing to conduct any permanent solid waste activities on the southern portion of Tax Lot 5501-400, which is the area reserved for the Green Technology Facility.

RLC is committed to providing annual updates to the County so that the County and the community are fully informed of the status of available alternative technologies.

The County also established specific Goal 5 riparian corridor regulations applicable only to RLC’s property. In general, those regulations limit the permanent alteration of the Riparian Area, which is an area defined as a corridor beginning at the top of bank of a fish-bearing stream and extending 100 feet from that top of bank. The County’s regulations are based on the Land Conservation and Development’s “safe harbor” method for protecting riparian areas set forth in Oregon Administrative Rule (OAR) 660-023-0090. Within that regulated corridor, RLC is permitted to make some permanent alterations of the Riparian Area, but only on a “demonstration that equal or better protection for identified resources will be ensured through restoration of Riparian Areas, enhanced buffer treatment, or similar measures.” Such permanent

alterations are not permitted, however, if they occupy more than 50% of the width of the Riparian Area.

RLC's development proposal includes new berms that are set back more than 100 feet from the South Yamhill River and from the two tributary creeks located on site. The proposal does necessitate a small amount of development within the Riparian Area of the southern tributary channel where the existing landfill has already been developed. The reconfigured berm that is part of Module 11 extends no more than 50 percent into the riparian corridor along that creek. In order to provide equal or better protection of the riparian resource in this area, RLC is proposing to restore and enhance approximately 3.8 acres of riparian habitat of the southern tributary reach south of Module 11, as detailed in the Riverbend South Tributary Channel and Floodplain Enhancement Plan included with the Floodplain Development Permit Application Narrative. RLC is also proposing one access road that will cross a riparian area on the southwest side of Module 11. This road will allow RLC to access the existing leachate pond, as well as the future Green Technology area. The road is exempt from the County's Goal 5 riparian provisions.

### **1101.03 Site Develop Plan Review Procedures.**

*The Director shall review site development plans subject to the following procedures:*

*A. Pre-application Conference. A pre-application conference shall be held prior to submittal. An application conference form together with appropriate ordinance requirements shall be provided to the applicant at the pre-application conference.*

**Response:** RLC attended a pre-application conference with County Planning Staff on October 1, 2014. At the pre-application conference, RLC and County Planning Staff discussed the appropriate ordinance requirements applicable to RLC's development proposal.

*B. Preliminary Site Development Plan Submittal and Review. A preliminary plan, together with a site design review application, shall be submitted for review in accordance with the requirements of this section and the underlying zoning district. The Director shall determine whether the application will be reviewed under the Type A or Type B application procedures set forth in Section 1301, based on the type, scale, location and potential impacts of the development. The Director shall inform the applicant in writing concerning compliance with applicable ordinance and development standards, and shall stipulate any modifications or changes necessary for final approval. If modifications or changes are not required, a preliminary plan may be approved as a final plan.*

**Response:** RLC has submitted a Preliminary Site Development Plan and a Site Design Review application in accordance with the requirements of this section and the underlying zoning district (EFU). The County's Planning Director has indicated that the SDR application will be reviewed under the Type B procedures set forth in Section 1301 to make it consistent with the County's review of RLC's FDP application. The Type B procedure generally includes a process for public notice and comment prior to a decision by the Planning Director. However, the Type B process also provides an option for the Planning Director to schedule a public hearing before the Planning Commission and to follow the Type C procedure process. It is RLC's understanding that the Planning Director may choose that alternative Type C process for reviewing RLC's application.

*C. Final Site Development Plan Submittal. If a final site development plan is required, the final plan shall be submitted for review in accordance with the requirements of this section. The Director shall inform the applicant in writing within fifteen (15) days of receipt of the final site plan of action taken for approval.*

**Response:** If a final site development plan is required, RLC will submit the final plan in accordance with the requirements of this section following review and approval by DEQ.

*D. Appeal of Director's Decision. The decision of the Director may be appealed to the Board, pursuant to the provisions of Section 1404 for appeals.*

**Response:** RLC understands that the Board of Commissioners is the appeal body for an appeal of the Director's decision on Site Design Review. If the Planning Director determines that RLC's application will be reviewed by the Planning Commission instead, the Board of Commissioners would still be the appeal body pursuant to YCZO 1301.01(7).

#### **1101.04 Preliminary Site Development Plan Requirements.**

*The following site design information shall be represented at a scale of 1" = 5', or an appropriate scale as may be approved by the Director:*

- A. Existing site conditions as follows:
  - 1. Site topography at the following minimum intervals:
    - (a) Two (2) foot intervals for slopes of up to 15%;
    - (b) Five (5) or ten (10) foot intervals for slopes in excess of 15%; and
    - (c) Identification of areas exceeding 35% slopes.

**Response:** In light of the large size of RLC's property and the scope of development subject to the SDR process, a scale of 1 inch = 5 feet is not appropriate. RLC is submitting all drawings using a scale that can be viewed on sheets that are 11 inches by 17 inches.

Drawing A-1 (see Attachment A) shows existing site conditions on RLC's property and includes site topographic contours at 2 foot intervals. The northerly portion of Tax Lot 101 where it slopes down into the riparian flood plain has slopes that approach, and only in a few small areas exceed 15 percent, but do not exceed 20 percent. There are no areas within the SDR boundary exceeding 35 percent slopes.

2. *Site drainage, creeks, ponds or areas of standing water, potential flooding and soil or geologic hazard;*

**Response:** As shown in Drawing A-1 (Attachment A) and Figure 1, there are creeks, ponds or areas of standing water, potential flooding, or areas of soil or geologic hazard near the areas where improvements are proposed as part of this SDR application. For those areas within the floodplain, RLC has applied for an FDP as part of its proposal.

3. *Major trees 8" in diameter at five (5) feet height, together with areas of significant natural vegetation. Where the site is heavily wooded, an aerial photograph, not to exceed 1" = 400' may be submitted; and only those trees that will be affected by the proposed development need be sited accurately;*

**Response:** Areas of existing wooded areas are shown in Figure 1. Because of the size of the site, a 1 inch = 400 feet scale of the aerial photo is not useful for viewing the site. RLC has provided an aerial photo that has a scale of 1 inch = 600 feet. If the County requires a different scale for specific portions of the site, RLC will provide those figures or photos. As shown in Figure 4, trees will be removed in several areas to accommodate expansion. These include several trees south of the agricultural barn in Module 10, the edge of the riparian forest north of Module 10, those associated with the residence in the southwestern area of Module 11, and smaller trees and shrubs associated with the road crossing over the southern tributary.

4. *Classification of soil types within the site and discussion of their suitable uses;*

**Response:** Figure 2 shows the distribution of soil types in the project area and surrounding vicinity. Soil types are predominately Woodburn Silty Loam (WuB & WuC), with slopes from 0 to 7 percent and 7 to 12 percent. The Woodburn series consists of moderately well-drained soils that formed in silty alluvium. Woodburn soils are associated with the well-drained Willamette

soils and the somewhat poorly drained Aloha and Amity soils. Woodburn soils are used mainly for vegetable crops, berries, orchards, small grains, and hay and pasture. They are also suitable for wildlife habitat, recreation, and rural and urban development.

5. *Existing structures, improvements, roadway access and utilities, together with the film volume and page number of all easements affecting the property; and*

**Response:** Drawings A-1 and A-2 (see Attachment A) show existing structures, improvements and roadway access affecting RLC's property. The property is located in a rural area outside the McMinnville Urban Growth Boundary ("UGB"). Existing utilities are limited to typical "rural" level facilities such as electrical power and telephone lines. There are no "urban" sewer, water or storm water facilities that extend outside of the UGB. A summary of existing easements affecting RLC's property is provided in Attachment D.

6. *Existing land uses, ownerships, property lines and building locations on adjoining and adjacent property within three hundred and fifty (350) feet of the subject property.*

**Response:** RLC owns ten separate tax lots totaling approximately 680 acres in the immediate vicinity, including the existing landfill on Tax Lot 200, the landfill office and approved Renewable Energy facility on Tax Lot 101, the poplar orchard on Tax Lot 400, the RV Park on Tax Lot 401 and other parcels to both sides of Highway 18.

Attachment D provides an overview of existing tax lots and ownership on adjoining and adjacent properties within three hundred and fifty (350) feet of the proposed improvements included in this SDR application. The location of buildings on those properties can be seen on the aerial photo of the site (see Figure 1).

**B. Proposed changes and improvements to the site as follows:**

1. *Proposed site improvements, including:*
  - a. *Boundary lines and dimensions for the property and proposed topographical changes;*

**Response:** No changes to existing parcel boundary lines or dimensions are proposed as part of this Site Design Review application. Drawing A-4 (see Attachment A) shows proposed final elevations that will mark topographical changes on the site.

- b. *All proposed structures, including finish floor elevations and setbacks;*

**Response:** RLC's development proposal does not include any new structures. Construction activities will be confined to grading and fill activities for the development of the perimeter berm.

*c. Vehicular and pedestrian circulation patterns and parking, loading and service areas;*

**Response:** Drawing A-2 (see Attachment A) shows existing circulation patterns and parking, loading and service areas. The circulation pattern and parking will not change as a result of this proposal. As described above, recent site improvements consolidated facilities at the public entry and also upgraded circulation and parking areas to facilitate separation of "commercial" and "public" access to the landfill. The new Recycling/Public Drop area provides for a more convenient and safe area for public drop off of recycling and small solid waste loads that is separate from the active landfill work area. The location and layout of the scales and driveways have also separated the commercial and public traffic and reduce vehicle queues and wait times for the commercial and public vehicles. On other areas of the site RLC will reconfigure roads for access and maintenance that will not be used by the public.

*d. Site drainage plan, including location of sumps or settling ponds; and*

**Response:** Drawings A-1 and A-2 (see Attachment A) show the existing and future drainage system and facilities associated with the proposed improvements. The stormwater pond on the south side of the site will be removed and replaced with water quality units integrated into the design of the berm. Other drainage features already approved for the entrance facilities will remain the same.

*e. A boundary survey and cross sections, and profiles as may be required by the Director.*

**Response:** RLC is not proposing to create any new parcels that would require a survey. Cross sections and profiles of the planned perimeter berm can be provided if the Planning Director requires RLC to do so.

*2. Proposed utilities, including subsurface sewerage, water supply system and electrical services. Invert elevations shall be shown for all underground transmission lines.*

**Response:** RLC's proposed site development does not include any new utilities. Some new electrical service may be required depending on the specific location of the leachate management system. RLC would obtain extended service from McMinnville Water & Light. The exact path of any new electric utility facilities is unknown until RLC works with McMinnville Water & Light, but the general path of any new lines will either follow road right of way or the new berm configuration.

3. *Proposed access to public roads and highways, railroads or other commercial or industrial transportation systems.*

**Response:** The proposal does not include any changes to existing access points to the site. The primary access to Riverbend will be retained at the existing location near the Riverbend office as shown on the Site Plan. This access to Highway 18 has an approved permit from ODOT and meets standards for sight distance and safe turning movements onto and off the highway.

4. *Proposed landscape plan, to include appropriate visual screening and noise buffering, where necessary, to ensure compatibility with surrounding properties and uses.*

**Response:** Drawings A-5 and A-6 (see Attachment A) show the landscape plan for the proposed improvements provided in this SDR application. As shown on Drawing A-5 approximately 8.3 acres are to be landscaped with an estimated total of 1082 trees, 1762 shrubs, and additional groundcover to be installed with the improvements. The proposed expansion will require removal of approximately 37 trees (see Figure 4). RLC will consult with a certified arborist to assess tree health and position in relation to proposed construction and buffer development to retain as many trees as is practicable.

5. *Proposed on-premise signs, fencing or other fabricated barriers, together with their heights and setbacks.*

**Response:** RLC is not proposing any signs, fencing or other fabricated barriers as part of the site development included in this Application.

*C. A written statement to accompany the site development plan, containing the following:*

1. *A statement of present ownership of all lands included within the proposed development; and*
2. *A schedule of expected development.*

**Response:** RLC's attorney of record has signed the SDR application and confirmed that RLC owns all of the parcels included within the proposed SDR boundary.

RLC plans to build the expansion areas with Module 10 to the north constructed first, followed second by Module 11 to the west. Based on remaining landfill airspace, Module 10 construction is expected to begin in 2016 and will provide approximately one year of airspace based on current projected disposal volumes. Module 11 construction is expected to begin in 2017 and will continue from the north working south in phases until the area is fully developed. RLC must still obtain approval from DEQ and the actual commencement of construction will depend on the timing of that approval.

**1101.05**      ***Final Site Plan Requirements.***

*The final development plans shall include the same information required for a preliminary plan together with any revisions, adjustments or refinements that may be required for compliance with the general development standards.*

- A.      *The final plan shall include the following information and shall be labeled by the Director as follows:*

*Exhibit A – Proposed Schedule of Development*

*Exhibit B – Site Analysis (map of existing conditions)*

*Exhibit C – Site plan*

*Exhibit D – Final Grading Plan*

*Exhibit E – Landscape Plan in accordance with Section 1010*

*Exhibit F – Cross Sections, Elevations and/or Architectural Drawings of Proposed Structures*

**Response:** The final development plans will include the information required by Section 1101.05(A), together with any revisions, adjustments or refinements that may be required for compliance with the Preliminary Site Development Plan, the general development standards of the EFU zone, or conditions of the SDR approval. RLC must still obtain approval from DEQ. If DEQ requires any changes to the development, those changes will nonetheless likely be in substantial conformance with the County's approval and RLC will not seek any approvals from DEQ that would result in a larger or more intense development than what the County approves.

- B.      *If submittal of any of the above exhibits are waived by the Director, justification to support such a decision shall be provided by the Director.*

**Response:** No waivers to submittal final development plan exhibits are anticipated at this time. If waivers are requested, RLC understands that justification must be provided to support such a decision.

C. *Any proposed changes in connection with an approved plan shall be reviewed and approved in accordance with the same procedures set forth under this section.*

**Response:** Under Section 1101.03.B, the Director shall determine whether the preliminary site development plan will be reviewed under the Type A or Type B application procedures set forth in Section 1301, based on the type, scale, location and potential impacts of the development. The preliminary site development plan will be reviewed under the Type B procedure, which may involve a Type C hearing process. RLC understands that future changes to an approved plan would be subject to review under established procedures set forth in Section 1301, but requests that the Type B procedure be the starting point and that the Type C hearing be utilized only if the Director determines such a hearing is necessary under the discretion provided to the Director under the Type B procedure.

#### **1101.06 Compliance with Site Development Plans.**

*Failure to comply with this section or with an approved site development plan shall constitute a violation of this ordinance and shall be subject to Section 1406 for enforcement.*

**Response:** RLC understands and accepts that the final approved site development plan will guide long-term expansion of the ancillary facilities for general compliance with zoning standards and any conditions of the Site Design Review permit.

### **IV. ORS 215.296(1)(a) and (b)**

Solid waste disposal sites are allowed uses in the EFU by virtue of the statutory EFU zone. ORS 215.283(2)(k) expressly provides that such uses are allowed, together with equipment, facilities or buildings necessary for their operation. As a non-farm use allowed under ORS 215.283(2), however, the use is subject to the standards in ORS 215.296. When the County amended its Code in 2011 to allow landfills in the EFU, it expressly incorporated the standards set forth in ORS 215.296(1)(a) and (b) into the Code. Thus, in addition to satisfying the County's SDR standards, RLC's development proposal must satisfy the following standards set forth in ORS 215.296(1), which this Narrative will refer to as the "Farm Impacts" standards:

A use allowed under ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) (2) or (11) or 215.283 (Uses permitted in exclusive

farm use zones in nonmarginal lands counties) (2) or (4) may be approved only where the local governing body or its designee finds that the use will not:

- (a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or
- (b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

As part of the Zone Change earlier this year, the County made factual and legal findings concluding that the planned expansion of Riverbend satisfied the Farm Impacts standards. Although the County first determined that the Farm Impacts standards did not apply to the Zone Change and should be assessed during a future SDR process, the County made the following alternative finding:

Even if the Board were to determine that consideration of the criteria in ORS 215.296 is warranted, the record demonstrates that the requested zone change will not cause a significant change to, or significantly increase the costs of, accepted farm practices in the area. \* \* \* With respect to potential expansions of the landfill, the record includes a farm impacts analysis. That analysis identifies crops and other farm uses in an area within a radius of approximately one mile around Riverbend Landfill. That analysis also identifies accepted farm practices associated with the production of those crops and other uses. \* \* \* The application indicates that if the landfill is expanded in the future, waste disposal volumes will remain relatively constant at approximately current disposal rates. Any subsequent expansion will merely shift the operations to other areas as the existing disposal areas are closed without significant effect on farm practices or costs. The record also reflects that the applicant investigated the farm practices on its own farm holdings and did not discover any impacts from the landfill on farm practices or costs on those sites adjacent to the landfill. Logically, if no such impacts exist immediately adjacent to the landfill, then they are also not likely to exist farther from the landfill.

RLC's development proposal is consistent with the expansion plans submitted to the County during its consideration of the Zone Change. The expansion will not change the level of

activities on the site and, instead, will shift those activities to the west as portions of the existing landfill reach final capacity and begin going into final closure.

Despite the County's earlier conclusion that the anticipated expansion of Riverbend satisfies the Farm Impacts standards, it is reasonable for the County to review those standards again for the specific development proposal that is part of this application. In order to assist with that review, RLC is providing a Farm Impacts Assessment that is significantly more robust than the farm impacts analysis the County considered as part of the Zone Change. The Farm Impacts Assessment is provided in Attachment B and incorporated into this Narrative by reference.

The Farm Impacts Assessment is more robust than the earlier analysis because it analyzes farm practices within a 2.5 to 3 mile from the landfill. All lands within 1 mile were inventoried and analyzed according to "crop areas" based upon site visits and the most recent aerial photography available on Google Earth. Lands more than one mile, and up to 3 miles, from the landfill expansion area were inventoried by the primary farm use on each tax lot.

The Farm Impacts Assessment reveals the following farm uses in the study area:

1. In the immediate vicinity of Riverbend (up to one mile away), the primary farm uses are: grass seed and similar uses such as grain and hay; orchards; plant nurseries and vegetable crops; and some pasture uses (with livestock).
2. In the broader area around Riverbend (more than one mile and out to 3 miles), the primary farm uses are the same as in the immediate vicinity, but with the addition of some vineyard uses and a Christmas tree farm.

For each of the farm uses in the study area, the Farm Impacts Assessment identifies the accepted farm practices for those uses. Those practices vary by crop, although some practices, such as fertilizer and pesticide use, or rodent control, are common among many of the crops in the study area.

The Farm Impacts Assessment also identifies several different externalities associated with landfills that could have an impact on the identified farm practices. Those externalities are litter, water quality impacts, air particulates, traffic, nuisance bird attraction, and rodents or other vermin. Not all of those externalities have the potential to actually impact each of the farm practices in the study area. For example, litter escaping from the landfill is unlikely to reach vineyards in the study area based on factors such as prevailing wind direction and distance from the landfill. Similarly, water quality is highly protected by state (DEQ) and federal regulations ensuring water quality impacts to agriculture are virtually eliminated.

The Farm Impacts Assessment provided in Attachment B analyzes the potential for each externality to actually impact a farm practice in the study area, and assigns that potential as either not apparent, limited, or heightened. The assignment of each level of potentiality is based on several factors explained in the report. The Farm Impact Assessment then evaluates whether any potential impact is significant.

The Farm Impacts Assessment supports a conclusion that the continued operation of Riverbend will not force a change in accepted farm or forest practices on surrounding lands devoted to farm or forest uses. As the County already determined, and this report confirms, Riverbend has a long track record of operating compatibly with surrounding farm uses. Crops and practices in the study area have remained consistent over time and, in fact, new investments in agriculture continue to be made near the landfill. Some externalities that have a heightened potential for impacts to surrounding areas, such as bird and vector control, are already managed by accepted farm practices and utilize specific measures that RLC must already utilize. Similarly, while litter control is not identified as an ongoing farm practice, RLC controls litter to prevent that externality from having an actual impact through measures such as litter fences, litter collection (on and off site), and imposition of higher fees for incoming loads that are not covered.

The Farm Impacts Assessment also supports a conclusion that the continued operation of Riverbend will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest uses. First, potential externalities from the landfill are not likely to have any impact on surrounding lands. Second, the cost to control such externalities, such as bird and vector control, are an extremely small percentage of the overall cost of farm practices for the crops in the study area. For example, even under a worst-case scenario, the added cost of controlling rodents for a white clover farm near the landfill would represent less than 1% of the overall direct expenses for that crop.

## **V. Conclusion**

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The Riverbend site is a unique site in Yamhill County and has likely undergone more review than any other site during its forty-year history. The landfill serves an important role in the County's solid waste management system. The County's multiple decisions concluding a need for the continued operation of the landfill provide testament to that importance.

RLC's proposal to expand Riverbend is starkly different than the original proposal presented to the County in 2008. Based on feedback from the community and the County's leadership, the expanded landfill will be much smaller in area, will not increase in total height, and will operate within the natural boundaries that exist on the site. While the proposal meets RLC's technical needs, it has also been shaped by the community input that has been provided over the years.

## Figures

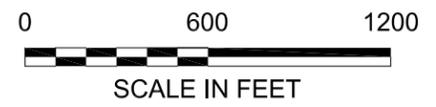


**LEGEND:**

- Proposed Lateral Expansion Areas
- Module 11 Berm Enhancement

SOURCE:  
 1. Satellite image © 2012, Google Earth and Riverbend image © 2014, Waste Management.

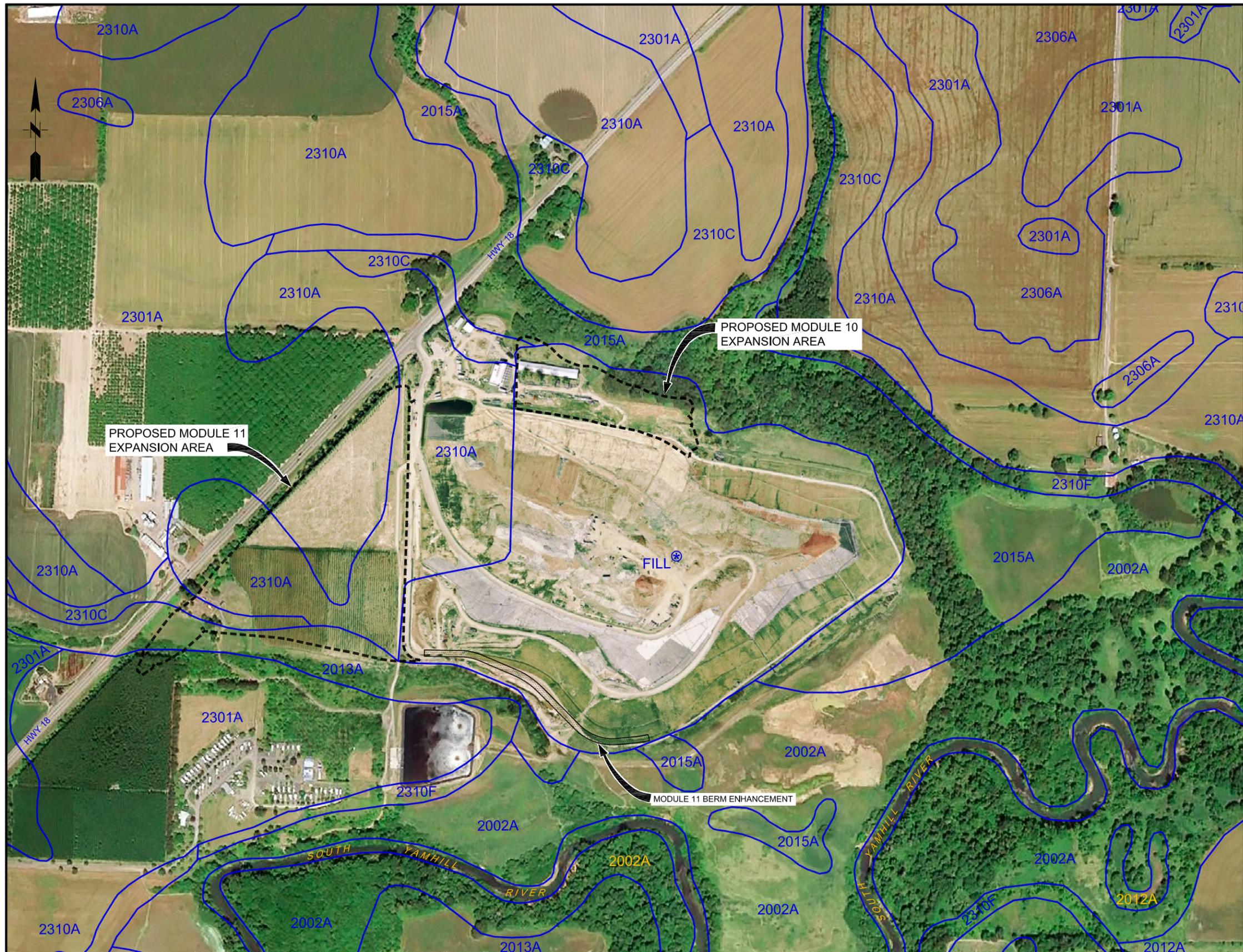
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 14945 SW Sequoia Parkway, Suite 180  
 Portland, Oregon 97224  
 (503) 639-9201 FAX: (503) 684-6948



PROJECT NO. 04213025.14	DES BY T.B.
SCALE AS SHOWN	CHK BY T.B.
CAD FILE FIGURE 1	APP BY L.C.

**OVERVIEW MAP AND AERIAL PHOTO**  
 SITE DESIGN REVIEW APPLICATION  
 RIVERBEND EXPANSION - MODULES 10 AND 11  
 RIVERBEND LANDFILL COMPANY

DATE  
NOVEMBER 2014  
 FIGURE  
**1**



**LEGEND :**

- Soil Boundary
- Module 11 Berm Enhancement

**SOIL MAP LEGEND :**

Map Unit Symbol	Map Unit Name
2002A	Chehalis silty clay loam, 0 to 3 percent slopes
2006A	McBee silty clay loam, 0 to 3 percent slopes
2012A	Waldo silty clay loam, 0 to 3 percent slopes
2013A	Wapato silty clay loam, 0 to 3 percent slopes
2015A	Cove silty clay loam, flooded, 0 to 3 percent slopes
2216A	Chehalem silty clay loam, volcanic, 0 to 3 percent slopes
2301A	Amity silty loam, 0 to 3 percent slopes
2304C	Carlton silty loam, 2 to 12 percent slopes
2306A	Dayton silty loam, 0 to 2 percent slopes
2310A	Woodburn silty loam, 0 to 3 percent slopes
2310C	Woodburn silty loam, 3 to 12 percent slopes
2310D	Woodburn silty loam, 12 to 20 percent slopes
2310F	Woodburn silty loam, 20 to 55 percent slopes
2791D	Gellatly silty clay loam, 12 to 20 percent north slopes
2795E	Gellatly-Dixonville complex, 20 to 30 percent south slopes
FILL	Fill land

⊗ Fill area formally consisted of primarily 2310A and 2015A soils.

**SOURCE:**  
 1. Natural Resources Conservation Service, Web Soil Survey. Soil Survey Area: Yamhill County, Oregon. Survey Area Data: Version 2, September 24, 2014.  
 2. Satellite image © 2012, Google Earth and Riverbend image © 2014, Waste Management.

**SCS ENGINEERS**  
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 14945 SW Sequoia Parkway, Suite 180  
 Portland, Oregon 97224  
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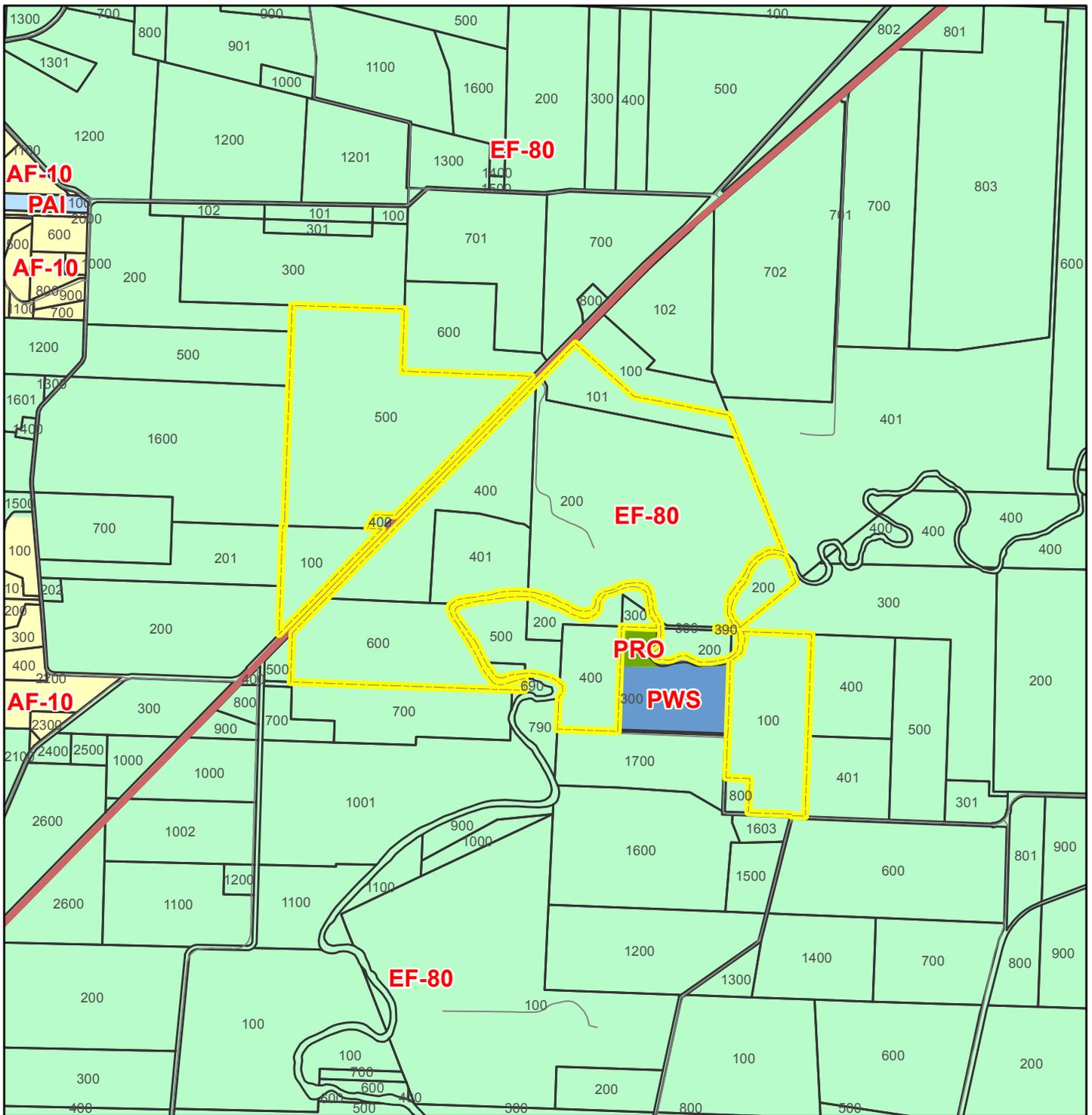
**WASTE MANAGEMENT**



PROJECT NO. 04213025.14	DES BY T.B.
SCALE AS SHOWN	CHK BY T.B.
CAD FILE FIGURE 2	APP BY L.C.

**SOIL SURVEY MAP**  
 SITE DESIGN REVIEW APPLICATION  
 RIVERBEND EXPANSION - MODULES 10 AND 11  
 RIVERBEND LANDFILL COMPANY

DATE NOVEMBER 2014
FIGURE 2



-  Riverbend Ownership
-  Tax Lots
- Current Zoning**
-  AF-10, Rural Residential
-  EF-80, Exclusive Farm Use
-  PRO, Parks-Recreation-Open Space
-  PWS, Public Works/Safety
-  PAI, Public Assembly/Institutional

## FIGURE 3

### Current Yamhill County Zoning

Site Design Review Application

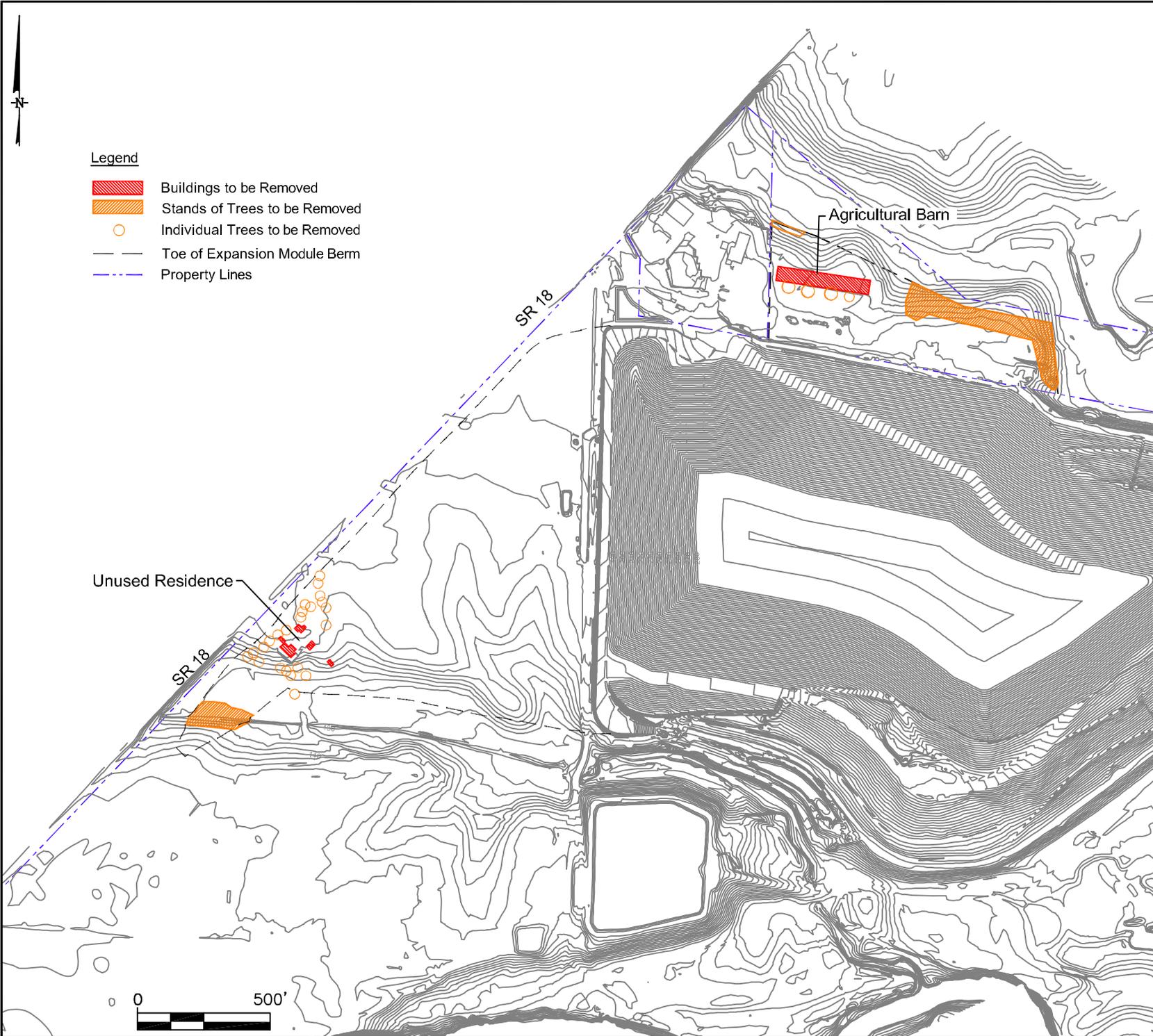
Riverbend Landfill Expansion Modules 10 and 11



0 1,000 2,000 Feet



Print Date: 11-4-2014



**Legend**

- Buildings to be Removed
- Stands of Trees to be Removed
- Individual Trees to be Removed
- Toe of Expansion Module Berm
- Property Lines

latimer environmental, LLC

35 SE 76th Ave.  
Portland, OR 97215  
503.867.1780



CLIENT:



PROJECT:

Site Design Review Application

Riverbend Expansion  
Modules 10 and 11

Riverbend Landfill Company  
Yamhill County, Oregon

TITLE:

Demolition Plan

Buildings and Trees  
to be  
Removed

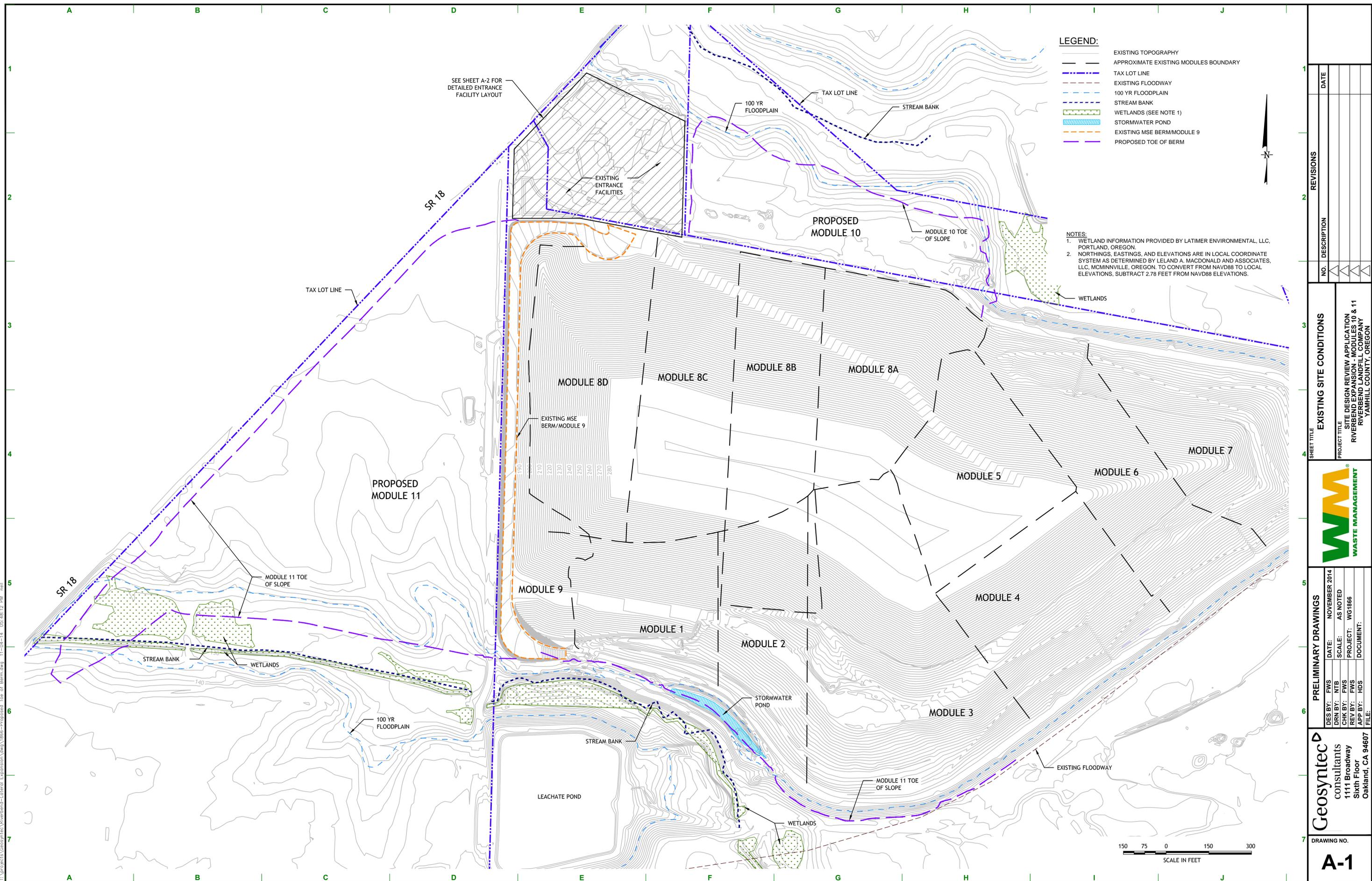
DRAWING DATA:

Plotted: 04/11/2014

FIGURE  
NO.

**4**

**Attachment A**  
**Preliminary Site Development Plans**



- LEGEND:**
- EXISTING TOPOGRAPHY
  - - - APPROXIMATE EXISTING MODULES BOUNDARY
  - TAX LOT LINE
  - - - EXISTING FLOODWAY
  - - - 100 YR FLOODPLAIN
  - - - STREAM BANK
  - WETLANDS (SEE NOTE 1)
  - STORMWATER POND
  - - - EXISTING MSE BERM/MODULE 9
  - - - PROPOSED TOE OF BERM

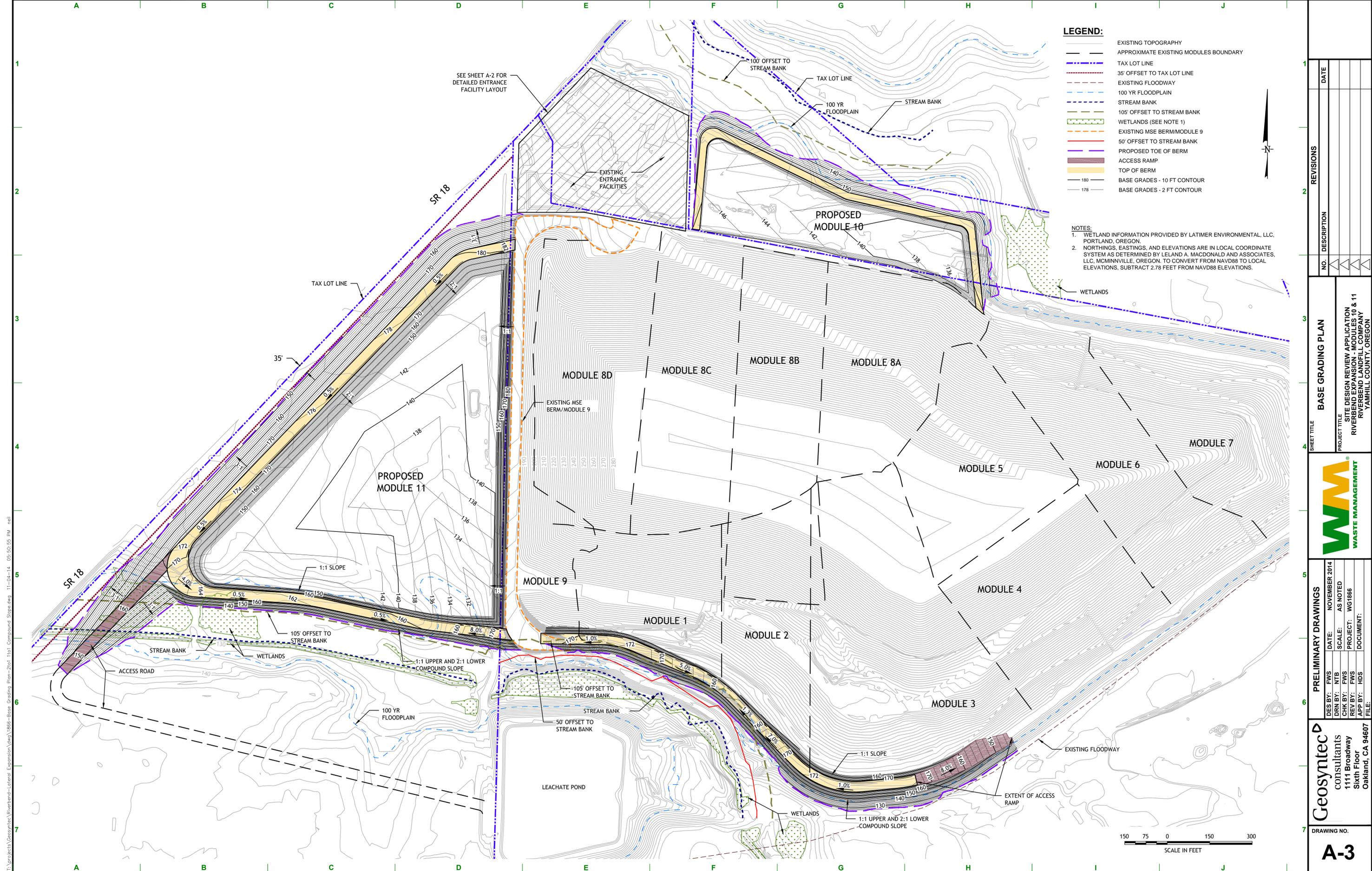
- NOTES:**
1. WETLAND INFORMATION PROVIDED BY LATIMER ENVIRONMENTAL, LLC, PORTLAND, OREGON.
  2. NORTHINGS, EASTINGS, AND ELEVATIONS ARE IN LOCAL COORDINATE SYSTEM AS DETERMINED BY LELAND A. MACDONALD AND ASSOCIATES, LLC, MCMINNVILLE, OREGON. TO CONVERT FROM NAVD88 TO LOCAL ELEVATIONS, SUBTRACT 2.78 FEET FROM NAVD88 ELEVATIONS.

REVISIONS		NO.	DESCRIPTION	DATE
EXISTING SITE CONDITIONS		PROJECT TITLE		
		SITE DESIGN REVIEW APPLICATION		
		RIVERBEND EXPANSION - MODULES 10 & 11		
		RIVERBEND LANDFILL COMPANY		
		YAMHILL COUNTY, OREGON		
PRELIMINARY DRAWINGS		DATE:	NOVEMBER 2014	
DES BY:	FWS	SCALE:	AS NOTED	
DRN BY:	NTB	PROJECT:	WG1886	
CHK BY:	FWS	DOCUMENT:		
REV BY:	FWS	FILE:		
APP BY:	HDS			
Geosyntec <sup>®</sup>		DRAWING NO.		
consultants		A-1		
1111 Broadway				
Sixth Floor				
Oakland, CA 94607				

T:\projects\Geosyntec\Riverbend-Central Expansion\Job\1886-Processed Toe of Berm.dwg 11-04-14 05:48:12 PM nsl







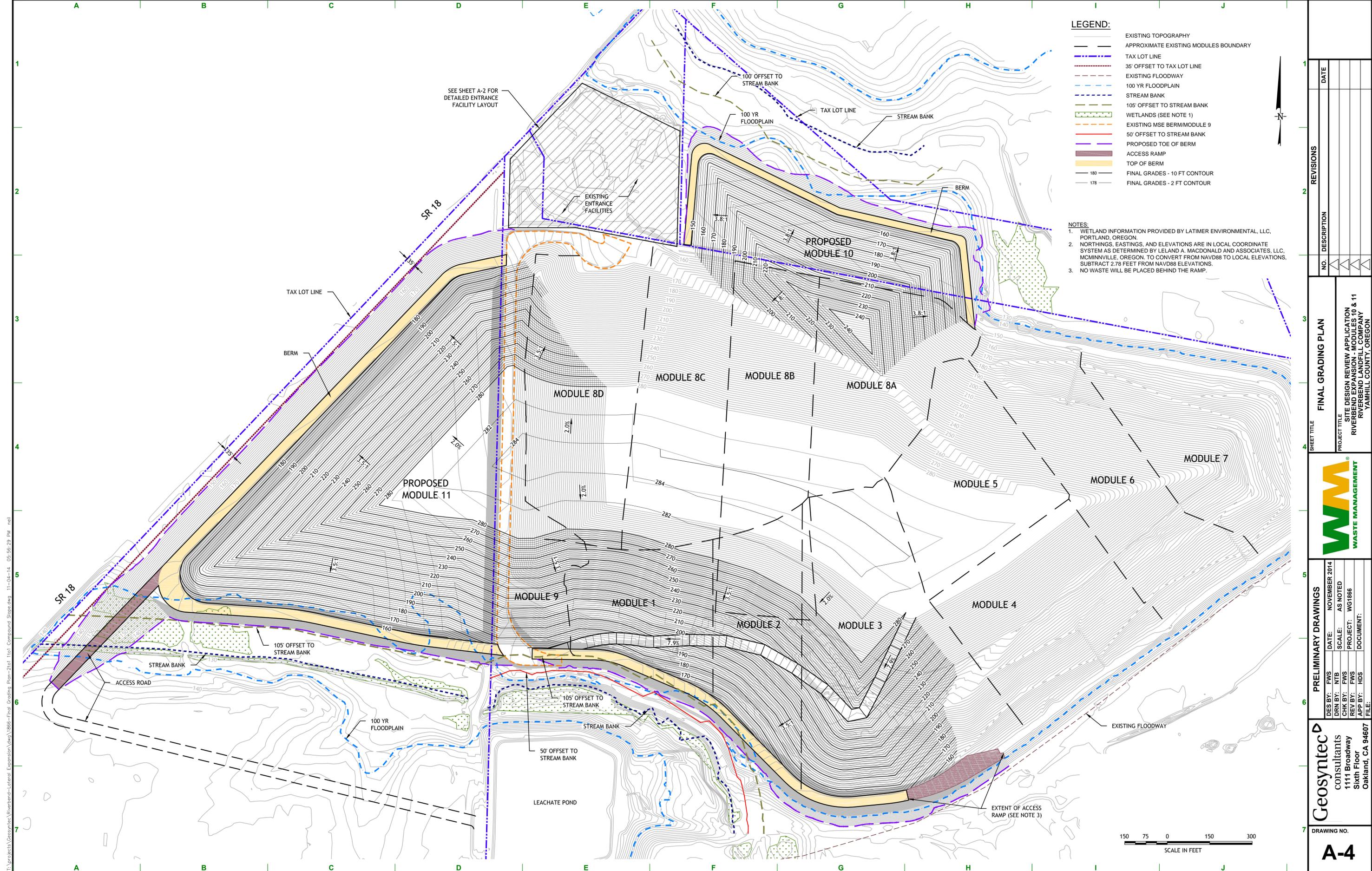
**LEGEND:**

- EXISTING TOPOGRAPHY
- APPROXIMATE EXISTING MODULES BOUNDARY
- TAX LOT LINE
- 35' OFFSET TO TAX LOT LINE
- EXISTING FLOODWAY
- 100 YR FLOODPLAIN
- STREAM BANK
- 105' OFFSET TO STREAM BANK
- WETLANDS (SEE NOTE 1)
- EXISTING MSE BERM/MODULE 9
- 50' OFFSET TO STREAM BANK
- PROPOSED TOE OF BERM
- ACCESS RAMP
- TOP OF BERM
- BASE GRADES - 10 FT CONTOUR
- BASE GRADES - 2 FT CONTOUR

**NOTES:**  
 1. WETLAND INFORMATION PROVIDED BY LATIMER ENVIRONMENTAL, LLC, PORTLAND, OREGON.  
 2. NORTHINGS, EASTINGS, AND ELEVATIONS ARE IN LOCAL COORDINATE SYSTEM AS DETERMINED BY LELAND A. MACDONALD AND ASSOCIATES, LLC, MCMINNVILLE, OREGON. TO CONVERT FROM NAVD88 TO LOCAL ELEVATIONS, SUBTRACT 2.78 FEET FROM NAVD88 ELEVATIONS.

DATE		REVISIONS	
NO.	DESCRIPTION	NO.	DESCRIPTION
<b>BASE GRADING PLAN</b>			
PROJECT TITLE			
SITE DESIGN REVIEW APPLICATION			
RIVERBEND EXPANSION - MODULES 10 & 11			
RIVERBEND LANDFILL COMPANY			
YAMHILL COUNTY, OREGON			
<b>WASTE MANAGEMENT</b>			
PRELIMINARY DRAWINGS			
DES BY: FWS	DATE: NOVEMBER 2014	SCALE: AS NOTED	FILE:
DRN BY: NTB	SCALE: AS NOTED	PROJECT: WG886	
CHK BY: FWS	PROJECT: WG886	DOCUMENT:	
REV BY: FWS	DOCUMENT:		
APP BY: HDS			
Geosyntec Consultants			
1111 Broadway			
Sixth Floor			
Oakland, CA 94607			
DRAWING NO.			
<b>A-3</b>			

T:\projects\Geosyntec\Riverbend-Lateral Expansion\day\1886-Bases Grading Plan-2101-1101 Compound Slopes.dwg 11-04-14 05:50:55 PM mel



- LEGEND:**
- EXISTING TOPOGRAPHY
  - - - APPROXIMATE EXISTING MODULES BOUNDARY
  - TAX LOT LINE
  - - - 35' OFFSET TO TAX LOT LINE
  - - - EXISTING FLOODWAY
  - - - 100 YR FLOODPLAIN
  - - - STREAM BANK
  - - - 105' OFFSET TO STREAM BANK
  - - - WETLANDS (SEE NOTE 1)
  - - - EXISTING MSE BERM/MODULE 9
  - - - 50' OFFSET TO STREAM BANK
  - - - PROPOSED TOE OF BERM
  - ACCESS RAMP
  - TOP OF BERM
  - 180 FINAL GRADES - 10 FT CONTOUR
  - 178 FINAL GRADES - 2 FT CONTOUR

- NOTES:**
1. WETLAND INFORMATION PROVIDED BY LATIMER ENVIRONMENTAL, LLC, PORTLAND, OREGON.
  2. NORTHINGS, EASTINGS, AND ELEVATIONS ARE IN LOCAL COORDINATE SYSTEM AS DETERMINED BY LELAND A. MACDONALD AND ASSOCIATES, LLC, McMinnville, Oregon. TO CONVERT FROM NAVD88 TO LOCAL ELEVATIONS, SUBTRACT 2.78 FEET FROM NAVD88 ELEVATIONS.
  3. NO WASTE WILL BE PLACED BEHIND THE RAMP.

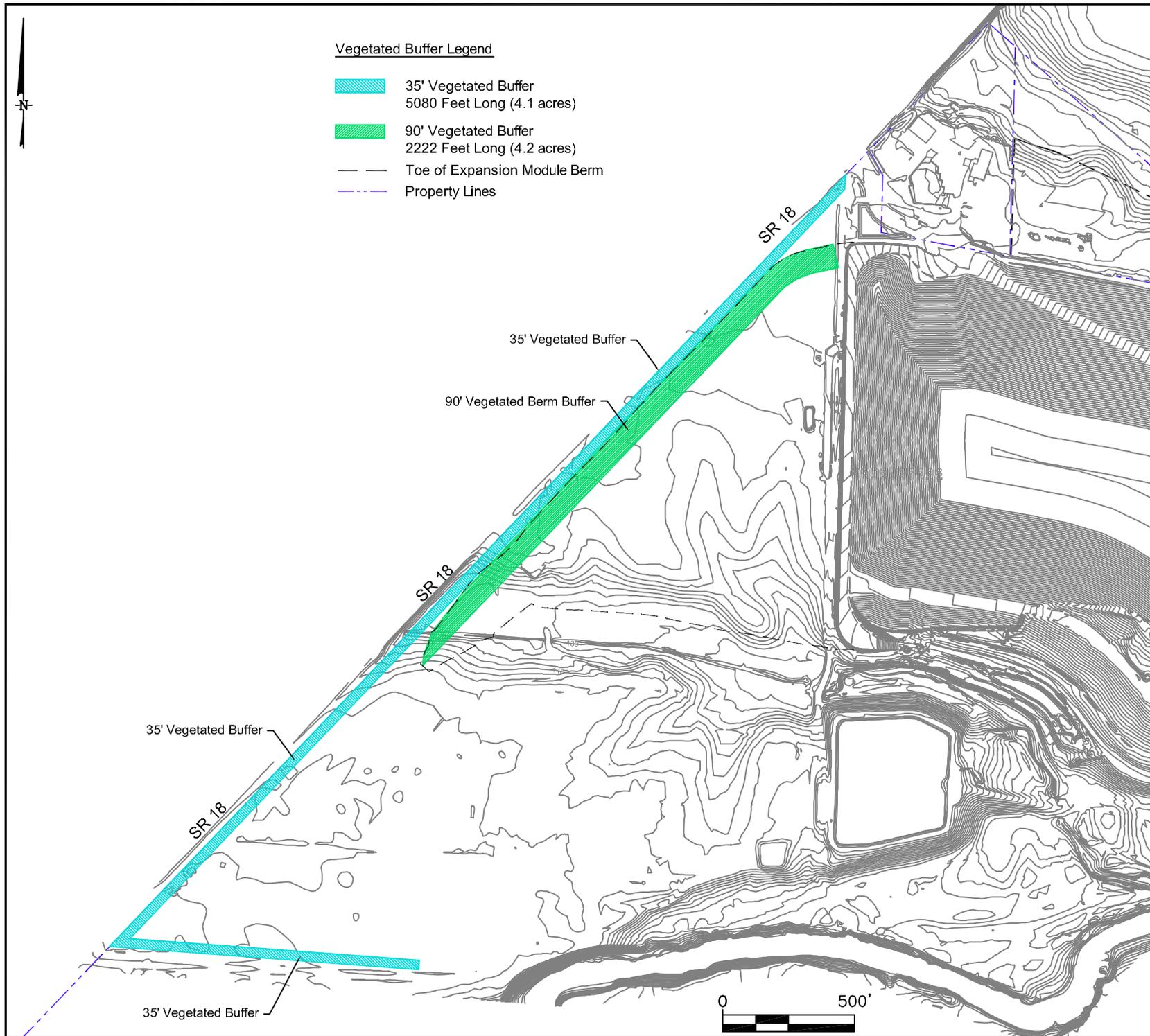


DATE		REVISIONS	
NO.	DESCRIPTION	NO.	DESCRIPTION
<b>FINAL GRADING PLAN</b>			
PROJECT TITLE			
SITE DESIGN REVIEW APPLICATION			
RIVERBEND EXPANSION - MODULES 10 & 11			
RIVERBEND LANDFILL COMPANY			
YAMHILL COUNTY, OREGON			
<b>WASTE MANAGEMENT</b>			
PRELIMINARY DRAWINGS			
DES BY: FWS	DATE: NOVEMBER 2014	SCALE: AS NOTED	
DRN BY: NTB	SCALE: AS NOTED	PROJECT: WG1886	
CHK BY: FWS	PROJECT: WG1886	DOCUMENT:	
APP BY: HDS	DOCUMENT:	FILE:	
Geosyntec consultants			
1111 Broadway			
Sixth Floor			
Oakland, CA 94607			
DRAWING NO.			
<b>A-4</b>			

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Vegetated Buffer Legend

-  35' Vegetated Buffer  
5080 Feet Long (4.1 acres)
-  90' Vegetated Buffer  
2222 Feet Long (4.2 acres)
-  Toe of Expansion Module Berm
-  Property Lines



latimer environmental, LLC

35 SE 76th Ave.  
Portland, OR 97215  
503.867.1780



CLIENT:



PROJECT:

Site Design Review Application

Riverbend Expansion  
Modules 10 and 11

Riverbend Landfill Company  
Yamhill County, Oregon

TITLE:

Vegetated Screening  
Buffers

DRAWING DATA:

Plotted: 04/11/2014

FIGURE  
NO.  
**A-5**



CLIENT:



PROJECT:

Site Design Review Application

Riverbend Expansion  
Modules 10 and 11

Riverbend Landfill Company  
Yamhill County, Oregon

TITLE:

Berm Buffer Planting  
Layouts

(Typical)

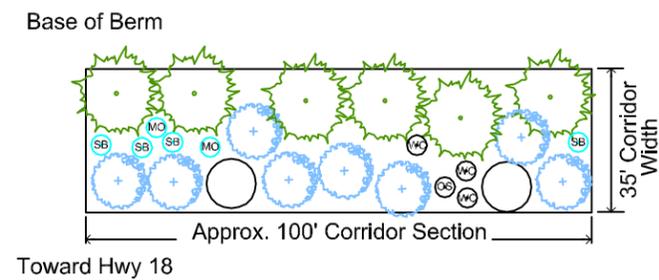
DRAWING DATA:

Plotted: 04/11/2014

DRAWING  
NO.

**A-6**

### PLANT LAYOUT MODULE A: 35' WIDE BUFFER ALONG HWY 18 AND SOUTH OF LANDFILL



#### PLANT LAYOUT MODULE A PLANT KEY

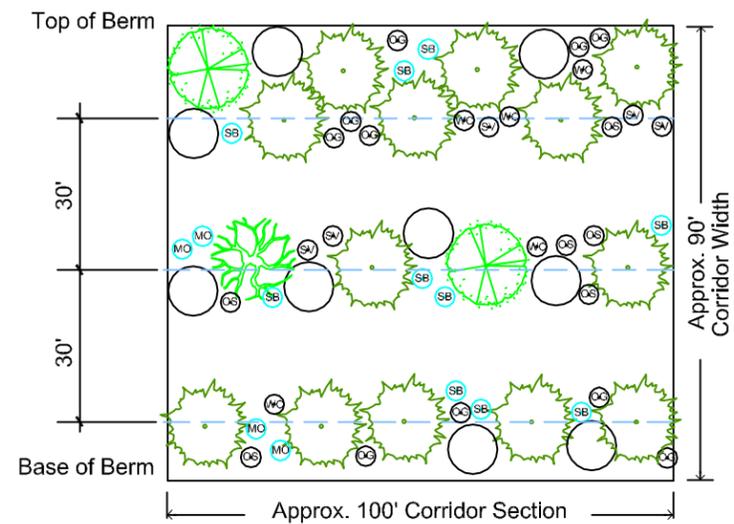
##### TREES

Symbol	Module Quantity	Name (Common/Botanical)	Size
	8	Blue Spruce <i>Picea pungens 'Glauca'</i>	Bare Root
	6	Douglas Fir <i>Pseudotsuga menziesii</i>	Bare Root

##### SHRUBS

Symbol	Module Quantity	Name (Common/Botanical)	Size
	2	Vine Maple <i>Acer circinatum</i>	Bare Root
	2	Mock Orange <i>Philadelphus lewisii</i>	Bare Root
	1	Ocean Spray <i>Holodiscus discolor</i>	Bare Root
	4	Snowberry <i>Symphoricarpos albus</i>	Bare Root
	3	Red Flowering Currant <i>Ribes sanguineum</i>	Bare Root

### PLANT LAYOUT MODULE B: 90' WIDE BUFFER ON BERM SLOPES FACING HWY 18



#### PLANT LAYOUT MODULE B PLANT KEY

##### TREES

Symbol	Module Quantity	Name (Common/Botanical)	Size
	13	Douglas Fir <i>Pseudotsuga menziesii</i>	Bare Root
	1	Giant Sequoia <i>Sequoiadendron giganteum</i>	Bare Root
	2	Big Leaf Maple <i>Acer macrophyllum</i>	Bare Root

##### SHRUBS

Symbol	Module Quantity	Name (Common/Botanical)	Size
	10	Vine Maple <i>Acer circinatum</i>	Bare Root
	4	Mock Orange <i>Philadelphus lewisii</i>	Bare Root
	6	Ocean Spray <i>Holodiscus discolor</i>	Bare Root
	10	Oregon Grape <i>Mahonia aquifolium</i>	Bare Root
	5	Serviceberry <i>Amelanchier alnifolia</i>	Bare Root
	10	Snowberry <i>Symphoricarpos albus</i>	Bare Root
	5	Red Flowering Currant <i>Ribes sanguineum</i>	Bare Root

#### PLANT LAYOUT MODULE NOTES

- Plant layout modules will be repeated throughout the buffer areas. See Drawing A-5 for buffer locations.
- Plant layout modules are diagrammatic; adjustments will be made in the field to accommodate actual planting area dimensions and existing trees and shrubs.
- Plant quantities shown are estimates. Exact quantities will be based on final layout of plants in the field.
- Bare root stock will be used as it consistently outperforms containerized stock in native landscaping situations.

**NOT FOR CONSTRUCTION**

**Attachment B**  
**Farm Impact Assessment**  
*(prepared by CSA Planning)*



November 5, 2014

Yamhill County Planning and Development

**CSA Planning, Ltd**

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Medford, OR 97504

Telephone 541.779.0569  
Fax 541.779.0114

[jay@CSAplanning.net](mailto:jay@CSAplanning.net)

**RE: Farm Use Impacts Assessment**

Dear Yamhill County Planning and Development,

This document constitutes Applicant's **Farm Impacts Assessment** for the proposed Riverbend Landfill expansion. The Farm Impacts Assessment contains the following fundamental components:

- Introduction
- Surrounding Lands Determination
- Potential Farm Impacts Identification and Methodology
  - Farm Use Inventory
  - Farm Practice Characterization
  - Potential Impacts from Landfill Externalities
  - Farm Practices and GIS Inventory Data Synthesis
  - Analysis and Methods General Limitations
- Farm Impacts Assessment
  - Assessment for Immediate Vicinity Surrounding Lands
  - Assessment for Broad Area Surrounding Lands
  - Evaluation of Surrounding Properties for Potential Increases to the Cost of Accepted Farm Practices by Potential Impact Character
- Forestry Use Impacts Assessment
- Summary Assessment
- Recommended Mitigation Measures

This document includes data and analysis prepared by land use planners with demonstrated expertise in the State of Oregon. Input data for the analysis was collected from a variety of sources and our best efforts were made to utilize the best available information on farm practices in Yamhill County. On this basis, the data and analysis presented herein constitute facts upon which a reasonable person can base land use decisions addressing potential farm use impacts in Yamhill County.

The analyses presented herein are complex and require a series of technical and analytical choices. CSA exercised our best professional judgment for all such choices.

Respectfully Submitted,

CSA Planning, Ltd.

A handwritten signature in blue ink, appearing to read 'Jay Harland', is written over a horizontal line.

Jay Harland  
Principal

## Table of Contents

1	Introduction .....	2
1.1	Riverbend Landfill Expansion Project .....	2
1.2	Farm Impacts Analysis Requirements .....	2
2	Surrounding Lands Determination .....	2
2.1	Immediate Vicinity Surrounding Lands .....	3
2.2	Broad Area Surrounding Lands.....	3
3	Potential Farm Impacts Identification and Methodology .....	3
3.1	Farm Use Inventory .....	3
3.1.1	Data Collection and Development Methodology .....	3
3.2	Farm Practice Characterization .....	6
3.2.1	Orchard Farm Practices .....	6
3.2.2	Farm Practices for Grass Seed, Grain and Hay .....	9
3.2.3	Farm Practices for Pasture with Livestock .....	15
3.2.4	Farm Practices for Field Crops and Vegetables .....	15
3.2.5	Farm Practices for Nurseries .....	16
3.2.6	Farm Practices for Vineyards .....	16
3.2.7	Farm Practices for Christmas Tree Farms .....	17
3.2.8	Local Farmer Interviews.....	17
3.3	Potential Impacts from Landfill Externalities .....	18
3.3.1	Externalities Identified with Logical Potential for Impacts.....	18
3.3.2	Assessment of Externalities' Intensity and Scale .....	18
3.3.3	Specific Farm Practices vs. Specific Externalities with Potential to Cause Impacts .....	20
3.3.4	Farm Practices and GIS Inventory Data Synthesis.....	23
3.4	Analysis and Methods General Limitations .....	24
4	Farm Impacts Assessment .....	24
4.1	Immediate Vicinity Surrounding Lands .....	25
4.1.1	Grass Seed Farm Uses (and similar such as grain and hay) .....	25
4.1.2	Orchards .....	26
4.1.3	Plant Nursery and Vegetable Crops.....	27
4.1.4	Pasture (with Livestock assumed) .....	28
4.1.5	Longitudinal Analysis of IVS Lands .....	28
4.2	Broad Area Surrounding Lands.....	28
4.2.1	Grass Seed Farm Uses (and similar such as grain and hay) .....	28
4.2.2	Pasture (with Livestock assumed) .....	29
4.2.3	Orchards .....	29
4.2.4	Vineyards.....	30
4.2.5	Plant Nursery and Field Crops.....	31
4.2.6	Christmas Tree Farm .....	31
4.2.7	Longitudinal Analysis of BAS Lands.....	32
5	Forestry Use Impacts Assessment .....	32
6	Summary Assessment.....	32
7	Appendices .....	34

## **1 INTRODUCTION**

This Farm Impacts Assessment supports the Site Design Review application for the proposed expansion of Riverbend Landfill. The Farm Impacts Assessment relies upon the design and details provided in the Site Design Review portion of the application. The purpose of this Farm Impacts Assessment is to determine whether it is reasonably expected that the proposed landfill expansion will significantly impact accepted farm practices or significantly increase the cost of accepted farm practices.

### **1.1 Riverbend Landfill Expansion Project**

The Riverbend Landfill Expansion project has been sought by Waste Management over the last seven years. During that period, the scope and scale of the project has been modified. The most current proposal is described in the Site Design Review land use application for which this assessment was prepared.

The Riverbend Landfill has been in continuous operation since 1982. This analysis relies upon current and expected future operations and management of the Riverbend Landfill. The Farm Impacts Assessment assumes that current operations will be extended through the useful life of the remaining landfill capacity and the capacity added by the expansion proposed in the land use application.

### **1.2 Farm Impacts Analysis Requirements**

Yamhill County Zoning Ordinance section 402.02(V) requires landfills in the Exclusive Farm Use zone to satisfy the standards set forth in ORS 215.296(1). That statute requires that the proposed landfill will not:

- (a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or
- (b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

The statute requires that “surrounding lands” be identified and within these surrounding lands supported conclusions be reached for each subsection of the statute. The statute does not present an absolute standard that requires no level of interference with farming activities of any kind be categorically demonstrated; the statute requires only that any impacts not rise to the level of being significant.

ORS 215.296(2) further provides that conditions of approval may be imposed to assure potential impacts do not give rise to the level of a significant change in farm practices or costs.

## **2 SURROUNDING LANDS DETERMINATION**

This section describes the geographic extent of the study area analyzed in the Farm Impacts Assessment. CSA Planning Ltd. has over 30 years of professional land use planning experience in Oregon and the identified study area constitutes our expert opinion of an appropriate study area. CSA’s opinion is that this study area is adequate for purposes of identifying potential changes to accepted farm practices and potential cost increases to accepted farm practices.

## 2.1 Immediate Vicinity Surrounding Lands

Immediate Vicinity Surrounding (IVS) Lands are located in the immediate vicinity of the landfill. All lands within 1 mile are inventoried and analyzed as Immediate Vicinity Surrounding Lands. The farm uses in this area were inventoried according to “crop areas” based upon the most recent aerial photography available on Google Earth which is dated July 6, 2012. For this area, Tax Lots that appear to be devoted to multiple farm uses are inventoried according to each crop area. This level of inventory resolution allows the immediate vicinity surrounding lands’ farm practices to be evaluated for each of its respective farm uses. The IVS lands are depicted on Atlas Pages 12 and 13.

## 2.2 Broad Area Surrounding Lands

Broad Area Surrounding (BAS) Lands are located beyond the immediate vicinity of the landfill. These lands are more than one mile from the landfill and up to 2.5 to 3 miles from the landfill expansion area<sup>1</sup>. These lands are inventoried by the primary farm use on each tax lot. Analysis of potential farm practice impacts on these lands is slightly more generalized due to its greater distance from the proposed landfill expansion. The BAS lands are depicted on Atlas Page 11. Lands beyond the Broad Area Surrounding lands are not considered surrounding lands for purposes of the analysis initially submitted with the application.

# 3 POTENTIAL FARM IMPACTS IDENTIFICATION AND METHODOLOGY

Oregon land use planning requires decisions that are supported by substantial evidence. Reasoning and opinion offered by experts constitute substantial evidence. The rational assertion and deductions presented in this impacts analysis are the reasoning and opinion of CSA Planning Ltd., which is a professional land use planning firm with over 30 years’ experience in Oregon Land Use Planning. The assertions and deductions are based upon field data collected directly by CSA Planning Ltd., other professionally collected data, Geographic Information System (GIS) analysis conducted by CSA Planning, and published data sources.

## 3.1 Farm Use Inventory

This section describes CSA’s methods to identify and classify farm uses on surrounding lands.

### 3.1.1 Data Collection and Development Methodology

CSA Planning Ltd. obtained GIS base data through Yamhill County. This base data is stored and updated periodically by the Mid-Willamette Valley Council of Governments (COG). The data provided by the COG included GIS layers for Tax Lots, Zoning, Comprehensive Plan Designations, Urban Growth Boundaries as well as floodplain data for the County as a whole. Floodplain data for the project area was obtained directly in CAD format from the project’s environmental consultant Latimer Environmental. The floodplain CAD data was imported and projected into the GIS layers for the analysis project. July 2012 Aerial Photos from Google Earth were geo-referenced and incorporated into the GIS layers for the project.

Current site-specific inventory data was collected through fieldwork conducted by CSA Planning Ltd, Principal Jay Harland, see Jay Harland resume in Appendix B. This data was collected using a GOPRO Hero 3+ taking pictures outside a vehicle front passenger

---

<sup>1</sup> As illustrated on Atlas Page 9, the Broad Area Surrounding Lands inventory extends approximately 2.5 miles to the north and east to the City of McMinnville and Unincorporated Community of Whiteson, respectively. The inventory extends approximately 3 miles to the south and west to Bellevue Highway and Muddy Valley Road respectively.

window on October 1, 2014 on all major roadways throughout the study area. October 1, 2014 was a calm day that was somewhat foggy in the morning and then cleared off at approximately 9:30 am. The GOPRO was set to take a high resolution image every five seconds; each image file was time stamped. Simultaneously, a Garmin 60csx was logging time-stamped Global Positioning System (GPS) track data in the vehicle. This time stamped data was reconciled and GPS coordinates were assigned to all images along with the direction of vehicle. This data is depicted on Atlas Pages 17 through 25.

Additional data utilized in the farm use identification and classification includes historical aerial photos available on Google Earth (See Atlas Pages 14, 15 and 16).

The identification and classification of farm uses was conducted for each tax lot within the study area. This identification and classification process requires a certain degree of subjective judgment during the assessment and categorization process. The classification work was conducted by Michael Savage. Mr. Savage’s resume is included as Appendix B. The classification process is based upon the use that appears to be the primary farm use on each tax lot. In general, the farm use classification assumed more intensive cultivation when choosing between a pair of classifications given available data. For example, if the choice was between hay and grass seed, the tax lot was classified as grass seed *e-ceteris paribus*.

These classification judgments were based in significant part on CSA’s understanding of major crops produced in Yamhill County. Major crops CSA understands to be produced in Yamhill County are based upon the following data:

**Table 1.**  
**Yamhill County Agricultural Sales by Commodity (2011)**

<b>Commodity</b>	<b>Sales (in dollars)</b>	<b>Percent</b>
Nursery & Greenhouse Crops	\$84,750,000	33%
Tree Fruit & Nuts	\$39,995,000	15%
Grass & Legume Seeds	\$37,485,000	14%
Grain & Hay	\$19,708,000	8%
Other crops	\$15,826,000	6%
Small Woodlots & Christmas Trees	\$7,489,000	3%
Vegetable & Truck Crops	\$7,388,000	3%
<b>ALL CROPS</b>	<b>\$212,641,000</b>	<b>82%</b>
Dairy Products	\$22,540,000	9%
Poultry	\$11,177,000	4%
Cattle	\$7,224,000	3%
Other Animal Products	\$5,431,000	2%
<b>ALL LIVESTOCK</b>	<b>\$46,372,000</b>	<b>18%</b>
<b>ALL CROPS &amp; LIVESTOCK</b>	<b>\$259,013,000</b>	<b>100%</b>

Preliminary sales by commodity are shown in Table 1<sup>2</sup>.

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<sup>2</sup> Oregon State University Extension Service, Economic Information Office, Oregon Agricultural Information Network (OAIN) 2011 *Oregon County and State Agricultural Estimates*.



**Table 2.  
 Yamhill County Top Five Commodities (2012)**

Rank	Commodity	Sales (in dollars)
1	Nursery crops	\$82,158,000
2	Wine grapes	\$28,594,000
3	Tall fescue	\$24,117,280
4	Dairy products	\$22,540,000
5	Perennial ryegrass	\$12,712,000

The top five sales by commodity are shown in Table 2<sup>3</sup>.

**Table 3.  
 Yamhill County Harvested Acreage (2011)**

Commodity	Acres	Percent
Grass & Legume Seeds	39,697	40%
Hays & Forage	19,450	20%
Grains	16,817	17%
Tree Fruits & Nuts	14,735	15%
Acreage Not Disclosed	5,743	6%
Field Crops	1,580	2%
Small Fruits & Berries	1,455	1%
Specialty Products	150	0%
<b>Total Acres</b>	<b>99,627</b>	<b>100%</b>

Preliminary harvested acreage for the County is summarized in Table 3<sup>4</sup>.

It is worth reiterating that the classification of farm uses was based upon the primary farm use present on the tax lot for farm uses located in the BAS lands and based upon individual “crop areas” for the IVS Lands. Several parcels include multiple farm uses. As such, the harvested acreages will differ from the GIS calculated acreages to some degree between these two analysis areas and the IVS lands estimate for harvested acreage is a higher resolution for each crop type.

<sup>3</sup> Oregon State University Extension Service, Economic Information Office, Oregon Agricultural Information Network (OAIN) *Top 5 Commodities for Yamhill County (2012)*.

<sup>4</sup> Oregon State University Extension Service, Economic Information Office, Oregon Agricultural Information Network (OAIN) *2011 Oregon County and State Agricultural Estimates*.



**Table 4.**  
**Farm Uses Identified on IVS Surrounding Lands**

Farm Use	Acres	Percent
Grass Seed	1,813.6	84.3%
Orchard	194.3	9.0%
Nursery & Vegetables	53.3	2.5%
Grain	53.4	2.5%
Barns & Facilities	18.5	0.9%
Nursery	9.3	0.4%
Pasture	5.2	0.2%
Farm Stand & Facilities	3.3	0.2%
<b>Totals</b>	<b>2,151.0</b>	<b>100%</b>

**Table 5.**  
**Farm Uses Identified on BAS Surrounding Lands**

Farm Use	Lots	Acres	Percent
Grass Seed	169	12,214.8	68.3%
Pasture	47	2,082.6	11.7%
Woodlot	27	1,070.4	6.0%
Orchard	17	826.1	4.6%
Vineyard	12	732.0	4.1%
Nursery & Field Crops	5	451.8	2.5%
Grain	1	158.9	0.9%
Tree Farm	1	150.5	0.8%
Pond	3	87.4	0.5%
Nursery	6	56.3	0.3%
Field Crop	2	40.2	0.2%
<b>Totals</b>	<b>290</b>	<b>17,870.9</b>	<b>100%</b>

### 3.2 Farm Practice Characterization

This section provides a broad summary of accepted farm practices associated with farm uses identified on surrounding lands. CSA sought data and information on farm practices from published sources where such data was readily available.

#### 3.2.1 Orchard Farm Practices

The primary source of information for farm practices on nut orchards in the area was from the OSU Extension publications, accessed from the following website: <http://extension.oregonstate.edu/yamhill/hazelnuts-filberts>. This website lists extension service publications for hazelnut orchards. The Farm Impacts Assessment generally assumes that the orchards in the area are tree nut orchards (this was the only type of orchard observed in the fieldwork inventory). Farm practices for other tree nut orchards besides filberts are assumed to be substantially similar for impacts analysis purposes.

The below tables are reproduced from OSU publication EM8556. These tables list all the major expenses associated with hazelnut farming in western Oregon. Money spent on farm management provides insight into the farm use activities themselves and lists the equipment types typically used. The associated cost estimates also indicate the relative efforts associated with the various farm practices for hazelnut farming.

**Table 5.**  
**Hazelnut Farming - \$/acre economic costs and returns**  
**in the Willamette Valley Oregon, 2008<sup>5</sup>**

<u>GROSS INCOME</u>		<u>Quantity</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Price/Lb</u>	
Hazelnuts		2,800	Pounds	\$ 0.70		\$ 0.70	
Total GROSS Income					\$ 1,960		
<u>VARIABLE CASH COSTS</u>	<u>Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Cost/Lb</u>	
	Production Pruning	1.2 hours	16.80	15.94	0.00	32.74	0.012
	Maintenance Pruning	1.5 hours	21.00	0.00	0.00	21.00	0.008
	Brush Removal		3.40	4.67	0.00	8.07	0.003
	Fertilizer – Urea		0.85	1.19	51.79	53.82	0.019
	Potash		0.85	1.19	19.66	21.69	0.008
	Lime		0.00	0.00	24.20	24.20	0.009
	Herbicide Strip Spray	1.0 appl.	3.85	8.48	5.10	17.43	0.006
	IPM Scouting		14.00	0.00	2.57	16.57	0.006
	Nutrient Analysis		0.00	0.00	0.58	0.58	0.000
	Sucker Control	4.0 appl.	10.27	14.36	9.50	34.13	0.012
	Boron Spray	0.5 appl.	1.92	4.24	4.80	10.97	0.004
	Filbertworm Spray	1.5 appl.	5.77	12.72	13.65	32.15	0.011
	Flailing Orchard	3.0 times	10.19	17.89	0.00	28.08	0.010
	Aphid/Leafroller Spray	0.25 appl.	0.96	2.12	4.16	7.24	0.003
	Rodent Control		0.00	0.00	7.00	7.00	0.003
	Leveling Orchard		2.26	3.75	0.00	6.02	0.002
	Harvesting Nut		6.60	12.56	0.00	19.16	0.007
	Sweeping Floor		8.88	10.00	0.00	18.88	0.007
	Loading Totes		9.90	13.53	0.00	23.43	0.008
	Washing & Drying Nuts	2800 Lbs	0.00	0.00	128.80	128.80	0.046
	Pickup		0.00	40.50	0.00	40.50	0.014
	Shop		0.00	0.00	6.92	6.92	0.002
	Miscellaneous and Overhead		0.00	0.00	44.75	44.75	0.016
	Interest: Operating Capital	6.0 mons	0.00	0.00	12.84	12.84	0.005
Total VARIABLE COSTS			117.51	163.15	336.30	616.95	0.220
<u>FIXED CASH COSTS</u>				<u>Unit</u>	<u>Total</u>	<u>Cost/Lb</u>	
Machinery and Equipment Insurance				acre	7.54	0.003	
Pickup Insurance				acre	9.99	0.004	
Property Taxes				acre	5.00	0.002	
Total CASH Costs					22.53	0.008	
<u>NON-CASH Costs</u>							
Machinery and Equip - Deprec. & Interest				acre	191.61	0.068	

<sup>5</sup> Oregon State University Extension Service, *Table 1 from Enterprise Budget, Hazelnut, Willamette Valley, EM 8556, 2008*



**Riverbend Landfill Expansion**  
**Applicant: Riverbend Landfill Company, Inc.**

Pickup - Depreciation & Interest	acre	30.19	0.011
Shop	acre	17.14	0.006
Land Interest Charge	acre	400.00	0.143
Amortized Establishment Costs	acre	<u>\$1,539.88</u>	<u>0.550</u>
Total NON-CASH Costs		2,178.83	0.778
Total FIXED COSTS		2,201.36	0.786
Total of All Costs Per Acre		2,818.31	1.007
Net Projected Returns		(858.31)	(0.307)

**Table 7.**  
**Estimated per acre returns over cash costs**  
**at varying yields and prices**

Pounds Per Acre							
Price per lb	1,600	2,000	2,400	2,800	3,200	3,600	4,000
\$ 0.25	(184)	(103)	(21)	61	142	224	305
\$ 0.40	56	197	339	481	622	764	905
\$ 0.55	296	497	699	901	1,102	1,304	1,505
\$ 0.70	536	797	1,059	1,321	1,582	1,844	2,105
\$ 0.85	776	1,097	1,419	1,741	2,062	2,384	2,705
\$ 1.00	1,016	1,397	1,779	2,161	2,542	2,924	3,305
\$ 1.15	1,256	1,697	2,139	2,581	3,022	3,464	3,905

Table 7 estimates the returns over cash costs per acre based on varying yields and prices. In this budget, a grower should expect \$1,321, based upon a yield of 2,800 pounds at \$0.70 per pound. At this yield, breakeven occurs at approximately \$0.25 per pound for cash costs.<sup>6</sup>

**Table 8.**  
**Estimated per acre returns over total economic costs**  
**at varying yields and prices.**

Pounds Per Acre							
Price per lb	1,600	2,000	2,400	2,800	3,200	3,600	4,000
\$ 0.25	\$ (2,363)	\$ (2,282)	\$ (2,200)	\$ (2,118)	\$ (2,037)	\$ (1,955)	\$ (1,874)
\$ 0.40	\$ (2,123)	\$ (1,982)	\$ (1,840)	\$ (1,698)	\$ (1,557)	\$ (1,415)	\$ (1,274)
\$ 0.55	\$ (1,883)	\$ (1,682)	\$ (1,480)	\$ (1,278)	\$ (1,077)	\$ (875)	\$ (674)
\$ 0.70	\$ (1,643)	\$ (1,382)	\$ (1,120)	\$ (858)	\$ (597)	\$ (335)	\$ (74)
\$ 0.85	\$ (1,403)	\$ (1,082)	\$ (760)	\$ (438)	\$ (117)	\$ 205	\$ 526
\$ 1.00	\$ (1,163)	\$ (782)	\$ (400)	\$ (18)	\$ 363	\$ 745	\$ 1,126
\$ 1.15	\$ (923)	\$ (482)	\$ (40)	\$ 402	\$ 843	\$ 1,285	\$ 1,726

Table 8 estimates the returns over total economic costs per acre based on varying yields and prices. In this budget a grower should expect -\$858, based on 2,800 pounds at \$0.70 per pound. At this yield, breakeven occurs at approximately \$1.15 per pound for total costs.<sup>7</sup>

The above tables provide a detailed listing of key year-to-year farm practices and their associated costs. Irrigation, while not specifically listed above, is a farm practice typically associated with hazelnut farming.

<sup>6</sup> Oregon State University Extension Service, *Table 5 from Enterprise Budget, Hazelnut, Willamette Valley, EM 8556, 2008*

<sup>7</sup> Oregon State University Extension Service, *Table 6 from Enterprise Budget, Hazelnut, Willamette Valley, EM 8556, 2008*



Orchard establishment is a specific type of farm use that occurs several years before the year-to-year operating orchard practices begin. This is a highly technical process wherein the specific cultivar is selected for a site, irrigation systems are designed and installed, and tree starts are planted according the orchard design for the site. The inventory did not identify any sites being prepped for new orchard installation. However, certain sites were identified where recently planted orchards have been identified.

### **3.2.2 Farm Practices for Grass Seed, Grain and Hay**

Atlas Pages 9 through 11 depict the considerable extent of grass seed farm use in the area. This is unsurprising given that OSU estimates 40 percent of the harvested acreage in Yamhill County is grass and legume seeds (primarily grass). The Oregon Agriculture in the Classroom Foundation website provides a good summary of grass seed production in western Oregon<sup>8</sup>, and is recited herein below:

#### ***“How Grass Seed is Grown***

*When a perennial grass field is being planted for the first time, and will be in production for many years, farmers take great care to make sure the field is properly prepared and weed free. Weed control is important to the health and profitability of a grass field because farmers are able to get more money for a crop with no weed seeds and the field will have higher yields.*

*Soil tests are taken to measure the field's pH levels. Lime may be added to raise the pH levels. The heavy rain in western Oregon soils can cause the soil pH level to drop and become too acidic for grass plants.*

*The next step is to prepare the field by tilling it and using herbicides to make the best seed bed possible. After the soil is tilled up and loosened, it is checked for pH and other nutrient levels. Once this is done the planting can begin. Planting occurs in both fall and spring depending on the variety. Varieties that are planted in the fall can start growing in the winter when the [sic] rains.*

#### ***Carbon Banding***

*A planting drill is used to put the seed and fertilized [sic] into the soil. To help control weeds, farmers use carbon band seeding. Carbon banding is where a slurry of activated charcoal is sprayed over the rows where the seeds have been drilled. Next, an herbicide is sprayed over the entire field to control weeds prior to the weeds or grass seed germinating. The charcoal over the drill row adsorbs the herbicide and allows the grass crop to emerge unharmed.*

*Once the grass is established, additional herbicides may be used to control both volunteer grass seedlings and broad leaf weeds. Grass fields are typically fertilized with nitrogen, phosphorus, and potassium in March and April.*

*Rusts and other diseases are serious problems in some grass seed species and fungicides are used to help control them. These diseases that can plague grass seed crops can have their biggest impact on seed yield.*

*Grass seed farmers grow different varieties of grass to protect themselves from a poor crop. Rain, or hot and freezing temperatures that hurt one type of seed may actually help a different variety produce more seed. Farmers may lose money on one variety at times, but hope to make money on another.*

#### ***Sheep***

*Sheep are sometimes used to graze the forage grass seed fields. Grazing is like pruning a tree. Wherever a blade has been cut off, the plant puts up more shoots. The more*

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<sup>8</sup> [http://aitc.oregonstate.edu/grown/comm\\_grass.htm#how](http://aitc.oregonstate.edu/grown/comm_grass.htm#how)

shoots, the more seed a plant will produce. The animals graze on the fields during the winter months through March.

### **Pests**

Two other creatures that feed on grass fields are geese and slugs. They can destroy crops in a matter of days. They eat the grass and roots, leaving nothing, but a poor stand (crop) and mud.

### **Swamp Buggies**

Since very few places grow grass seed the equipment they use must either be modified or manufactured by the dealer or farmer. Swamp buggies, for example, were created to apply fertilizers and chemicals on wet fields. A swamp buggy has huge, balloon-like tires that can move across the wet fields without leaving ruts. Since grass seed is grown mostly on wet soils, swamp buggies can go on fields during the winter and spring months when normal tractors would sink in the mud.

### **Harvesting**

Harvest time for grass seed crops begins in late June or early July. A machine called a windrower or swather cuts the grass and lays it in rows. This is done while the grass seed is still somewhat green to prevent it from shattering. Seed shattering is a natural way seeds are dispersed.

The grass then dries in the sun and wind for about 5-10 days before being harvested. A combine separates the seed from the straw and spreads the straw back on the field. The seed is then transferred from the combine to trucks and transported to the seed cleaning warehouse." "A seed cleaner is used to remove the soil, weeds and small pieces of straw from the tons of harvested grass seed. The cleaner has several screens which move back and forth inside the cleaner and the good seed falls through the screens. The bigger pieces of weed and straw are left on the top screen. The bottom screen is finer and only the dirt and tiny weed seeds fall through. The good seed is left on top of the last screen.

### **Seed Certification**

After cleaning, the seed is bagged and sampled for germination and purity. The price a farmer gets for the crop depends on how well the new seeds grow and if it contains any weed seeds. The definition of a weed is, "any plant where it is not supposed to be." So, if the crop is supposed to be ryegrass and the test shows Orchardgrass, then it has a lower value.

Many growers use the Seed Certification Service at Oregon State University or other private lab to test their seed. The certification program helps assure buyers the seed they buy is of a high quality. To meet certification standards, a grower's field must pass a seedling inspection, a crop inspection prior to harvest, and cleaned seed must meet germination and purity requirements.

A seed certification service inspects fields to evaluate if seed is genetically pure. The grass must be planted in rows so inspectors can easily check for weeds. These inspections are timed so off-type seeds, other crops and weed contamination can be easily detected. The inspector looks for evidence of volunteer plants, weeds or other problems that could cause problems in the genetic purity of the seed. Before each harvest, the crop is again inspected, usually when the plants are in the final stages of seed formation.

Certain harvesting practices must be followed to meet certification standards. If there are strips along the edges of a field that could be contaminated genetically by nearby fields, these must be harvested separately and seed lot records must be maintained for each lot. These isolation strips can only be sold as less profitable uncertified seed. Field equipment must also be cleaned when fields of different cultivars are harvested.

Finally, a sample from each harvested seed lot is tested for germination and mechanical purity by visual inspection.

### **Post-harvest residue management**

*In the mid-1940s open-field burning was a way growers controlled disease problems (ergot, blind seed, and seed gall nematode) and pest like rodents and slugs. Field burning was also used to dispose of straw following seed harvest. However, during the 1970s and 1980s this practice became increasingly controversial and as of 2010 is no longer an option.*

### **By Products**

*As farmers adjusted to reduced field burning, a new export market developed for the straw. Over one billion pounds (600,000 tons) of grass and grain straw is now exported annually to Japan, Korea and Taiwan for dairy and beef cattle feed. These exports sales have an estimated value of \$50-\$60 million.*

*Forage grass is used for pastures for cattle and other livestock to graze on, roadside plantings, and is often used to help stop soil erosion. Turf grass seed is used for soccer and other types of sport fields, and is used on the fields of premier sporting events including the Super Bowl, World Cup Soccer, the Olympics and major golfing events. The straw from both types of grass is baled and sold for livestock feed.*

### **Grass Species**

*There are many different kinds of grass seed and each type is used for a specific location and purpose.*

**Annual Rye -** *Lolium multiflorum - (forage grass) It is a fast growing forage grass planted along roadsides and other areas requiring quick, economical ground cover. Annual Ryegrass is often used on hillsides to curb wind and water erosion problems.*

**Perennial Rye -** *Lolium perenne - (turf and forage grass) This is the most widely used grass in the world. It is used in the northern states for permanent turf and forage pastures and for overseeding of dormant grasses in the southern U.S.. It has been s[sic] cultivation as a forage grass since the 17th century.*

**Tall fescue -** *Festuca arundinacea - (turf and forage grass) This is a popular grass in the transition zone between northern cool-season grass species and warm-season southern species.*

**Bentgrass -** *Agrostis capillaries - (turf grass) Oregon produces nearly all the Bentgrass seed grown in the United States. Predominantly a Willamette Valley crop, Bentgrass seed is exported in large quantities to Europe and the central and northern states for use in turf mixtures. This grass is widely used on golf courses throughout the world.*

**Fine Fescue -** *Festuca rubra spp. rubra - (turf grass) This group of grasses is used for golf courses. It grows well in shaded areas and is very drought tolerant.*

**Orchardgrass -** *Dactylis glomerata (forage grass) This grass is used in the northern states for pastures and grass hay. Oregon is the nation's leading producer of orchard grass seed and it is most commonly used for cattle feed."*

The farm inventory data collected for the analysis generally classified lands that appeared to be intensively cultivated for grass as *grass seed*. Without interviewing every property owner and/or trespassing onto private property, it is difficult to discern which lots are devoted to grass seed production and which might be devoted to hay or cereal grain production from the available inventory data. As such, the mapping and summary data assumes grass seed production for these lands unless the inventory data was definitive.

However, the actual cultivation could be grains or simply hay. From an impacts analysis standpoint, this approach is more conservative because grass seed is the most intensive form of this general cultivation category. This approach is appropriate for impacts analysis purposes because the farm practices are similar (except for native hay which is less complex), as summarized in the below data prepared Gregory Butler<sup>9</sup>.

**Table 8.  
 Perennial Ryegrass Farm Practices**

Establishment	Production
<ul style="list-style-type: none"> <li>▪ Soil Sample</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fall Fertilizer</li> </ul>
<ul style="list-style-type: none"> <li>▪ Disk (multiple times)</li> </ul>	<ul style="list-style-type: none"> <li>○ 16-16-16 LB</li> </ul>
<ul style="list-style-type: none"> <li>▪ Rip</li> </ul>	<ul style="list-style-type: none"> <li>▪ Seedling Weed Control</li> </ul>
<ul style="list-style-type: none"> <li>▪ Plow</li> </ul>	<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>
<ul style="list-style-type: none"> <li>▪ Harrow &amp; Roll</li> </ul>	<ul style="list-style-type: none"> <li>○ Prowl H20</li> </ul>
<ul style="list-style-type: none"> <li>▪ Lime</li> </ul>	<ul style="list-style-type: none"> <li>○ AziomOZ</li> </ul>
<ul style="list-style-type: none"> <li>▪ Harrow &amp; Roll</li> </ul>	<ul style="list-style-type: none"> <li>○ Surfactant--Induce</li> </ul>
<ul style="list-style-type: none"> <li>▪ Plant Seed</li> </ul>	<ul style="list-style-type: none"> <li>▪ Slug Control</li> </ul>
<ul style="list-style-type: none"> <li>○ Charcoal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fertilize - Spring</li> </ul>
<ul style="list-style-type: none"> <li>▪ Seedling Weed Control</li> </ul>	<ul style="list-style-type: none"> <li>○ 33-0-0-12 LB</li> </ul>
<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>	<ul style="list-style-type: none"> <li>○ 46-0-0 Urea LB</li> </ul>
<ul style="list-style-type: none"> <li>○ GlyphosateGAL3</li> </ul>	<ul style="list-style-type: none"> <li>▪ Broadleaf Weed Control</li> </ul>
<ul style="list-style-type: none"> <li>○ Surfactant--Induce</li> </ul>	<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>
<ul style="list-style-type: none"> <li>▪ Ditching</li> </ul>	<ul style="list-style-type: none"> <li>○ 2, 4-D</li> </ul>
<ul style="list-style-type: none"> <li>▪ Seedling Weed Control</li> </ul>	<ul style="list-style-type: none"> <li>○ Banvel</li> </ul>
<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>	<ul style="list-style-type: none"> <li>○ Surfactant--Induce</li> </ul>
<ul style="list-style-type: none"> <li>▪ Nortron (pt)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rogue Weed Control</li> </ul>
<ul style="list-style-type: none"> <li>▪ Slug Control</li> </ul>	<ul style="list-style-type: none"> <li>▪ Plant Growth Reg.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Fertilize - Spring</li> </ul>	<ul style="list-style-type: none"> <li>▪ Spray Bug60 7 mph</li> </ul>
<ul style="list-style-type: none"> <li>○ 33-0-0-12 LB</li> </ul>	<ul style="list-style-type: none"> <li>▪ Palisade (PGR)</li> </ul>
<ul style="list-style-type: none"> <li>○ 46-0-0 Urea LB</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rust Control</li> </ul>
<ul style="list-style-type: none"> <li>▪ Rodent Control</li> </ul>	<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>
<ul style="list-style-type: none"> <li>▪ Broadleaf Weed Control</li> </ul>	<ul style="list-style-type: none"> <li>○ Quilt/Fungicide</li> </ul>
<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>	<ul style="list-style-type: none"> <li>○ Surfactant--Induce</li> </ul>
<ul style="list-style-type: none"> <li>○ 2, 4-D</li> </ul>	<ul style="list-style-type: none"> <li>▪ Swath</li> </ul>
<ul style="list-style-type: none"> <li>○ Banvel</li> </ul>	<ul style="list-style-type: none"> <li>▪ Combine</li> </ul>
<ul style="list-style-type: none"> <li>▪ Rogue Weed Control</li> </ul>	<ul style="list-style-type: none"> <li>▪ Clean &amp; Bag Seed</li> </ul>
<ul style="list-style-type: none"> <li>▪ Border Spray</li> </ul>	<ul style="list-style-type: none"> <li>▪ Custom Bale</li> </ul>
<ul style="list-style-type: none"> <li>▪ Plant Growth Reg.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Flail</li> </ul>
<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mph</li> </ul>	<ul style="list-style-type: none"> <li>▪ Border Spray</li> </ul>
<ul style="list-style-type: none"> <li>○ Apogee (PGR)</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Rust Control</li> </ul>	
<ul style="list-style-type: none"> <li>○ Spray Bug60 7 mp</li> </ul>	
<ul style="list-style-type: none"> <li>○ Quilt/Fungicide</li> </ul>	
<ul style="list-style-type: none"> <li>○ Surfactant--Induce</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Swath</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Flail</li> </ul>	

**Table 9.  
 Spring Wheat Farm Practices**

<sup>9</sup> Gregory Butler holds a Master of Science Degree in Natural Resources and the Environment from the University of Arizona.



Operations
▪ Disk
▪ Fertilize - Spring
○ 16-16-16 LB
▪ Plant
○ Drill
○ Harrow/Cultipacker
○ Treated Sp.Wht. Seed
▪ Spring Grass/Broadleaf Control
○ Spray Bug60 7 mph
○ MCPA Amine
▪ Fertilize - Spring
○ Spray Bug100 7 mph
○ 40-0-0-6 LB
▪ Fungicide & Insecticide
○ Spray Bug60 7 mph
○ Stratego
○ Diomethoate
▪ Combine
▪ Haul Grain
○ Transport to PDX

Table 10.  
 Tall Fescue Farm Practices

Establishment
▪ Soil Sample
▪ Plow
▪ Disk (multiple times)
▪ Harrow & Roll
▪ Lime
▪ Harrow & Roll
▪ Seedling Weed Control
○ Spray Bug60 7 mph
○ GlyphosateGAL1
▪ Border Spray
▪ Plant Seed
▪ Drill
▪ Chemical Fertilizer - Spring
○ 16-16-16 LB
▪ Broadleaf Weed Control
○ Spray Bug60 7 mph
○ Bronate
▪ Insect Control
○ Spray Bug60 7 mph
○ Lorsban
▪ Border Spray
▪ Flail

Production
▪ Fall Weed Control
○ Spray Bug60 7 mph
○ AxiomLB
○ Goal
○ Diuron
▪ Fall Fertilizer
○ 16-16-16 LB
▪ Broadleaf Weed Control
○ Spray Bug60 7 mph
○ 2, 4-D
○ Banvel
○ Surfactant--Induce
▪ Fertilize - Spring
○ 40-0-0-6 lb
○ 0-0-60 lb
▪ Plant Growth Reg.
○ Spray Bug60 7 mph
○ Apogee (PGR)
▪ Fungicide
○ Spray Bug60 7 mph
○ Quilt/Fungicide
○ Surfactant--Induce
▪ Border Spray
▪ Swath
▪ Combine



Establishment

Production
<ul style="list-style-type: none"> <li>▪ Flail</li> <li>▪ Clean &amp; Bag Seed</li> </ul>

**Table 11.**  
**White Clover Farm Practices**

Establishment and Year 1 Production
<ul style="list-style-type: none"> <li>▪ Soil Sample               <ul style="list-style-type: none"> <li>○ Grid Sample</li> </ul> </li> <li>▪ Flail</li> <li>▪ Disk</li> <li>▪ Lime</li> <li>▪ Harrow &amp; Roll</li> <li>▪ Land Level</li> <li>▪ Harrow &amp; Roll</li> <li>▪ Plant               <ul style="list-style-type: none"> <li>○ Drill</li> <li>○ 3-Point Blade</li> <li>○ White Clover Seed</li> <li>○ 10-34-0 LB</li> <li>○ Slug Bait</li> <li>○ 32 Solution LB</li> </ul> </li> <li>▪ Slug Control</li> <li>▪ Fall Grass &amp; Insecticide               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Select</li> <li>○ Lorsban</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Spring Fertilizer               <ul style="list-style-type: none"> <li>○ 16-20-0-14 LB</li> <li>○ 0-0-60 LB</li> <li>○ 0-0-21-21S-10.5 Mg</li> <li>○ 46-0-0 Urea LB</li> <li>○ 10-34-0 LB</li> <li>○ Boron</li> </ul> </li> <li>▪ Rodent Control</li> <li>▪ Spring Herbicide               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Kerb</li> <li>○ MCPA Amine</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Spring Grass Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Select</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Spring Broadleaf Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Basagran</li> <li>○ Raptor</li> <li>○ Surfactant</li> </ul> </li> </ul>

Year 2 Production
<ul style="list-style-type: none"> <li>▪ Slug Control</li> <li>▪ Winter Broadleaf Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Kerb</li> </ul> </li> <li>▪ Rodent Control</li> <li>▪ Spring Fertilizer               <ul style="list-style-type: none"> <li>○ 0-0-60 LB</li> <li>○ 16-20-0-14 LB</li> <li>○ 0-0-21-21S-10.5 Mg</li> <li>○ 11-52-0</li> <li>○ Boron</li> </ul> </li> <li>▪ Spring Herbicide               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Goal</li> <li>○ Gramoxone Inteon</li> <li>○ MCPA Amine</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Spring Broadleaf Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Basagran</li> <li>○ Raptor</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Spring Grass Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Select</li> <li>○ Surfactant</li> </ul> </li> <li>▪ Bee Pollination</li> <li>▪ Insect Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Capture</li> </ul> </li> <li>▪ Swath</li> <li>▪ Combine</li> <li>▪ Clean &amp; Bag Seed</li> </ul>



Establishment and Year 1 Production	Year 2 Production
<ul style="list-style-type: none"> <li>▪ Bee Pollination</li> <li>▪ Insect Control               <ul style="list-style-type: none"> <li>○ Spray Bug80 7 mph</li> <li>○ Capture</li> </ul> </li> <li>▪ Swath</li> <li>▪ Combine</li> <li>▪ Clean &amp; Bag Seed</li> </ul>	

**Table 12.**  
**Native Hay Farm Practices**

Operations	Machine
<ul style="list-style-type: none"> <li>▪ Farm Pickup</li> <li>▪ Drag Meadows</li> <li>▪ Custom Ditch Maintenance</li> <li>▪ Clean Ditches</li> <li>▪ Fertilizer (nitrogen)</li> <li>▪ Flood Irrigate</li> <li>▪ Swath</li> <li>▪ Rake</li> <li>▪ Bale</li> <li>▪ Haul &amp; Stack</li> </ul>	<ul style="list-style-type: none"> <li>▪ Old Tractor</li> <li>▪ Loader Tractor</li> <li>▪ Pull Swather</li> <li>▪ Ditcher</li> <li>▪ Drags/Harrow</li> <li>▪ Hay Wagon</li> <li>▪ Round Baler</li> <li>▪ Side Deliver Rake</li> <li>▪ Pickup</li> <li>▪</li> </ul>

**3.2.3 Farm Practices for Pasture with Livestock**

The farm use inventory identified relatively few pasture sites with associated livestock on surrounding lands. Large scale ranching operations can involve some complicated and technical farm practices. However, the nature and scale of the observed livestock and associated pastureland on surrounding lands of Riverbend Landfill were such that more simplified practices would be expected.

Farm practices would involve field fencing construction and maintenance, livestock medical treatments, animal feeding during times of low food sources, pasture rotations, livestock watering, and related activities. The pasture itself might be irrigated. Rodent control practice is typically employed. Occasional chemical treatments including weed control and nutrient supplies are common.

**3.2.4 Farm Practices for Field Crops and Vegetables**

Farm practices for the production of field crops and vegetables varies to some extent according to the type of vegetables and field crops being grown. Many of these crop types require irrigation and associated infrastructure and maintenance. These crops are typically annuals and must be planted anew each season. This involves preparing the field for planting by tilling the soil, applying appropriate chemicals such as pesticides, herbicides and nutrients. Planting typically occurs in the spring. Crops are tended through the summer months with additional fertilizers, pesticides and herbicides for weed control for the particular crops under cultivation. Farm practices typically include rodent control. Harvest occurs in late summer and into fall depending on the crop type. Harvest methods vary by crop. Most field crops and vegetables must be brought to market quickly after harvest.



Generally, field crops and vegetables are somewhat limited in their level of mechanization except as part of very large commercial operations for singular crop types which were not observed in the inventory data collection for surrounding lands. Smaller operations require more manual labor and overall higher labor inputs when compared to other farm uses that can achieve greater levels of mechanization. Most smaller-scale field and vegetable crop operations utilize a standard tractor with attachments appropriate to their crops such as discs, sprayers, trailers, and more specialized harvesters if appropriate.

### **3.2.5 Farm Practices for Nurseries**

Several nurseries are located on surrounding lands. Nurseries in the Willamette Valley typically are container nurseries. These nurseries produce ornamental plants in individual potting containers for sale at wholesale and retail establishments. Some nurseries also sell direct to consumer at their respective farm site. Most nurseries have tens to hundreds of plant varieties.

Nurseries often have greenhouses to extend the growing season and accelerate production. Nurseries require irrigation. However, many nurseries have irrigation water recycling systems to reuse water that drains through its containers. Nurseries are labor intensive farm uses and involve nearly constant pruning, fertilizing, pest control and irrigation management.

Products need to be available for supply to market throughout the planting season. Peak periods of market demand are the spring and fall.

Planting and propagation methods vary by plant variety. New soil imports for container planting must be made available from either on-farm sources or the importation of soils.

### **3.2.6 Farm Practices for Vineyards**

The surrounding vineyard lands are all located within the McMinnville American Viticultural Area. Basic information on this wine growing region is quoted from the AVA's website below:

*The McMinnville AVA lies due west of the town of McMinnville in the Coast Range Foothills of Yamhill County. This AVA is the most westerly of all Oregon AVAs and is geologically and climatically very different from any other in the Willamette Valley. An AVA or "American Viticultural Area" is defined as a delimited, grape-growing region distinguishable by unique geographical features and recognized by the Bureau of Alcohol and Tobacco as having unique characteristics.*

*Geologically, the soils in the McMinnville AVA are the oldest and most complex of any Oregon AVA with a combination of marine sedimentary soils and basalt. The soils in our AVA were created during the Eocene period 38-55 million years ago and were the result of a combination of Cascade Mountain lava flows and tectonic plate movements that created the Coast Range Mountains. The plate movement exposed ancient and weathered soils in the foothill regions where our AVA is located and the lava flows created 'basal lava fingers' which can be seen amongst marine soils in the McMinnville AVA vineyards. The soils are primarily uplifted marine sedimentary loams and silts, with alluvial overlays. Beneath is a base of the uplifting basalt. Clay and silt loams average 20-40 inches in depth before reaching harder rock and compressed sediments, shot with basalt pebbles and stone. The uniqueness of the soils for winegrowing is in the 20 to 40 inch depth.*

*Climatically, this AVA is again in a class of its own. These primarily east and south facing slopes facing sit in a protected weather shadow of the Coast-range Mountains. Rainfall is lower (33 inches annually) than sites only 12 to 20 miles to the east. The foothills also provide protection from chilling winds in the unstable air conditions of the spring and fall. Winegrowers also have the option of placing vineyards on more southerly facing sites to take advantage of the drying winds from the Van Duzer corridor, which helps control mold and mildew on the grapes during Oregon's humid summer days.*

Critical to vineyard farming practice is the siting and designing of the vineyard itself. It is necessary to select the proper varietals for a particular terroir. The vineyard should be designed to take maximum advantage of solar and micro-climate affects.

Vineyards are a high intensity agricultural practice. According to *Oz Clarke's Wine Atlas, Wines & Wine Regions of the World*, (Little, Brown and Company, 1995) the farming practices associated with ongoing viticulture are: in winter, grape vines are pruned as a way to control the yield. Sometimes the vines are chip budded to change varieties. If new planting is planned, it is done in the spring once the ground has warmed and the risk of frost is reduced. Spring is also the time fertilizers and pesticides are applied to the grape vines, which is typically done mechanically but can also be done by hand. Throughout the growing season, new foliage is tied to the wood and wire supports that are common to viticulture throughout the world. In spring, mechanical spray equipment is used to treat the vines with chemicals to prevent or suppress mildew and other diseases common to grapes. Irrigation is applied, as needed, throughout the growing season – typically by overhead sprinklers or drip irrigation. Water management is critical to wine grape quality to obtain optimum sugar levels at the time of harvest. The vines are pruned again in summer to prevent excess foliage from shading the grapes. Methods are often employed to protect grapes from birds once the grapes begin to ripen. In the fall, grapes are constantly monitored for sugar content. Harvesting occurs (either mechanically or by hand) during a very short window when grape sugar content is optimal for wine production of the particular varietal being cultivated. The grapes are processed then into wine. After the grapes have been harvested, winter pruning is undertaken in preparation of the next season.

### **3.2.7 Farm Practices for Christmas Tree Farms**

There is one Christmas tree farm on surrounding lands. Christmas tree farming involves the planting of conifers (typically firs such as noble, grand and Douglas). Some Christmas tree farms utilize a direct to consumer sales model where customers come to the farm and select their desired tree. Others farms harvest and transport them to retail sales lots in more populated market areas. Trees can be planted from starts from conifer nurseries or from seed. Trees are routinely pruned to produce “full” trees. Market ready trees typically take 6 to 10 years from seedling. Irrigation may be used to establish trees. Precipitation in western Oregon is typically sufficient to allow trees to grow without supplemental irrigation after establishment. Varying levels of nutrient management occur for a given farm operation, which can be done by tractor or by hand. Final pruning occurs before sale to optimize tree aesthetics.

### **3.2.8 Local Farmer Interviews**

CSA Planning interviewed a local farmer who primarily farms hazelnuts on surrounding lands. He operates one hazelnut farm that is essentially adjacent to the landfill, another that is approximately 1 mile away and a third that is approximately two miles away. The oldest and the youngest orchard is the orchard closest to the landfill. Most of this orchard

is approximately 30 years old and is being replanted. The first replanted portion is three years old. The orchard approximately a mile away is approximately 15 years old. The orchard that is approximately two miles away is five years old.

The farmer stated that he has not experienced any negative impacts to his farming practices from the proximity to the landfill. He stated that his operations and practices are the same for the orchard that is nearest to the landfill from the one that is located farther away. He indicated that crop losses due to bird destruction are not noticeably different for any of the orchards. He stated rodent control practices are the same for all three orchards and that greater impacts from the orchards closest to the landfill have not been observed.

### **3.3 Potential Impacts from Landfill Externalities**

The purpose of this section is to identify the landfill externalities that must be analyzed for potential farm impacts.

#### **3.3.1 Externalities Identified with Logical Potential for Impacts**

Identifying and determining landfill expansion externalities that have discernable potential to change accepted farming practices or to increase the cost of accepted farming practices on surrounding lands involves a deductive process that ties potential threats to accepted farm practices to the externality character. Not all landfill expansion externalities are necessarily a threat to a given farming practice. Thus, the universe of all possible landfill externalities need not be analyzed if there is no discernable potential for that externality to change accepted farming practices or to increase the cost of accepted farming practices on surrounding lands.

Based upon the farm uses and associated farm practices on surrounding lands, the following landfill expansion externalities have a discernable potential to change accepted farming practices or to increase the cost of accepted farming practices and warrant further evaluation:

- Litter
- Water Quality Impacts
- Air Particulates
- Traffic
- Nuisance Bird Attraction
- Rodent (and other Vermin) Attraction

#### **3.3.2 Assessment of Externalities' Intensity and Scale**

The next step in the inquiry is to determine if each of the above identified landfill externalities has sufficient potential from the standpoint of scale and intensity that could cause significant impacts. The scale and intensity of each of the above identified externalities is assessed below:

- **Litter** – Litter is simply refuse destined for the landfill that either never made it to its destination in the landfill or somehow managed to escape the landfill prior to compaction and covering. Landfill management requires litter containment and elimination efforts. Litter containment and elimination is an operational challenge that is managed now and will continue to be managed in the future.. The intensity

and scale of potential litter impacts are expected to be concentrated along the delivery route (being Highway 18) and for properties located adjacent to the landfill site. The degree to which litter has the potential to change farm practices will vary by the type of farm practice and the success of litter containment and elimination management practices. For these reasons, potential for impact to farm practices from litter warrants detailed analysis.

- **Water Quality** –Prior to modern landfill design and construction, documented impacts to water quality from other landfills occurred due to leachate infiltration. Those historical impacts to water quality triggered the creation of EPA *Sub-Title D* regulations with which new landfills (or landfill expansions) must comply. These regulatory changes ushered in a new era of landfill design and construction technology. The engineering and design of landfills has evolved over the last thirty years. These technological and regulatory advancements in landfill design and construction have functionally eliminated water quality impacts resulting from leachate transmission through a landfill built to modern standards. This conclusion is based on expert opinion that the rate of failure is effectively zero and the functional life of the design exceeds the period of time the decaying refuse represents a significant risk to water quality. Once the landfill is closed, the volume of leachate diminishes significantly because the water cannot enter the landfill through the cap nor escape it through the liner.

With a properly designed and constructed liner system built to modern standards, water quality impact potential at Riverbend Landfill is essentially limited to two sources – storm water and leachate seepage. These two sources of potential water quality impact are analyzed in Appendix C prepared by SCS Engineering. That technical analysis concludes that regulatory requirements of ODEQ and resulting best management practices of Riverbend Landfill render significant risk to water quality from storm water or leachate seepage to be very limited.

Based upon the technological advancements in landfill design and construction that are standard industry practice and further mandated by ODEQ regulations and the regulatory monitoring and management required prior to closure, the scale and intensity of water quality externalities appears limited and not sufficient to cause significant changes to accepted farm practices or to increase the cost of accepted farm practices on surrounding lands. A more detailed evaluation of potential impacts is therefore not warranted.

- **Air Particulates** – The Riverbend Landfill has a Title V point source permit for air particulate emissions. This permit sets a cap on air particulate emissions that are allowed under applicable ODEQ and EPA regulations. On the basis of the particulate emissions permitting alone, air particulate externalities warrant detailed evaluation for potential impacts to farm practices.
- **Traffic** – New uses that create significant changes in traffic volumes on certain roads used in farming operations have the potential for significant impacts to farm

practices. However, the scale and intensity of traffic externalities for the Riverbend Landfill expansion are limited. Two factual circumstances exist to support this expectation. First, the landfill is already in operation so no actual changes to the traffic patterns will occur from the existing conditions due to the landfill expansion itself. Second, Riverbend Landfill has access directly to Highway 18. Highway 18 is a higher volume State Highway. Any farm practices utilizing this road must be conducted in a manner that negotiates the traffic volumes on Highway 18. Highway 18 has over 1175 cars per hour just in the PM peak, or a car every 3.06 seconds on average, see Appendix D with traffic study for the prior zone change. Of these cars, Riverbend Landfill expansion at full build-out in the future (including a separate green-tech facility not part of the subject application) is only 48 trips or 4.1% of the total peak hour traffic volumes. For the above reasons, the scale and intensity of traffic externalities for the Riverbend Landfill expansion are sufficiently limited that significant impacts to accepted farm practices is not expected and does not warrant detailed analysis.

- ***Nuisance Bird Attraction*** – Landfills have the potential to attract birds – especially corvids (such as jays and ravens), gulls and pigeons. Birds can and do harm certain types of crops. Given this relationship, nuisance bird attractant externalities warrant detailed evaluation for potential impacts to farm practices.
- ***Rodent (and other vermin) Attraction*** – Landfills have the potential to attract and to propagate rodents and other vermin. Rodents and other vermin can and do harm certain types of crops. Given this relationship, rodent attractant externalities warrant detailed evaluation for potential impacts to farm practices.

### **3.3.3 Specific Farm Practices vs. Specific Externalities with Potential to Cause Impacts**

The next step in the analytic process is to “cross-tab” the specific farm practices identified to be occurring on surrounding lands with the specific landfill externalities that warrant detailed evaluation. This is the last methodological step in the process to match which accepted farm practices need to be evaluated for potential impacts from specific potential landfill externalities. The below matrix depicts this cross-tab procedure. Potential for impact to a given farm practice from a given landfill externality is assigned one of three categories – INA which stands for potential Impact Not Apparent, LP which stands for Limited Potential, HP which stands for Heightened Potential.

**Table 13.**  
**Orchards Farm Practices**  
 Level of Potential Impacts

Orchards	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
	Orchard Establishment	INA	LP	INA	LP
	Crop Growth	INA	LP	INA	LP
	Chemical and Nutrient Applications	LP	LP	INA	INA
	Brush Removal	LP	INA	INA	INA
	Pruning	INA	INA	INA	INA
	Irrigation	LP	INA	INA	INA
	Rodent Control	LP	INA	LP	HP
	Bird Control	LP	INA	HP	LP
	Sucker Control	LP	INA	LP	LP
	Flailing Orchard Floor	LP	INA	INA	INA
	Leveling Orchard Floor	LP	INA	INA	HP
	Harvest and associated Nut Sweeping	HP	INA	HP	HP
Washing and Drying Nuts (if onsite)	LP	LP	INA	HP	

**Table 14.**  
**Grass Seed Farm Practices**  
 Level of Potential Impacts

Grass Seed (assumed to include similar farm practices for grain and native hay production)	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
	Chemical and Nutrient Applications	LP	LP	INA	INA
	Crop Growth	INA	LP	INA	LP
	Bird Control	LP	INA	LP	LP
	Rodent Control	LP	INA	LP	HP
	Planting	LP	INA	HP	HP
	Weed Control	LP	INA	INA	INA
	Tilling/Disc	LP	INA	INA	LP
	Sheep Grazing	INA	INA	INA	LP
	Swathing for Harvest	LP	INA	LP	LP
	Combine (& thresh)	HP	INA	INA	LP
	Clean and Bag Seed	HP	LP	INA	LP
	Straw baling or Flail	LP	INA	INA	LP

**Table 15.**  
**Pasture Farm Practices**  
 Level of Potential Impacts

	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
<b>Pasture (w/Livestock)</b>	Chemical and Nutrient Applications	LP	LP	INA	INA
	Pasture Growth	INA	LP	INA	INA
	Animal Growth	INA	INA	INA	INA
	Rodent Control	LP	INA	LP	HP
	Livestock Medical Treatment	INA	INA	INA	INA
	Feeding and Watering	INA	INA	INA	INA
	Fence Maintenance	INA	INA	INA	INA

**Table 16.**  
**Field Crops Farm Practices**  
 Level of Potential Impacts

	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
<b>Field Crops and Vegetables</b>	Chemical and Nutrient Applications	LP	LP	INA	INA
	Crop Growth	INA	LP	INA	LP
	Bird Control	LP	INA	HP	LP
	Rodent Control	LP	INA	LP	HP
	Tilling and Planting	LP	INA	HP	HP
	Tilling/Disc	LP	INA	INA	LP
	Harvest (by hand or automated tractor)	HP	INA	HP	HP

**Table 17.**  
**Plant Nurseries Farm Practices**  
 Level of Potential Impacts

	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
<b>Plant Nurseries</b>	Chemical and Nutrient Applications	LP	LP	INA	INA
	Bird Control	LP	INA	HP	LP
	Rodent Control	LP	INA	HP	HP
	Plant Starts (typically in greenhouse)	INA	INA	INA	INA
	Pruning	LP	INA	INA	INA
	Plant Growth	LP			
	Irrigation	LP	INA	INA	INA
	Soil Stockpiling	LP	INA	INA	LP
	On-site Composting	LP	INA	LP	HP

**Table 18.**  
**Vineyards Farm Practices**  
 Level of Potential Impacts

	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
<b>Vineyards</b>	Vineyard Design and Installation (includes trellising and planting)	INA	INA	LP	LP
	Bird Control	LP	INA	HP	LP
	Rodent Control	LP	INA	LP	HP
	Pruning	LP	INA	INA	INA
	Weed Control	LP	INA	LP	INA
	Frost Protection	INA	INA	INA	INA
	Irrigation	LP	INA	INA	LP
	Application of nutrients and other chemicals	INA	INA	INA	INA
	Grape Growth	INA	LP	LP	LP
	Harvest (mechanical or by hand)	INA	INA	HP	HP

**Table 19.**  
**Christmas Tree Farm Practices**  
 Level of Potential Impacts

	Generalized Farm Practice	Litter	Air Particulates	Nuisance Bird Attraction	Rodents (& Vermin)
<b>Christmas Tree Farms</b>	Chemical and Nutrient Applications	LP	INA	INA	INA
	Planting	INA	INA	INA	LP
	Weed Control	LP	INA	LP	LP
	Irrigation for new plantings	LP	INA	INA	LP
	Pruning	LP	INA	INA	INA
	Tree Growth	INA	LP	INA	LP
	Harvesting	INA	INA	INA	LP

### 3.3.4 Farm Practices and GIS Inventory Data Synthesis

The final step in the analysis is evaluating potential impacts to farm practices with specific farm use geography taken into account. The geographic dimensions of each of the landfill externalities with potential for significant impacts to accepted farming practices is analyzed below:

- **Litter** – The potential for litter impacts is expected to be limited by geography. The geographic extent of this potential impact is expected to be limited to properties north and south of the landfill between Highway 18 and the South Yamhill River. Prevailing winds are such that it would be rare for litter to be carried west. Surrounding lands devoted to farm use to the east are protected to a significant extent by the riparian area of the South Yamhill River. Potential litter impacts are expected to be most acute immediately north and south of the landfill and right along and east of the Highway 18. See Atlas Pages 7 and 13.

- ***Air Particulates*** – Potential for air particulate impacts is expected to be affected by geography to a significant degree. The geography with the greatest potential for air emission impacts is expected to be properties north and south of the landfill between Highway 18 and the South Yamhill River due to prevailing winds. Prevailing winds are such that it would be rare for emission particulates to be carried to the west. South Yamhill River would provide a significant windbreak to the east but strong winds still have potential to carry particulates that direction. Many farm uses, especially ones that involve a lot of tilling and disc work that are common in the area, produce air particulate emissions. Thus, the overall background air quality in the area is expected to be determined in significant part by the existing farm practices surrounding the landfill. See Atlas Pages 10 through 13.
- ***Nuisance Bird Attraction*** – The geographic extent of nuisance bird attraction is difficult to quantify without extensive scientific research. Attracted birds are primarily corvids, gulls and pigeons. These birds are all mobile and are naturally prevalent irrespective of the landfill's existence or expansion. It is expected that any potential for bird attraction impacts to agriculture diminishes with increasing distance from the landfill but the rate at which this occurs is not known with specificity. ODEQ Administrative Rules for landfill operation requires bird control (see OAR 340-094-040(10)). This creates a downward pressure on populations at the landfill. Thus, it is expected that concentrations of corvids, gull, and pigeons diminish to natural levels within 2.5 miles of the landfill expansion. See Atlas Pages 10 through 13.
- ***Rodents (and other Vermin)*** – The extent of the potential for rodent and vermin impacts is expected to be limited by geography. Rodents and similar vermin tend to have relatively small home ranges. These pests occur naturally. It is expected that the potential for rodent attraction impacts to agriculture diminishes with increasing distance from the landfill but the rate at which this occurs is not known with specificity. ODEQ Administrative Rules for landfill operation requires aggressive rodent control (see OAR 340-094-040(10)). This creates a downward pressure on rodent populations at the landfill. Given the relatively small home range of most rodents and the active control at the landfill, it is expected that population densities diminish to naturally occurring densities in a mile or less from the landfill. See Atlas Pages 12 and 13.

### **3.4 Analysis and Methods General Limitations**

Precise farm cost and practice data for each farm on surrounding lands cannot be obtained unless each of the individual farmers were to provide this data. Some of the farmers in the area may not keep such records in a useable format and they would be under no obligation to provide such data in any event. As such, the analysis must utilize generalities based upon the published data sources that are available and field data that could be readily collected. Notwithstanding these limitations, the data utilized in the analysis is the best available and is sufficient to constitute substantial evidence for Oregon Land Use Planning permit purposes.

## **4 FARM IMPACTS ASSESSMENT**

This section assesses the likelihood that identified landfill externalities will cause changes to accepted farm practices or to increase the cost of accepted farming practices. The assessment

determines whether potential impacts are expected to be significant enough to change accepted farming practices or significantly increase the cost of accepted farming. The assessment includes two dimensions (background data and analysis) to support the conclusions reached for each potential impact. This assessment is geographic and accounts for geographic differences between farm practices and their location in relation to the proposed landfill expansion.

In the case of the proposed expansion of Riverbend Landfill, the use is already present. The assessment includes evaluation of observable data that would indicate whether impacts to farm practices have occurred or are occurring. If landfill externalities caused significant changes in the accepted farming practices on surrounding lands, it would be expected that these changes would already have occurred due to the landfill operations that have been ongoing for the past forty years.

Thinking about the assessment more scientifically, the null hypothesis is that the existing operating landfill has caused significant changes to the accepted farming practices on surrounding lands. Null hypotheses are tested by looking for empirical and observational data that proves the null hypothesis to be untrue. If the observational data does not support the null hypothesis, then credence is developed that the opposite conclusion is true.

In the case of landfill expansion, testing the null hypothesis involved looking for changes in farm use (and associated practices) on lands surrounding the landfill. Observational data to support the null hypothesis would include observable differences in farm use (and associated practices) as the distance from the landfill increases. Examples of such observable differences would be significantly different crop types and significantly different percentages of arable land in crop production as the distance from the landfill increases. Similar differences would be expected (and a stronger relationship would be expected) in looking at longitudinal data (or data over time). CSA did not have the benefit of historical farm inventory field data from prior years. However, Google Earth has historical aerial photos available for the entire study area since 1994 and these were used to assess changes over time in the farm use pattern on surrounding lands.

#### **4.1 Immediate Vicinity Surrounding Lands**

This section assesses the potential impacts to accepted farm practices for lands within 1 mile of the landfill expansion area.

##### **4.1.1 Grass Seed Farm Uses (and similar such as grain and hay)**

The predominant farm use in the IVS lands is Grass-Seed Farming (and farm uses with similar but slightly less intensive practices such as grain production and native hay farming). The inventory estimates 84.3% of the IVS lands devoted to farm use are being used for grass seed (a portion of which may be native hay) and an additional 2.5% were devoted to grain. Thus, in total, 86.8% of the surrounding farm lands are devoted to the production of grass seed, grain and hay.

Potential litter impacts for grass seed production is expected to be limited for all identified farm practices except for combine operations and cleaning and bagging the seed. For all other farm practices, any litter appears to be an occasional annoyance rather than something that would significantly change accepted farm practices or increase the costs of farm operations. For example, litter may be one source of weed seed transport but there are many other transports for weeds and the presence of litter would not be expected to raise the agronomic rate of weed control application. Combine operations and seed cleaning and washing involve the use of machinery. Large volumes of litter may have a heightened potential to clog machines and slow down harvesting and

cleaning operations. However, litter control is actively managed by existing landfill operations programs, including litter fences and litter collection.

Air particulates have a limited potential to affect chemical applications and affect crop growth due to reduced photosynthesis. This potential impact appears to be too slight and insignificant for grass seed farming to change farm practices or increase its costs.

Nuisance bird attraction has limited potential to affect farming practices for grass seed. The primary bird problem for grass seed is geese. Landfills are not known to attract geese. The seed losses to geese are a far greater risk to crop yield than the bird varieties attracted by the landfill. Any bird control or hazing done to protect the fields from geese would be readily available and easy deployed for the comparatively small threat posed by nuisance birds attracted by the landfill.

Rodent control is an accepted farm practice for most types of field farming and is already employed because of the natural occurrence of rodents. Where rodent control is employed, it does not appear to be a significant cost factor or management issue for grass seed in the context of the entire enterprise. For White Clover, the OSU Extension Service Agricultural Enterprise Budget in AEB0021 estimates \$5.00 per acre in rodent control expenses. The item is not even listed in AEB0011 indicating the cost is not significant for annual ryegrass production. Even though there is heightened potential for farm practice impacts for rodent control from the landfill, there is no evidence that such impacts have in fact occurred. Even if such impacts were evident, it does not appear the costs rise to the level of significantly increasing the cost of the accepted farm practice. For example, in the extreme case that a white clover farm near the landfill has to double its rodent control to keep its rodent population consistent with other farms in the area, then that doubled cost over the standard AEB budgeted amount would be an additional \$5.00 per acre. This represents only 0.75% of the total direct expenses of production. The Riverbind Landfill monitors and inspects the landfill for potential impacts from rodents. The landfill also has a contractor available to be called for trapping rodents if necessary.. Rodent attraction and propagation is not expected to change accepted farming practices or significantly increase the cost of accepted farming practices for grass seed farming on surrounding lands.

#### **4.1.2 Orchards**

The second most common farm use on the IVS lands is orchards. These all appeared to be nut orchards (primarily hazelnut with some walnut orchards as well). Orchards constitute 9.9% of the IVS lands.

Litter impacts, if any, would be expected to be concentrated nearest the landfill between Highway 18 and the South Yamhill River. In this area, there is only one orchard. It is approximately 3,900 feet southwest and 700 feet east of Highway 18. Potential litter impacts for orchard production are expected to be limited for all identified farm practices except for harvesting operations. However, litter control is actively managed by existing landfill operations programs, including litter fences and litter collection and it is unlikely given the location of this orchard that litter would be at such a quantity to impact harvesting operations.

Air particulates have a limited potential to affect chemical applications and affect crop growth due to reduced photo synthesis and the washing and drying of nuts. Again, there is only the single orchard downwind of the landfill where air emissions might be carried. This particular orchard area has been expanding over the last 20 years so it would appear any impacts are too slight to significantly change farm practices or to increase its costs.

Nuisance bird attraction has heightened potential to affect harvest yields. Corvids can eat hazelnuts. A hazelnut farmer was interviewed who farms an orchard immediately adjacent to the landfill expansion and approximately a mile away and another orchard approximately two miles. That farmer indicated no difference in losses to bird crop loss for the orchard nearest to the landfill versus the one that is two miles away. Based upon the information provided by a local hazelnut farmer, it does not appear that hazelnut losses to corvids rise to the level of a significant impact that is significantly changing accepted farming practices or significantly increasing orchard farming costs.

Rodent control is an accepted farm practice for orchard farming and is already employed because of the natural occurrence of rodents. Where rodent control is employed, it does not appear to be a significant cost factor or management issue for orchard operations. For Hazelnuts, the OSU Extension Service Agricultural Enterprise Budget in EM8556 estimates \$7.00 per acre in rodent control expenses. Even though there is heightened potential for farm practice impacts for rodent control from the landfill, there is no evidence that such impacts have in fact occurred. Even if such impacts were evident, it does not appear the costs rise to the level of significantly increasing the cost of the accepted farm practice. For example, in the extreme case that a hazelnut farm near the landfill has to double its rodent control to keep its rodent population consistent with other farms in the area, then that doubled cost over the standard AEB budgeted amount would be an additional \$7.00 per acre. This represents only 1.1% of the total direct expenses of production. The hazelnut farmer interview indicated that rodent control expenses and efforts did not vary with the distance to the landfill. Further, and as previously stated, the Riverbend Landfill monitors and inspects for rodent impacts. The landfill also has a contractor who can be called if necessary to trap or otherwise assist controlling rodents. Given the information provided by the hazelnut farmer and relatively low cost of control in relation to orchard operating costs, rodent attraction and propagation does not appear likely to significantly change accepted farming practices or significantly increase the cost of accepted farming practices for grass seed farming on surrounding lands.

#### **4.1.3 Plant Nursery and Vegetable Crops**

The third most common farm use on the IVS lands are two crop units that appear to be managed together and they are part vegetable and field crops and part plant nursery. These farm uses constitute 2.8% of the IVS lands. The nursery and vegetable crop farm uses were analyzed above as separate farm uses with separate farm practices, but these two areas appear to have these two uses co-mingled.

Both of these uses are located west of Highway 18 where few, if any, litter impacts are expected for the reasons described in Section 3.4. No significant impacts to farm practices are anticipated for farm uses at this location from litter impacts.

Both of these uses are located west of Highway 18 which is a direction the wind rarely blows and therefore particulate transport would be no more than minimal. No significant impacts to farm practices are anticipated for farm uses at this location from emission particulate impacts.

Nuisance bird attraction has heightened potential to affect plant nurseries and vegetable farming. Corvids and gulls are omnivorous and could seek out food from vegetable farms and ornamental nurseries that are outdoors. Impacts from nuisance birds are likely not significant, however, because ODEQ requires landfills to actively control nuisance birds. Riverbend Landfill provides such controls in part through its falconry program. Because nuisance bird control is already an accepted farm practice for vegetable farming

and to a lesser extent plant nurseries, the expansion of Riverbend Landfill is not expected to impact that practice.

Rodent control is an accepted farm practice for most all farming practices. Nurseries and vegetable crops are higher value crops per acre than grass seed farming and on par with nut orchard farming. For similar reasons as for grass seed and orchard nuts described above, it is expected that potential cost increases to control rodents would be insignificant in relation to the overall production operations costs.

#### **4.1.4 Pasture (with Livestock assumed)**

Only 0.2% of the IVS land area were inventoried to be devoted to pasture with livestock. The farm practices for this use in this area are not very intensive. While there is some heightened potential for additional rodent control, this diminishes with distance from the landfill. These uses are near the periphery of the 1-mile IVS boundary landfill and rodent concentrations at this distance are not expected to be affected by the landfill. Consequently, it is not expected that any landfill externalities would have the potential to cause significant impacts to the pasture uses with associated livestock.

#### **4.1.5 Longitudinal Analysis of IVS Lands**

This section looks at farm use impacts from the standpoint of land use change for all IVS lands. CSA reviewed historical aerial photos since 1994 for all the IVS surrounding lands. From that analysis, it appeared that virtually no land that was in farm use in 1994 has been taken out of production except for new investments in farm facilities such as ponds or new barns. One hundred percent of the land that is inventoried as being in grass seed currently appears to have been devoted to grass seed in 1994. Some acreage was taken out of grass seed production and put into new vegetable/field crops. Over 100 acres have been converted from a lower value crop to orchards since 1994.

This longitudinal analysis indicates that the farm land use pattern is very stable over time. It appears that more investment in agriculture has occurred over the last 20 years while the Riverbend Landfill has been in full operation. Specifically, the longitudinal data supports increased investments in the very high value crop of nut orchards; an orchard investment takes many years of establishment expense amortization because the establishment is very expensive and generates no revenue for four years and is not fully productive until the fifth to seventh year of establishment.

## **4.2 Broad Area Surrounding Lands**

This section assesses the potential impacts to accepted farm practices for lands from 1 mile to 2.5 miles of the landfill expansion area.

### **4.2.1 Grass Seed Farm Uses (and similar such as grain and hay)**

The predominant farm use in the BAS lands is Grass-Seed Farming (and farm uses with similar but slightly less intensive practices such as grain production and native hay farming). The inventory estimates 68.3% of the BAS lands devoted to farm use are being used for grass seed (a portion of which may be native hay) and an additional 0.9% were devoted to grain. Thus, in total, 69.2% of the surrounding farm lands are devoted to the production of grass seed, grain and hay.

Potential litter impacts for grass seed production is expected to be limited for all identified farm practices except for combine operations and the cleaning and bagging the

seed. For all other farm practices, any litter appears to be an occasional annoyance rather than something that would significantly change accepted farm practices or increase the costs of farm operations. Litter may have a heightened potential to clog machines and slow down harvesting and cleaning operations. However, litter control is actively managed by existing landfill operations programs, including litter fences and litter collection. The volume necessary to cause a significant impact would be high, which is unlikely to occur, especially in light of the fact that BAS lands lie more than one mile from the landfill, and no changes to accepted farming practices or significant increases in costs would be expected from litter on BAS lands.

Air particulates have a limited potential to affect chemical applications and affect crop growth due to reduced photo synthesis. This potential impact appears to be too slight and insignificant to rise to the level of significantly changing farm practices or increasing its costs.

Nuisance bird attraction has limited potential to affect farming practices for grass seed. The primary bird problem for grass seed is geese. Landfills are not known to attract geese. The seed losses to geese are a far greater risk to crop yield. Any bird control or hazing done to protect the fields from geese would be readily available and easy deploy for the comparatively small threat posed by nuisance birds attracted by the landfill to grass seed operations.

Rodent control is an accepted farm practice for most all types of field farming as discussed above for the more immediate vicinity lands. For lands over a mile away, rodent concentrations would be expected to be at or below naturally occurring levels and no additional rodent control would be expected. Additionally, the farm practice of rodent control is not likely to be affected to a significant degree for all the reasons described above for the IVS grass seed lands.

#### **4.2.2 Pasture (with Livestock assumed)**

The second most common farm use on the BAS lands is pasture (with assumed livestock). 11.7% of the BAS land area was inventoried to be devoted to pasture with livestock. The farm practices for this use in this area are not very intensive. While there is some heightened potential for additional rodent control, this diminishes with distance from the landfill. These uses are more than a mile from the landfill and rodent concentrations at this distance are not expected to be affected by the landfill. Consequently, it is not expected that any landfill externalities would have the potential to cause significant impacts to the pasture uses with associated livestock.

#### **4.2.3 Orchards**

The third most common farm use on the BAS lands is orchards. These all appeared to be nut orchards (primarily hazelnut with some walnut orchards as well). Orchards constitute 4.6% of the BAS lands.

Litter impacts, if any, would be expected to be concentrated nearest the landfill between Highway 18 and the South Yamhill River. In this area, there is only one orchard, which is more than two miles away. Litter sources for this orchard would be much more likely from the City of McMinnville than transported from the landfill. The only other orchard downwind of the landfill is about a mile away. Potential litter impacts for orchard production are expected to be limited for all identified farm practices except for harvesting operations. It is not known whether litter is significantly changing accepted farming practices or significantly increasing its costs on nearby lands, however, it would

seem unlikely given the location of the orchards downwind of the landfill that litter would be at such a quantity to significantly impact harvesting operations. Litter control is actively managed by existing landfill operations programs.

Air particulates have a limited potential to affect chemical applications and affect crop growth due to reduced photosynthesis and the washing and drying of nuts. Most of the orchards are upwind and would not be affected by potential emissions from the landfill. The orchard located at the corner of US 99 and Highway 18 would be much more affected by mobile source emissions from these highways than from the landfill over two miles away. The other orchard near Briedwell Road is downwind and approximately a mile away. At this distance the dispersion would be sufficient that potential impacts appears to be too slight and insignificant to rise to the level of significantly changing farm practices or increasing its costs.

Nuisance bird attraction has heightened potential to affect harvest yields. Corvids can eat hazelnuts. A hazelnut farmer was interviewed who farms an orchard immediately adjacent to the landfill expansion and approximately one mile away and another orchard approximately two miles. That farmer indicated no difference in losses to bird crop loss for the orchard nearest to the landfill versus the one that is two miles away. Based upon the information provided by a local hazelnut farmer, it does not appear that hazelnut losses to corvids rise to the level of a significant impact that is significantly changing accepted farming practices or significantly increasing orchard farming costs.

Rodent control is an accepted farm practice for most all types of field farming as discussed above for the more immediate vicinity lands. For lands over a mile away, rodent concentrations would be expected to be at or below naturally occurring levels and no additional rodent control would be expected. Additionally, the farm practice of rodent control is not likely to be affected to a significant degree for all the reasons described above for the IVS orchard lands.

#### **4.2.4 Vineyards**

The fourth most common farm use on the BAS lands is vineyards. These vineyards are almost all located to the west of the landfill and are concentrated in a block of lands approximately a mile wide by two miles long. There is an additional vineyard to the northwest that is smaller and surrounded by woodlot. Vineyards constitute 4.1% of the BAS lands.

Litter impacts, if any, would be expected to be concentrated nearest the landfill between Highway 18 and the South Yamhill River. There are no vineyards in this area and all vineyards are upwind from the landfill, so no litter impacts would be expected to change accepted vineyard farming practices or increase its costs on nearby lands.

Air emission impacts, if any, would occur downwind from the landfill. There are no vineyards in this area and all vineyards are upwind from the landfill, so no particulate emissions impacts would be expected to change accepted vineyard farming practices or increase its costs on nearby lands.

Nuisance bird attraction has heightened potential to affect harvesting of wine grapes. Corvids, and potentially other nuisance birds, eat grapes. However, corvids are widespread native birds and vineyards attract other nuisance birds. Bird control is thus a standard farm practice for vineyards. OSU publication EM8413 lists four methods of bird control that include netting, predators, and scare devices and hazing, and shooting and direct control (many bird species are illegal to shoot or control directly). Netting has

a nearly 100% efficacy but is expensive for the vineyard operator. The attraction of the landfill may attract problem birds toward the landfill and away from competing grape food sources. The landfill is also required to actively manage nuisance birds and employs a falconry program to control birds at the landfill. Falconry reduces the overall bird population at the landfill.

Rodent control is an accepted farm practice for most all types of farming as discussed above for the more immediate vicinity lands. For lands over a mile away, rodent concentrations would be expected to be at or below naturally occurring levels and no additional rodent control would be expected.

#### **4.2.5 Plant Nursery and Field Crops**

The fifth most common farm use on the BAS lands are two crop units that appear to be managed together and they are part vegetable and field crops and part plant nursery. These farm uses constitute 2.8% of the BAS lands. The nursery and field crop farm uses were analyzed above as separate farm uses with separate farm practices, but several farming operations appear to have these two uses co-mingled. There are also some stand-alone nursery parcels that are the seventh most common farm use at 0.3% of the BAS lands and two stand-alone field crop uses that constitute 0.2% of the BAS lands.

These farm uses are primarily located east of the river which is expected to limit any litter impacts to a level that would not result in expected impacts to farm uses. There is another use of combined nursery and field crops over 2.5 miles away to the southwest and a stand-alone field crop parcel that are both sufficiently distant from the landfill to limit any litter impacts to a level that would not result in expected impacts to farm uses.

Air particulate emission impacts for lands more than a mile away are expected to be sufficiently dispersed to limit potential impacts below any level that would cause significant changes to accepted nursery or field crop farming practices.

Nuisance bird attraction has heightened potential to affect plant nurseries and vegetable farming. Corvids and gulls are omnivorous and could seek out food from vegetable farms and ornamental nurseries that are outdoors. Because plant nurseries and vegetable farming already attract birds, however, impacts are likely not significant because ODEQ requires landfills to actively control nuisance birds. Riverbend Landfill provides such controls in part through its falconry program. Because nuisance bird control is already an accepted farm practice for vegetable farming and to a lesser extent plant nurseries, the expansion of Riverbend Landfill is not expected to impact that practice.

Rodent control is an accepted farm practice for most all farming practices. Nurseries and field crops are higher value crops per acre than grass seed farming and on par with nut orchard farming. For similar reasons as for grass seed and orchard nuts described above, it is expected that potential cost increases to control rodents would be insignificant in relation to the overall production operations costs. For lands over a mile away, rodent concentrations would be expected to be at or below naturally occurring levels and no additional rodent control would be expected.

#### **4.2.6 Christmas Tree Farm**

There is one Christmas Tree Farm southwest of the landfill expansion approximately two miles away. There is a limited potential for any of the identified Christmas Tree farming practices to be impacted by the landfill externalities and with a separation over a mile and a half no impacts are expected that would cause significant changes to accepted tree farming practices or significantly increase its cost.

#### **4.2.7 Longitudinal Analysis of BAS Lands**

This section looks at farm use impacts from the standpoint of land use change for all BAS lands. CSA reviewed historical aerial photos since 1994 for all the BAS surrounding lands. From that analysis, it appeared that virtually no land that was in farm use in 1994 has been taken out of production except for new investments in farm facilities such as ponds or new barns or conversion to another farm use. Some acreage appears to have been taken out of pasture and converted to woodlot. The vineyards located west of Southwest Oldsville Road and east of Southwest Muddy Valley Road have expanded over several dozens of acres since 1994, converting both pasture-land and open space lands to vineyard. Some grass seed lands were put into new vegetable/field crops and some grass seed lands were converted to nurseries.

This longitudinal analysis indicates that the farm land use pattern is very stable over time. It appears that more investment in agriculture has occurred over the last 20 years while the Riverbend Landfill has been in full operation. Specifically, the longitudinal data supports increased investments in nurseries, vineyards and orchards. All of which are very high value crops with significant start-up investments. Vineyards and orchards in particular can take many years of establishment expense amortization because the establishment is very expensive and generates no revenue for three to five years.

### **5 FORESTRY USE IMPACTS ASSESSMENT**

There are approximately 27 woodlots that are mostly located in the western hills and a couple on the hills to the east at the far eastern boundary of the BAS lands that appear to be devoted to forest uses. These woodlots make up 6.0% of the BAS lands. There are no woodlots on the IVS lands within one mile of the landfill expansion. The presence of woodlots on BAS lands reflects the topographic relief that exists more than a mile from the landfill expansion area.

Forest practices involve occasional brush clearing; cleared brush is typically chipped or hauled to a disposal site in foothills step lands such as these. Depending on a the life cycle of the tree species every 7-12 years the site will be thinned using standard logging equipment including a chainsaw, skidder, caterpillar and a log truck. After a couple thinning cycles, the stand will become ready for harvest. Mature trees are harvested using standard logging equipment including a chainsaw, skidder, caterpillar and a log truck. After harvest, the site is restocked (typically from nursery starts) and the process begins anew.

The woodlot sites are well over a mile from the landfill expansion area and entirely upwind. CSA Planning Ltd. has not identified any landfill externalities of sufficient intensity or scale that would impact these forestry uses to any detectable degree.

### **6 SUMMARY ASSESSMENT**

The longitudinal analyses for the IVS lands and the BAS lands do not support the null hypothesis that Landfill Operations have been causing significant changes to the accepted farm practices in the area or significantly increasing the cost of accepted farm practices. The use pattern since 1994 has been very stable, and if anything, has trended toward more intensive agriculture. The dominant farm use is grass seed production (and similar hay and grain production activities) and this pattern has not changed in the last 20 years. Inventoried farm uses do not appear to vary with distance from the landfill (where topography is not a factor). The longitudinal and geographic empirical data indicates the null hypothesis should be rejected and this data lends support to the proposition that landfill operations have not

affected accepted farming practices and have not increased costs of accepted farming practices on surrounding lands.

While there was not sufficient data or a logical basis to conclude that litter or nuisance bird impacts actually exist, the mere potential for an impact does not indicate that such an impact exists or that such an impact would cause changes in farm practices. Litter, for example, is a potential impact that is actively managed. These management mechanisms are adequate to prevent significant impacts.

Nuisance birds exist and impact farms with or without the landfill. Quantifying the landfill's potential effects is difficult. The hazelnut farmer interviewed for this analysis indicated no difference in crop loss or control efforts regardless of proximity of his orchards to the landfill. A similar lack of actual impacts can be extrapolated for vineyards and vegetable and field farms. Nuisance birds are actively controlled and managed by the landfill just as they are by farmers. This common objective increases the likelihood of success for such practices.

## **7 APPENDICES**

# APPENDIX A

## ATLAS



# *Appendix A*

# *Atlas*

*Farm & Forest*  
*Impacts*  
*Assessment*

*Riverbend*  
*Landfill*  
*Expansion*  
*Application*

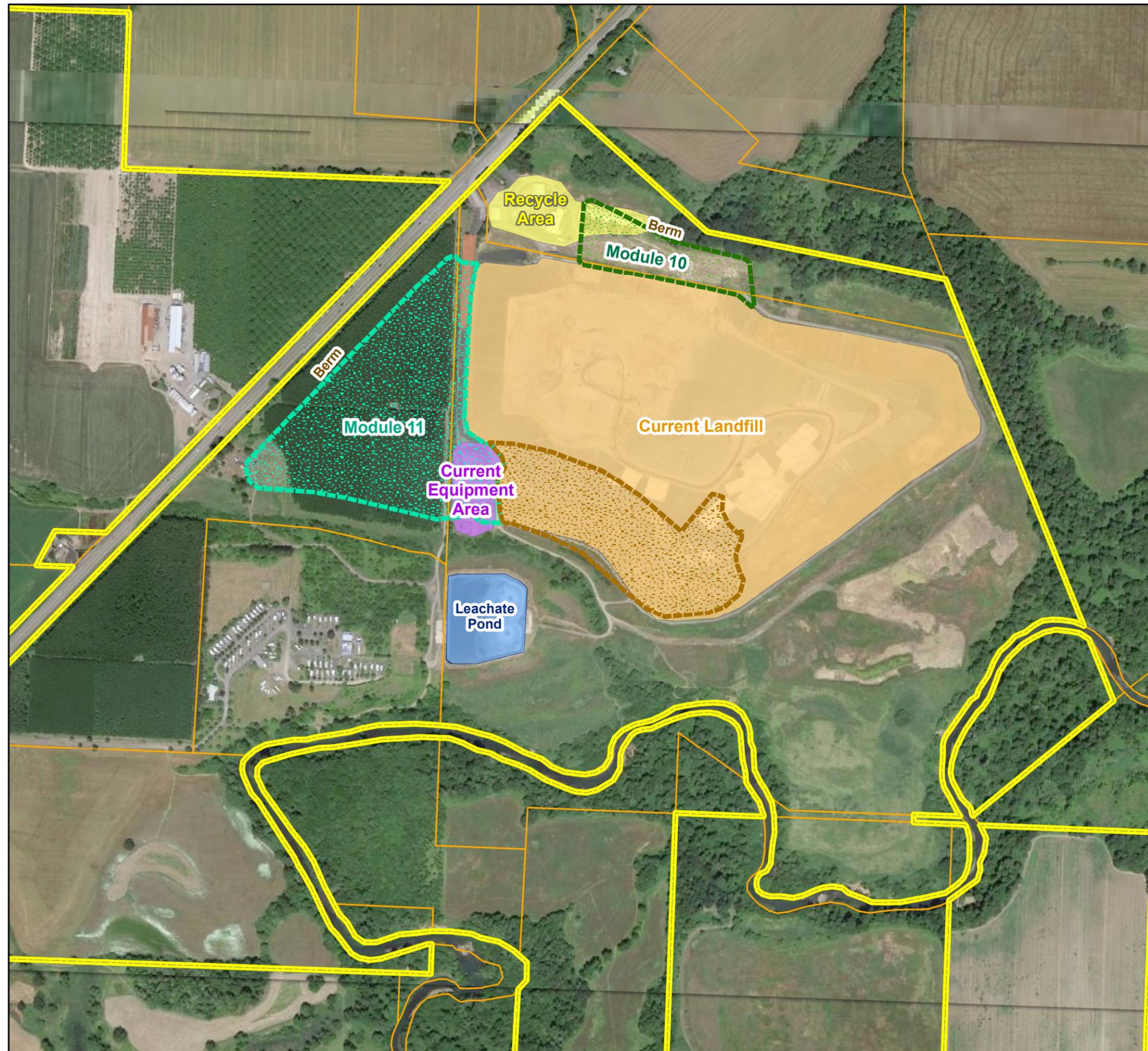


Prepared for  
Waste Management, Inc.



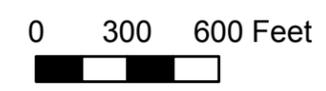
By:  
CSA Planning, Ltd.





- Legend**
- Riverbend Ownership
  - Current Landfill Facilities**
  - Landfill
  - Recycling
  - Equipment Area
  - Leachate Pond
  - Scales
  - Proposed Expansion Areas \***
  - North Expansion Area
  - South Expansion Area
  - Vertical Expansion Area

\* Existing and Proposed Facilities Are Approximate. See Site Development Narrative For Detailed Information & Drawings

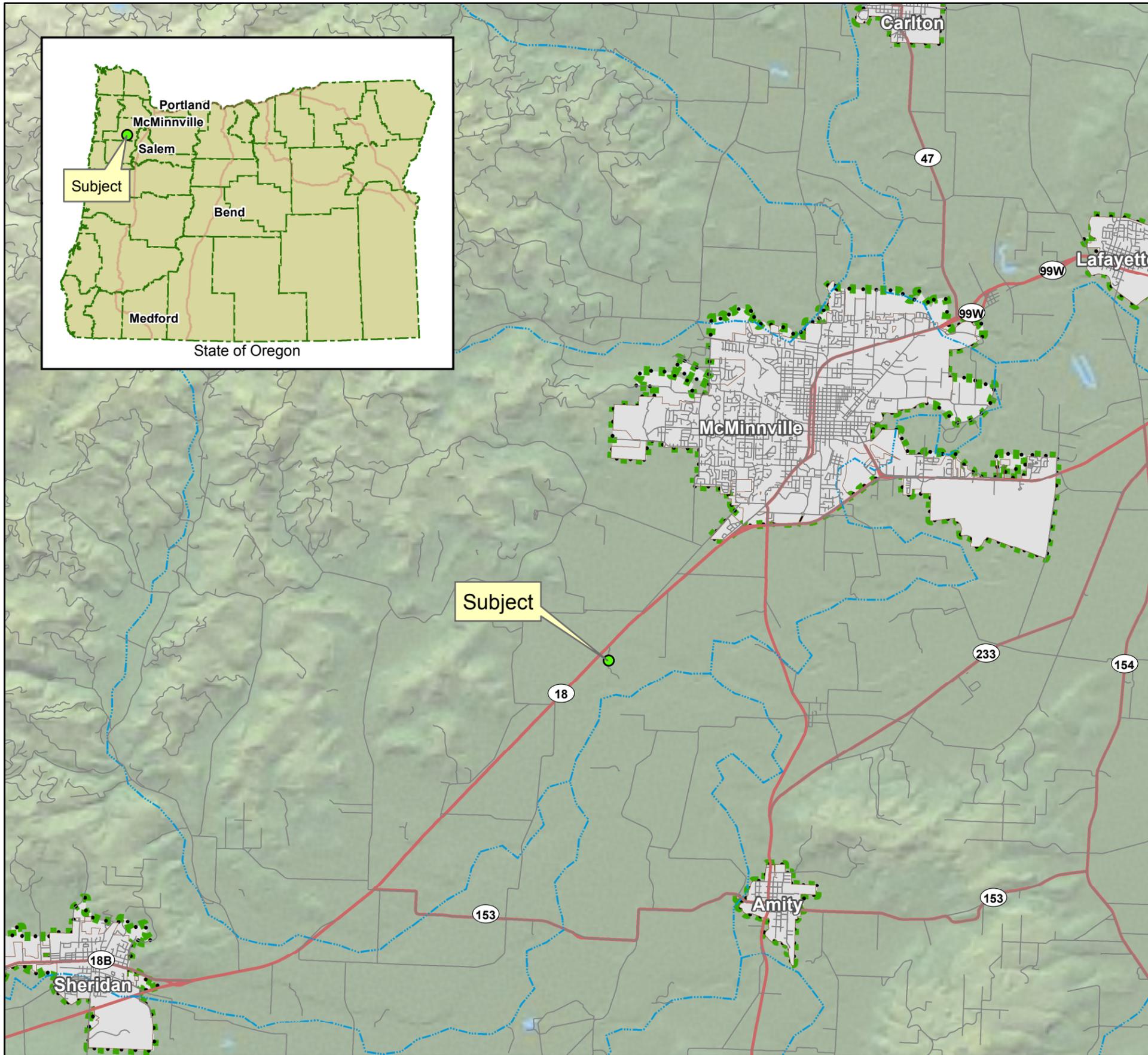


1 inch = 600 feet

**RIVERBEND LANDFILL EXPANSION**

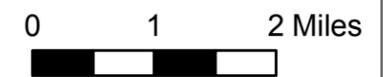
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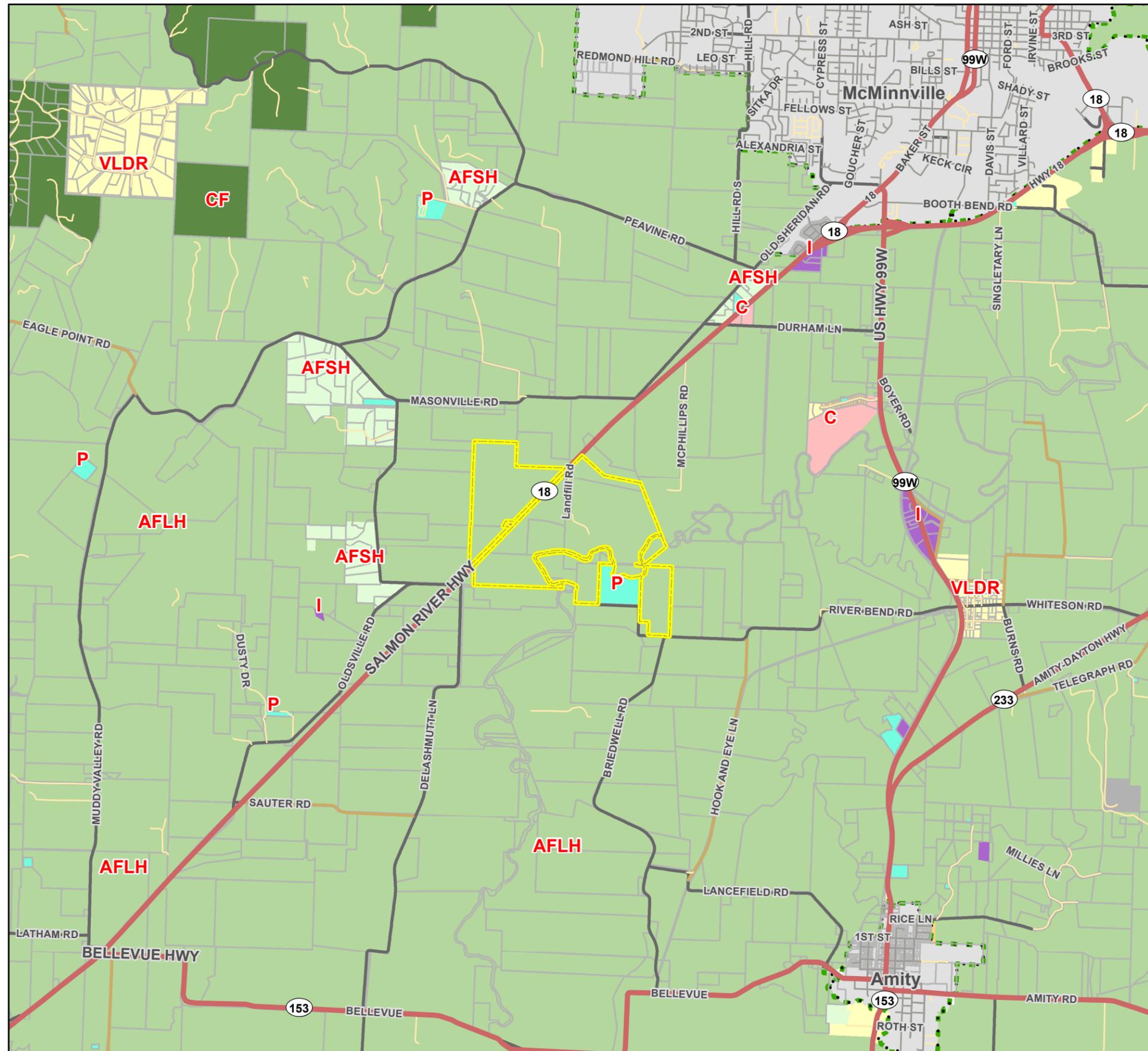
**Legend**

- Subject
- Urban Growth Boundary
- Highway



1 inch = 1.5 miles





**Legend**

- Riverbend Ownership
- Comprehensive Plan**
  - AFSH, Agriculture/Forestry Small Holding
  - AFLH, Agriculture/Forestry Large Holding
  - C, Commercial
  - CF, Commercial Forestry
  - I, Industrial
  - VLDR, Very Low Density Residential
  - LDR, Low Density Residential
  - MDR, Medium Density Residential
  - P, Public Facility
  - Q, Quarry
  - TRBL, Tribal Land
  - USA, Bureau of Land Management
- City Roads**
- County Roads By Surface Type**
  - Unknown
  - DIRT
  - GRAVEL
  - PAVED
  - Highway

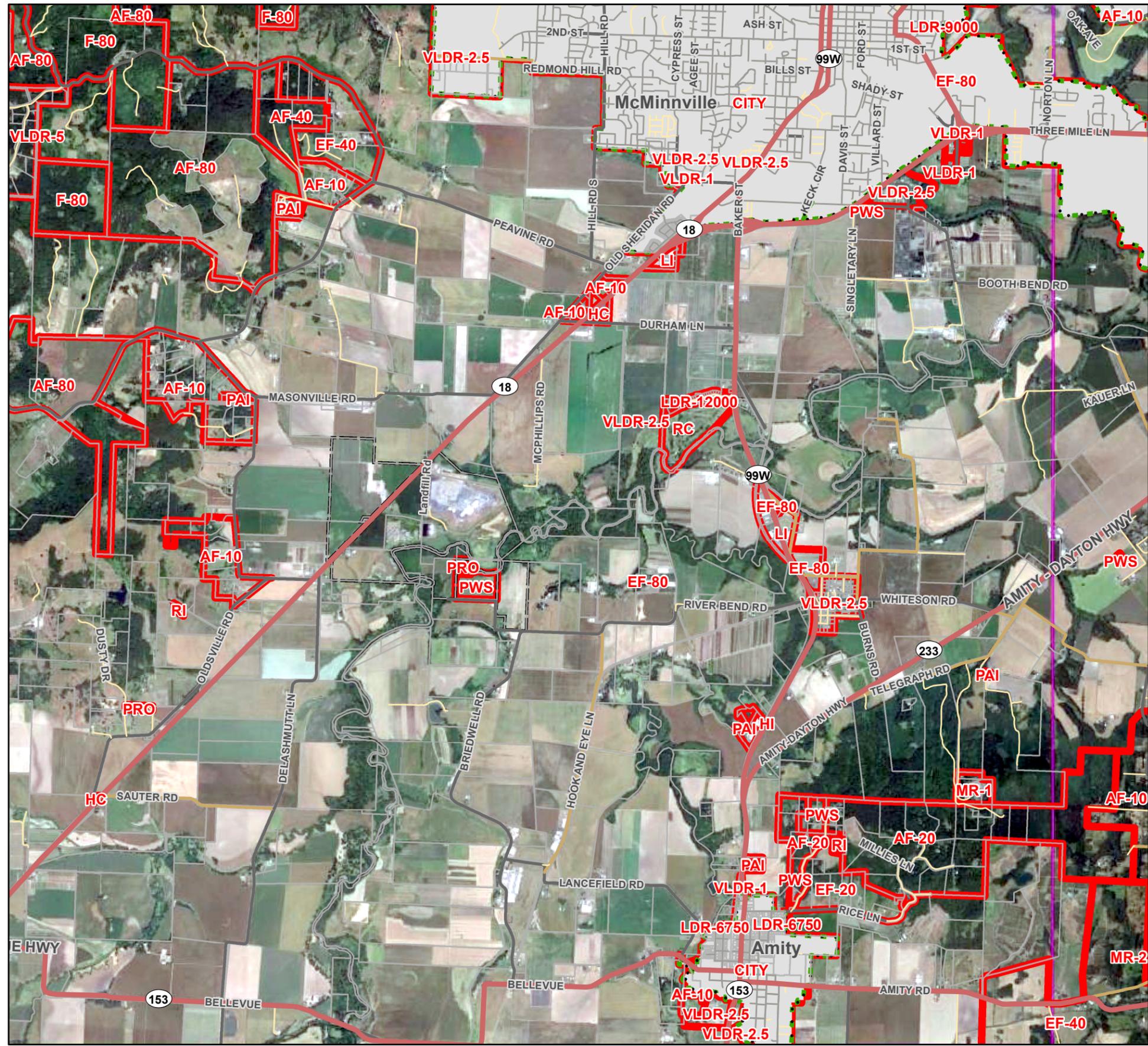
0 0.5 1 Miles

1 inch = 0.75 miles

**RIVERBEND LANDFILL EXPANSION**

**Comprehensive Plan**





**Legend**

- Riverbend Ownership
- Zoning
- Urban Growth Boundary
- Tax Lots

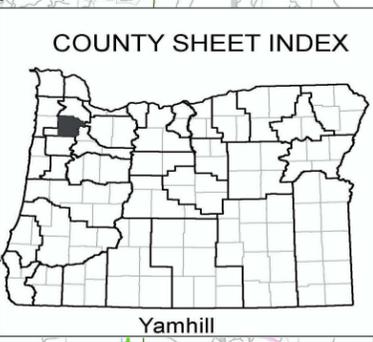
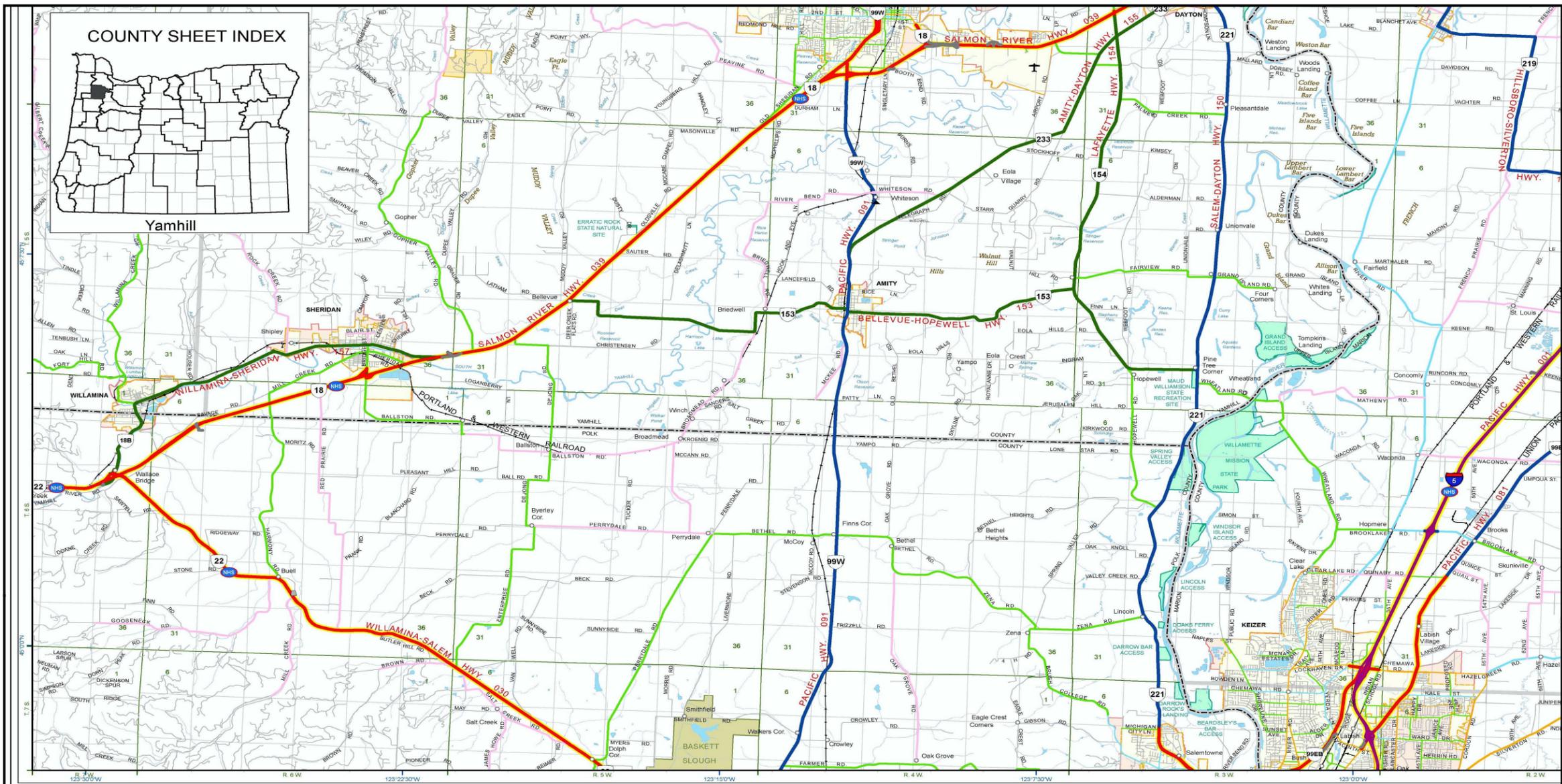
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1 inch = 0.75 miles

**RIVERBEND LANDFILL EXPANSION**

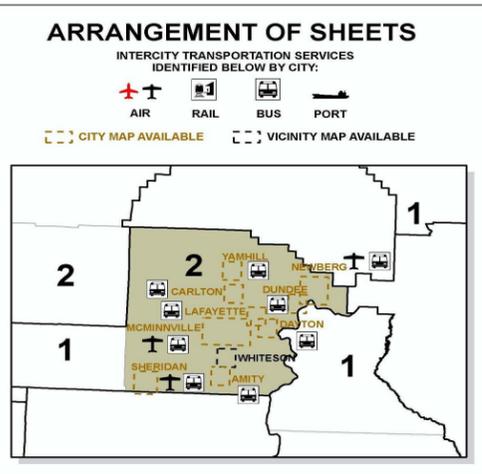
**Zoning on Aerial**





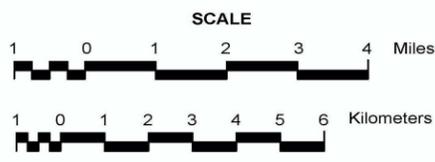
**LEGEND**

STATE HWY	OTHER JURISDICTION	FC W/I FAUB *	FOR FURTHER FUNCTIONAL CLASSIFICATION INFORMATION, CONTACT ODOT REGION OFFICE.
(Red line)	(Orange line)	(Yellow line)	INTERSTATE
(Orange line)	(Yellow line)	(Green line)	PRINCIPAL ARTERIAL
(Yellow line)	(Green line)	(Light green line)	MINOR ARTERIAL
(Green line)	(Light green line)	(Dark green line)	RURAL MAJOR COLLECTOR/ URBAN COLLECTOR
(Light green line)	(Dark green line)	(Pink line)	MINOR COLLECTOR
(Pink line)	(Grey line)	(Dashed grey line)	LOCAL
(Dashed grey line)	(Dotted grey line)	(Dotted grey line)	UNIDENTIFIED ROAD OR TRAIL
(Dotted grey line)	(Blue line)	(Blue line)	ORE. ROUTE - US. ROUTE - INTERSTATE ROUTE
(Blue line)	(Blue line)	(Blue line)	NATIONAL HIGHWAY SYSTEM ROUTE
(Blue line)	(Blue line)	(Blue line)	CITY LIMIT
(Blue line)	(Blue line)	(Blue line)	URBAN GROWTH BOUNDARY
(Blue line)	(Blue line)	(Blue line)	AMTRAK RAIL PASSENGER STATION
(Blue line)	(Blue line)	(Blue line)	COMMERCIAL - GENERAL AVIATION
(Blue line)	(Blue line)	(Blue line)	SAFETY REST AREA - WEIGH STATION
(Blue line)	(Blue line)	(Blue line)	PUBLIC BUILDING - ODOT STOCKPILE SITE
(Blue line)	(Blue line)	(Blue line)	GRAVEL PIT - QUARRY
(Blue line)	(Blue line)	(Blue line)	FUNCTIONALLY CLASSIFIED ROAD WITHIN FEDERAL AID URBAN BOUNDARY



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"Make local inquiry of road conditions in remote areas. Some roads are impassable following severe weather conditions."



**OREGON TRANSPORTATION MAP**  
Showing Federal Functional Classification of Roads

**YAMHILL COUNTY**

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POPULATION 101,400  
2013 Edition

PREPARED DIGITALLY BY THE OREGON DEPARTMENT OF TRANSPORTATION IN COOPERATION WITH THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

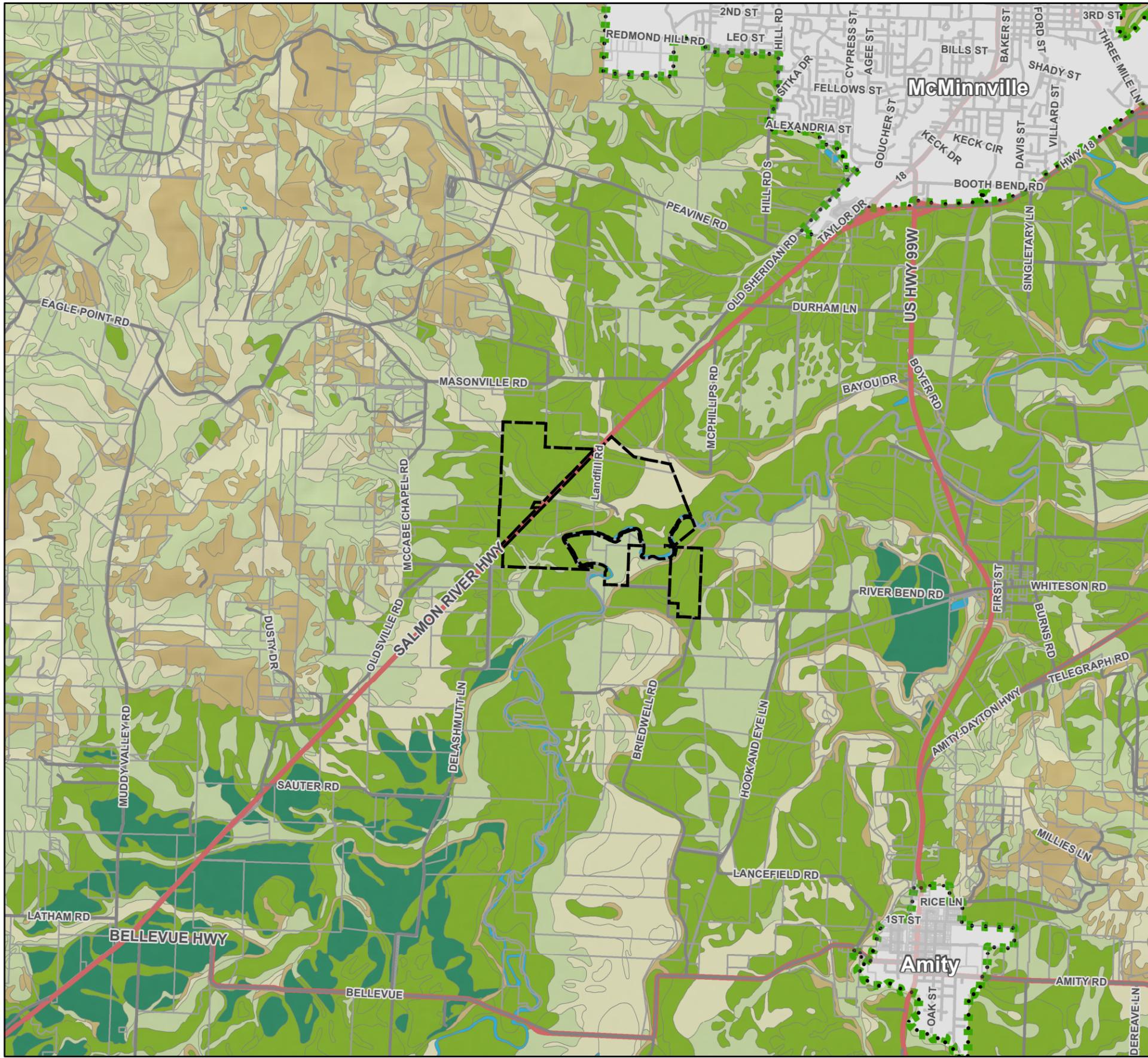
NORTH

Copies are available from the Oregon Department of Transportation, Geographic Information Services Unit, Mill Creek Office Building, 555 13th St. NE, Salem, Oregon 97301, (503) 986-3154, <http://www.oregon.gov/ODOT/TD/TA/pages/gis/countymaps.aspx>  
Population numbers are based on current Oregon Population Report, College of Urban and Public Affairs, Portland State University, <http://pdx.edu/prc>

**RIVERBEND LANDFILL EXPANSION**

**Transportation - Functional Class Map**





**Legend**

- Riverbend Ownership
- Tax Lots
- Urban Growth Boundary

**NRCS Soils By Ag. Class**

- I
- II
- III
- IV
- VI
- VII; VIII
- Water

0 0.5 1 Miles

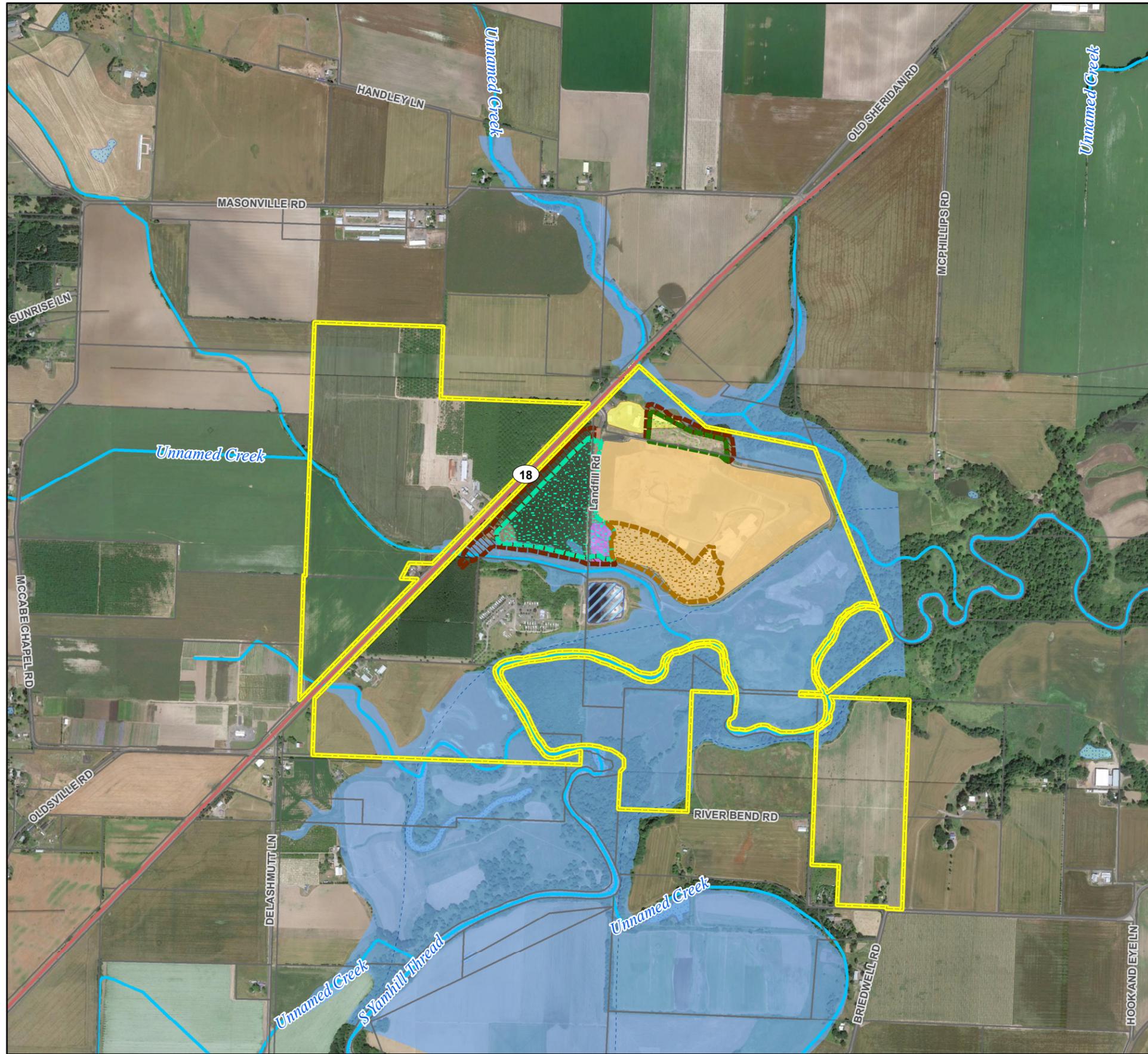
1 inch = 0.75 miles

**RIVERBEND LANDFILL EXPANSION**

**NRCS Soils By Agricultural Class**







**Legend**

- Riverbend Ownership
- Proposed Expansion Areas \***
- Berm
- Module 10
- Module 11
- Vertical Expansion Area
- Current Landfill Facilities**
- Landfill
- Recycling
- Equipment Area
- Leachate Pond
- Scales
- Water Features**
- Streams
- Floodway
- 100yr
- Water\_Area

\* Illustrations Are Approximate  
See Engineering Plans For  
Details

0 0.125 0.25 Miles

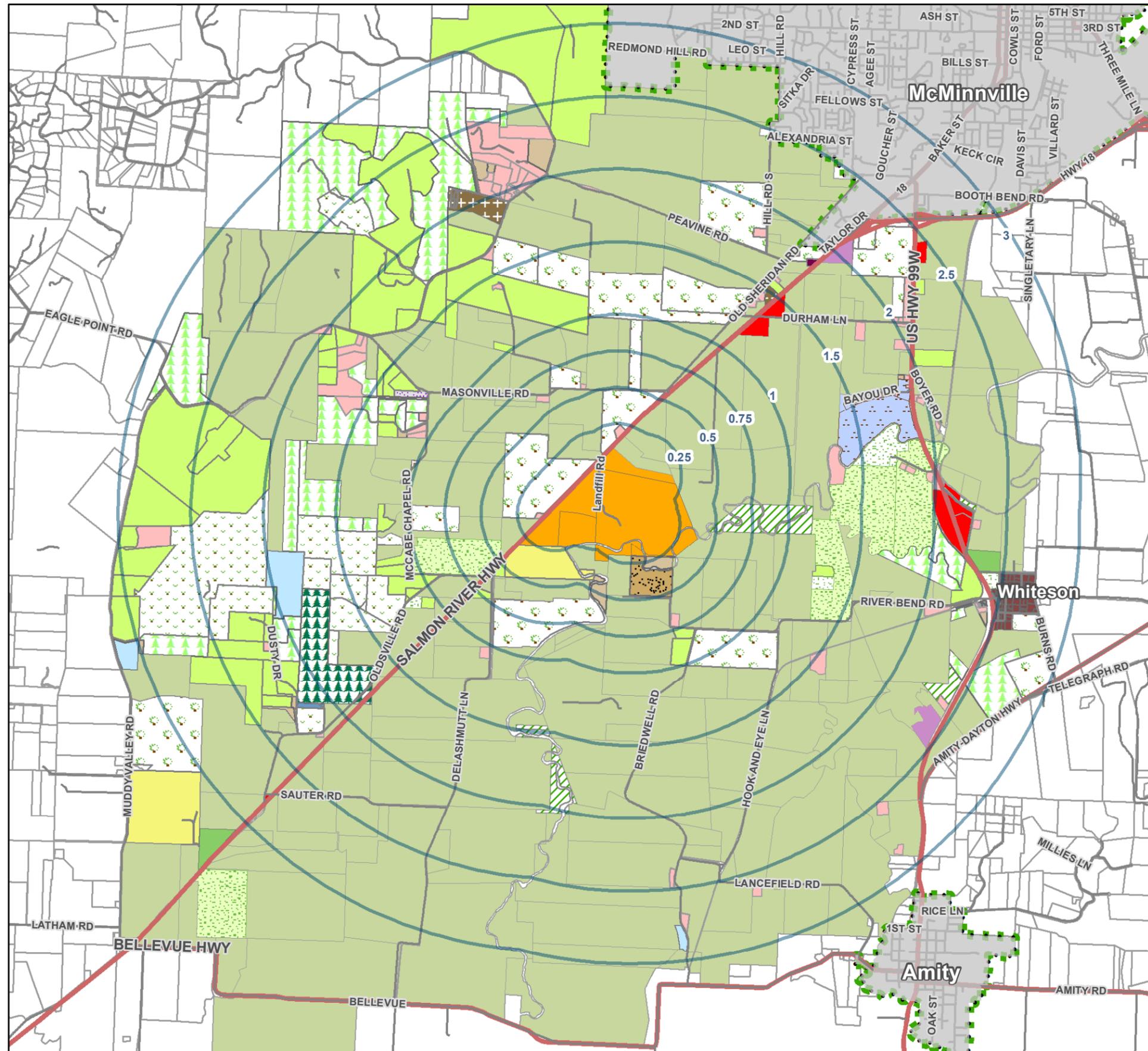


1 inch = 0.25 miles

**RIVERBEND LANDFILL EXPANSION**

**Water Features**



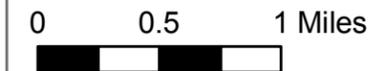


**Legend**

- Urban Growth Boundary
- Study Area by Primary Use**
- Subject\*
- Grass
- Orchard
- Nursery
- Nursery & Field Crops
- Tree Farm
- Vineyard
- Field Crop
- Pasture
- Grain
- Woodlot
- Open Space
- Pond
- Riparian
- Residence
- Church
- Golf Course
- Commercial
- Industrial
- Former Landfill
- Cemetery
- Access
- Vacant Railroad Property
- State Park
- Substation
- Town of Whiteson
- Tax Lots Outside Study

\* This Map Reflects Parcels By Primary Use. Uses Identified Are Based On Site Inspections and Aerial Photos See Appendix For Detailed Inventory.

Majority of the Subject Property is Currently Used as Landfill

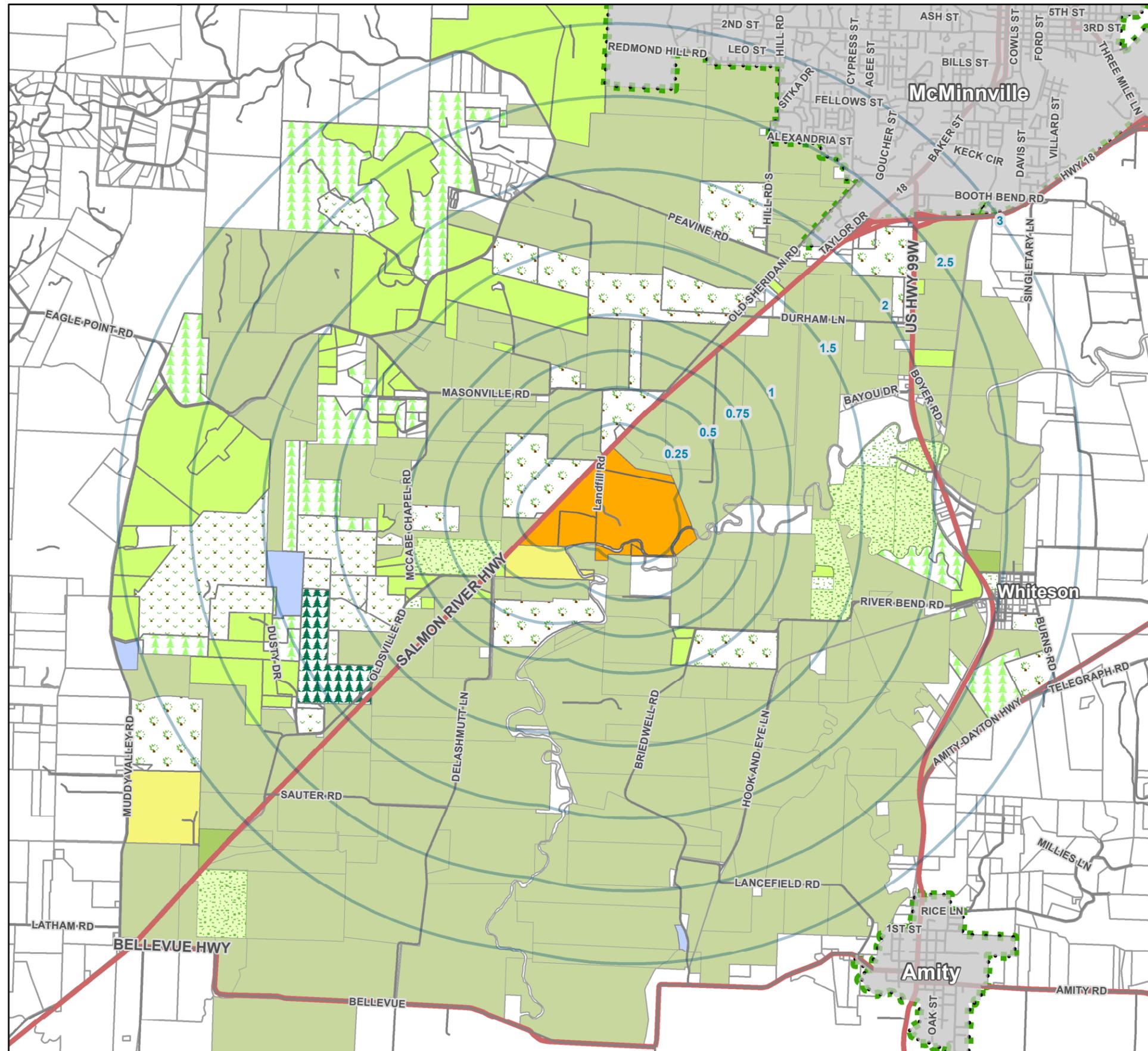


1 inch = 0.75 miles

**RIVERBEND LANDFILL EXPANSION**

**Study Area Inventory  
(Lots By Primary Use)**



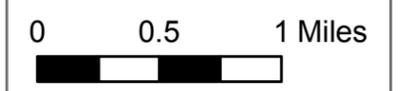


**Legend**

- Urban Growth Boundary
- Lots By Primary Farm Use\***
  - Grass Seed
  - Pasture
  - Grain
  - Orchard
  - Vineyard
  - Nursery
  - Nursery & Field Crops
  - Tree Farm
  - Field Crop
  - Woodlot
  - Pond
  - Subject
  - Tax Lots Outside Study

\* This Map Reflects Parcels By Primary Farm Use. Uses Identified Are Based On Site Inspections and Aerial Photos See Appendix For Detailed Inventory.

See 'Farm Uses Within Immediate Vicinity Area Map' For A More Detailed Inventory of Farm Uses on Lands Within One Mile As Noted Above.

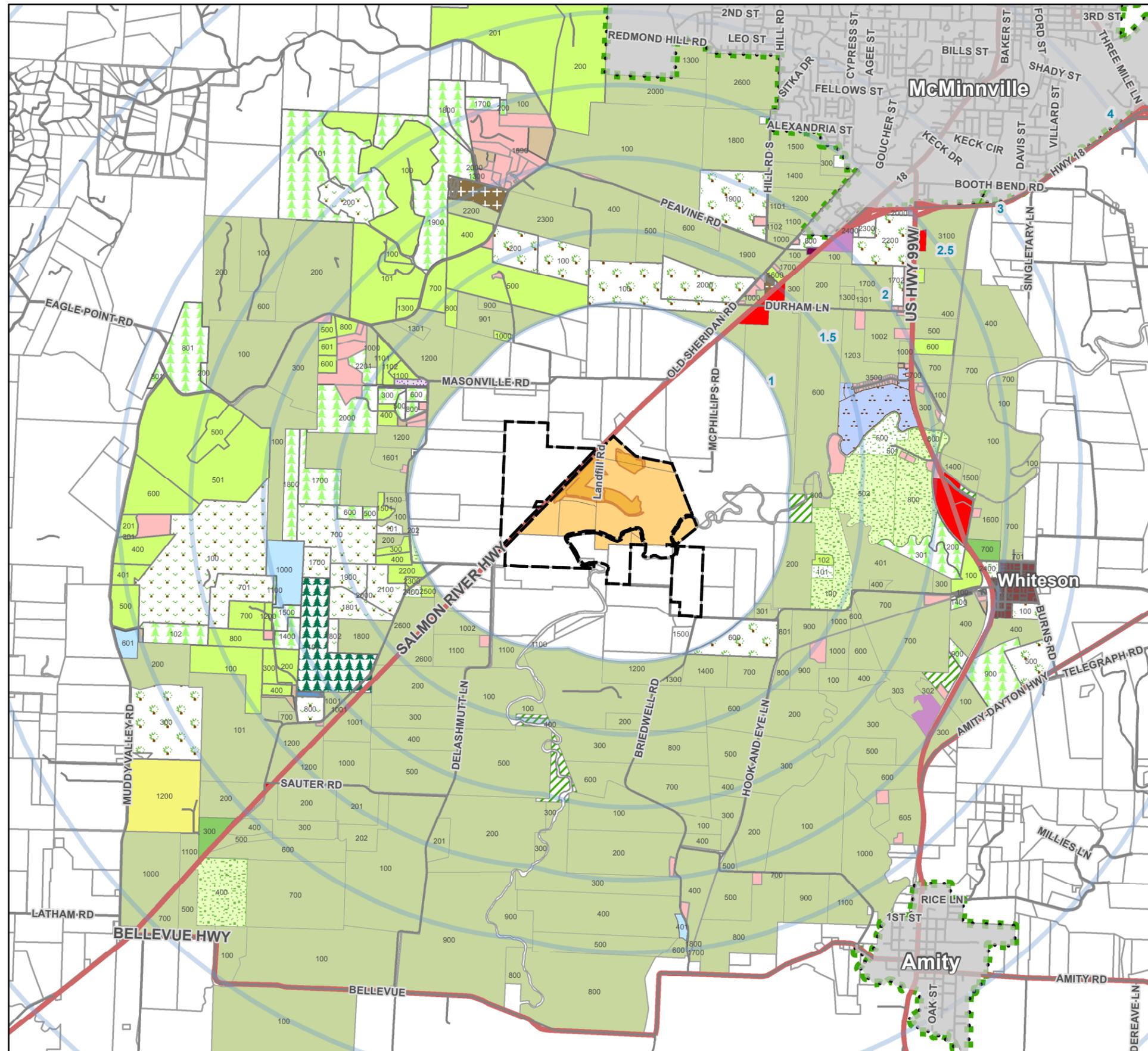


1 inch = 0.75 miles

**RIVERBEND LANDFILL EXPANSION**

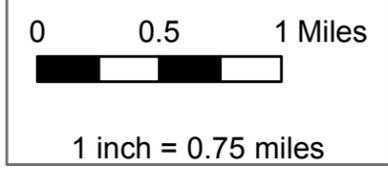
**Farm Use Inventory**





- Legend**
- Riverbend Ownership
  - Proposed Expansion Area
  - Subject
  - Distance Buffer
  - Urban Growth Boundary
  - Broad Study Area Lots By Farm Use**
  - Grass Seed
  - Orchard
  - Nursery
  - Nursery & Field Crops
  - Tree Farm
  - Vineyard
  - Field Crop
  - Pasture
  - Grain
  - Woodlot
  - Open Space
  - Pond
  - Lots Not Dedicated To Farm Use**
  - Riparian
  - Residence
  - Church
  - Golf Course
  - Commercial
  - Industrial
  - Cemetery
  - Access
  - Vacant Railroad Property
  - State Park
  - Substation
  - Town of Whiteson
  - Tax Lots Outside Study

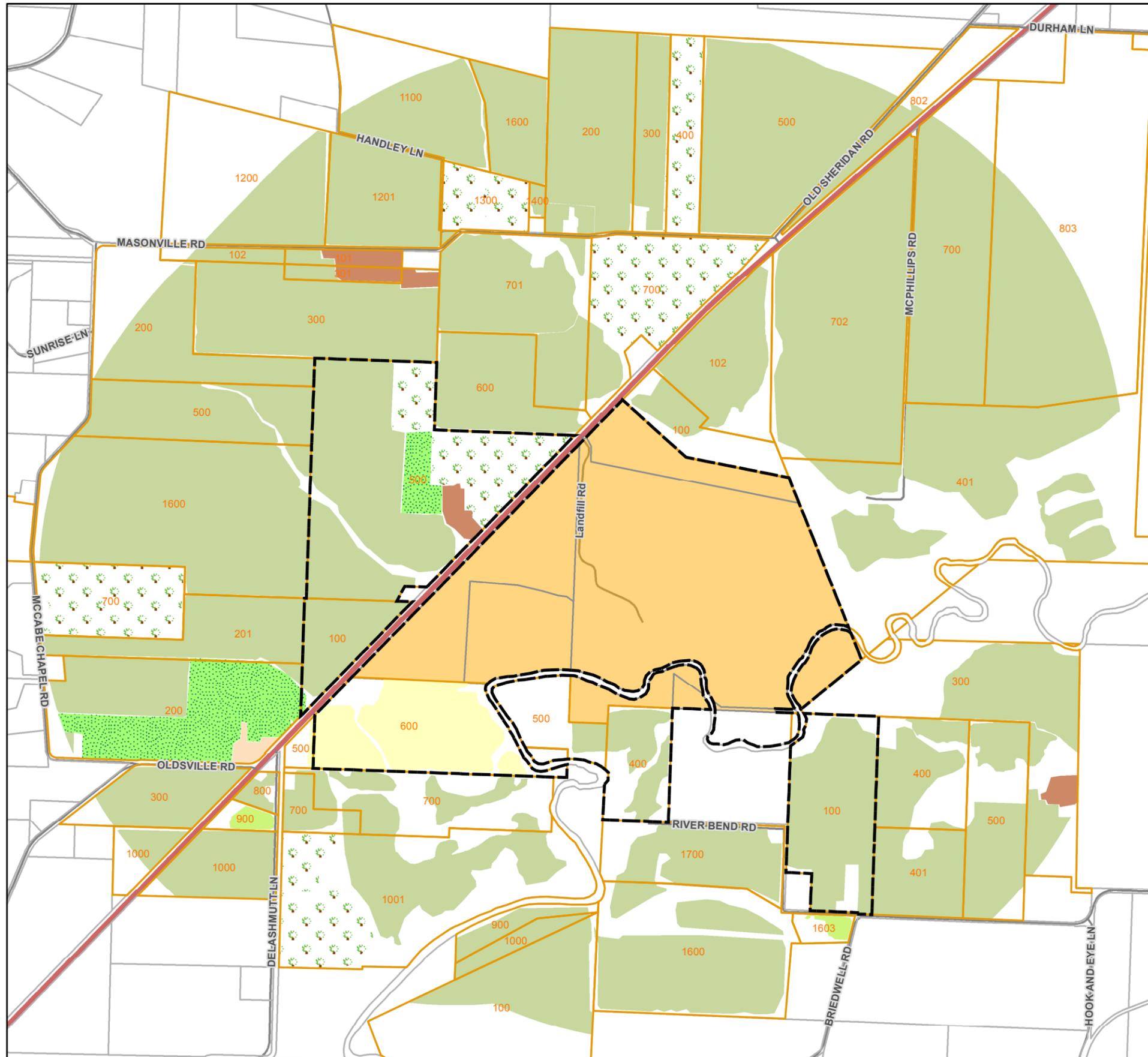
\* BASL: Broad Area Surrounding Lands  
 Uses Identified Are Primary Uses Based On Site Inspections and Aerial Photos See Appendix For Detailed Inventory



**RIVERBEND LANDFILL EXPANSION**

**Broad Area Surrounding Lands By Primary Farm Use**





**Legend**

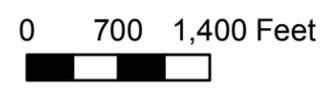
- Riverbend Ownership
- IVA Lots
- Barns & Facilities
- Farm Stand & Facilities
- Grain
- Grass Seed
- Greenhouses
- Nursery & Vegetables
- Orchard
- Pasture
- Woodlot
- Subject
- Tax Lots
- Roads
- Highway

\* IVA: Immediate Vicinity Area

Farm Use Overlay Reflects Actual Area of Use Based On Aerial Photographs & Site Visits

Barns and Related Facilities & Farm Stand & Facilities Are Not Separate Farm-Uses They are Analyzed With Associated Farm Uses

Areas not in Farm Use Include but are not limited to Riparian Areas; Residences; Roads; Former Landfill; and Open Space

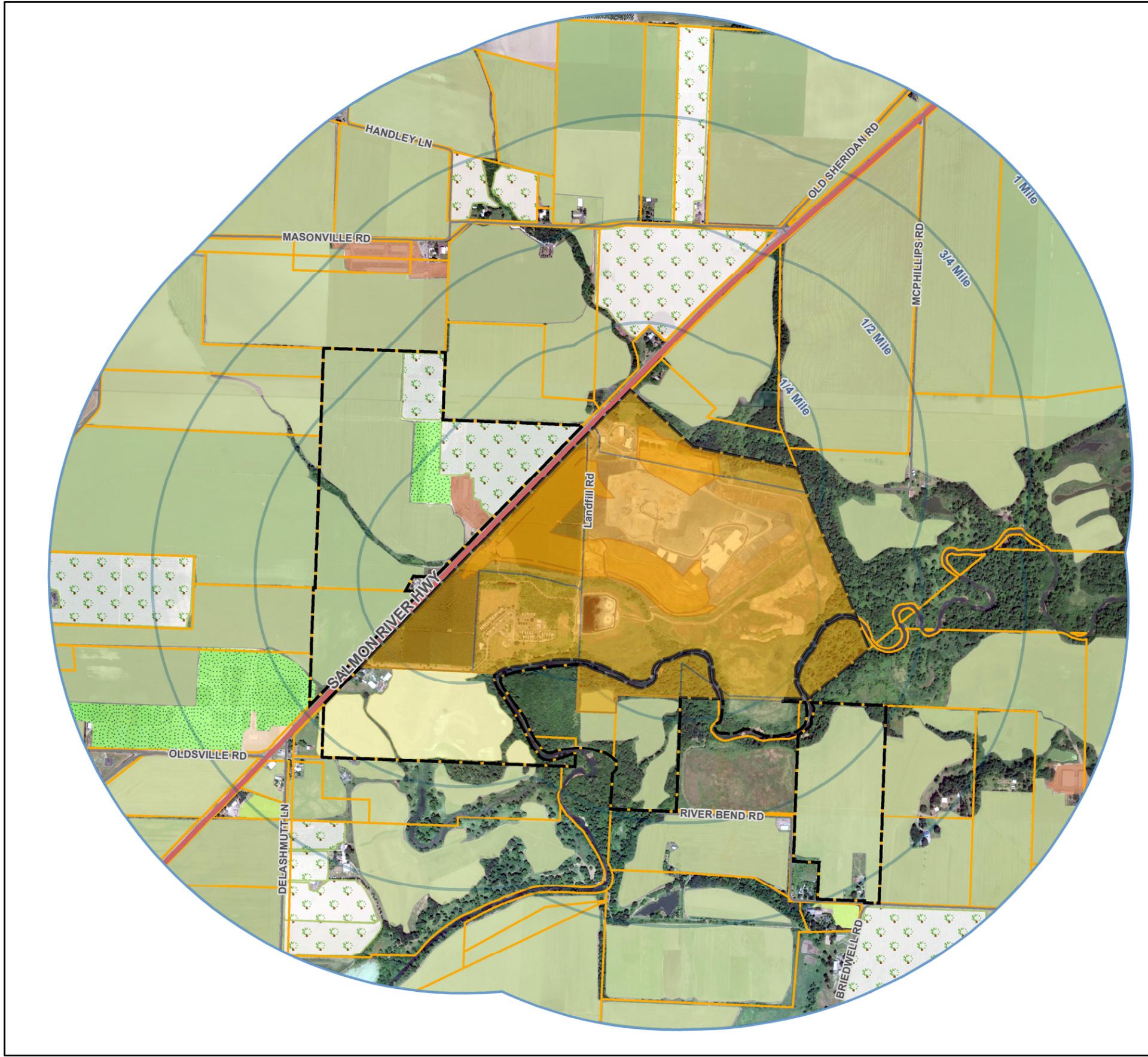


1 inch = 1,400 feet

**RIVERBEND LANDFILL EXPANSION**

**Farm Uses Within Immediate Vicinity Area**





**Legend**

- Subject
- Proposed Expansion Area
- Riverbend Ownership
- IVA Lots
- Farm Uses Within IVA \***
- Grass Seed
- Orchard
- Nursery & Vegetables
- Grain
- Barns & Facilities\*
- Farm Stand & Facilities
- Pasture

\* IVA: Immediate Vicinity Area

Farm Use Overlay Reflects Actual Area of Use Based On Aerial Photographs & Site Visits

Barns and Related Facilities & Farm Stand & Facilities Are Not Separate Farm-Uses They are Analyzed With Associated Farm Uses

Areas not in Farm Use Include but are not limited to Riparian Areas; Residences; Roads; and Open Space



0 700 1,400 Feet

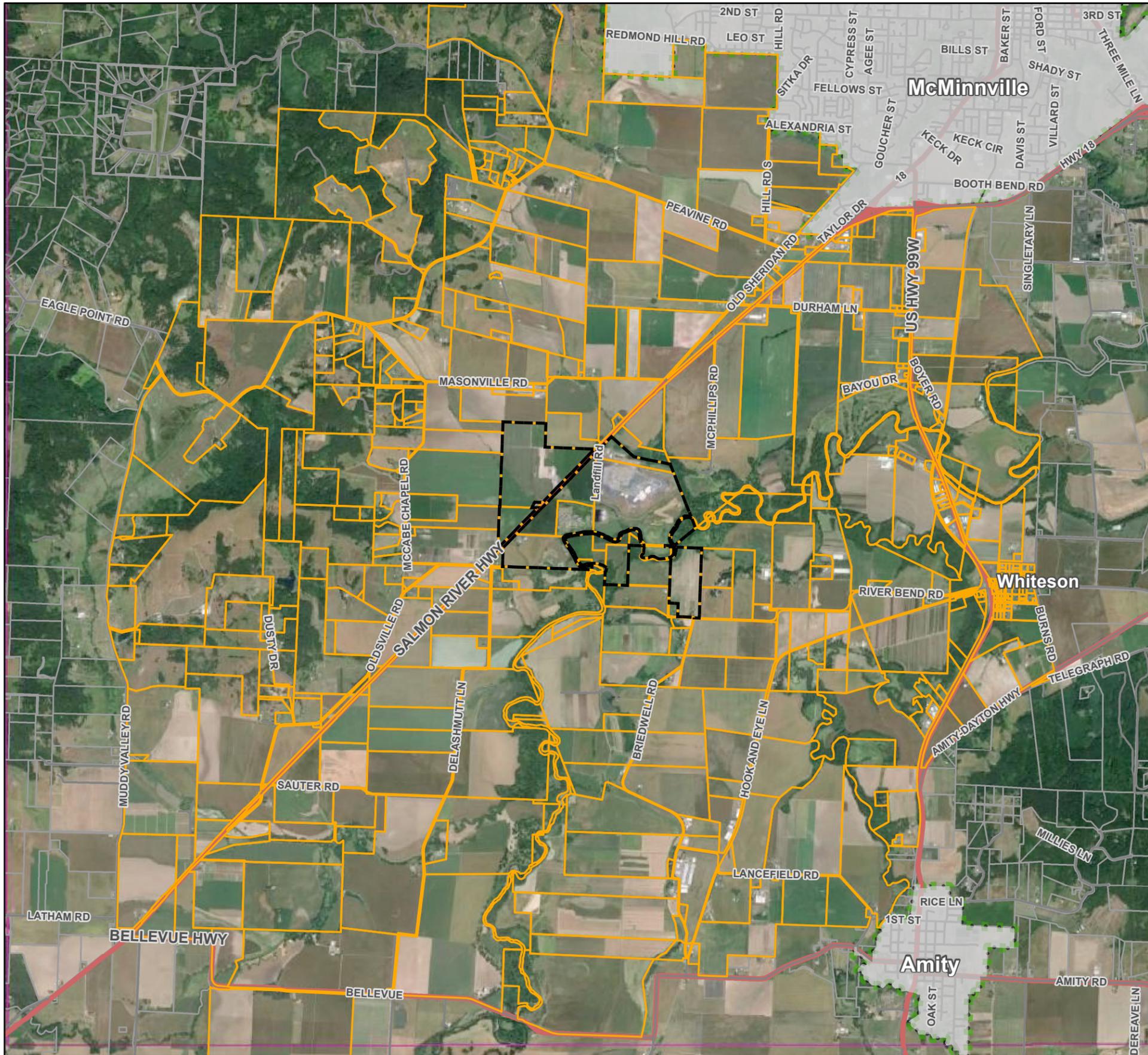


1 inch = 1,400 feet

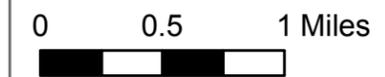
**RIVERBEND LANDFILL EXPANSION**

**Farm Uses Within Immediate Vicinity Area on Aerial**





- Legend**
- Riverbend Ownership
  - Study Lots
  - Roads
  - Highway
  - Urban Growth Boundary

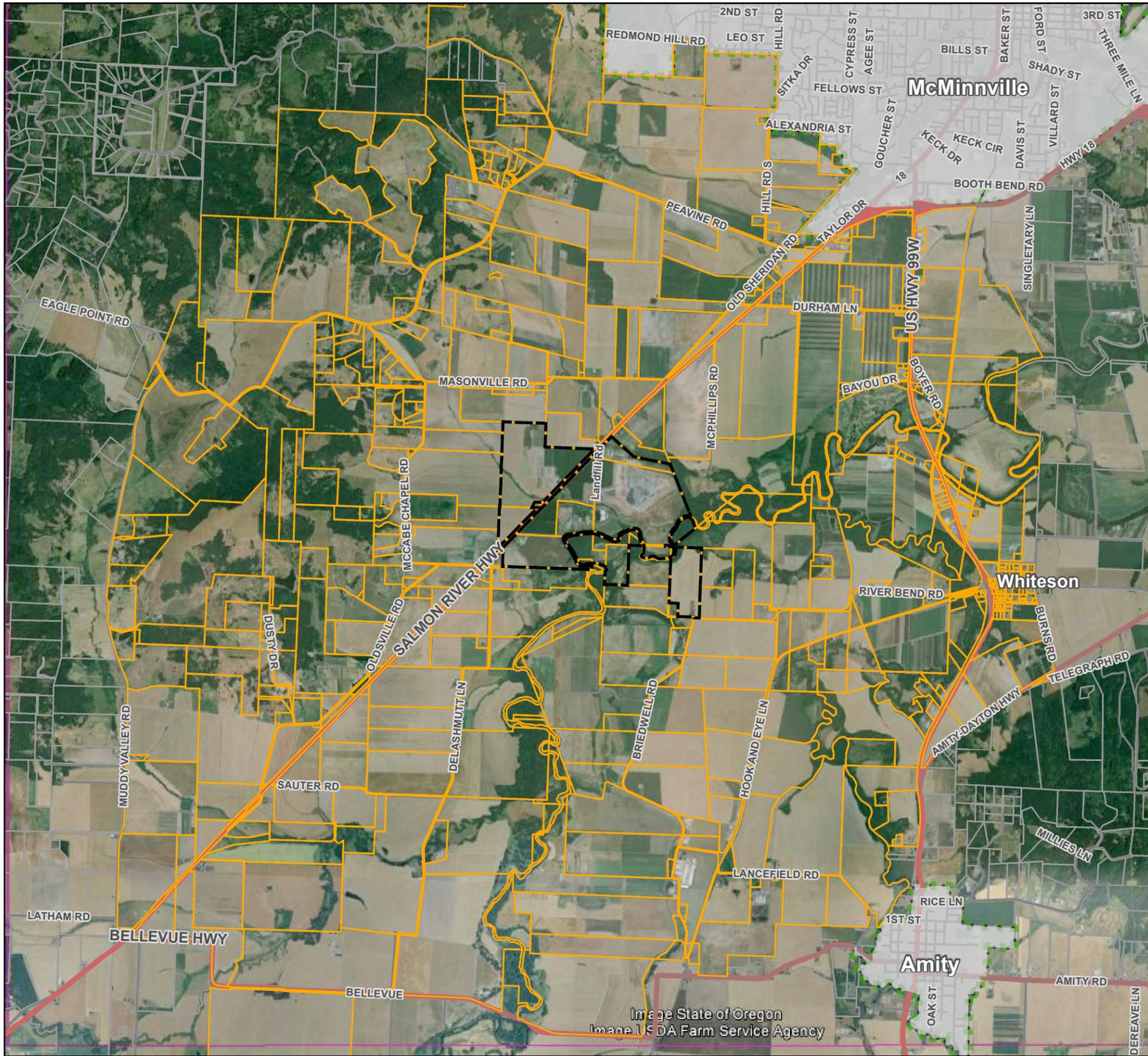


1 inch = 0.75 miles

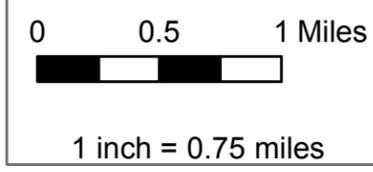
**RIVERBEND LANDFILL EXPANSION**

**Study Area On 2012 Aerial**





- Legend**
- Riverbend Ownership
  - Study Lots
  - Roads
  - Highway
  - Urban Growth Boundary



**RIVERBEND LANDFILL EXPANSION**

**Study Area On 2006 Aerial**



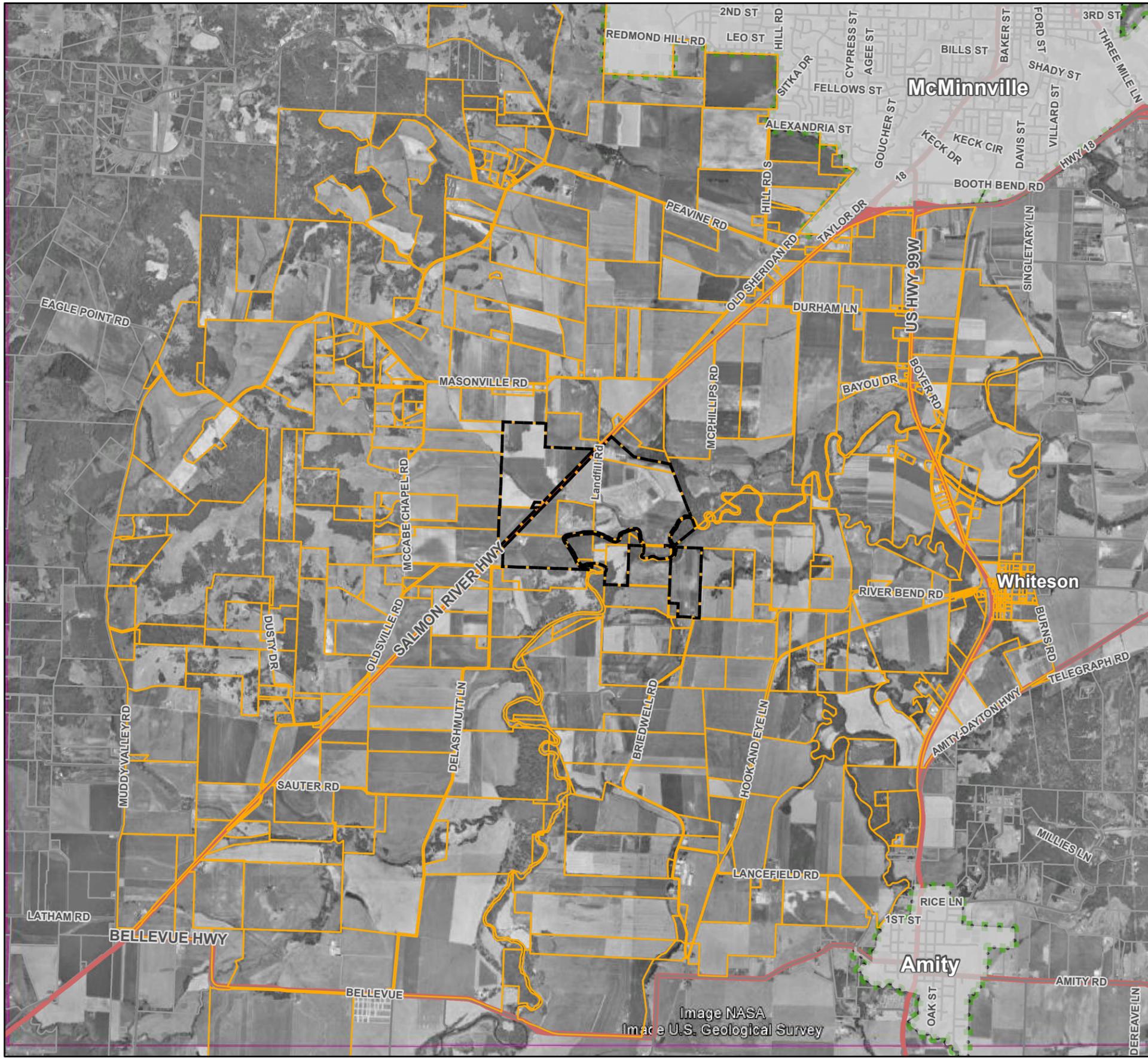


Image NASA  
Image U.S. Geological Survey

- Legend**
- Riverbend Ownership
  - Study Lots
  - Roads
  - Highway
  - Urban Growth Boundary

0 0.5 1 Miles

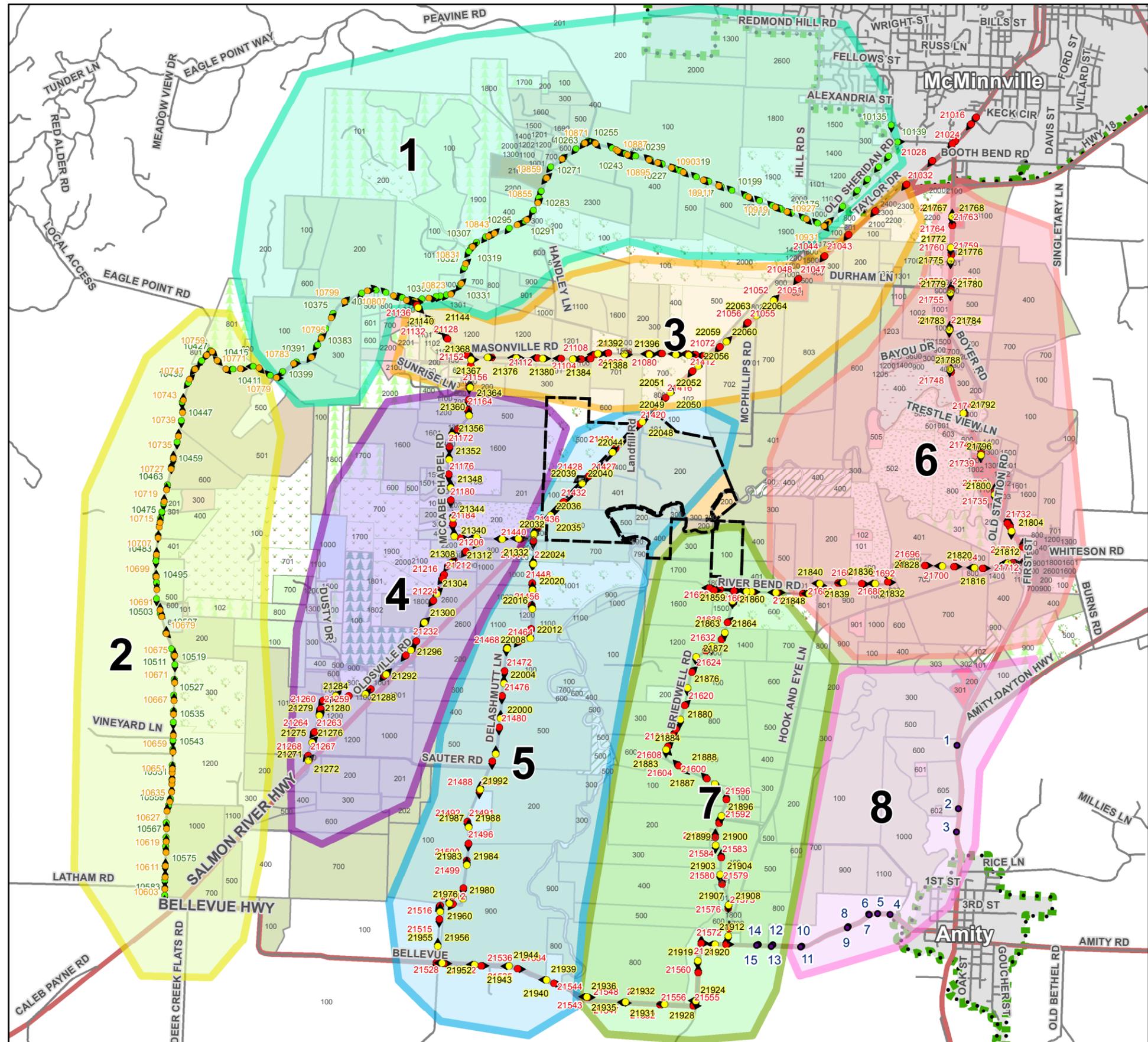
1 inch = 0.75 miles



**RIVERBEND LANDFILL EXPANSION**

**Study Area On 1994 Aerial**





- Photo Location and Travel Direction \***
- AM Photo Location
  - AM Photo Location (return trip)
  - PM Photo Location
  - PM Photo Location (return trip)
  - Google Earth Photo Location

- Photo Map Area**
- Photo Map Area 1
  - Photo Map Area 2
  - Photo Map Area 3
  - Photo Map Area 4
  - Photo Map Area 5
  - Photo Map Area 6
  - Photo Map Area 7
  - Photo Map Area 8

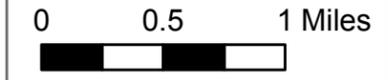
- Riverbend Ownership**
- Riverbend Ownership
  - Urban Growth Boundary

- Study Area By Primary Use\*\***
- Subject
  - Grass Seed
  - Pasture
  - Orchard
  - Nursery; Misc Row Crops
  - Vineyard
  - Tree Farm
  - Woodlot
  - Open Space
  - Riparian
  - Golf Course
  - Pond
  - Residence
  - Commercial
  - Cemetery
  - Church
  - State Park
  - Railroad/ Access
  - Substation
  - Town of Whiteson

\* Photo Location is tied to GPS point. Arrow reflects direction of vehicle travel during picture capture. Picture is 90 degrees right of travel direction.

Picture interval exceeds gps interval, thus picture locations are approximate.

For map legibility purposes not all pictures are labeled. See Appendix for list of all pictures captured.



**RIVERBEND LANDFILL EXPANSION**

**Photo Inventory Key**





10183



10191



10195



10217



10232



10272



10307



10356



10367



10388



10788



10810



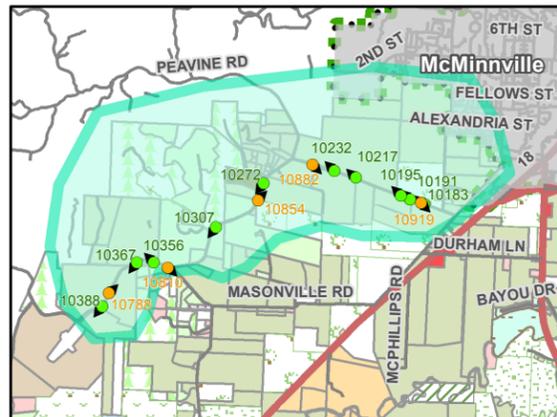
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10919



RIVERBEND LANDFILL EXPANSION

Photo Inventory Map 1





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10483



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10638



10663



10696



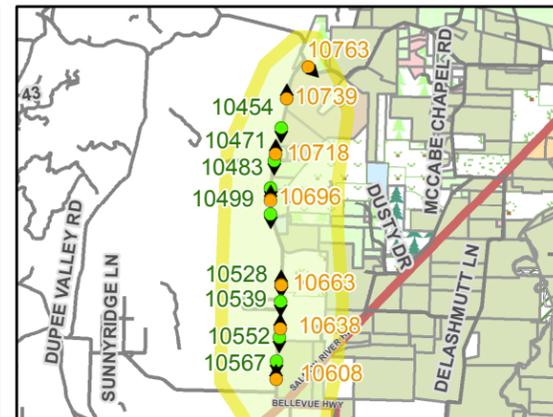
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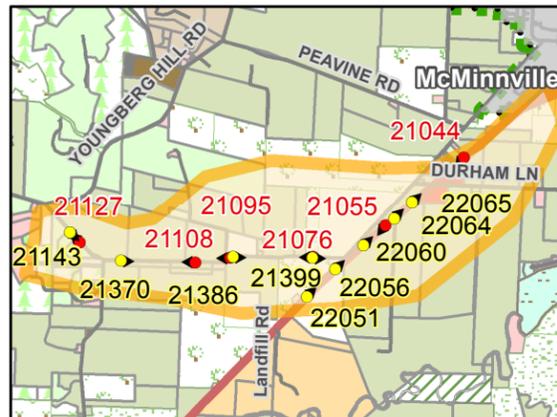
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RIVERBEND LANDFILL EXPANSION

Photo Inventory Map 3





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21225



21239



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21276



21282



21295



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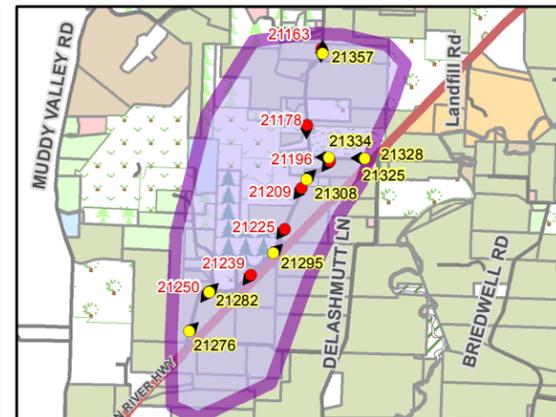
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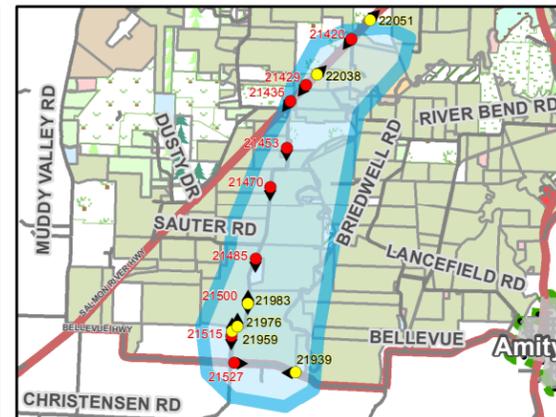
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22051



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RIVERBEND LANDFILL EXPANSION

Photo Inventory Map 5





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21685



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21729



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21799



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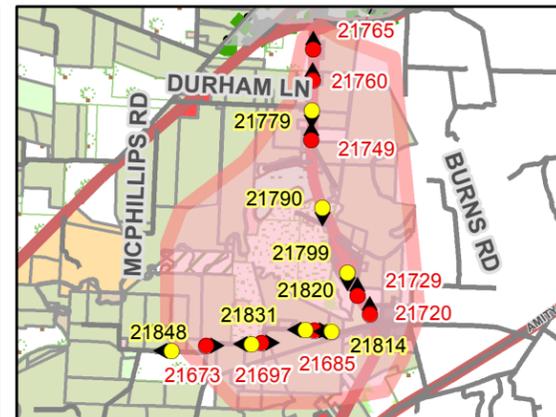
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21604



21620



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21670



21848



21864



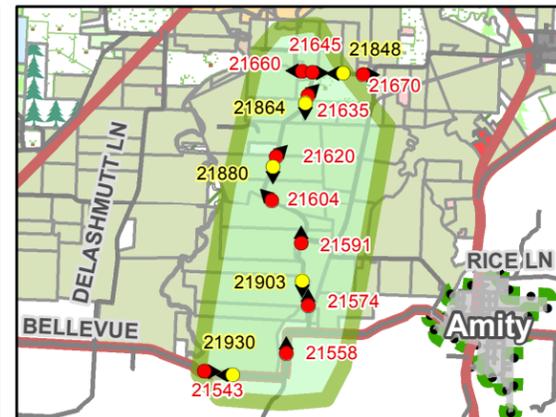
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21903



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RIVERBEND LANDFILL EXPANSION

Photo Inventory Map 7





1



2



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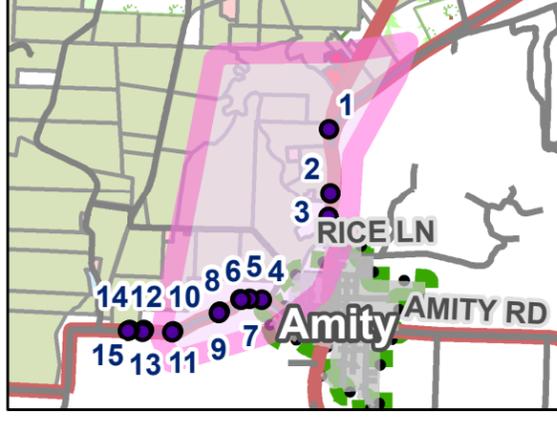
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14



15



Maplot	Taxlot	Acres	Owner 1	Owner 2	Pclass	Situs	Dist	14_use_gen	06_farm	06_Leasor	14_use_cat	14_use	Historic	Assmnt	Category	Proximity
45-4W-19-02600	2600	120.06	MCKEE PROPERTIES LLC		5505	551 HILL RD SOUTH	2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-02000	2000	3.20	COLEMAN HERBERT C		5515	9510 S HIGHWAY 99W	2.5 to 3.0	Orchard			Orchard	Orchard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-02200	2200	76.58	COLEMAN HERBERT C		5505		2.0 to 3.0	Orchard			Orchard	Orchard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-02300	2300	8.42	COLEMAN HERBERT C		5505		2.5	Orchard			Orchard	Orchard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-02400	2400	2.05	JEMK LLC 1/2	SCHOKO PROPERTIES LLC 1/2	3505	1670 SW HIGHWAY 18	2.5	Orchard			Orchard	Orchard		Industrial EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-03100	3100	85.04	R&B KAUER PROPERTIES LLC		5515	9805 S HIGHWAY 99W	2.5 to 3.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-00300	300	17.65	MCKEE PROPERTIES LLC		5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-00800	800	12.59	WOLF GERALD L & VIRGINIA H REV LIV TRUST	WOLF GERALD L & VIRGINIA TRUSTEES FOR	5515	1960 SW OLD SHERIDAN RD	2.0 to 2.5	Orchard			Orchard	Orchard; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01000	1000	10.01	HUBBARD ROBIN M	HUBBARD RANDALL	5515	11150 SW PEAVINE RD	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01100	1100	25.41	MARTSOLF GLENDA REVOC LIV TRUST 42%	MARTSOLF DONALD J & GLENDA TRUSTEES FOR	5515	1905 SW OLD SHERIDAN RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01101	1101	3.03	MARTSOLF GLENDA REVOC LIV TRUST 42%	MARTSOLF DONALD J & GLENDA TRUSTEES FOR	5505		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01102	1102	3.05	MARTSOLF GLENDA REVOC LIV TRUST 42%	MARTSOLF DONALD J & GLENDA TRUSTEES FOR	5505		2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01200	1200	37.91	TRENT CARL R		5515	1761 SW OLD SHERIDAN RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01400	1400	49.26	TRENT MARGE A 1/2	TRENT JAMES R 1/2 &	5515	1695 SW OLD SHERIDAN RD	2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01500	1500	49.04	MCKEE PROPERTIES LLC		5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01800	1800	119.47	MCKEE PROPERTIES LLC		5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-30-01900	1900	114.75	W REDMOND FARM INC		5505		2.0 to 2.5	Orchard			Orchard	Orchard; Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-00100	100	22.69	OLDHAM LOIS E REVOC LIVING TRUST 1/2	OLDHAM LOIS E TRUSTEE	5515	10205 SW OLD SHERIDAN RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-00200	200	49.15	WILLAMETTE VALLEY LAND LLC		5505	SW OLD SHERIDAN RD	2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-00300	300	19.12	HAWORTH ANTOINETTE I	HAWORTH VINCENT S	5595	10750 SW DURHAM LN	1.5 to 2.0	Grass			Grass Seed	Grass; Residence; Barn		Farm Use Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-00600	600	210.68	WILLAMETTE VALLEY LAND LLC		5505		1.5 to 2.0	Grass			Grass Seed	Grass; Riparian		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-00700	700	90.50	R&B KAUER PROPERTIES LLC		5505		0.5 to 1.5	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-4W-31-00702	702	134.79	R&B KAUER PROPERTIES LLC		5505		0.25 to 1.0	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
45-4W-31-00802	802	20.54	MCPHILLIPS FARMS INC		5505		0.75 to 1.5	Grass			Grass Seed	Plowed Field Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-4W-31-00803	803	196.76	MCPHILLIPS FARMS INC		5505		0.75 to 1.5	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-4W-31-01000	1000	5.54	WHITLOW DONALD REVOCABLE LIVING TRUST	WHITLOW ROSALIE &	5505	11300 SW DURHAM LN	1.5	Grass			Grass Seed	Grass Hay		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-01600	1600	4.32	HARRELL FRANCELLA P	HARRELL LORIS E	5595	10415 SW OLD SHERIDAN RD	2.0	Pasture			Pasture	Pasture; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-01700	1700	7.90	WALKER EUN SOON	WALKER CHARLES E	5515	10315 SW OLD SHERIDAN RD	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-01900	1900	109.74	CLEVENGER WAYNE W TRUSTEE FOR	CLEVENGER MARJORIE E SOLE TRUSTEE FOR	5515	11301 SW PEAVINE RD	1.5 to 2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-31-02000	2000	81.54	WENNERSTROM FAMILY TRUST	WENNERSTROM WINSTON O & OLIVE I TRUSTEES	5515	10880 SW OLD SHERIDAN RD	1.5	Orchard			Orchard	Orchard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-00300	300	4.96	TURLEY LAVELLE REVOCABLE LIVING TRUST	TURLEY RONALD E, MORRIS LINDA M,	5511	10515 S HIGHWAY 99W	2.5	Pasture			Pasture	Pasture; Residence; Barns		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-00400	400	219.57	MCKEE PROPERTIES LLC		5501		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-00500	500	26.51	YODER MITZIE J	YODER LONNY F	5511	11015 S HIGHWAY 99W	2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-00600	600	21.02	WELLIVER FAMILY TRUST	WELLIVER LARRY A TRUSTEE	5511	11485 S HIGHWAY 99W	2.0 to 2.5	Pasture			Pasture	Pasture; horse paddocks		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-00700	700	82.16	WALLACE MELINDA L	WALLACE SAMUEL J	5511	11655 SE BOYER RD	2.0 to 3.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01000	1000	7.69	WILLAMETTE VALLEY LAND LLC		5505		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01002	1002	57.20	WILLAMETTE VALLEY LAND LLC		5505		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01203	1203	58.90	WILLAMETTE VALLEY LAND LLC		5505		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01300	1300	9.70	KINDRED JERI M	KINDRED GLENN W	5515	10200 SW DURHAM LN	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01301	1301	4.82	KINDRED LYLE V	KINDRED LYLE V TRUSTEE FOR	5505		2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01700	1700	55.73	WILLAMETTE VALLEY LAND LLC		5505		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-01702	1702	14.23	COLEMAN RANDY C		5505		2.5	Orchard			Orchard	Orchard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-4W-32-CC-03500	3500	0.19	RIVERSTONE DEVELOPMENT LLC		5505		2.0	Grass			Grass Seed	Grass		Farm Use	Farm Forest Broad Area Surrounding Lands	
45-5W-23-00200	200	246.20	BINGENHEIMER JAMES A	BINGENHEIMER PATRICIA A	5815	3501 SW REDMOND HILL RD	2.5 to 4.0	Pasture			Pasture	Pasture; Open Space; Residence		Farm multi special assess Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-23-00201	201	288.90	MARCOM BARBARA L		6595	3507 SW REDMOND HILL RD	2.5 to 4.0	Pasture			Pasture	Pasture; Open Space; Woodlot		Forest EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-24-01300	1300	36.18	THOMPSON ROY B		4515	2700 SW REDMOND HILL RD	3.0	Grass			Grass Seed	Grass		Tract Farm Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-24-02000	2000	86.10	MCKEE PROPERTIES LLC		5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-25-00100	100	350.30	W REDMOND FARM INC		5515	13500 SW PEAVINE RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-25-00400	400	173.09	COYLE MICHAEL A 54.04%	COYLE MICHAEL A TRUSTEE	5515	13951 SW PEAVINE RD	1.5 to 2.5	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-25-00500	500	52.13	CONE STEPHEN H TRUSTEE	CONE STEPHEN H TRUSTEE	5505		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-25-00600	600	42.47	BANKE FAMILY REVOCABLE LIVING TRUST	BANKE DONALD W & ADELE S TRUSTEES FOR	5505		2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-00100	100	21.48	WHITLOCK CINDY L	WHITLOCK SHERMAN F	5515	14501 SW PEAVINE RD	2.5 to 3.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-01690	1690	0.16	W REDMOND FARM INC		5505		2.5	Pasture			Pasture	Pasture		Farm Use	Farm Forest Broad Area Surrounding Lands	
45-5W-26-01691	1691	0.09	COYLE MICHAEL A 54.04%	COYLE MICHAEL A TRUSTEE	5505		2.5	Pasture			Pasture	Pasture		Farm Use	Farm Forest Broad Area Surrounding Lands	
45-5W-26-02200	2200	23.62	FRASER ROBERT S & MARY L RLT 1/2	FERRELL DIANE M 1/2 &	5925	9862 SW YOUNGBERG HILL RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence; Barns		Farm Potl Development	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-02300	2300	99.44	COYLE MICHAEL A 38.533% &	HILL NANCY H 24.159% &	5505		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-27-00100	100	205.14	RF OREGON LLC		5515	15460 SW ROCK OF AGES RD	2.0 to 4.0	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-27-00200	200	49.62	TASHA'S INC		5515	10660 SW YOUNGBERG HILL RD	2.0 to 3.0	Vineyard			Vineyard	Vineyard; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-33-00100	100	101.61	RAMOS JUVENCIO A	JACOBS LYN C	5505		2.5 to 3.0	Grass			Grass Seed	Grass; Woodlot		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-33-00200	200	128.14	HALLORAN WRIGHT SILAS 1/5 &	HALLORAN BRIAN &	5595	17500 SW MASONVILLE RD	2.5 to 4.0	Grass			Grass Seed	Grass; Woodlot; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-33-00600	600	20.61	HAY MARY B	HAY JAMES R	5515	17450 SW MASONVILLE RD	2.5 to 3.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00101	101	144.65	EASTMAN FAMILY TRUST	EASTMAN SAMUEL W CO-TRUSTEE	5515	10650 SW YOUNGBERG HILL RD	2.0 to 2.5	Pasture			Pasture	Pasture; Woodlot; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00200	200	199.00	CONE STEPHEN H TRUSTEE	CONE DAVID S TRUSTEE	5515	17306 SW MASONVILLE RD	2.0 to 3.0	Grass			Grass Seed	Grass; Residence; Woodlot		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00300	300	88.32	KING LYNDIA R	KING MATT V	6415	18115 SW MASONVILLE RD	2.0 to 2.5	Grass			Grass Seed	Grass		Forest farm Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00500	500	9.54	OLSON KAREN G	OLSON TERRENCE H	6415	17001 SW MASONVILLE RD	2.0 to 2.5	Pasture			Pasture	Pasture; Residence		Forest farm Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00600	600	9.93	CALDWELL THOMAS R		5415	17007 SW MASONVILLE RD	2.0	Pasture			Pasture	Pasture; Residence		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00601	601	9.83	BLISS LOUISE	BLISS WARREN	5415	17005 SW MASONVILLE RD	2.0	Pasture			Pasture	Pasture; Residence		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-34-00800	800	10.06	BUCK LYDIA A	BUCK ROBERT K	5415	16901 SW MASONVILLE RD	2.0	Pasture			Pasture	Pasture; Residence				

45-5W-35-00901	901	50.01	DHF HOLDINGS INC		5505		0.75 to 1.5	Grass			Grass Seed	Grass Likely		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-35-01000	1000	5.00	BERNARDS PATRICK & JEANETTE		5595	11550 SW HANDLEY LN	1.0 to 1.5	Pasture	Grass	Dean Krieger	Pasture	Pasture; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-35-01100	1100	57.63	BERNARDS PATRICK & JEANETTE		5505		0.75 to 1.5	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-35-01200	1200	81.40	BERNARDS JEANETTE	BERNARDS MINNIE	5505		1.0 to 1.5	Grass			Grass Seed	Grass	Grass Seed back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-35-01201	1201	42.71	BERNARDS MARY B	BERNARDS JOHN G	5505		0.75 to 1.0	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-35-01300	1300	19.23	SMITH FAY BELLE TRUST	SMITH FAYE BELLE TRUSTEE FOR	5515	14000 SW MASONVILLE RD	0.75 to 1.0	Orchard			Orchard	New Orchard; Residence	Converted from Grass to Orchard in last two years; Grass or other crops back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-35-01400	1400	2.04	DEPUY CORNELIUS G JR & SHARON L		5505		0.75	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-35-01600	1600	25.61	PRITCHETT EDWARD L FAMILY TRUST 1/2	PRITCHETT HELEN A & EDWARD L TRUSTEES OF	5505		0.75 to 1.0	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-36-00100	100	125.63	SELBY DOUGLAS P 1/2	ELSBREE-SELBY LELAH J 1/2 &	5515	10900 SW OLD SHERIDAN RD	1.0 to 1.5	Orchard			Orchard	Orchard; Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-36-00200	200	66.26	PRITCHETT EDWARD L FAMILY TRUST 1/2	PRITCHETT HELEN A & EDWARD L TRUSTEES OF	5515	13550 SW MASONVILLE RD	0.5 to 1.5	Grass	Grass	Clark Ellison	Grass Seed; Pasture	Grass; Pasture; Residence; Barn	Grass back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-36-00300	300	24.87	SANDERCOCK STEVEN L		5515	13200 SW MASONVILLE RD	0.5 to 1.0	Grass	grass		Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-36-00400	400	24.79	SCHMIDT FAMILY TRUST	SCHMIDT THOMAS J & JANET M TRUSTEES FOR	5515	12970 SW MASONVILLE RD	0.5 to 1.0	Orchard	grass	Christensen Farms	Orchard	Orchard likely Hazelnuts	Converted from Grass to Orchard in 2012; Grass back to at least 1994 Prior; Same Areas Grass or other crops back to at least 1994;	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
45-5W-36-00500	500	114.34	BERNARDS JOHN G 1/3	BERNARDS PATRICK & J 1/3 &	5505		0.75 to 1.5	Grass			Grass Seed	Plowed Field Grass Likely; formerly corn	Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-4W-17-00100	100	35.31	NIELSEN CAROLYN	NIELSEN DALE	5514	16001 S HIGHWAY 99W	2.5 to 3.0	Grass			Grass Seed	Grass; Residence; Barn		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00300	300	175.49	R&B KAUER PROPERTIES LLC		5514		2.0 to 3.0	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00302	302	9.62	ANDERSEN JAMES M & DIXIE		5504		2.5	Grass			Grass Seed	Grass; Woodlot		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00303	303	44.45	BUNN JAMES L		5514	16900 S HIGHWAY 99W	2.0 to 2.5	Grass			Grass Seed	Grass; Woodlot		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00400	400	19.44	FOIX HAROLD E	FOIX MARY J	5504		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00500	500	38.86	GRANAT KURT L	GRANAT KARL H & LOUISE &	5594	S HIGHWAY 99W	2.5	Grass			Grass Seed	Grass		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00600	600	66.14	MCRAE STUART M 1/2	MCRAE ANDREW L 1/2 &	5504		2.5 to 3.0	Grass			Grass Seed	Grass; Riparian		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-17-00605	605	54.29	COLEMAN BARBARA	COLEMAN RANDAL	5514	18100 S HIGHWAY 99W	3.0	Grass			Grass Seed	Grass; Residence; Riparian		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00100	100	20.12	FOIX HAROLD E	FOIX MARY J	5504		2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00200	200	87.57	DERAEVE CAMMIE J	DERAEVE DAVID	5504		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00300	300	98.96	EICHLER LEON		5504		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00400	400	19.79	HAYES AUTUMN	HAYES RANDY	5594	17750 SW HOOK & EYE LN	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00500	500	66.87	DERAEVE CAMMIE	DERAEVE KATHRYN L &	5514	17500 SW HOOK & EYE LN	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-18-00600	600	74.47	DERAEVE GEORGE TRUST THE 1/2	DERAEVE LUCILLE V TRUSTEE FOR	5504		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00100	100	217.36	LANCEFIELD FARM CO		5584	10900 SW LANCEFIELD RD	2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00200	200	74.82	EICHLER PHILIP S REVOCABLE LIVING TRUST	EICHLER PHILIP S TRUSTEE FOR	5504		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00300	300	34.12	SIMONSON LIVING TRUST	STROUT DONNA L	5594	18220 SW HOOK & EYE LN	2.0 to 2.5	Grass			Grass Seed	Grass; Shop Buildings		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00400	400	87.29	EICHLER TERRI L	EICHLER LEON S	5594	19799 SW BRIEDWELL RD	2.5 to 3.0	Grass			Grass Seed	Grass; Large Barns; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00500	500	70.79	SIMON TED E		5514	11705 SW LANCEFIELD RD	2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00700	700	0.92	AT SMA NANCY A	AT SMA GERALD W	4014	10875 SW LANCEFIELD RD	3.0	Grass			Grass Seed	Grass		Tract Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00800	800	138.14	AT SMA NANCY A	AT SMA GERALD W	5594	11105 SW LANCEFIELD RD	3.0 to 4.0	Grass			Grass Seed	Grass; Barns; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-00900	900	66.19	CHRISTENSEN CRYSTALIN	CHRISTENSEN ZACHARY	5504		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-01700	1700	5.64	CRAWFORD LISA	GIBSON JUSTIN	4094	20025 SW BRIEDWELL RD	3.0 to 4.0	Grass			Grass Seed	Grass; Residence		Tract Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-19-01800	1800	1.61	DEUTH JOINT LIVING TRUST	DEUTH ROBERT B TRUSTEE	4014		3.0 to 4.0	Grass			Grass Seed	Grass		Tract Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-20-01000	1000	143.44	LANCEFIELD FARM CO		5584	9880 SW LANCEFIELD RD	2.5 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-20-01100	1100	48.06	CHRISTENSEN CRYSTALIN	CHRISTENSEN ZACHARY	5504		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00100	100	246.47	BOYER THOMAS R		5514	12255 SE BOYER RD	2.0 to 3.0	Grass			Grass Seed	Grass; Residence; Riparian		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00300	300	19.69	SOPER-FRANEY RHONDA	FRANEY DAVID L	5514	12100 SE BOYER RD	2.0 to 3.5	Grass			Grass Seed	Grass; Open Space		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00500	500	35.31	SCHROEDER LUCINDA L	SCHROEDER MARK S	5514	9408 SW TRESTLE VIEW LN	1.5 to 2.0	Nursery			Nursery	Nursery; Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00501	501	1.99	CRONK SANDRA J		5514	9415 SW TRESTLE VIEW LN	2.0	Nursery			Nursery	Nursery; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00502	502	132.86	ROBINSON FARMS LLC		5514	9339 SW TRESTLE VIEW LN	1.5 to 2.0	Nursery & Field Crops			Nursery & Field Crops	Nursery; Field Crops; Misc Barns and Facilities		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00602	602	0.29	ROBINSON FARMS LLC		5504		2.0	Nursery			Nursery	Nursery		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-00800	800	122.66	ROBINSON FARMS LLC		5594	9015 SW TRESTLE VIEW LN	2.0 to 2.5	Nursery & Field Crops			Nursery & Field Crops	Nursery; Field Crops; Misc Barns and Facilities		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-01400	1400	11.49	BOYER THOMAS R		5504		2.5	Grass			Grass Seed	Grass; Riparian		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-01500	1500	11.94	BOYER THOMAS R		5504		2.5	Grass			Grass Seed	Grass; Riparian		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-5-01600	1600	34.18	SIMONSON LIVING TRUST 3/4 &	SIMONSON BRUCE L & SUSAN S TRUSTEES FOR	5514	13625 SW OLD STATION RD	2.5	Grass			Grass Seed	Plowed Field Grass Likely		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-6-00300	300	9.55	ROBINSON FARMS LLC		5504		1.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-6-00401	401	215.13	MCPHILLIPS FARMS INC		5515	13200 SW MCPHILLIPS RD	0.25 to 1.5	Grass			Grass Seed; Riparian	Field Crops; possible Grass Hay; Riparian	Grass or other crops back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-4W-7-00100	100	91.85	ROBINSON FARMS LLC		5504		1.5 to 2.0	Nursery & Field Crops			Nursery & Field Crops	Greenhouses; Possible Nursery or Vegetables; Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00101	101	8.20	HUGGINS FAMILY TRUST	HUGGINS GARY G TRUSTEE	5514	9950 SW RIVER BEND RD	1.5	Nursery			Nursery	Nursery; Residence; Shop; Pasture		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00102	102	6.81	STOCKS KATHLEEN M		5514	9956 SW RIVER BEND RD	1.5	Pasture			Pasture	Residence; Barns; Open Space		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00200	200	102.49	WILLIAMSON JOELY D	HENDGEN HANS A	5504	10950 SW RIVER BEND RD	1.0 to 1.5	Grass	grass, pasture	Brian Turpley	Grass Seed	Grass; Residence		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00300	300	97.70	WILLIAMSON JOELY D	HENDGEN HANS A	5514	10952 SW RIVER BEND RD	0.5 to 1.5	Grass	Grass, pasture		Grass Seed; Pasture; Riparian	Grass; Barns; Riparian	Grass or other crops back to at least 1994; Same Areas; Added a Pond between 2000-2003	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-4W-7-00301	301	10.00	VAN CALCAR JOHN N		5514	10930 SW RIVER BEND RD	1.0 to 1.5	Grass			Grass Seed	Grass; Barns		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00400	400	37.57	WATTS ZELDA	WATTS JAMES D	5514	11570 SW RIVER BEND RD	0.5 to 1.0	Grass	grass	Dean Krieger	Grass Seed	Field Crops; Residence; Open Space	Grass or other crops back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-4W-7-00401	401	29.81	KEETON CONNIE L REVOCABLE LIVING TRUST	KEETON CONNIE L TRUSTEE FOR	5514	11780 SW RIVER BEND RD	0.75 to 1.0	Grass	grass	Dean Krieger	Grass Seed	Grass	Grass or other crops back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-4W-7-00500	500	44.64	RAINEY ERIN		5514	11270 SW RIVER BEND RD	0.75 to 1.5	Grass	grass	Dean Krieger	Grass Seed	Grass; Residence; Barns	Grass or other crops back to at least 1994; Same Areas; Added a small garden around 2003	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-4W-7-00600	600	95.36	BARSS LIVING TRUST	BARSS MARY M TRUSTEES FOR	5504		1.0 to 1.5	Orchard			Orchard	Orchard; Plowed Field Presumably		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00700	700	43.63	WILLAMETTE VALLEY LAND LLC		5504		1.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00800	800	16.08	HALVERSON KELLY R	VAN BAGGEN BRIAN D	5514	16175 SW HOOK & EYE LN	1.5 to 2.0	Grass			Grass Seed	Grass; Residence; Barns; Open Space		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00801	801	17.32	SCHOENBORN LIVING TRUST	SCHOENBORN ERIC J & SUZANNE G TRUSTEES	5504		1.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-00900	900	69.57	SCHOENBORN LIVING TRUST	SCHOENBORN ERIC J & SUZANNE G TRUSTEES	5514	10557 SW RIVER BEND RD	1.5 to 2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-7-01000	1000	39.65	THURSTON EDWARD L & DORIS		5514	10251 SW RIVER BEND RD	1.5 to 2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00100	100	23.11	ALT KIM	ALT DARYLL J	5514	8220 SW RIVER BEND RD	2.5	Pasture			Pasture	Pastures; Residence; Barns; Woodlot		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00300	300	10.28	HURLEY SANDRA K	HURLEY GARY L	5514	8620 SW RIVER BEND RD	2.5	Grass			Grass Seed	Plowed Field Grass Likely; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00400	400	5.87	MCRAE ANDREW	MCRAE STUART	5514	9700 SW RIVER BEND RD	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00401	401	106.92	MCRAE LIDIA	MCRAE STUART M	5504		1.5 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00600	600	37.92	FOIX HAROLD E	FOIX MARY J	5594	10015 SW RIVER BEND RD	2.0	Grass			Grass Seed	Grass; Residence; Barns		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands

55-4W-8-00700	700	185.30	ROBINSON FARMS LLC		5514		2.0 to 2.5	Grass			Grass Seed	Grass; Nursery		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-AA-00700	700	17.64	JOHNSTON KIT P		5504		2.5	Field Crop			Field Crop	Corn		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-AA-02400	2400	6.26	SEMMONS STEVEN F		5514	14620 SE FIRST ST	2.5	Nursery			Nursery	Nursery; Greenhouses		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-9-00400	400	90.51	BRADLEY JEAN		5504		2.5 to 3.0	Grass			Grass Seed	Grass; Orchard; Riparian; Woodlot		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-9-00500	500	46.28	MARTIN CYNTHIA A		5594	15652 SE BURNS RD	3.0 to 4.0	Orchard			Orchard	Orchard; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-9-BB-00700	700	42.80	JOHNSTON KIT P		5594	4231 SE CHERRY RD	2.5 to 3.0	Grass			Grass Seed	Field Crops; Grass Likely; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-9-BB-00701	701	1.85	JOHNSTON KIT P		5504		3.0	Grass			Grass Seed	Plowed Field Grass Likely		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-4W-9-CB-00100	100	14.17	MURRAY REBECCA		5514	4280 SE BROWN ST	3.0	Orchard			Orchard	Orchard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00100	100	13.29	FANGER JULIE	FANGER MICHAEL	5415	14030 SW MCCABE CHAPEL RD	1.5	Grass			Grass Seed	Grass; Residence		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00101	101	7.93	MORROW JUDY	MORROW DAVID	6415	14300 SW MCCABE CHAPEL RD	1.5	Vineyard			Vineyard	Vineyard; Residence		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00200	200	10.67	JERNSTEDT JUDITH A	JERNSTEDT KAREN K	5405		1.5	Grass			Grass Seed	Field; Possibly Grass		Farm farm land Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00300	300	10.17	GAYNOR VYETTE M	GAYNOR ALEC E	5415	14500 SW MCCABE CHAPEL RD	1.5	Pasture			Pasture	Pasture; Arena; Horses; Residence		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00400	400	11.44	HOOPMAN GINATH M	HOOPMAN NELSON L	4095	14670 SW MCCABE CHAPEL RD	1.5	Pasture			Pasture	Pasture; Residence		Tract Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00700	700	106.32	MEREDITH MITCHELL VINEYARDS LLC		5815	14100 SW MCCABE CHAPEL RD	1.5 to 2.0	Vineyard			Vineyard	Vineyard; Grass; Timber; Open Space		Farm multi special assess improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-1-00100	100	23.71	BACON NAN M &	BERNARDS MARJORIE M &	5595	13145 SW HIGHWAY 18	0.125 to 0.25	Grass	beans		Grass Seed; Riparian	Grass and Riparian Vegetation	Grass or other crops back to at least 1994; Same Areas	Farm EFU Manf Structure	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-10-01000	1000	63.08	MOMTAZI FAMILY LLC		5005		2.0 to 2.5	Pond			Pond	Pond; Vineyard; Woodlot		Farm Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-1-00102	102	47.09	ALLEN MARY M &	BERNARDS DANIEL J &	5505		0.125 to 0.75	Grass			Grass Seed; Riparian	Grass and Riparian Vegetation	Grass or other crops back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-10-01200	1200	6.78	RUGGLES SUSAN L	RUGGLES JAMES R	5505		2.5	Pasture			Pasture	Pasture; Residence		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01700	1700	25.20	BURGER DENIS	YAMHILL VALLEY VINEYARDS INC	5505		2.0	Vineyard			Vineyard	Vineyard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01800	1800	47.83	SCHMIDT FAMILY TRUST	SCHMIDT EUGENE J & IRENE A TRUSTEES FOR	5505		1.5 to 2.0	Grass			Grass Seed	Plowed Field Grass Likely		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01801	1801	42.16	YAMHILL VALLEY VINEYARDS INC		2515	16250 SW OLDSVILLE RD	1.5 to 2.0	Vineyard			Vineyard	Vineyard		Commercial EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01802	1802	10.30	YAMHILL VALLEY VINEYARDS INC		5505		2.0	Vineyard			Vineyard	Vineyard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01900	1900	29.71	BURGER DENIS	YAMHILL VALLEY VINEYARDS INC	2515		1.5 to 2.0	Vineyard			Vineyard	Vineyard		Commercial EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02000	2000	1.14	BURGER DENIS	YAMHILL VALLEY VINEYARDS INC	5505		1.5	Vineyard			Vineyard	Vineyard		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02100	2100	39.99	YAMHILL VALLEY VINEYARDS INC		5515	16200 SW OLDSVILLE RD	1.5	Vineyard			Vineyard	Vineyard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02200	2200	21.15	SCHMIDT JOSEPH F & LORRAINE		5415	16006 SW OLDSVILLE RD	1.0 to 1.5	Pasture	pasture		Pasture	Cattle; Pasture; Residence; Barns		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02300	2300	3.34	SCHMIDT JOSEPH F & LORRAINE E		5415		1.5	Pasture			Pasture	Pasture		Farm farm land Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02400	2400	4.22	MULDOON KRISTEN L		5515	16065 SW OLDSVILLE RD	1.5	Nursery			Nursery	Greenhouses; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02500	2500	4.87	MULDOON KRISTEN L		5505		1.5	Pasture			Pasture	Pasture		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-02600	2600	85.77	SCHMIDT FAMILY TRUST	SCHMIDT EUGENE J & IRENE A TRUSTEES FOR	5595	16145 SW OLDSVILLE RD	1.5 to 2.0	Grass	grass	Christensen Farms	Grass Seed	Grass		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-1-00500	500	148.40	RIVERBEND LANDFILL CO		5515	13940 SW HIGHWAY 18	0.125 to 0.75	Orchard			Orchard; Grass Seed; Nursery	Hazelnut Orchard; field crops; possible nursery; misc ag facilities; owned by Riverbend	Same farming extent since 94; orchard in north added around 2000; Convert some area from grass to other crops est 2003; other crops expanded thru 06; some back to grass 2011	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-1-00600	600	41.42	WARD JUDITH A	WISECARVER GLADYS B	5515	13450 SW HIGHWAY 18	0.125 to 0.5	Grass	grass		Grass Seed	Grass Likely; formerly wheat	Grass back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-1-00700	700	59.96	BERNARDS MARY B	BERNARDS JOHN G	5505		0.125 to 0.75	Orchard			Orchard	Newly Planted Orchard; formerly corn and other field crops	Grass and other crops back to at least 1994; Convert most to Orchard in 2012	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-1-00701	701	69.78	BERNARDS MARY B	BERNARDS JOHN G	5515	13801 SW MASONVILLE RD	0.125 to 0.75	Grass	Grass		Grass Seed	Plowed Field Grass Likely	Grass or other crops back to at least 1994; Same Areas; Added house by 2000	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-11-00100	100	23.78	RIVERBEND LANDFILL CO		5505		0.125 to 0.5	Grass			Grass Seed	Plowed Field Grass Likely	Grass or other crops back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-11-00200	200	90.62	BERNARDS JOHN G		5595	15000 SW OLDSVILLE RD	0.5 to 1.5	Nursery & Field Crops	Grass		Vegetables; Nursery; Grass Seed; Farm Stand	Vegetable Crops; Nursery; Farm Johns Sales	All Grass in 94; Orchard in sw and Farm Stand bldg by 2000; more veg crops by 03(near hwy); aprox half convert to nursery and veg and farm stand by 03	Farm EFU Manf Structure	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-00201	201	40.00	BERNARDS JEANETTE A	BERNARDS PATRICK J	5505		0.5 to 1.5	Grass			Grass Seed	Dirt Field; Grass Likley	Grass or other crops back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-11-00202	202	2.01	STEVENS TAMIE J WROS	BRODERSEN NANCY L WROS	4015	14291 SW MCCABE CHAPEL RD	1.0 to 1.5	Grass			Grass Seed	Plowed Field Grass Likely		Tract Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-11-00300	300	28.69	GERBER MARY F		5505		0.75 to 1.5	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-00500	500	4.02	SEIFERT GENE L & BETTY D		5515	14705 SW DELASHMUTT LN	0.5 to 0.75	Pasture			Pasture	Possible Pasture; Barn	Same Area under Farm Use back to at least 1994	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-11-00600	600	66.98	RIVERBEND LANDFILL CO		5595	14615 SW HIGHWAY 18	0.25 to 0.75	Grain	grass		Grain	Possible weat; appeared recently planted; owned by Riverbend	Grass or other crops back to at least 1994; Same Areas	Farm EFU Manf Structure	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-11-00700	700	10.79	CIFUENTES ROLANDO A	CIFUENTES AMPARO	5515	14835 SW DELASHMUTT LN	0.75	Grass			Grass Seed	Grass	Grass back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-00800	800	4.84	DILL W NADINE		4015	14880 SW DELASHMUTT LN	0.75	Grass			Grass Seed; Pasture	Grass; Residence; Pasture; Possible Commercial Use along hwy		Tract Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-00900	900	5.79	GREENWOOD PATRICIA A	GREENWOOD ROBERT H	5515	15000 SW DELASHMUTT LN	0.75 to 1.0	Pasture			Pasture	Pasture; Residence	Same Area under Farm Use back to at least 1994; Added Barn and misc facilities by 2003	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-01000	1000	39.05	WESTON EDNA M		5505		0.75 to 1.5	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-01001	1001	119.38	BERGSTROM CARL L & LINDA J		5515	15225 SW DELASHMUTT LN	0.75 to 1.5	Orchard	grass, hazel nuts, pasture		Orchard; Grass Seed	Orchards (established and new); grass fields; Riparian	Mostly grass w orchard in nw corner in 94; orchard expand in 05; large orchard expansion 2011; rest still in grass or riparian	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-11-01002	1002	40.85	MICHAEL ROBIN B		5505		1.0 to 1.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-11-01100	1100	92.68	GERBER SUZANNE M &	GERBER MARY F LIFE ESTATE	5505		1.0 to 1.5	Grass			Grass Seed	Grass Likely; Plowed Fields; Riparian		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-12-00100	100	59.80	RIVERBEND LANDFILL CO		5514	12100 SW RIVER BEND RD	0.5 to 1.0	Grass			Grass Seed	Field Crops; Residence	Same area as grass or other crops back to 1994; in 2000 small area near barn removed from crop	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-12-00300	300	38.18	YAMHILL COUNTY		9504		0.25 to 0.75	Former Landfill			Former Landfill	Former Landfill	Former Landfill	Exempt Farm partially exempt	Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-12-00400	400	27.50	RIVERBEND LANDFILL CO		5504		0.25 to 0.5	Grass			Grass Seed; Riparian	Grass; Open Space & Riparian; owned by Riverbend	Same areas of grass and riparian since at least 1994	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-12-00500	500	21.90	RIVERBEND LANDFILL CO		5504		0.25 to 0.5	Grass			Grass Seed; Riparian	Grass; Open Space & Riparian; owned by Riverbend	Same areas of grass, open space and riparian since at least 1994	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-12-00700	700	49.89	LARSON RHONDA L	LARSON RONLEY V	5515	14815 SW DELASHMUTT LN	0.5 to 0.75	Grass	grass, pasture	Christensen Farms	Grass Seed; Pasture; Riparian	Grass Hay; Pasture; Riparian	House added in 2003; outbldng 04; convert couple acres from grass to possible pasture 05; otherwise same areas of grass and riparian since at least 1994	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-12-00900	900	10.02	CT YAMHILL LLC		5504		0.75 to 1.0	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-12-01000	1000	8.58	CT YAMHILL LLC		5504		0.75 to 1.0	Grass			Grass Seed	Grass Likely	Grass back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-12-01200	1200	70.02	BOURASSA EILEEN L	BOURASSA RICHARD N	5514	15930 SW BRIEDWELL RD	1.0 to 1.5	Grass	grass, pasture		Grass Seed	Grass; Residences		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-12-01300	1300	8.06	MORRISON MICHELLE R	MORRISON ARTY E	5514	16151 SW BRIEDWELL RD	1.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-12-01400	1400	42.86	WILLAMETTE VALLEY LAND LLC		5504		1.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-12-01500	1500	14.30	JAILLET ANDRE L	JAILLET JOSEPH J	5594	15660 SW BRIEDWELL RD	1.0 to 1.5	Pasture			Pasture	Pasture; Residence; Barn		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-12-01600	1600	91.54	UPSHAW MERCEDES C	UPSHAW DANIEL L	5504	15450 SW BRIEDWELL RD	0.75 to 1.0	Grass	grass, corn		Grass Seed; Corn	Field Crops; Grass; Possibly Corn	Grass back to at least 1994; Same Areas except convert some from grass to pond approximately 2003	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile

55-5W-12-01603	1603	5.97	UPSHAW MERCEDES C	UPSHAW DANIEL L	5594	15480 SW BRIEDWELL RD	0.75 to 1.0	Pasture			Pasture	Pasture	Except for small areas convert to barn & shop around 2000; same areas grass back to at least 1994	Farm EFU Manf Structure	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-12-01700	1700	43.55	YAMHILL COUNTY		5514	12555 SW RIVER BEND RD	0.5 to 0.75	Grass			Grass Seed; Riparian	Field Crops; possible Grass Hay; Riparian	Except for small shed in ne corner converted to shed around 2006 same areas grass back to at least 1994	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-13-00100	100	306.47	CT YAMHILL LLC		5514	16430 SW BRIEDWELL RD	0.75 to 2.0	Grass			Grass Seed	Grass Likely; Residence; Pond	Grass back to at least 1994; Same Areas	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-13-00200	200	19.30	HOLT DOROTHY F		5514	16850 SW BRIEDWELL RD	1.5	Grass			Grass Seed	Grass; Residence; Pond		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-13-00300	300	79.68	SHELDON ANDREA K	SHELDON HAL D	5504		1.5 to 2.0	Grass			Grass Seed	Grass; Pond		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-13-00400	400	0.16	USA		9704		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-13-00600	600	47.51	SHELDON ANDREA K	SHELDON HAL D	5514	17550 SW BRIEDWELL RD	2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-13-00700	700	102.80	DERAEVE GEORGE TRUST THE 1/2	DERAEVE LUCILLE V TRUSTEE FOR	5514	17725 SW BRIEDWELL RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-13-00800	800	69.36	DERAEVE GEORGE TRUST THE 1/2	DERAEVE LUCILLE V TRUSTEE FOR	5504		1.5 to 2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-14-00100	100	123.33	MCKENNEY MICHAEL (WROS)	WILSER DANIEL E (WROS)	5515	16825 SW DELASHMUTT LN	1.5 to 2.0	Grass			Grass Seed	Grass; Pasture; Residences; Barns		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-14-00200	200	108.08	CHRISTENSEN MARY		5515	16350 SW DELASHMUTT LN	1.5 to 2.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-14-00300	300	59.86	CHRISTENSEN DON		5505		2.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-14-00400	400	58.81	CHRISTENSEN LAURA		5505		2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-14-00500	500	300.11	MARGUERITE CHRISTENSEN FAMILY FARM LLC		5515	17465 SW DELASHMUTT LN	2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00100	100	150.48	BLAKE BARBARA H 1/4	HIBBS GEORGE R 1/4 &	5515	16460 SW OLDSVILLE RD	2.0 to 2.5	Tree Farm			Tree Farm	Tree Farm; Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00200	200	23.38	LEVY PATRICIA J		5505		2.5	Pasture			Pasture	Pasture; Woodlot		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00300	300	15.45	HIGGINS DANIEL J		5505		2.5	Pasture			Pasture	Pasture		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00400	400	10.03	HIGGINS DANIEL J		5515	17500 SW OLDSVILLE RD	2.5	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00700	700	6.00	HARDING FAMILY TRUST	HARDING CLEO A & PATRICIA R TRUSTEES FOR	5515	17676 SW OLDSVILLE RD	2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-00800	800	20.51	WILSON ELIZABETH A	ANDERSON DAVID J	5515	17450 SW OLDSVILLE RD	2.5	Vineyard			Vineyard	Vineyard; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-01000	1000	62.74	CHRISTENSEN JERRY L WROS	CHRISTENSEN MARY R WROS	5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-01001	1001	62.40	CHRISTENSEN CYNTHIA	CHRISTENSEN LYLE	5515	17000 SW OLDSVILLE RD	2.0 to 2.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-15-01200	1200	81.06	BOUNDY JODI L	BOUNDY MICHAEL C	5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-16-00100	100	80.11	TRUSTEES	VERTREGT FAMILY 1994 TRUST	5505		2.5 to 3.0	Pasture			Pasture	Pasture; Woodlot		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-16-00101	101	218.22	HARDING FAMILY TRUST	HARDING CLEO A & PATRICIA R TRUSTEES FOR	5515		2.5 to 4.0	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-16-00200	200	75.36	MOODY NICKIE L	WESTON ROLAND L	5595	16435 SW MUDDY VALLEY RD	3.0 to 4.0	Grass			Grass Seed	Grass; Orchard; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-16-00300	300	155.50	BOUNDY MICHAEL C & JODI L		5515	16845 SW MUDDY VALLEY RD	3.0 to 4.0	Orchard			Orchard	Orchard; Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-2-00101	101	7.25	BERNARDS JOHN G	BERNARDS PATRICK &	5595	14295 SW MASONVILLE RD	0.75 to 1.0	Grass	grass		Grass Seed	Grass; Barns	Same areas dedicated to grass and barns since at least 1994	Farm EFU Manf Structure	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00102	102	6.64	BERNARDS MARY B	BERNARDS JOHN G	5505		1.0 to 1.5	Grass			Grass Seed	Grass	Grass Seed back to at least 1994; Same Areas	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00200	200	61.47	PRITCHETT EDWARD L FAMILY TRUST 1/2	PRITCHETT HELEN A & EDWARD L TRUSTEES OF	5505		0.75 to 1.5	Grass			Grass Seed	Grass	Same areas dedicated to grass and barns since at least 1994	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00300	300	78.06	BERNARDS MARY B	BERNARDS JOHN G	5505		0.5 to 1.0	Grass			Grass Seed	Grass	Same areas dedicated to grass and barns since at least 1994 some slow progressin of farm bldngs into crop areas between 94 and 2006 near house	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00301	301	6.54	BERNARDS JOHN G	BERNARDS PATRICK J &	5505		0.75 to 1.0	Grass			Grass Seed	Grass; Barns	Same areas dedicated to grass and barns since at least 1994	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00500	500	48.87	PRITCHETT EDWARD L FAMILY TRUST 1/2	PRITCHETT HELEN A & EDWARD L TRUSTEES OF	5505		0.5 to 1.5	Grass			Grass Seed	Grass	Same areas dedicated to grass and barns since at least 1994	Farm EFU Vacant	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-2-00700	700	40.01	FREASE FAMILY TRUST	FREASE LILLIAN E TRUSTEE	5515	14025 SW MCCABE CHAPEL RD	0.75 to 1.5	Orchard	hazel nuts		Orchard	Orchard	Orchard since at least 1994	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half To ONE Mile
55-5W-21-00200	200	58.89	BUEL SUE E		5505		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-00300	300	22.59	BOUNDY JODI L	BOUNDY MICHAEL C	5505		4.0	Field Crop			Field Crop	Corn		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-00400	400	100.39	BERNARDS MICHAEL J & CHRIS 83 1/3%	BERNARDS MICHAEL J 16 2/3% &	5515	18755 SW HIGHWAY 18	4.0	Nursery & Field Crops	beans		Nursery & Field Crops	Vegetable Crops; Grass; Orchard; Farm Stand; Nursery		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-00500	500	40.16	ROSSNER NI MADE		5595	18930 SW BELLEVUE HWY	4.0	Grass			Grass Seed	Grass		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-00700	700	34.97	ROSSNER NI MADE		5505		4.0 to 5.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-01000	1000	134.38	ROSSNER JUDY A		5515	19530 SW HIGHWAY 18	4.0 to 5.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-01100	1100	20.29	BOUNDY JODI L	BOUNDY MICHAEL C	5505		4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-21-01200	1200	158.91	BOUNDY JODI L	BOUNDY MICHAEL C	5515	18750 SW HIGHWAY 18	4.0	Grain			Grain	Grain Likely; Grass; Field Crops		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00100	100	273.35	K A BERGER FARMS INC		5515	19000 SW DELASHMUTT LN	2.5 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00200	200	65.06	GRAUER BROTHERS PARTNERSHIP OF	GRAUER RICK &	5515	17251 SW SAUTER RD	2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00201	201	46.82	WEIRICH BETTY J	WEIRICH ALVIN G	5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00202	202	39.54	WEIRICH ALVIN G & BETTY J		5595	16365 SW SAUTER RD	2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00300	300	56.14	DUYCK JAMES L & GLORIA J		5515	17901 SW HIGHWAY 18	3.0 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00400	400	17.61	HONG GENE		5505		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00500	500	13.71	KIRBY JACK W & ARLENE E		5515	18401 SW HIGHWAY 18	3.0 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00600	600	78.83	LEHMAN SHARON	LEHMAN MELVIN E	5505		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-22-00700	700	201.27	STOLLER INVESTMENT COMPANY LLC		5515	18701 SW HIGHWAY 18	3.0 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-23-00200	200	215.88	JONES GRETCHEN K REV LIV TRUST	JONES WILLIAM A TRUSTEE FOR	5505		2.5 to 3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-23-00201	201	23.83	RODASTA NAOMI	RODASTA NICOLAS	5515	18825 SW DELASHMUTT LN	2.5 to 3.0	Grass			Grass Seed	Grass; Residence; Open Space		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00100	100	141.36	EICHLER TERRI	EICHLER LEON	5594	18175 SW BRIEDWELL RD	2.0 to 2.5	Grass			Grass Seed	Grass		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00200	200	141.10	DEUTH JOINT LIVING TRUST	DEUTH ROBERT B TRUSTEE	5514	18520 SW BRIEDWELL RD	2.5	Grass			Grass Seed	Grass Likely; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00300	300	150.57	LEHMAN ROBERT E		5514	19050 SW BRIEDWELL RD	2.5 to 3.0	Grass			Grass Seed	Grass; Residence; Riparian		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00400	400	191.43	DEUTH JOINT LIVING TRUST	DEUTH ROBERT B TRUSTEE	5504		3.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00401	401	6.53	TREJO MARK A & BRANDY C	OPHEIM JOEL J	4014	19800 SW BRIEDWELL RD	3.0	Pond			Pond	Pond; Grass		Tract Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00500	500	81.23	DEUTH JOINT LIVING TRUST	DEUTH ROBERT B TRUSTEE	5504		3.0 to 4.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-24-00600	600	10.44	HOWARD JON S 1/3 &	HOWARD MICHAEL L 1/3 &	5594	19910 SW BRIEDWELL RD	3.0 to 4.0	Grass			Grass Seed	Grass; Residence		Farm EFU Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-25-00800	800	305.52	ROTHENBUCHER JOYCE M		5514		4.0	Grass	Corn		Grass Seed	Grass		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-26-00900	900	390.72	JONES REVOCABLE LIVING TRUST	JONES STEVEN R & GRETCHEN TRUSTEES OF	5514	14870 SW BELLEVUE HWY	3.0 to 4.0	Grass			Grass Seed	Grass; Orchard; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-27-00100	100	686.45	K A BERGER FARMS INC		5515	16720 SW BELLEVUE HWY	4.0 to 5.0	Grass			Grass Seed	Grass; Orchard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-28-00100	100	46.04	KOESTER FAMILY REVOCABLE LIVING TRUST	KOESTER ROBERT J & ELAINE H TRUSTEES OF	5505		4.0 to 5.0	Grass			Grass Seed	Grass		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-00400	400	12.99	COYLE MICHAEL A		5495	16540 SW SUNRISE LN	1.5	Pasture			Pasture	Pasture		Farm farm land Manf Structure	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01200	1200	31.70	MCGHEHEY FAMILY TRUST	MCGHEHEY JOHN H & PATRICIA L TRUSTEES	5515	12830 SW MCCABE CHAPEL RD	1.0 to 1.5	Grass			Grass Seed	Plowed Field Grass Likely; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01500	1500	7.82	KREIGER TAMI D	KREIGER DAVID L	5515	14038 SW MCCABE CHAPEL RD	1.5	Grass			Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01501	1501	8.49	KRIEGER ELAINE E	KRIEGER PERRY L	5715	14036 SW MCCABE CHAPEL RD	1.5	Pasture			Pasture	Pasture; Residence		Farm disqualified farm use Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01600	1600	271.80	SCHREIBER MAI M	SCHREIBER PHILIP E	5515		0.5 to 2.0	Grass			Grass Seed; Pasture	Plowed Field Grass Likely (east of rd); Grass; Pasture; Forested Hillside; Residence (west of rd)	Same areas dedicated to same uses since at least 1994	Farm EFU Improved	Farm Use	Farm Forest Immediate Vicinity Half Mile
55-5W-3-01601	1601	22.21	SCHREIBER PHILIP E & MAI M		5515	13300 SW MCCABE CHAPEL RD	1.5	Grass	grass		Grass Seed	Grass; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-4-00100	100	277.51	DUNN SHERYL WU	KRISTOF NICHOLAS D	5815		2.0 to 3.0	Grass			Grass Seed	Grass; Woodlot		Farm multi special assess Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-4-00500	500	39.37	GAHR FARM TRUST	GAHR D ANN TRUSTEE	5515	18585 SW MASONVILLE RD	2.5 to 3.0	Pasture			Pasture	Pasture; Bed & Breakfast; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-4-00501	501	310.97	NATURE CONSERVANCY THE		9505		2.0 to 3.0	Pasture			Pasture	Nature Conservancy; Open Space		Exempt Farm ptaxable leased	Farm Use	Farm Forest Broad Area Surrounding Lands

55-5W-4-00600	600	80.76	WEBER BERNIECE A REVOCABLE LIVING TRUST	WEBER BERNIECE A TRUSTEE FOR	5005			2.5 to 3.0	Pasture			Pasture	Open Space; Possible Pasture		Farm Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00100	100	334.05	MOMTAZI FAMILY LLC		5515	15765 SW MUDDY VALLEY RD		2.0 to 3.0	Vineyard			Vineyard	Vineyard		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00201	201	11.53	BENNER GEORGINE	BENNER CARSON	5515	14301 SW MUDDY VALLEY RD		3.0 to 4.0	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00301	301	0.84	RICHARDSON MARY A C	RICHARDSON WILLIAM L	5505			3.0	Pasture			Pasture	Pasture; Residence		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00400	400	40.56	RICHARDSON MARY A C	RICHARDSON WILLIAM L	6615	14541 SW MUDDY VALLEY RD		3.0 to 4.0	Pasture			Pasture	Pasture; Residence		Forest small forest tract Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00401	401	18.69	WILCOX DENISE	WILCOX RANDALL L	5515	14935 SW MUDDY VALLEY RD		3.0 to 4.0	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00500	500	35.87	HAMILTON SCOTT M		5515	15575 SW MUDDY VALLEY RD		3.0 to 4.0	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00601	601	17.80	MOMTAZI FAMILY LLC		5505			3.0 to 4.0	Pond			Pond	Pond; Open Space		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00700	700	30.61	RUGGLES SUSAN L	RUGGLES JAMES R	5515	15500 SW DUSTY DR		2.5	Pasture			Pasture	Pasture; Residence		Farm EFU Improved	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00701	701	65.03	MOMTAZI FAMILY LLC		5505			2.0 to 3.0	Vineyard			Vineyard	Vineyard; Pasture		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00800	800	32.52	KECK FAMILY TRUST	KECK VAN W & GLENDA R TRUSTEES FOR	5505			2.5 to 3.0	Pasture			Pasture	Pasture		Farm EFU Vacant	Farm Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-00200	200	3.50	MARTINEZ KIMBERLY M	MARTINEZ JOHN F	6405			2.5 to 3.0	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-01300	1300	1.09	GERBER AMY C	GERBER STEPHEN J	5505			2.5	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-01700	1700	13.89	MARTINEZ KIMBERLY M	MARTINEZ JOHN F	6415	14509 SW PEAVINE RD		2.5 to 3.0	Woodlot			Woodlot	Woodlot; Residence		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-01800	1800	63.42	SCHOLL ROBERT A		6405			2.5 to 3.0	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-01900	1900	157.90	RF OREGON LLC		6805	15460 SW ROCK OF AGES RD		2.0 to 2.0	Woodlot			Woodlot	Woodlot; Grain Storage		Forest multi special assessments Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-26-02000	2000	1.17	SCHOLL ROBERT A		6405			2.5	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-27-00101	101	243.34	RF OREGON LLC		6505			2.5 to 4.0	Woodlot			Woodlot	Woodlot		Forest EFU Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-5W-33-00801	801	97.24	WEINSTEIN JULIA A		6415	19550 SW EAGLE POINT RD		2.5 to 3.0	Woodlot			Woodlot	Woodlot; Residence		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00200	200	26.94	HURLEY GARY L & SANDRA K		5504			2.0 to 2.5	Woodlot			Woodlot	Woodlot		Farm EFU Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00301	301	43.31	HURLEY GARY L & SANDRA K		5514	8628 SW RIVER BEND RD		2.0 to 2.5	Woodlot			Woodlot	Woodlot; Residence; Pasture		Farm EFU Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-00900	900	77.92	OLSON LIVING TRUST	OLSON JEFFREY L & TONIA J TRUSTEES FOR	5514	5025 SE AMITY-DAYTON HWY		2.5 to 3.0	Woodlot			Woodlot	Woodlot		Farm EFU Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-4W-8-AD-01400	1400	5.12	TRANSPORTATION CO	SOUTHERN PACIFIC	0034			2.5	Woodlot			Woodlot	Woodlot		Vacant Railroad Property	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00500	500	5.99	BURCHAM BRIAN L & CAROLE J		6405	SW MCCABE CHAPEL RD		1.5	Woodlot			Woodlot	Woodlot; Residence		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-00600	600	10.70	BURCHAM BRIAN L & CAROLE J		6415	14040 SW MCCABE CHAPEL RD		1.5	Woodlot			Woodlot	Timber; Open Space		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01100	1100	2.72	MOMTAZI FAMILY LLC		6405			2.0 to 2.5	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01400	1400	18.83	LEVY PATRICIA J		5515	16001 SW DUSTY DR		2.0 to 2.5	Woodlot			Woodlot	Woodlot; Residence		Farm EFU Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-10-01500	1500	16.87	MAHESH HARIHARA	MAHESH PARVATHY	5515	15651 SW DUSTY DR		2.0 to 2.5	Woodlot			Woodlot	Woodlot; Residence		Farm EFU Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-00300	300	10.35	WEISER GEORGIA A REVOCABLE TRUST	WEISER GEORGIA A TRUSTEE FOR	6495	12120 SW MCCABE CHAPEL RD		1.5	Woodlot			Woodlot	Woodlot; Residence		Forest farm Manf Structure	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-00500	500	7.29	JURHS CLARENCE V & MARY M		6415	16260 SW SUNRISE LN		1.5	Woodlot			Woodlot	Woodlot; Residence		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-00600	600	8.77	KNOTT DIANE REVOCABLE TRUST	KNOTT DIANE & EVERETT L TRUSTEES FOR	6415	12160 SW MCCABE CHAPEL RD		1.5	Woodlot			Woodlot	Woodlot; Residence		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-00800	800	6.76	LEPPIN GEORGE O & MARILYN A		6415			1.5	Woodlot			Woodlot	Timber; Barn		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01700	1700	54.71	HOLLANDER-WATKINS TRUST	WATKINS SUSAN TRUSTEE &	6615	13440 SW MCCABE CHAPEL RD		1.5 to 2.0	Woodlot			Woodlot	Woodlot; Residence		Forest small forest tract Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-01800	1800	50.09	PAGEL KLAUS		5515	13450 SW MCCABE CHAPEL RD		2.0	Woodlot			Woodlot	Woodlot; Residence; Pasture		Farm EFU Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-02000	2000	83.01	COYLE MICHAEL A		5815	16705 SW SUNRISE LN		1.5 to 2.0	Woodlot			Woodlot	Woodlot; Residence		Farm multi special assess improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-3-02201	2201	15.73	ZIEGLER CECIL M & BONNIE K		6415	12150 SW MCCABE CHAPEL RD		1.5 to 2.0	Woodlot			Woodlot	Woodlot; Residence		Forest farm Improved	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-4-00200	200	3.94	BALWIT JOHN		6405			3.0	Woodlot			Woodlot	Woodlot		Forest Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
55-5W-9-00102	102	39.75	MOMTAZI FAMILY LLC		5505			3.0	Woodlot			Woodlot	Woodlot		Farm EFU Vacant	Forest Use	Farm Forest Broad Area Surrounding Lands
45-4W-29-02100	2100	0.67	DRAMIS JAMES A & FRANCES J		4015	9580 S HIGHWAY 99W		2.5 to 3.0	Residence			Residence	Residence		Non Farm Use	Nonfarm Broad Area Surrounding Lands	
45-4W-29-03101	3101	7.00	RICHARDS JIM & PHYLLIS FAMILY LLC		2515	9889 S HIGHWAY 99W		2.5 to 3.0	Commercial			Commercial	Commercial; Pape Equipment Machinery Sales		Commercial EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-30-00801	801	2.00	COMMISSION		9415	10120 SW HIGHWAY 18		2.0	Substation			Substation	Substation		Exempt farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-30-00900	900	1.03	DEMASTER LIVING TRUST	DEMASTER ROBERT J & SANDRA L TRUSTEES OF	4015	2000 SW OLD SHERIDAN RD		2.0	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-30-02000	2000	3.42	EARLY JULIE A (WROS)	EARLY KENNETH W (WROS)	4015	2301 HILL RD SOUTH		2.0	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-30-02100	2100	7.48	WALTER CONNIE L PARTNER	D INVESTMENT CO PARTNERSHIP OF	3015	1726 SW HIGHWAY 18		2.0 to 2.5	Industrial			Industrial	Industrial / Commercial		Non Farm Use	Nonfarm Broad Area Surrounding Lands	
45-4W-30-02200	2200	2.15	SCHOKO PROPERTIES LLC 1/2	WOLFF JUNE K TRUSTEE &	3015	1720 SW HIGHWAY 18		2.0 to 2.5	Industrial			Industrial	Industrial / Commercial		Non Farm Use	Nonfarm Broad Area Surrounding Lands	
45-4W-30-02300	2300	3.92	SCHOKO PROPERTIES LLC 1/2	WOLFF JUNE K TRUSTEE &	3015	1700 SW HIGHWAY 18		2.0 to 2.5	Industrial			Industrial	Industrial / Commercial		Non Farm Use	Nonfarm Broad Area Surrounding Lands	
45-4W-31-00400	400	6.99	CH HOLDINGS LLC		3015			1.5 to 2.0	Commercial			Commercial	Commercial: Valley RV Center		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-00500	500	3.00	CH HOLDINGS LLC		3215	11160 SW DURHAM LN		1.5	Commercial			Commercial	Commercial: Valley RV Center		Commercial Use Commercial Zone Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-00701	701	2.53	MCPHILLIPS FARMS INC		5505			0.5 to 1.0	Access			Access	access strip to fields	Same access strip since at least 1994	Farm EFU Vacant	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
45-4W-31-00801	801	12.39	YAMHILL COUNTY HISTORICAL SOCIETY		9815	11275 SW DURHAM LN		1.5	Commercial			Commercial	Commercial; Historical Museum		Exempt multiple special assessments Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-00900	900	0.77	TRUST	WHITLOW DONALD TRUSTEE FOR	4015	11590 SW DURHAM LN		1.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-01100	1100	2.68	WHITLOW DONALD		4015	10751 SW OLD SHERIDAN RD		1.5	Residence			Residence	Residence; Grass Hay		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-01200	1200	2.29	TERRY LISA	TERRY JERRY N	4415	10575 SW OLD SHERIDAN RD		1.5	Residence			Residence	Residence		Tract Farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-01400	1400	0.71	ROBINSON CAROL	ROBINSON RAY	4095	10505 SW OLD SHERIDAN RD		1.5 to 2.0	Residence			Residence	Residence		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-01500	1500	4.93	NORTHWEST COMMUNITY CHURCH		9115	10475 SW OLD SHERIDAN RD		1.5 to 2.0	Church			Church	Church		Exempt Res zone Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-01701	1701	1.00	HAMILTON BARBARA G	HAMILTON JOHN M	4095	10365 SW OLD SHERIDAN RD		2.0	Residence			Residence	Residence		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-31-02100	2100	0.20	WENNERSTROM KRISTINE L	WENNERSTROM ROBERT J	4015	10580 SW OLD SHERIDAN RD		1.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-00800	800	0.24	ROMINE MARY J (WROS)	ROMINE ROBERT R (WROS)	4015	9261 SW DURHAM LN		2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-00900	900	1.34	KIESS KIMBALL	KIESS JERRELL	4015	9295 SW DURHAM LN		2.0 to 2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01001	1001	5.30	RICHEY KAREN L		5515	11200 S HIGHWAY 99W		2.0 to 2.5	Residence			Residence	Residence; Barns		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01100	1100	5.77	LARSON WENDY M	LARSON KENNETH J	5515	9975 SW DURHAM LN		2.0	Residence			Residence	Residence		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01200	1200	3.75	COMPTON JOHN C QUAL PERSONAL RES TRUST	COMPTON JOHN C TRUSTEE	5415	10025 SW BAYOU DR		1.5 to 2.0	Golf Course			Golf Course	Golf Course		Farm farm land Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01201	1201	0.90	DRAPER M EILIENE		4005			2.0	Open Space			Open Space	Open Space		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01205	1205	2.63	ARMSTRONG MARY J		4015	10055 SW BAYOU DR		1.5	Golf Course			Golf Course	Golf Course		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01400	1400	1.17	SHERWOOD EMMA N	GADBERRY DUANE L SR	4015	10880 S HIGHWAY 99W		2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01500	1500	0.69	GLASS TONY	GLASS SUZANNE R	4015	9400 SW DURHAM LN		2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01600	1600	1.00	GLASS TONY	GLASS SUZANNE R	4015			2.0 to 2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-01701	1701	9.83	COLEMAN IRENE L	COLEMAN RANDY C	5515	10480 S HIGHWAY 99W		2.5	Residence			Residence	Residence; Barns		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-00300	300	0.47	RODER ANTONIO & SYLVIE REVOCABLE TRUST	RODER ANTONIO & SYLVIE TRUSTEES FOR	4015</												

45-4W-32-CC-01300	1300	0.26	SETTELL LISA L	SETTELL RANDY W	4005		2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-01400	1400	0.49	CALLANDER ROBIN C		4015	9935 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-01600	1600	0.25	MARA CLAUDIA W	MARA BRIAN A	4015	9965 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-01700	1700	0.27	COMPTON JOHN C QUAL PERSONAL RES TRUST	COMPTON JOHN C TRUSTEE	4005		2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02000	2000	0.27	NISBET SUSAN I		4015	9480 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02100	2100	0.27	BUEHLER SHARON E	BUEHLER JONATHAN	4015	9526 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02200	2200	0.23	HOOVER CHRIS E		4015	9550 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02300	2300	0.23	BEEBE TONIA A SOBER		4015	9580 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02400	2400	0.23	GARDNER VALERIE J	GARDNER RICHARD A	4015	9610 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02500	2500	0.23	MIZE MARY H TRUST 1/2	MIZE KENNETH G & MARY H TRUSTEES FOR	4005	9630 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02600	2600	0.23	MCCASLIN OLGA M	MCCASLIN DENNIS S	4015	9760 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02700	2700	0.23	BRYSON JAN W		4015		2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02800	2800	0.23	BRYSON JAN W		4015	9820 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-02900	2900	0.23	RIOS FAUSTO A		4015	9850 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-03000	3000	0.46	STASTNY GEORGE J & CAROLYN J		4015	9870 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-03200	3200	0.23	CALLANDER ROBIN C		4015		2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-03300	3300	0.46	BEEBE TRUST	BEEBE DONALD J & MARTHA A TRUSTEES FOR	4015	10000 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CC-03600	3600	0.82	RIVERSTONE DEVELOPMENT LLC		2015	9670 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Commercial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00200	200	0.67	HUDSON BILLIE J	HUDSON MICHAEL D	4015	11944 SE BOYER RD	2.0 to 2.5	Residence		Residence	Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00300	300	1.56	BERNARDS LOUISE M TRUST	BERNARDS LOUISE M TRUSTEE	4015	11946 SE BOYER RD	2.0 to 2.5	Residence		Residence	Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00400	400	1.22	NORDIN MIEKO		4015	11950 SE BOYER RD	2.0	Residence		Residence	Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00500	500	0.77	DRAPER EILEEN KING		4015	11650 S HIGHWAY 99W	2.0	Residence		Residence	Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00700	700	0.37	KRIECK JAMES S & SUSAN M		4015	11780 S HIGHWAY 99W	2.0	Residence		Residence	Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-00900	900	5.76	MELDON INVESTMENT CORPORATION		2015	9301 SW BAYOU DR	2.0	Golf Course		Golf Course	Golf Course	Commercial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-01100	1100	0.09	BAYOU WATER IMPROVEMENT DISTRICT		9915	9420 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Exempt potl development Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-01200	1200	0.23	BENDER BARRY L		4205		2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Use Commercial Zone Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-01300	1300	0.26	WILLHITE FRANCES K		4015	9460 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-01400	1400	0.32	KEM PROPERTIES LLC		4015	9451 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-4W-32-CD-01401	1401	0.36	LEIGHTON LESLEY K		4015	9435 SW BAYOU DR	2.0	Residence		Residence	Small Residential Lot along Golf Course	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-25-00300	300	1.87	REDMOND WENTON E & ANNA TRUSTEE FOR	REDMOND JANET L 39% &	4015	13700 SW PEAVINE RD	2.0	Residence		Residence	Residence		Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-25-00700	700	1.52	GANFIELD MARION T	GANFIELD JEFFREY A	4015	11951 SW PEAVINE RD	2.0	Residence		Residence	Residence		Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00300	300	19.46	MCCALLIE LIVING TRUST	MCCALLIE CHARLES F TRUSTEE	5515	14275 SW PEAVINE RD	2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00400	400	0.09	YAMHILL COUNTY		9905		2.5	Access		Access	Access		Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00500	500	20.11	MOUREK OLGA 1/2	TYLE VITEZSLAV 1/2	4005		2.5	Open Space		Open Space	Open Space	Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00600	600	5.75	FORNATARO CATHY	FORNATARO CHRISTOPHER	6415	9200 SW YOUNGBERG HILL RD	2.0 to 2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Forest farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00601	601	5.00	DEVINE TAMMY A	DEVINE PATRICK D	5515	9310 SW YOUNGBERG HILL RD	2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00602	602	4.08	WHITE ROBERT D REVOCABLE LIVING TRUST	WHITE ROBERT D TRUSTEE FOR	5505	9300 SW YOUNGBERG HILL RD	2.0 to 2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00700	700	2.12	SCHOLBROCK KYLA A		4015	9416 SW YOUNGBERG HILL RD	2.0 to 2.5	Residence		Residence	Residence		Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-00800	800	1.50	NICHOLS STACY L WROS	KLEIN TIMOTHY A WROS	5515	9420 SW YOUNGBERG HILL RD	2.0	Residence		Residence	Residential	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01001	1001	2.72	PEREZ-SELSKY DELPHIA H	PEREZ-SELSKY GREGORIO A	4015	14946 SW ROCK OF AGES RD	2.0 to 2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01100	1100	6.74	D & C TRUST	LUNDMARK DOUGLAS &	5595	14950 SW ROCK OF AGES RD	2.0 to 2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01200	1200	11.08	SPENCE BRANDI J		4095	9360 SW YOUNGBERG HILL RD	2.0 to 2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01201	1201	2.11	WHITE ROBERT D REVOCABLE LIVING TRUST	WHITE ROBERT D TRUSTEE FOR	4005		2.5	Open Space		Open Space	Open Space	Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01202	1202	1.94	DURHAM JANET R		4015	9350 SW YOUNGBERG HILL RD	2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01400	1400	6.81	GERBER AMY C	GERBER STEPHEN J	5505		2.5	Open Space		Open Space	Open Space	Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01500	1500	10.08	GERBER AMY C	GERBER STEPHEN J	5595	9340 SW YOUNGBERG HILL RD	2.5	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-01600	1600	56.70	COATS THEA L TRUSTEE FOR	COATS MATTIE M 1/4	5515	9100 SW YOUNGBERG HILL RD	2.5 to 3.0	Residence		Residence	Open Space; Possible Pasture; Residence	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-26-02100	2100	37.51	ROCK OF AGES MENNONITE	BIBLE MENNONITE FELLOWSHIP CHURCH	2445	15670 SW ROCK OF AGES RD	2.0 to 2.5	Church		Church	Mennonite Residential Development; Church	Commercial Farmland Partially Exempt	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-34-00400	400	3.44	CASPER KATHY A WROS	COPENHAVER JOHN R WROS	4095	17425 SW MASONVILLE RD	2.0 to 2.5	Residence		Residence	Residence; Pasture	Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-34-00700	700	12.18	SUMMERFIELD SHIRLEY L	SUMMERFIELD GARY L	4415	16725 SW MASONVILLE RD	2.0	Residence		Residence	Residence	Tract Farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-34-00701	701	7.89	KABARSKY DEBRA K	KABARSKY MARK R	4415	16755 SW MASONVILLE RD	2.0	Residence		Residence	Residence; Pasture	Tract Farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-34-00900	900	1.93	FARLEY STEVEN G (WROS)	FARLEY HOMER P	4095	16791 SW MASONVILLE RD	2.0	Residence		Residence	Residence; Pasture	Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-35-00300	300	2.48	MEKKERS VINCENT & PATRICIA		4015	10205 SW YOUNGBERG HILL RD	2.0	Residence		Residence	Residence		Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-35-00600	600	1.72	WESTPHAL CLEO		4515	10550 SW HANDLEY LN	1.5	Residence		Residence	Residence	Tract Farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
45-5W-35-01500	1500	0.90	DEPUY CORNELIUS JR & SHARON		5515	13780 SW MASONVILLE RD	0.75	Residence		Residence	Residence	Farm EFU Improved	Non Farm Use	Nonfarm Immediate Vicinity Half To ONE Mile
55-4W-17-00101	101	2.97	ANDERSEN JAMES M & DIXIE L		5514	16320 S HIGHWAY 99W	2.5	Residence		Residence	Residence	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-17-00102	102	18.61	ANDERSEN JAMES M & DIXIE		5514		2.5	Riparian		Riparian	Riparian; Grass; Woodlot	Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands

55-4W-17-00200	200	4.56	SAME PROPERTIES LLC		3534	16500 S HIGHWAY 99W	2.5	Industrial		Industrial	Packing Plant; Grain Storage; Warehouse		Industrial EFU State Responsibility	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-17-00301	301	15.55	MIDVALLEY REHABILITATION INC	MIDVALLEY WORKSHOP INC NKA	9814	16700 S HIGHWAY 99W	2.5	Industrial		Industrial	Packing Plant; Grain Storage; Warehouse		Exempt multiple special assessments Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-17-00601	601	5.17	LAWSON PATRICIA L (WROS)	LAWSON JOHN R (WROS)	4714	18110 S HIGHWAY 99W	2.5 to 3.0	Residence		Residence	Residence		Tract Disqualified from Farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-17-00602	602	2.50	HAYS DOROTHY	HAYS LARRY	4094	18106 S HIGHWAY 99W	3.0	Residence		Residence	Residence		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-19-00401	401	3.25	EICHLER MARY LOU		5514	19301 SW BRIEDWELL RD	3.0	Residence		Residence	Residence		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-19-00600	600	3.81	AT SMA NANCY A	AT SMA GERALD	4014	11101 SW LANCEFIELD RD	3.0	Residence		Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00200	200	1.13	KINION STEVEN J		4014	12300 SE BOYER RD	2.5	Residence		Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00400	400	93.50	MELDON INVESTMENT CORPORATION		2015		1.5 to 2.0	Golf Course		Golf Course	Golf Course		Commercial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00505	505	14.93	ROBINSON ROXANNE S	ROBINSON RICHARD L JR	5514	9365 SW TRESTLE VIEW LN	1.5	Residence		Residence	Residence; Open Space; Riparian		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00600	600	2.19	JONES TRAVIS		4014	9005 SW TRESTLE VIEW LN	2.0	Residence		Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00601	601	1.38	RUNGE KRISTINA A		4014	9235 SW TRESTLE VIEW LN	2.0	Residence		Residence	Residence; Field Crops		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00603	603	2.00	IMLAH BRIAN J		5514	9101 SW TRESTLE VIEW LN	2.0	Residence		Residence	Residence; Field Crops		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-00900	900	3.65	EARL CHARLOTTE A LIVING TRUST	EARL CHARLOTTE A TRUSTEE FOR	5514	13180 S HIGHWAY 99W	2.0 to 2.5	Residence		Residence	Residence; Pasture		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01000	1000	1.73	VANDERVELDE STANLEY & ROBIN L		3014		2.5	Commercial		Commercial	Commercial		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01001	1001	3.75	HANDER WILLIAM C & GLENDA		2314	13450 S HIGHWAY 99W	2.0 to 2.5	Commercial		Commercial	Commercial		Commercial Use Industrial Zone Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01002	1002	2.05	VANDERVELDE STANLEY & ROBIN L		3014	13500 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01003	1003	1.33	DARLING LIVING TRUST	DARLING PHILIP H & JUDITH E TRUSTEES	3314	13600 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial		Commercial Use Industrial Zone Partially Exempt	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01004	1004	1.00	FORNIA CONRAD L		3094		2.5	Commercial		Commercial	Commercial		Commercial Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01005	1005	1.98	DARLING LIVING TRUST	DARLING PHILIP H & JUDITH E TRUSTEES	2314	13600 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial		Commercial Use Industrial Zone Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01100	1100	6.44	LEGARD ANDREW C A	LEGARD GERALD D JR	3314	13800 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial; Valley Feed & Supply		Commercial Use Industrial Zone Partially Exempt	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01101	1101	6.00	WILCO FARMERS		3014	14000 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial; Grain Elevators; Other		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01201	1201	2.59	CALKINS MICHAEL S		4794	13501 SW OLD STATION RD	2.5	Riparian		Riparian	Riparian		Tract Disqualified from Farm Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01202	1202	8.59	SQUIRES FAMILY LIMITED PARTNERSHIP		3014	3555 SW SQUIRES WY	2.5	Commercial		Commercial	Commercial Shop; Grass		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01203	1203	4.91	MCMINNVILLE RV & SELF STORAGE LLC		3014	13999 S HIGHWAY 99W	2.5	Commercial		Commercial	Commercial; Storage; Rv & Uhaul		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01300	1300	5.90	REMINGTON GREG		3014	13341 SW OLD STATION RD	2.5	Commercial		Commercial	Commercial; Auto Salvage Yard; Riparian		Industrial Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-5-01601	1601	2.37	WEIRICH JEANNE	WEIRICH LARRY	5594	13765 SW OLD STATION RD	2.5	Residence		Residence	Residence		Farm EFU Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-6-00400	400	70.79	MCPHILLIPS FARMS INC		5505		0.5 to 1.5	Riparian		Riparian	Riparian	Same Riparian since at least 1994	Farm EFU Vacant	Non Farm Use	Nonfarm Immediate Vicinity Half To ONE Mile
55-4W-7-00901	901	10.36	FOX CARLA S	FOX ALAN J	5514	10551 SW RIVER BEND RD	1.5 to 2.0	Residence		Residence	Residence; Grass		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-00800	800	5.61	VANHOY RANDY K (WROS)	HERUBIN JUDI R (WROS)	5514	8910 SW RIVER BEND RD	2.5	Residence		Residence	Residence; Pasture		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00290	290	0.16	OREGON STATE OF	OREGON STATE OF HIGHWAY COMMISSION	9904		2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Exempt potl development Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00291	291	0.05	KNEEDLER MAUDE ROBBINS HEIRS AT LAW		9604		2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Exempt small tract forest Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00292	292	0.03			4004		2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00300	300	0.48	PAULL JERI	PAULL MICHAEL W	4014	3960 SE WHITESON RD	2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson			Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00400	400	0.21	WHITELY JIM		4014	14650 SE FIRST ST	2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00500	500	0.21	HERRING CAROL L		4014	14680 SE FIRST ST	2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00600	600	0.24	COTTAM DARRON R		4094	3990 SE WHITESON RD	2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00800	800	0.54	DOLLAR MARY A		4014	14850 SE FIRST ST	2.5	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-00900	900	0.38	CURTIS JACOB		4014	14854 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01000	1000	0.28	ALTRINGER SANDRA D	ALTRINGER JEFFREY F	4014	4005 SE BROWN ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01100	1100	1.78	BUNN CINDY		5514	8157 SW RIVER BEND RD	2.5	Residence		Residence	Residence		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01101	1101	0.63	SOUTHERN PACIFIC RAILROAD		0034		2.5	Vacant Railroad Property		Vacant Railroad Property	Open Space		Vacant Railroad Property	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01102	1102	1.97	BUNN CINDY		5504		2.5	Open Space		Open Space	Open Space		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01200	1200	0.81	TRANSPORTATION CO	SOUTHERN PACIFIC	0034	8201 SW RIVER BEND RD	2.5	Vacant Railroad Property		Vacant Railroad Property	Open Space		Vacant Railroad Property	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-8-AD-01300	1300	0.83	SOUTHERN PACIFIC TRANSPORTATION CO		0034		2.5	Vacant Railroad Property		Vacant Railroad Property	Railroad		Vacant Railroad Property	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-00800	800	0.79	RICKERD KENDY L	RICKERD JAMES G	4094	4120 SE CHERRY RD	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-00900	900	0.63	BRAY ROBERT L		4014	14515 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01000	1000	0.81	MARTIN DORIS R	MARTIN WALTER F	4094	4180 SE CHERRY RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01001	1001	0.87	NORWOOD THOMAS		4094	4210 SE CHERRY RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01100	1100	0.66	WALSH BEVERLY	WALSH JAMES C	4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01101	1101	0.82	WALSH BEVERLY	WALSH JAMES C	4094	4230 SE CHERRY RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01200	1200	1.42	BARBER DEBRA A	BARBER EDWARD L	4094	4400 SE CHERRY RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BB-01300	1300	1.46	BARBER DEBRA A	BARBER EDWARD L	4014		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00100	100	0.90	CLARK ZOIE M	CLARK PHILLIP E	4014	14588 SE BURNS RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00101	101	0.69	JOHNSON KATIE	JOHNSON JONATHAN D	4014	14580 SE BURNS RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00200	200	0.47	HART DAVID V	HART CONNIE C	4094	14495 SE FOURTH ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00201	201	0.47	CHURCH CHARLES D		4094	14575 SE FOURTH ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00202	202	0.63	VILLASENOR PATRICIA E		4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00300	300	0.99	HERMENS DEBRA L	HERMENS JOHN F	4094	14600 SE FOURTH ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00301	301	0.66	BROWN SANDRA L	BROWN ROGER D	4094	14500 SE FOURTH ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00400	400	0.67	BERKEY NOAH W		4094	4185 SE APPLE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands

55-4W-9-BC-00401	401	1.18	BERKEY NOAH W		4014	4175 SE APPLE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00500	500	0.63	SCHMIDT CHARLES E	TURNER LARRY L & LYDIA TRUSTEES FOR	4014	14555 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00600	600	0.95	GRAHAM RICHARD & CARREL		4094	14625 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00700	700	0.80	KRATZ PHILLIS J		4014	4121 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00800	800	0.41	DURAN MARIA J	DURAN SANTIAGO	4094	14671 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-00900	900	0.22	ORAVETS LISA A		4094	4071 SE WHITESON RD	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01000	1000	0.50	CASTRO ALEJANDRA G		4094	14715 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01090	1090	0.50	GRAHAM BONNIE E (WROS)	GRAHAM JOHNNY D (WROS)	4094	4235 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01100	1100	0.40	SWEERE MICHAEL D		4014	4231 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01200	1200	0.59	CLINE HEBERT & GLADYS		4094	4255 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01300	1300	0.67	SCHNATTERLY PATRICIA A		4014	4341 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01400	1400	0.64	CRONIN DONALD M		4094	4375 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01401	1401	0.61	FLOCH DUANE R		4094	4385 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01500	1500	1.02	ELLIS MARK D		4014	4461 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01600	1600	2.17	GALE MONICA L (WROS)	GALE WILLIAM W (WROS)	4094	14840 SE BURNS RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01601	1601	1.40	GALE MONICA L	GALE WILLIAM W	4094	4480 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01602	1602	0.50	LOISELLE DEBRA L	LOISELLE ANDRE J	4014	14920 SE BURNS RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01700	1700	0.89	NORTON JEANETTE I REVOC LIVING TRUST	NORTON JEANETTE I TRUSTEE FOR	4094	4425 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01701	1701	0.78	ROHNING FAMILY TRUST	ROHNING FRANK M & ANN H TRUSTEES FOR	4094	4340 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01702	1702	0.82	ROHNING FAMILY TRUST	ROHNING FRANK M & ANN H TRUSTEES FOR	4014	4380 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01703	1703	0.24	VICARS CHARLYNN L		4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01704	1704	0.49	VICARS CHARLYNN L		4094	4401 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01800	1800	1.47	BACON DALE L		4014	4236 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-01900	1900	1.20	BELL OREST E & KAREN J		4014	4180 SE WHITESON RD	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02000	2000	0.48	HERMENS JOSHUA J		4014	14824 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02100	2100	0.40	LOPEZ ALMA D	LOPEZ JOSE A	4094	4050 SE WHITESON RD	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02200	2200	0.24	DEIS BRIAN	BERRY ROBERT	4014	14831 SE FIRST ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02300	2300	0.34	WEISER GEORGIA A REVOCABLE TRUST	WEISER GEORGIA A TRUSTEE FOR	4014	14855 SE FIRST ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02301	2301	0.41	ALEXANDER EVA	ALEXANDER BARRETT N	4094	14850 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02302	2302	0.21	WEISER GEORGIA A REVOCABLE TRUST	WEISER GEORGIA A TRUSTEE FOR	4014	4105 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02303	2303	0.14	WEISER GEORGIA A REVOCABLE TRUST	WEISER GEORGIA A TRUSTEE FOR	4014	4075 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02400	2400	0.14	WEISER GEORGIA A REVOCABLE TRUST	WEISER GEORGIA A TRUSTEE FOR	4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02500	2500	0.28	BAKER CHARLES M		4094	14871 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02501	2501	0.55	RILEY JAMIE	RILEY KEVIN	4094	14921 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02502	2502	0.08	RILEY JAMIE	RILEY KEVIN	4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson			Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02504	2504	0.51	RILEY JAMIE	RILEY KEVIN	4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-BC-02600	2600	1.61	BACON DALE L		4014		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00200	200	0.79	HILL KIM M	HILL JEFFREY S	4014	15060 SE SECOND ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00201	201	0.63	CAMPOS-BERMUDEZ ALICIA	CAMPOS-BERMUDEZ TRANSITO	4014	4170 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00300	300	0.62	GRAY KIMBERLY A	GRAY JASON L	4014	4110 SE BROWN ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00400	400	0.24	FAULHABER MARY L	FAULHABER DONALD W	4004		3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00500	500	0.24	FAULHABER MARY L	FAULHABER DONALD W	4014	15025 SE FIRST ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00600	600	0.55	BILODEAU BRYON D		4014	14990 SE FIRST ST	2.5 to 3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00700	700	0.97	PAULL JERI L	PAULL MICHAEL W	4014	4000 SE WILLAMETTE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00800	800	0.90	DAVIS JERRY L	DAVIS ELEANOR L	4094	4100 SE WILLAMETTE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00801	801	0.90	RAMER JENNIE M	RAMER NATHAN M	4014	4070 SE WILLAMETTE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-4W-9-CB-00900	900	1.95	COLLINS ORA B	COLLINS JAMES B	4094	4130 SE WILLAMETTE ST	3.0	Town of Whiteson		Town of Whiteson	Town of Whiteson		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands

55-5W-1-00101	101	25.94	RIVERBEND LANDFILL COMPANY INC		3035	13475 SW HIGHWAY 18	0.125 to 0.25	Subject			Subject	Subject Lnadfill	Subject Property	Industrial State Responsibility	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-10-01300	1300	3.07	KECK FAMILY TRUST	KECK VAN W & GLENDA R TRUSTEES FOR	5515	15820 SW DUSTY DR	2.5	Residence			Residence	Residence; Pasture		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-1-00200	200	208.92	RIVERBEND LANDFILL CO		3035	13465 SW HIGHWAY 18	0.125 to 0.5	Subject			Subject	Subject Current Landfill	Subject Property	Industrial State Responsibility	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-1-00300	300	3.89	RIVERBEND LANDFILL CO		5504		0.125 to 0.5	Subject			Subject	Subject Riparian	Subject Property	Farm EFU Vacant	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-1-00390	390	0.28	CONVERSION 2014		4104		0.5	Open Space			Open Space	Open Space & Riparian; owned by Riverbend	Subject Property	Tract Use Residential Zone Partially Exempt	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-1-00400	400	61.28	RIVERBEND LANDFILL CO		5515	13965 SW HIGHWAY 18	0.125 to 0.5	Subject			Subject	Subject Proposed Landfill Site	Subject Property	Farm EFU Improved	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-1-00401	401	34.46	RIVERBEND LANDFILL CO		5295	14325 SW HIGHWAY 18	0.125 to 0.25	Subject			Subject	??Former RV Park; owned by Riverbend	Subject Property	Farm Commercial Manf Structure	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-1-00800	800	2.54	MICKEY LESLIE E	MICKEY LOREN D	4015	13130 SW HIGHWAY 18	0.25	Residence			Residence	House and Barn	Same house and barn since at least 1994; small area near creek stopped grass between 1994 and 2000	Tract Improved	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-11-00400	400	0.85	STUCK THOMAS		4015	14750 SW DELASHMUTT LN	0.75	Residence			Residence	Residence	Same area dedicated to grass or pasture since at least 1994	Tract Improved	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-11-01200	1200	4.05	RODRIGUEZ ENRIQUE G		5515	15810 SW DELASHMUTT LN	1.5	Residence			Residence	Residence		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-12-00200	200	9.58	RIVERBEND LANDFILL CO		5505		0.25 to 0.5	Open Space			Open Space	Open Space & Riparian; owned by Riverbend	Same areas of Open Space and Riparian since at least 1994	Farm EFU Vacant	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-12-00690	690	1.98	YAMHILL COUNTY		9504		0.5	Open Space			Open Space	Open Space & Riparian	Same areas of Open Space and Riparian since at least 1994	Exempt Farm partially exempt	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-12-00790	790	8.98	YAMHILL COUNTY		9504		0.5 to 0.75	Open Space			Open Space	Open Space & Riparian	Same areas of Open Space and Riparian since at least 1994	Exempt Farm partially exempt	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-12-01800	1800	3.57	BUTLER ELOUISE L	BUTLER MARY G &	5514	12340 SW RIVER BEND RD	0.75	Residence			Residence	Residence; Open Space	Same residence and open space since at least 1994	Farm EFU Improved	Non Farm Use	Nonfarm Immediate Vicinity Half To ONE Mile
55-5W-13-00500	500	28.96	JONES GRETCHEN K REV LIV TRUST	JONES WILLIAM A TRUSTEE FOR	5504		2.0 to 2.5	Riparian			Riparian	Riparian		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-14-00600	600	5.86	WRIGHT JAKOB B W		6405		1.5 to 2.0	Riparian			Riparian	Riparian		Forest Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-14-00700	700	3.81	CT YAMHILL LLC		5504		1.5	Riparian			Riparian	Riparian		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-15-00500	500	2.79	HIGGINS DANIEL J		0005		2.5	Open Space			Open Space	Open Space		Misc Leased	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-15-00600	600	4.24	BURNS CATHERINE	BURNS JACOB	5505		2.5	Open Space			Open Space	Open Space		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-15-00900	900	4.12	PARKS AND RECREATION DEPARTMENT	OREGON STATE OF	9605		2.5	State Park			State Park	Erratic Rock State Park		Exempt small tract forest Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-15-01100	1100	0.83	TACKETT WILLIAM G & JOY M		4015	17175 SW OLDSVILLE RD	2.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-2-00100	100	2.54	BERNARDS MARY B	BERNARDS JOHN G	5715	14735 SW MASONVILLE RD	0.75	Residence			Residence	Residence; Barns	Same Residence and Barns since at least 1994	Farm disqualified farm use Improved	Non Farm Use	Nonfarm Immediate Vicinity Half To ONE Mile
55-5W-2-00400	400	1.07	SCHMIDT FAMILY TRUST	SCHMIDT EUGENE J & IRENE A TRUSTEES FOR	5515	14280 SW HIGHWAY 18	0.125 to 0.25	Residence	walnuts, hazel nuts, nursery tock, grass	Tom Schmidt	Residence	residence	Same residence; same surrounding areas of farm use since at least 1994	Farm EFU Improved	Non Farm Use	Nonfarm Immediate Vicinity Half Mile
55-5W-21-00100	100	0.25	SIMPSON EDITH J		2015	17850 SW HIGHWAY 18	3.0	Commercial			Commercial	Commercial Vacant Bldng			Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-21-00600	600	1.15	ROSSNER NI MADE		5515	18920 SW BELLEVUE HWY	4.0	Residence			Residence	Residence		Farm EFU Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-24-00201	201	2.92	HOFFMAN CASEY J		4794	18830 SW BRIEDWELL RD	2.5	Residence			Residence	Residence		Tract Disqualified from Farm Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-00100	100	6.40	SOUTH YAMHILL CEMETERY ASSN		9305		1.5	Cemetery			Cemetery	Cemetery		Exempt Industrial Zone Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-00200	200	0.94	COYLE MICHAEL A		4005		1.5	Access			Access	Access			Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-00700	700	3.25	SMITH LIVING TRUST	SMITH FREEMAN E & RAMONA TRUSTEES FOR	4095	16145 SW SUNRISE LN	1.5	Residence	grass	Christensen Farms	Residence	Residence		Tract Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-00900	900	3.98	MCGHEHEY TRACIE S	MCGHEHEY JOHN C	4015	16105 SW SUNRISE LN	1.5	Residence			Residence	Residence		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-01000	1000	2.00	LEPPIN GEORGE O & MARILYN A		6415	16000 SW SUNRISE LN	1.5	Residence			Residence	Residence		Forest farm Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-01100	1100	2.06	MCGHEHEY FAMILY TRUST	MCGHEHEY JOHN H & PATRICIA L TRUSTEES OF	4005	16231 SW SUNRISE LN	1.5	Open Space			Open Space	Open Space		Tract	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-01300	1300	1.20	MCCABE METHODIST CHURCH		9115	13150 SW MCCABE CHAPEL RD	1.0 to 1.5	Church			Church	Church		Exempt Res zone Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-01400	1400	1.45	BEALS MARY K		4015	13430 SW MCCABE CHAPEL RD	1.5	Residence			Residence	Residence; Barns		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-02100	2100	10.06	STEVENSON FAMILY TRUST	STEVENSON MARGARET A TRUSTEE	4015	16900 SW SUNRISE LN	2.0	Residence			Residence	Residence; Grass		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-3-02200	2200	23.24	SUN ENOCH		4015	12140 SW MCCABE CHAPEL RD	1.5 to 2.0	Residence			Residence	Residence; Pasture		Tract Improved	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-9-00101	101	2.08	MOMTAZI FAMILY LLC		5505		3.0 to 4.0	Open Space			Open Space	Open Space		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-9-00300	300	21.85	HEAIRET JODY	HEAIRET BRAD	4795	14501 SW MUDDY VALLEY RD	3.0	Residence			Residence	Residential; Pasture		Tract Disqualified from Farm Manf Structure	Non Farm Use	Nonfarm Broad Area Surrounding Lands
55-5W-9-00600	600	1.33	MOMTAZI FAMILY LLC		5505		3.0 to 4.0	Open Space			Open Space	Open Space		Farm EFU Vacant	Non Farm Use	Nonfarm Broad Area Surrounding Lands

# APPENDIX B

## RESUMES

- JAY HARLAND
- MICHAEL SAVAGE





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## Jay Harland

Principal

Jay Harland joined CSA Planning in 2004 as a Principal. He has an in-depth knowledge of Oregon land use law and the public review process. He is proficient in technical analyses involving statistical and mathematical models. Before joining CSA, Mr. Harland was project manager for the Jackson County 20-year, county-wide Transportation System Plan. His duties included revising the transportation element of the comprehensive plan and coordinating public involvement.

Mr. Harland has an expertise in developing Findings of Fact and Conclusions of Law that demonstrate compliance with approval criteria. For the City of Medford and Organic Food Manufacturer Amy's Kitchen, Mr. Harland brought about Whetstone Industrial Park overlay amendments and represented the clients at public hearings. He demonstrated a need to adjust lot sizes to reflect trends in business financing methods. The amendments solved a technical problem with boundaries and accommodated new environmental constraints for vernal pools. His success was due in part to his working knowledge of the Endangered Species Act. Mr. Harland was project manager for the Rogue Valley Transportation District (RVTD) boundary assessment funded by Oregon Department of Transportation (ODOT). In a consultant evaluation, ODOT scored Mr. Harland's team 5 out of 5 possible points and RVTD gave a score of 4.97 out of 5.

### Experience

**Principal**

CSA Planning, Ltd, Medford, OR

**Transportation Planner**

Jackson County, Medford, OR

**Research Planner**

Missoula Office of Planning & Grants Missoula, Montana

### Education

**Master of Arts in Geography, Rural, Town and Regional Planning (Graduated with 4.0 GPA)**

University of Montana, Missoula, Montana

**Bachelor of Arts in Philosophy**

University of Montana, Missoula, Montana

### Project Responsibilities

- Project Management
- Technical and Economic Analysis
- Transportation Planning
- Project Feasibility and Site Plan Development and Review

### PROJECT EXPERIENCE

**CSA Planning, Ltd.**

*Major Firm Projects:*

- Project Manager for Rock-n-Ready Mix Aggregate Expansion Master Plan, Comp Plan Map Amendment and Zone Change
- Project Manager for the City of Medford Economic Opportunities Analysis adopted December 2008.
- Project Manager and Analyst for Rogue Valley Transportation District Boundary Study (TGM).
- Principal Planner and Analyst for the Whetstone Industrial Park Urban Overlay Amendment for City of Medford and Amy's Kitchen
- Principal in Charge of the City of Medford's US Cellular Sports Park Site Planning Review process.
- Principal Planner Northgate Center and Alba Village mill development project.



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# **Michael Savage**

## **Associate Planner**

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Michael Savage joined CSA Planning in 2008 as an Associate Planner with a specialty in GIS land use analysis and cartography. He has expertise in tackling major spatial and geo-database projects. Before joining CSA, Mr. Savage helped develop the award-winning, web-based planning and assessment program called *Front Counter Application*. He was a member of the management team for Jackson County Planning and Development.

Mr. Savage brings to each project an in-depth knowledge of land use development ordinances. For Rogue Valley Transportation District boundary study, he analyzed population and employment growth, created a detailed, color Atlas and provided key elements in the development of a transit transportation model. Mr. Savage has played a key role in analysis, cartography and supplementing Findings of Fact Conclusions of Law for a landfill redevelopment project. He is experienced with multi-agency coordination and permitting, site planning and development.

The Greater Bear Creek Valley Regional Problem Solving Plan, approved by the Land Conservation and Development Commission on March 7, 2013, establishes a system to guide long-term planning for the next 50 years. Mr. Savage's analysis, maps and tables illustrated data for one of the most comprehensive growth plans in the state.

Mr. Savage also brings several years of experience working on a variety of farms in an assortment of duties including but not limited to planting, harvesting, heavy equipment operation, logging, and orchard installation and maintenance.

### **Experience**

Planning Associate  
**CSA Planning, Ltd, Medford, Oregon**  
Land-Use Planning Permit-System Administrator  
**Jackson County, Medford, Oregon**  
GIS Programmer and Analyst  
**Jackson County, Medford, Oregon**

### **Education**

**Bachelor of Arts in Geography**  
Southern Oregon University, Ashland, Oregon

### **Project Responsibilities**

- GIS Land-Use Analysis and Cartography
- Project Research and Development
- Develop Findings and Conclusions
- Project Feasibility Review
- Site Plan Development and Review

### **PROJECT EXPERIENCE**

#### **CSA Planning, Ltd.**

##### *Major Firm Projects:*

- GIS and Research Analyst and Cartographer for Landfill Redevelopment Project, Comprehensive Plan Map Amendment for South Stage Landfill Inc.
- GIS analysis, Cartography and Public Involvement for Rogue Valley Transportation District Boundary Assessment (TGM)
- GIS Analysis, Research and Findings of Fact for City of Phoenix Urban Growth Boundary Expansion.
- GIS Analysis for City of Medford Economic Opportunities Analysis.

#### **Previous Experience**

##### *Major Projects:*

- White City Buildable Lands Analysis and Major Rezone
- Destination Resort Element and Map for the Jackson County Land Development Ordinance
- Land Development Ordinance and Comp Plan Update

# APPENDIX C

## TECHNICAL MEMORANDUM

### Regulatory Monitoring Programs for Water Quality Protection at Riverbend Landfill, McMinnville, Oregon

SCS Engineers - November 5, 2014



## SCS ENGINEERS

### TECHNICAL MEMORANDUM

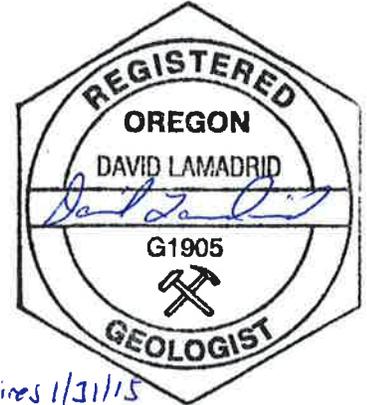
**DATE:** November 5, 2014

**TO:** Jay Harland, CSA Planning, Ltd.

**Cc:**

**FROM:** Louis Caruso and David Lamadrid, R.G., SCS Engineers

**SUBJECT:** **Regulatory Monitoring Programs for Water Quality Protection at Riverbend Landfill, McMinnville, Oregon (Client-Review Draft)**



Water-quality protection monitoring at Riverbend Landfill (RL) is performed to evaluate the performance of engineered environmental control systems (e.g., landfill liner, leachate collection system, landfill gas control and collection system, and stormwater management system), and provides early detection of any potential releases from these systems. Early identification of potential releases from these protection systems allow further analysis to be performed to assess any potential release against applicable regulatory criteria. This memorandum describes the regulations, permits, and plans that require water-quality protection monitoring at RL. It also summarizes the water-quality protection monitoring programs and historical monitoring results demonstrating that RL has been in compliance with Oregon Department of Environmental Quality (DEQ) water-quality regulations. SCS Engineers (SCS) prepared this memorandum at the request of Riverbend Landfill Company (RLC).

## REGULATIONS AND PERMITS

### Federal and State Regulations

The water-quality monitoring programs implemented at RL are designed to comply with the Solid Waste Facility Criteria (and revisions) in 40 Code of Federal Regulations (CFR), Part 258 (Criteria for Municipal Solid Waste Landfills, Subtitle D). It includes requirements for the location, design, and installation of monitoring systems and sampling and analysis standards. Oregon, a U.S. Environmental Protection Agency (EPA)-approved state for administering environmental monitoring programs in Oregon, has incorporated parts of 40 CFR, Part 258, into its state regulations. Oregon Administrative Rules (OARs) and guidance from the DEQ that pertain to the environmental compliance and reporting programs for RL include the following:

- OAR 340-040 (Groundwater Quality Protection Rules).
  - OAR 340-93-0130 (Site Characterization).
  - OAR 340-94-0010 (Adoption of EPA's Subtitle D Rules).
  - OAR 340-94-0040 (Operating Criteria).
  - OAR 340-94-060 (Design Criteria).
  - OAR 340-94-080 (Groundwater Monitoring and Corrective Action).
- OAR 690, Division 240 (Construction, Maintenance, and Decommissioning of Monitoring Wells, Geotechnical Holes, and Other Holes in Oregon) (OWRD, 1994).
- DEQ Internal Management Directive for developing concentrations limits at permitted solid waste and water quality facilities, February 2011 (DEQ, 2011).

### **Solid Waste Disposal Permit**

RL operates under Solid Waste Disposal Site Permit No. 345 (SWDP), issued by the DEQ on December 3, 1999, to accept municipal solid waste and approved special waste. Although the SWDP has an expiration date of December 1, 2009, it has been administratively extended by the DEQ in compliance with OAR 340-093-0070(6)(b)(C) (DEQ, 2012). The following sections of the SWDP pertain to the environmental monitoring and reporting programs at RL:

- Section 12.0, Site Characterization
- Section 13.0, Environmental Monitoring Plan.
- Section 14.0, Environmental Sampling Requirements.
- Section 15.0, Establishing Permit-Specific Concentration Limits.
- Section 16.0, Environmental Monitoring Standards.
- Section 17.0, Record Keeping and Reporting Environmental Monitoring.
- Section 18.0, Environmental Monitoring Network.

Section 13.0 of the SWDP requires that RL maintain and periodically update a site-specific Environmental Monitoring Plan (EMP). The EMP, last updated in July 2013 (SCS, 2013),<sup>1</sup> describes the environmental monitoring networks and programs at RL, and includes sampling protocols and procedures, related to monitoring groundwater, stormwater, and surface water.<sup>2</sup> The EMP includes a Landfill Gas Management Plan, Sampling and Analysis Plan, and laboratory Quality Assurance Manual.

### **Stormwater Discharge Permit**

40 CFR, Parts 122, 123, and 124, require National Pollutant Discharge and Elimination System (NPDES) permits for discharges of stormwater from certain industrial and construction activities. The DEQ, as the EPA-delegated authority, is responsible for implementing these regulations in Oregon and issued a renewed NPDES 1200-Z Industrial Stormwater General Permit (NPDES Permit) to RL on June 13, 2013, effective through June 30, 2017.

The NPDES Permit includes specific requirements for stormwater monitoring and reporting activities. Additionally, the NPDES Permit requires that RL maintain and periodically update a site-specific Stormwater Pollution Control Plan (SWPCP). The SWPCP, last updated in June 2014 (SCS, 2014b), is used to aid the facility in preventing industrial pollutants from entering stormwater runoff from the facility. The SWPCP provides guidance regarding stormwater pollution control strategies, maintaining existing controls, and developing and implementing appropriate new controls.

In compliance with the NPDES Permit, the site performs routine inspections to assess the overall condition of the landfill and stormwater control systems to identify needed repairs for any issues identified.

### **SUMMARY OF WATER QUALITY PROTECTION MONITORING**

This section provides a brief overview of the water quality monitoring and reporting programs at RL, and summarizes the interpretation of historical and recent monitoring results for groundwater, stormwater, and surface water. Details and in-depth descriptions of the monitoring and reporting programs are provided in the permits and documents described in the previous sections.

#### **Background**

Numerous local and regional hydrogeological investigations have been performed at and in the vicinity of RL. Onsite investigations began in 1981 before the landfill was constructed and continued through 2014 because of requirements associated with landfill expansion permitting. In

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<sup>1</sup> The DEQ conditionally approved the EMP in a review letter dated March 18, 2014 (DEQ, 2014), pending submittal of additional information. RLC plans to submit a revised EMP in 2014 that incorporates the additional information requested by the DEQ. In its March 18, 2014, letter, the DEQ noted that environmental monitoring activities could be implemented immediately in 2014 in accordance with the updated July 2013 EMP.

<sup>2</sup> The EMP also describes schedules and protocols for monitoring the primary leachate collection system and secondary containment system, and for performing compliance monitoring landfill gas.

general, the investigations included drilling and sampling soil borings; installing and sampling groundwater monitoring wells; geophysical testing (including surface and subsurface methods); collection and analysis of leachate, landfill gas, and environmental media (soil, groundwater, surface water, and stormwater); and aquifer hydraulic parameter characterization. Figure 1 is a site plan of the facility showing existing and historical monitoring and exploratory locations. The past studies provided (1) the foundation for hydrogeologic interpretations at RL, and (2) the technical basis for developing the environmental monitoring programs presented in RL's DEQ-approved EMP.

### **Water Quality Monitoring Schedules and Data Evaluation**

Water-quality monitoring at RL is performed on a routine basis in accordance with schedules described in the EMP for groundwater and surface water<sup>3</sup>, and in the SWPCP for stormwater. Additionally, the EMP and SWPCP specify analytical parameters that must be tested for in water quality samples.

The EMP includes the following key elements for evaluating environmental monitoring analytical data:

- Quality assurance/quality control (QA/QC) procedures to (1) confirm that the laboratory data meet certain minimum QA/QC standards described in the laboratory's Quality Assurance Manual (included in Appendix D of the EMP) and EPA QA/QC requirements, and (2) determine the usability of the laboratory analytical data for comparison to regulatory criteria.
- Comparing analytical data to regulatory criteria including (1) statistically derived concentration (prediction) limits for some groundwater monitoring parameters, or (2) state and/or federal regulatory or benchmark limits (i.e., concentration standards) specified in the EMP, SWPCP, and facility permits (i.e., SWDP and NPDES permits).

The EMP and SWPCP describe notification requirements to the DEQ in the event that data evaluation criteria are exceeded, as well as response or corrective actions that must be subsequently undertaken.

### **Reporting**

The reporting of water quality monitoring data for RL, consistent with minimum requirements of Section 17.0 of the SWDP and the NPDES Permit, includes the following:

- Annual environmental monitoring report (AEMR)

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<sup>3</sup> Surface water monitoring of the South Yamhill River is not required by RL's SWDP; however, annual monitoring, including laboratory analysis of samples collected from of the South Yamhill River was voluntarily performed in 2012 and 2013 for information purposes.

- DEQ-split sampling report (if DEQ split sampling is performed during a given year)
- Quarterly and annual stormwater Discharge Monitoring Reports (DMRs).

### **Summary of Water Quality Monitoring Results**

This section (1) provides a brief overview of RL's water-quality monitoring systems and (2) describes results of RL's groundwater, stormwater, and surface water monitoring programs based on historical and on-going monitoring data that are regularly reported to and reviewed by the DEQ.

#### **Groundwater**

A network of groundwater compliance monitoring wells are located hydraulically downgradient of existing landfill modules to provide early detection of a potential release. The compliance monitoring network consists of monitoring well pairs MW-12A/B, MW-14A/B, MW15A/B, MW16A/B, and MW21A/B (see Figure 1). Historical groundwater monitoring data date back to 1996/1997 for some of these wells. The historical groundwater monitoring database is continuously updated, evaluated, and reported on a yearly basis in the AEMRs, including the most recent 2013 AEMR (SCS, 2014a).

The analytical results for groundwater samples historically collected from the compliance monitoring wells have indicated that no contaminant releases from the landfill unit have occurred (SCS, 2014a). The DEQ agreed with this conclusion in its review letter of the most recent (2013) AEMR (DEQ, 2014b).

There have been two localized occurrences of groundwater quality impacts at RL based on historical groundwater monitoring results from detection monitoring wells (i.e., wells that are used to monitor these groundwater quality impacts but are not compliance monitoring wells) (SCS, 2014a). These groundwater quality impacts are described below.

- Analytical results of groundwater samples collected in 2013 from detection wells monitoring groundwater quality downgradient of the poplar tree farms continue to show that previous leachate irrigation has changed groundwater quality in shallow water-bearing zone (WBZ) well MW-20A (north field) and to a lesser degree at shallow WBZ well MW-19A (south field) (SCS, 2014a). Concentrations of some inorganic parameters (including chloride [Cl], sodium [Na], magnesium [Mg], and total dissolved solids [TDS]) have been detected in groundwater from one or both wells above their statistically derived concentration limits. However, the concentrations of these parameters are below their regulatory limits, except for Cl and TDS in well MW-20A groundwater. Leachate irrigation of the poplar tree farms was suspended in 2013 in response to these water-quality changes (CH2M Hill, 2013); the poplar trees have been irrigated exclusively by precipitation since 2013.

- Low-level concentrations of volatile organic compounds (VOCs) were detected in groundwater samples collected in 2013 from detection monitoring well MW-5A located directly adjacent to the existing landfill footprint (SCS, 2014a). Results of a remedial investigation performed in 1993 (EMCON Northwest, Inc., 1993) demonstrated that LFG was the source of VOCs impacting shallow groundwater in the well MW-5A area. The number of VOCs and their concentrations historically detected in MW-5A groundwater have significantly decreased due operational improvements and controls installed since impacts were first identified in the early 1990s. Additionally, VOCs have not been detected in the groundwater sample collected from detection monitoring well MW-5B (located adjacent to MW-5A and screened in the lower sand-gravel WBZ) in 2013, or in compliance monitoring wells located hydraulically downgradient of detection monitoring well MW-5A. The decreasing concentration trends indicate that the active LFG collection and control system (GCCS) at RL is effective at (1) eliminating the source of VOCs in shallow groundwater near MW-5A and (2) mitigating the lateral migration of VOCs in shallow groundwater near MW-5A, as noted by the DEQ in its June 26, 2001, letter (DEQ, 2001).

Historical groundwater analytical data show that the localized groundwater quality impacts at RL do not extend significantly beyond the affected detection monitoring wells and are proximal to the landfill unit. In conclusion, the impacts are not affecting surface water quality in the South Yamhill River (discussed below) and are not expected to in the future. Operational controls and the monitoring network design have proven effective in maintaining compliance with water quality criteria at the facility point of compliance. The DEQ does not require corrective action due to these localized groundwater quality impacts because (1) the affected wells are not point-of-compliance wells, and (2) the water quality impacts are anticipated to attenuate over time.

### **Stormwater**

There are two regulated stormwater monitoring points (Outfalls 2 and 4) located where stormwater discharges from the landfill into nearby, unnamed drainages within the RL property (see Figure 1). Recent analytical results of stormwater samples collected in 2013 and 2014 indicated that parameter concentrations were below regulatory (benchmark) criteria except for single exceedances for (Zn) and *E. coli* (SCS, 2014c). In accordance with the new NPDES Permit requirements for the 2013-2014 monitoring year (i.e., consistent the Schedule A.10 of the permit), RL performed a Tier I corrective action to address the Zn and *E. coli* benchmark exceedances (SCS, 2014c). The Tier I corrective action included site inspections to evaluate the source of the Zn and *E. coli* benchmark exceedances. The elevated Zn concentration was likely related to erosion of exposed soils in a recently expanded, onsite stormwater detention pond. Before this expansion, the detention pond had established vegetation and no exposed soils. Additionally, site inspection identified the presence of wildlife on the RL property as a potential contributory source of the elevated *E. coli* at Sampling Point 4. RLC also performed microbial source testing of *E. coli* in Sampling Point 4 stormwater and determined that it was related to a natural source (i.e., avian) and not related to the RL industrial activities.

Overall, parameter concentrations in stormwater are low. RL requested monitoring waivers, consistent with Schedule B, Section 4.a.i.1, of the NPDES Permit, to eliminate monitoring of all benchmark parameters at one of the monitoring locations because the calculated geometric mean value of the last four consecutive sampling results are below the regulatory (benchmark) criteria, including for Zn and *E. coli*.

Stormwater monitoring results indicate that onsite best management practices are effective at minimizing or preventing impacts to stormwater that discharges from the site. As a result, stormwater discharging from the site is not affecting surface water quality in the South Yamhill River (discussed below) and is not expected to in the future.

### **Surface Water**

Surface water samples were collected from the South Yamhill River in 2012 and 2013 from monitoring points located upstream (SYR SW-1) and downstream (SYR-SW-3) of the landfill (see Figure 1). The surface water sample analytical results, including *E. coli* and Zn, showed general uniformity in the concentrations of water quality parameters between the upstream and downstream samples (SCS, 2014a). The results indicate that the South Yamhill River is not affected by landfill activities.

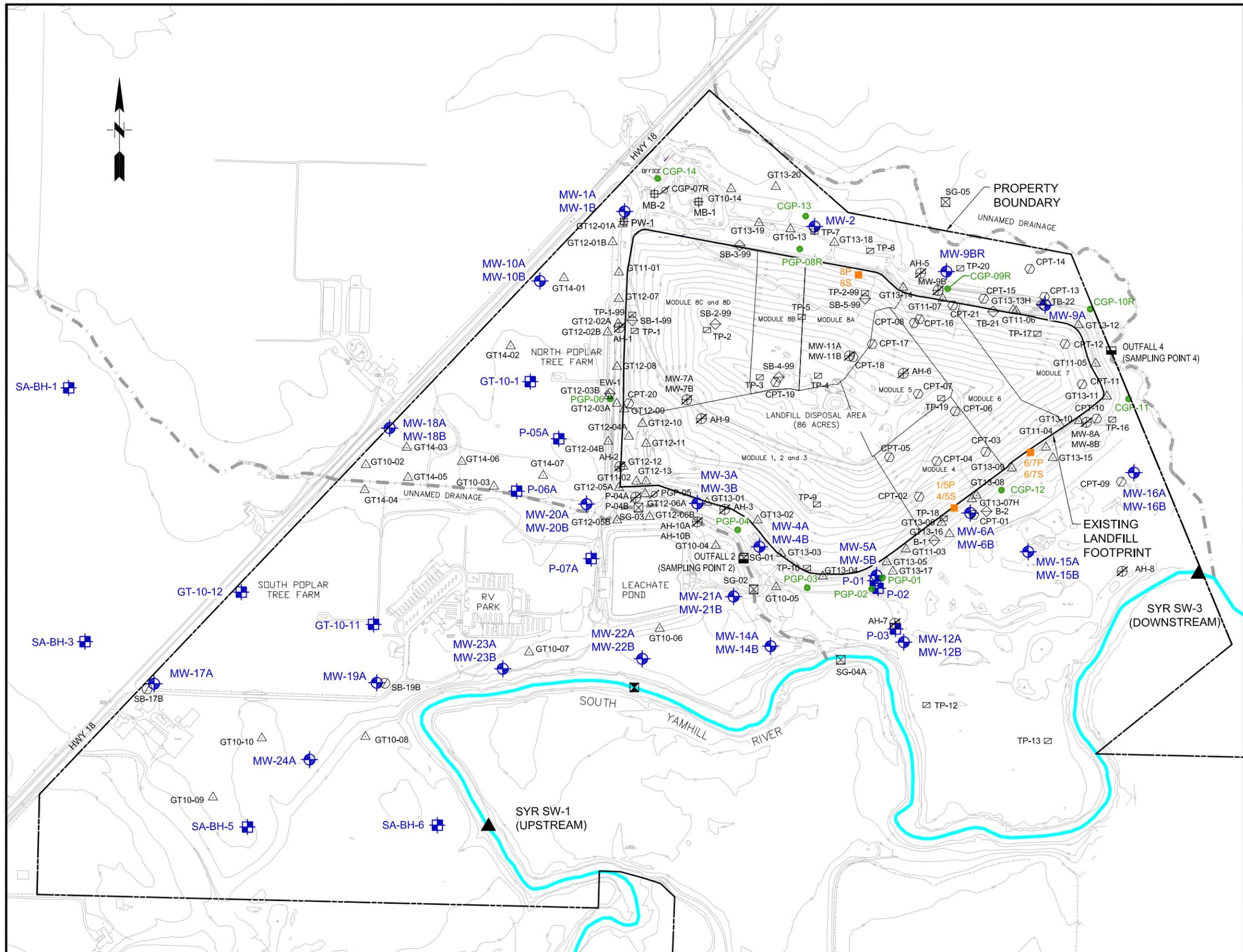
In January 2014, during an extreme weather event, the leachate collection tanks reached capacity that caused a seep to occur that carried leachate towards the unnamed creek that borders the north side of the landfill. RLC identified the seep during a regular inspection and responded quickly to contain and control the seep; however, some leachate eventually reached the creek. RL assessed the potential impacts to surficial soils in the area, surface water, and to the creek biology from the event. The assessment results showed that there were no significant impacts to the environment or to the existing health of the creek and that no long-term effects would be expected. Surface water quality monitoring for pH, temperature, conductivity, and turbidity was performed at locations both upstream and downstream from where the seep discharged into the creek. The monitoring results showed that the leachate seep had no effect to these water-quality indicator parameters at the monitoring locations.

In response to this leachate seep event, RLC implemented several operational changes to significantly reduce the likelihood that such an event will occur in the future. The operational changes included installing (1) overflow alarms with an auto-dialer system in the leachate collection tanks and (2) a bypass line for diverting leachate from the tanks to the leachate pond. The DEQ did eventually issue a monetary fine to RL from the seep event because water-quality regulations impose strict requirements prohibiting any leachate from the lined area of the landfill regardless of whether impacts actually resulted from such a release.

Attachments: Figure 1 – Site Plan with Existing and Historical Monitoring/Exploratory Locations

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- Oregon Department of Environmental Quality, 2014a, Letter (re: 2013 Riverbend Environmental Monitoring Plan, Yamhill County SWDP #345), to F. Willmann, Waste Management, Portland, Oregon, from A. Eldridge, DEQ, The Dalles, Oregon, March 18.
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- SCS Engineers, 2014c, Letter-Report (Re: 2013-2014 National Pollutant Discharge Elimination System Annual Stormwater, Discharge Monitoring Report, Riverbend Landfill Company, Riverbend Landfill, DEQ Permit No. 1200-Z, File No. 106959), to J. Denson, Riverbend Landfill Company, from J. Davendonis and L. Caruso, SCS, Portland, Oregon, July 25, 2014,



**LEGEND :**

- Topographic Contours (Surveyed)
- - - Topographic Contours (USGS)
- Property Boundary
- Flow Line - Yamhill River
- - - Flow Line - Unnamed Drainage

**EXISTING MONITORING LOCATIONS**

- MW-19A Groundwater Monitoring Well
- P-05A Piezometer
- MB-2 On-Site Water Well
- South Yamhill River Gauging Station
- CGP-14 Landfill Gas Monitoring Probe
- 6/7P LCRS and LSCS Monitoring Location
- 6/7S LCRS and LSCS Monitoring Location
- SYR SW-1 South Yamhill River Sampling Locations (Approximate)
- OUTFALL 2 Stormwater Outfall Monitoring Locations

**FORMER MONITORING OR EXPLORATORY LOCATIONS**

- AH-5 Decommissioned Monitoring Well or Piezometer
- CGP-07A Decommissioned Landfill Gas Monitoring Probe
- B-1, EW-1, TB-21, SB-5-99 1993 or 1999 Test Boring
- SB-19B 2000 Test Boring
- CPT-10 1993 Cone Penetrometer Test Boring
- GT13-06 2010 - 2014 Geotechnical Borehole
- TP-10, TP-2-99 1981 or 1999 Test Pit
- SG-05 Former Stream Level Monitoring Location

**SOURCE:**

- 1) Topographic base map prepared by Miller Creek Aerial Mapping, using photogrammetric survey methods, date of photograph March 22, 2014. Contours are based on NAVD 88.

**NOTES:**

- 1) Monitoring wells and piezometers with "A" designation are screened in the shallow (Silt-Clay) water-bearing zone, and monitoring wells and piezometers with "B" designation are screened in the deeper (Sand-Gravel) water-bearing zone.
- 2) Piezometers with "GT" and "SA-BH" designations are screened in the shallow (Silt-Clay) water-bearing zone.
- 3) Leachate Collection and Removal System (LCRS) monitoring locations are identified by a "P" designation and Leachate Secondary Containment System (LSCS) monitoring locations are identified with a "S" designation.

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PROJECT NO. 04213025.14	DES BY D.L.
SCALE AS SHOWN	CHK BY D.L.
CAD FILE FIGURE 1	APP BY L.C.

**SITE PLAN WITH EXISTING AND HISTORICAL MONITORING/EXPLORATORY LOCATIONS**  
**RIVERBEND LANDFILL**  
**McMINNVILLE, OREGON**

DATE  
OCTOBER 2014  
 FIGURE  
**1**

# APPENDIX D

## TRAFFIC IMPACT ANALYSIS

### Riverbend Landfill Expansion

Jones & Stokes

August 2007





# Oregon

Theodore R. Kulongoski, Governor

## Department of Transportation

### Region 2 Tech Center

455 Airport Road SE Building A  
Salem, Oregon 97301-5397  
Telephone (503) 986-2990  
Fax (503) 986-2839

**DATE:** April 16, 2008

**File:** T39-1

**TO:** Mark Reeves  
Waste Management  
7227 NE 55<sup>th</sup> Avenue  
Portland, OR 97218  
(503) 331-2221

**FROM:** Stephen B. Wilson, PE   
Region 2 Senior Traffic Analyst

**SUBJECT:** Zone Change/Plan Amendment  
Traffic Impact Analysis Scope of Work  
Riverbend Landfill Expansion  
Salmon River Highway – OR 18 (Highway #39)  
Milepost 40.44 – 44.60  
Pacific Highway West – OR 99W (Highway #1W)  
Milepost 38.99 – 39.93  
City of McMinnville  
Yamhill County

These are review comments for the **Riverbend Landfill Expansion** Traffic Impact Analysis (TIA), prepared by **Jones & Stokes**. The focus of this review is the analysis methodologies and assumptions. This analysis was developed, for the most part, using ODOT analysis procedures and methodologies. No further analysis work should be required.

Page	Paragraph	Comment
7	2	The queuing analysis prepared for this study was developed using Highway Capacity Software (HCS). ODOT has determined HCS underestimates the 95 <sup>th</sup> Percentile queuing, and does not accept the analysis results. For unsignalized intersections, the AASHTO 2-Minute Rule is adequate for queuing analysis.
n/a	Traffic Development	The traffic data, seasonal adjustment factor, and growth rate all appear to be developed in accordance with ODOT procedures.
n/a	Capacity Analysis	The unsignalized intersection capacity analysis appears to be developed in accordance with ODOT procedures.
8	Summary & Conclusions	The conclusion of "no mitigation" appears reasonable for this proposed development.

If you have any questions regarding my comments, please contact me by phone at (503) 986-2857 or by e-mail at [stephen.b.wilson@odot.state.or.us](mailto:stephen.b.wilson@odot.state.or.us).

## Memorandum

---

Date: June 9, 2008

To: Shane Latimer

cc:

From: Ron Loewen

Subject: **Riverbend Landfill Expansion – ODOT TIA Comments**

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Regarding the comments on the TIA report we performed additional analysis on the required left turn pocket storage length. The AASHTO Policy on Geometric Design of Highway and Streets, page 718 recommends a storage pocket length adequate to accommodate the “number of turning vehicles likely to arrive in an average two-minute period within the peak hour.”

To perform the analysis we used the PM peak hour left turn vehicle volumes. In 2025 this volume is forecasted to be 16 vehicles. On average this is less than 1 vehicle every 2 minutes. The 95<sup>th</sup> percentile two-minute peak was calculated as 3 vehicles. The 95<sup>th</sup> percentile is the maximum number of anticipated vehicles that would be queued in the left turn pocket 95% of the time.

We also analyzed the year 2025 site peak hour generation which forecasted 58 left turns. On average this is approximately 1 vehicle per minute or over a 2 minute period would require storage for 2 vehicles. The 95<sup>th</sup> percentile peak was calculated as 4 vehicles.

The longest anticipated queue is 4 vehicles. The left turn classification counts indicate that 50% of the vehicles turning left are trucks of 50 feet in length. Assuming a queue length of 55 feet per truck and 25 feet for all other vehicles the 95<sup>th</sup> percentile queue would require 160 feet. The existing left turn pocket storage is approximately 160 feet.

# Traffic Impact Analysis

Riverbend Landfill Expansion ■ Riverbend Landfill Company, Inc. ■ August 2007

# Traffic Impact Analysis

## Riverbend Landfill Expansion

Prepared for:  
Riverbend Landfill Company, Inc.  
Yamhill County, Oregon  
Contact: George Duvendack  
503 472 8788

Prepared by:

Ron Loewen, P.E.



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August 2007

This document should be cited as:  
Jones & Stokes. 2007. Traffic Impact Analysis. Riverbend Landfill Expansion. August. (J&S 06293.06.) Portland, Oregon.  
Prepared for Riverbend Landfill Company, Inc.

# Table of Contents

---

<b>Executive Summary</b> .....	<b>ES-1</b>
<b>Introduction</b> .....	<b>1</b>
<b>Location</b> .....	<b>1</b>
Existing Traffic Conditions .....	2
<b>Trip Generation and Distribution</b> .....	<b>2</b>
Landfill.....	2
<b>Operational Analysis</b> .....	<b>3</b>
Seasonal Adjustments .....	3
Traffic Volume Forecasts .....	3
Crash Analysis .....	5
Capacity Analysis.....	5
Access Management .....	7
Summary and Conclusion.....	8
<b>References</b> .....	<b>8</b>

## Tables

---

Table 1.	Site Trip Generation Summary .....	3
Table 2.	Existing Landfill Volume to Capacity Ratios .....	6
Table 3.	Year 2012 Landfill Volume to Capacity Ratios .....	6
Table 4.	Year 2026 Landfill Volume to Capacity Ratios .....	6
Table 5.	Access Spacing Along Highway 18 .....	7

## Figures

---

- Figure 1. Vicinity Map
- Figure 2. Existing Traffic Volumes (Seasonally Adjusted)
- Figure 3. 2012 and 2025 Traffic Volumes with Project

## Appendices

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- Appendix A. ODOT Letter: Traffic Impact Analysis Scope of Work
- Appendix B. Site Photographs
- Appendix C. Vehicle Counts, October 2006
- Appendix D. Seasonal Highway Factor Calculations
- Appendix E. ODOT Projected Future Traffic Volume
- Appendix F. Projected Disposal Rates
- Appendix G. Existing and Projected Traffic Volume and Landfill Entrance
- Appendix H. ODOT Crash Analysis
- Appendix I. ODOT Operational Standards
- Appendix J. Data Sheets

## Acronyms and Abbreviations

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AASHTO	American Association of State Highway and Transportation Officials
AMVM	Accidents per Million Vehicle Miles
County	Yamhill County
HCS	Highway Capacity Software
Landfill	Riverbend Landfill
ODOT	Oregon Department of Transportation
RLC	Riverbend Landfill Company, Inc.
RV Park	Mulkey Recreational Vehicle Park
V/C	volume to capacity

# Executive Summary

Riverbend Landfill Company, Inc. (RLC) is proposing to expand Riverbend Landfill (Landfill), McMinnville, Oregon, in Yamhill County (County), which would require a rezone of adjacent agricultural land. This report analyzes the transportation impacts potentially associated with the expansion project.

Population growth projected for the County will drive an increase in waste generation and disposal. The disposal tonnage rate, as a result of this population growth, is projected to increase by 1.42% annually from 2006 through 2014, and by 1.38% annually from 2015 through 2024. This projected increase in tonnage rates will, in turn, increase demand for landfill capacity and will likely increase traffic to and from the Landfill. There are currently 550 vehicular trips entering and leaving the Landfill on an average weekday. By 2012, when the first expansion landfill cell is projected to open, the average number of weekday trips will have increased to approximately 620.

The existing access to the Landfill would be maintained, including a left turn lane and a right turn acceleration lane. An analysis of projected traffic volumes at the intersection for the year 2012 AM, PM and site weekday peak hours and Saturday mid day peak hour revealed that the intersection would operate with a volume-to-capacity (V/C) ratio no worse than 0.17. The lowest volume to capacity ratio would occur during the PM peak hour. In the year 2026 the highest V/C ratio is 0.29.

A review of traffic crash data revealed only one crash that may have been related to the Landfill access over a 5-year period. A site inspection ascertained that there was adequate sight distance for entering and exiting vehicles at the Landfill entrance and the channelization met current Oregon Department of Transportation (ODOT) standards.

Based on this evaluation no transportation improvements are recommended as part of the expansion project.

# Introduction

Riverbend Landfill Company, Inc. (RLC), a subsidiary of Waste Management, Inc. proposes to expand its current operations at Riverbend Landfill (Landfill), located on Oregon Highway 18 (OR 18) near McMinnville, Oregon (Figure 1). The project would expand the vertical and horizontal footprint of the existing municipal solid waste landfill onto property generally south and west of the currently permitted landfill. The project includes plans to construct landfill accessory facilities (leachate treatment system, vehicle service shop, etc.). To facilitate expansion, RLC must obtain a change in zoning from an existing Exclusive Farm Use zone to a Public Works Safety zone.

This Transportation Impact Assessment analyzes the traffic impacts associated with the proposed expansion of the Landfill and recommends mitigation measures as appropriate. The report is based on guidance provided by the Oregon Department of Transportation (ODOT) in their letter of September 22, 2006 (Appendix A).

# Location

The Landfill is located along Oregon Highway 18 approximately 3.5 miles south of McMinnville. The existing entrance is located at milepost 41.56. The site is bordered by Oregon Highway 18 to the west, agricultural land to the north, and the Yamhill River to the east and south. The Landfill is surrounded by land mainly zoned for Exclusive Farm Use. An exception is Mulkey Recreational Vehicle Park (RV Park) in the southwest corner of the project site, which leases land from RLC. The RV Park's lease expires in approximately 5 years and is not expected to be renewed, pending approval of the proposed landfill expansion.

The primary access to the site would remain at the current location. The existing access to the RV Park would be used in the future to access maintenance facilities and the south end of the Landfill.

Oregon Highway 18 in this location is a rural two-lane highway, with 8-foot paved shoulders bordered by 4- to 6-foot gravel shoulders. The highway is under the jurisdiction of ODOT and is classified as a Statewide Roadway, is on the National Highway System, and is a designated Freight Route. The posted speed limit in the project area is 55 miles per hour. The portion of highway adjacent to the Landfill is straight with several small vertical curves for drainage swales. One of these is 700 feet to the north of the Landfill entrance. The vertical curves do not limit sight

distance below acceptable stopping sight distance standards. See Appendix B for photographs of the site entrance.

At the existing entrance to the Landfill a left turn pocket is provided for left turn vehicles entering the facility, and a right turn acceleration lane is provided for vehicles leaving the facility. The entrance width is approximately 80 feet to accommodate large trucks.

There is no transit service available to the site.

## Existing Traffic Conditions

Two turning movement traffic counts were performed at the Landfill entrance on Thursday, October 5th, 2006; and Saturday, October 7th, 2006 (Appendix C). The Thursday count was conducted from 6 AM to 4 PM and the Saturday count was conducted from 5 AM to 5 PM. The weekday highway peak hours were found to be 6 to 7 AM and 3:45 to 4:45 PM. The weekday peak hour generated by traffic to and from the Landfill entrance was from 11:15 AM to 12:15 PM. The Saturday peak hour was from 12 to 1 PM. The Thursday highway traffic volume was 9400 vehicles, of which 550 (6%) were for the Landfill entrance. The Saturday highway traffic volume was 8,700 vehicles, of which 445 (5%) were for the Landfill entrance. The existing traffic volumes are shown in Figure 2.

## Trip Generation and Distribution

### Landfill

The Landfill intersection on Oregon Highway 18 only serves the Landfill. Trip generation and distribution for the site was established by the traffic counts conducted at this intersection in October 2006. There is no indication that the distribution of trips would vary in the future. The highway trips for each of the four peak hour periods (AM weekday, PM weekday, midday Saturday, and site generator weekday) are shown in Table 1. Trip distribution during the AM and PM peak hours is 80% to the northeast and 20% to the southwest on Oregon Highway 18. During the Saturday and for site-generated peak hours the distribution is 87% to the northeast and 13% to the southwest

**Table 1. Site Trip Generation Summary**

Peak Hour	Entering Trips	Exiting Trips	Total Trips
AM Weekday	30	9	39
PM Weekday	14	11	25
Midday Saturday	35	30	65
Site-Generator	46	37	83

## Operational Analysis

### Seasonal Adjustments

The traffic counts were conducted for two days during the hours the Landfill was open, Thursday and Saturday, October 5th and 7th 2006. ODOT guidelines recommend these traffic counts be seasonally adjusted to determine the 30th highest traffic volume hour, which is used as the design hour. Oregon Highway 18 experiences a seasonal fluctuation in traffic flow since it is a primary route to the Oregon coast.

ODOT has a permanent traffic recorder at milepost 41.0 along Oregon Highway 18, which is just slightly over 1 mile from the site. The data from this recorder were used to establish the seasonal variation. The peak traffic month is August with traffic volumes 9% higher than the average of all months. A seasonal adjustment factor of 1.14 was derived for the weekday traffic count at the Landfill. Using the same data source a weekend seasonal adjustment factor of 1.15 was derived for the Saturday count. The calculation of the seasonal factors and ODOT permanent count station records are included in Appendix D.

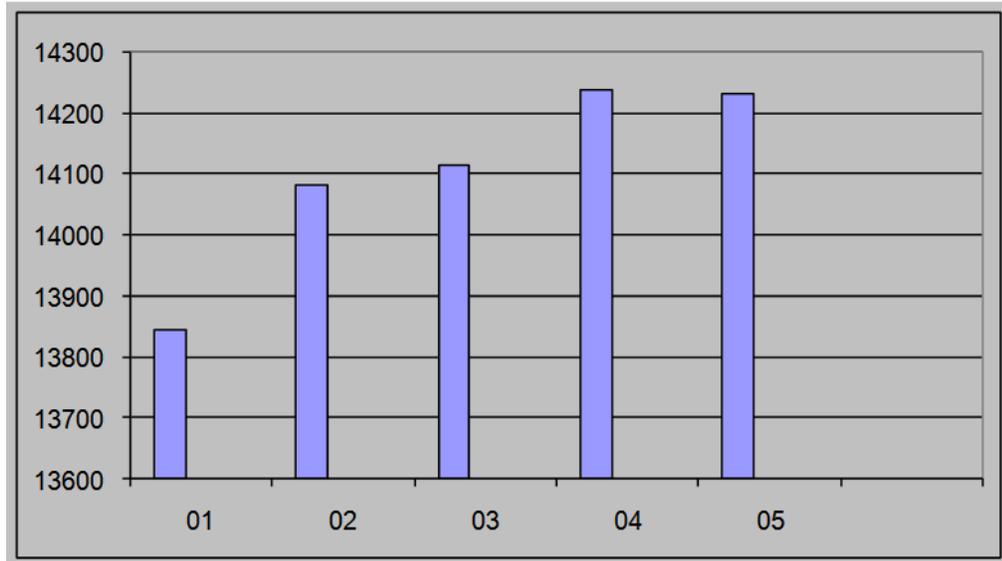
### Traffic Volume Forecasts

The Landfill accepts municipal solid waste, and non-hazardous special wastes from public and private haulers and the general public. The landfill is open from 5 AM to 5 PM weekdays, 6 AM to 4 PM Saturdays, and closed on Sundays. Currently, 98 acres are permitted for solid waste disposal operations. The current proposal would expand the landfill operations beyond the existing landfill footprint and allow the acceptance of an additional 20 million tons of solid waste over a 30-year period. Since the landfill is currently operating, traffic forecasts were made for the year the first new disposal cell is projected to open, 2012. A 20-year analysis was also performed per ODOT guidance for rezone applications.

## Highway 18

To forecast future traffic volumes on Oregon Highway 18 the ODOT traffic volume tables were consulted (ODOT 2006). The closest permanent traffic recorder at milepost 41.0 has provided 4 years of data. Growth in traffic volume during this period of time has been very modest at 0.7% per year. The following chart displays the average annual traffic volume over these 4 years. The ODOT 2025 Future Volume Table projects an annual traffic volume growth rate of 2.3% through 2025 (Appendix E).

**Chart 1. Historical Annual Average Daily Traffic by Year**



Source: Oregon Traffic Volume Tables, Permanent Count Station ORE18 MP 41.00

## Landfill Site

The mix of private and commercial vehicles hauling waste is assumed to remain the same as current conditions. Thus, traffic volume growth should be consistent with the annual increase in solid waste generation and disposal.

Annual disposal tonnage projections were developed using population projections (Friesen 2007) and are included as Appendix F. These projections show that disposal tonnage will grow at an annual rate of 1.42% from 2006 through 2014, and at 1.38% from 2015 through 2024. To arrive at future site traffic volumes the existing traffic volumes were increased by the same percentages after being adjusted for seasonal variations. The forecasted traffic volumes are shown on Figure3, and the Landfill entrance traffic volume calculations are shown in Appendix G.

## Crash Analysis

To examine the safety of the Oregon Highway 18 and Landfill access intersection a five-year crash history was obtained from ODOT for the section of Oregon Highway 18 from milepost 41.0 to 42.0 (Appendix H). There were 5 reported crashes within this mile. The accident rate of 0.2 accidents per million vehicle miles (AMVM) was derived. This compares to a statewide rate of 0.6 AMVM for similar roadways.

Three of the 5 crashes were near or at the intersection, which is at milepost 41.56. Two were at milepost 41.50. Of the 3 crashes that occurred at the intersection, one head-on crash occurred on a Wednesday at 9 AM when an eastbound passenger vehicle crossed the centerline. Since the left turn pocket is for westbound vehicles it is unlikely this crash involved the intersection. The second crash occurred on a Sunday at 3 PM when one vehicle rear-ended another. Since the Landfill is closed on Sundays once again it is unlikely the crash involved the intersection. The third crash occurred on a Wednesday at 3 PM and involved three vehicles in a rear-end crash at milepost 41.51. Though this location is approximately 200 feet from the intersection it may have involved a vehicle slowing for another vehicle making a right turn into the landfill.

This section of Oregon Highway 18 was not ranked in the top 10% of the 2006 Safety Priority Index System (ODOT 2006).

A site inspection of the Oregon Highway 18 and Landfill access intersection revealed an ample left turn pocket with a storage length of 150 feet and a right turn pocket with a storage length of 150 feet. The approaches to the intersection from the east and west were not obscured by vertical or horizontal curves. Sight distance for vehicles exiting the Landfill exceeds 820 feet to the left, the minimum right turn visibility standard for a combination truck established by the American Association of State Highway and Transportation Officials (AASHTO 2001), and 920 feet to the right, the minimum left turn visibility standard for a combination truck.

Based on these observations no traffic safety improvements are recommended.

## Capacity Analysis

A capacity analysis was conducted as required by ODOT's guidance for the Transportation Impact Assessment. Only the Landfill access roadway was analyzed as the next closest intersection is several miles in either direction. Based on ODOT operational standards (Appendix I), the stop-controlled approach for the Landfill access should operate with a volume-to-capacity (V/C) ratio of 0.70 or better. The intersection analysis was prepared using methods outlined in the 2000 Highway Capacity Manual. (TRB 2000)

The analysis of existing conditions was conducted for four different time periods: the weekday AM and PM peak hours, the weekday peak hour of the Landfill (the site peak hour), and the Saturday peak hour. The results of the analysis for the critical movements are shown in Table 2 and the data sheets are included in Appendix J.

**Table 2. Existing Landfill Volume to Capacity Ratios**

Movement	AM Peak Hour V/C	PM Peak Hour V/C	Site Peak Hour V/C	Saturday Peak Hour V/C
Westbound to southbound left turn	0.04	0.02	0.06	0.04
Landfill exit left turn	0.03	0.04	0.13	0.11

V/C = volume to capacity ratio

The Highway Capacity Manual uses the highest approach V/C ratio to characterize the intersection level of service. In the AM peak the V/C ratio is 0.04 for the westbound left turn into the landfill. In each of the other cases the exit from the Landfill is the highest value. The worst case is 0.13 for the site peak hour, still well below the acceptable V/C ratio of 0.70.

The V/C ratios were also calculated for the projected traffic volumes for the years 2012 (Table 3) and 2026 (Table 4).

**Table 3. Year 2012 Landfill Volume to Capacity Ratios**

Movement	AM Peak Hour V/C	PM Peak Hour V/C	Site Peak Hour V/C	Saturday Peak Hour V/C
Westbound to southbound left turn	0.05	0.02	0.08	0.05
Landfill exit left turn	0.04	0.06	0.16	0.17

Once again in the year 2012 the capacity analysis indicates that the westbound left turn into the landfill would be the worst movement during the AM peak hour with a V/C ratio of 0.05. In each of the other cases the exit from the Landfill would have the highest V/C ratio. The worst case V/C ratio would be 0.17 for the Saturday peak hour, still well below the acceptable V/C ratio of 0.70.

**Table 4. Year 2026 Landfill Volume to Capacity Ratios**

Movement	AM Peak Hour V/C	PM Peak Hour V/C	Site Peak Hour V/C	Saturday Peak Hour V/C
Westbound to Southbound left turn	0.07	0.05	0.11	0.08
Landfill exit left turn	0.08	0.13	0.29	0.20

Lastly, capacity analysis of the year 2026 indicates that the Landfill exit would have higher V/C ratios than incoming turns for all peak hours. The worst case V/C ratio would be 0.29 for the site peak hour, still well below the acceptable V/C ratio of 0.70.

An analysis of queue lengths was performed using Highway Capacity Software (HCS). The results show that the maximum queue length for vehicles turning left from Oregon Highway 18 to enter the Landfill would be 25 feet, and 50 feet for vehicles leaving the Landfill. Queuing distances are adequate to accommodate these lengths.

## Access Management

ODOT has adopted access management standards for private accesses to state highways, (Oregon Administrative Rule [OAR] 734-051). These standards indicate that private accesses along Oregon Highway 18 in this area should be spaced 1320 feet apart. Table 5 summarizes spacing between the public and private accesses adjacent to the Landfill along the eastern side of the roadway. The type of access and future status is also indicated.

**Table 5. Access Spacing Along Highway 18**

Milepost	Spacing	Access Type	Future Status
40.51		Public Road (Delashmutt Lane)	Will remain
40.75	1420 feet	Private farm and residence	Will be removed
40.78	160 feet	Private RV Park	Will remain
41.20	2220 feet	Private farm and residence	Will be removed
41.56	1900 feet	Landfill access	Will remain
41.80	1270 feet	Field access	Will remain

There are two accesses that do not meet spacing requirements. The first, at milepost 40.75, would be removed to provide adequate spacing between accesses at milepost 40.51 and milepost 40.78. The second, at milepost 41.80, provides access to the field just north of the entrance to the Landfill, a privately owned property. The access is only used for agricultural purposes when working the land. Although the spacing is below the standard the limited use of the access and lack of accidents over the previous 5 years involving this access mitigate the need to meet the standard.

The project would convert the RV Park access to a limited Landfill access. The access would serve two purposes: it would provide access to Landfill maintenance facilities and equipment, and landfill maintenance. Discussions with one of the RV Park staff (Eckhardt pers. comm.) indicated that August is the peak month for access to the RV Park. On an average day during this month 90 of their spaces would be

occupied, 85 by recreational vehicles. Based on the Institute of Transportation Engineers (ITE) trip generation manual, Land Use Code 416 (Campground/Recreational Vehicle Park) (ITE 2003), 90 occupied spaces would generate 33 trip ends during the PM peak hour. Assuming the PM peak hour trips represent 10% of the total daily trip ends, a daily trip end value of 330 could be calculated for RV Park access.

The proposed future use of this access would serve approximately 20 employee trips and 20 additional trips daily, for delivering supplies and materials to the maintenance facility or inspecting the landfill. This would amount to 80 total daily trip ends, significantly less than existing volumes.

## Summary and Conclusion

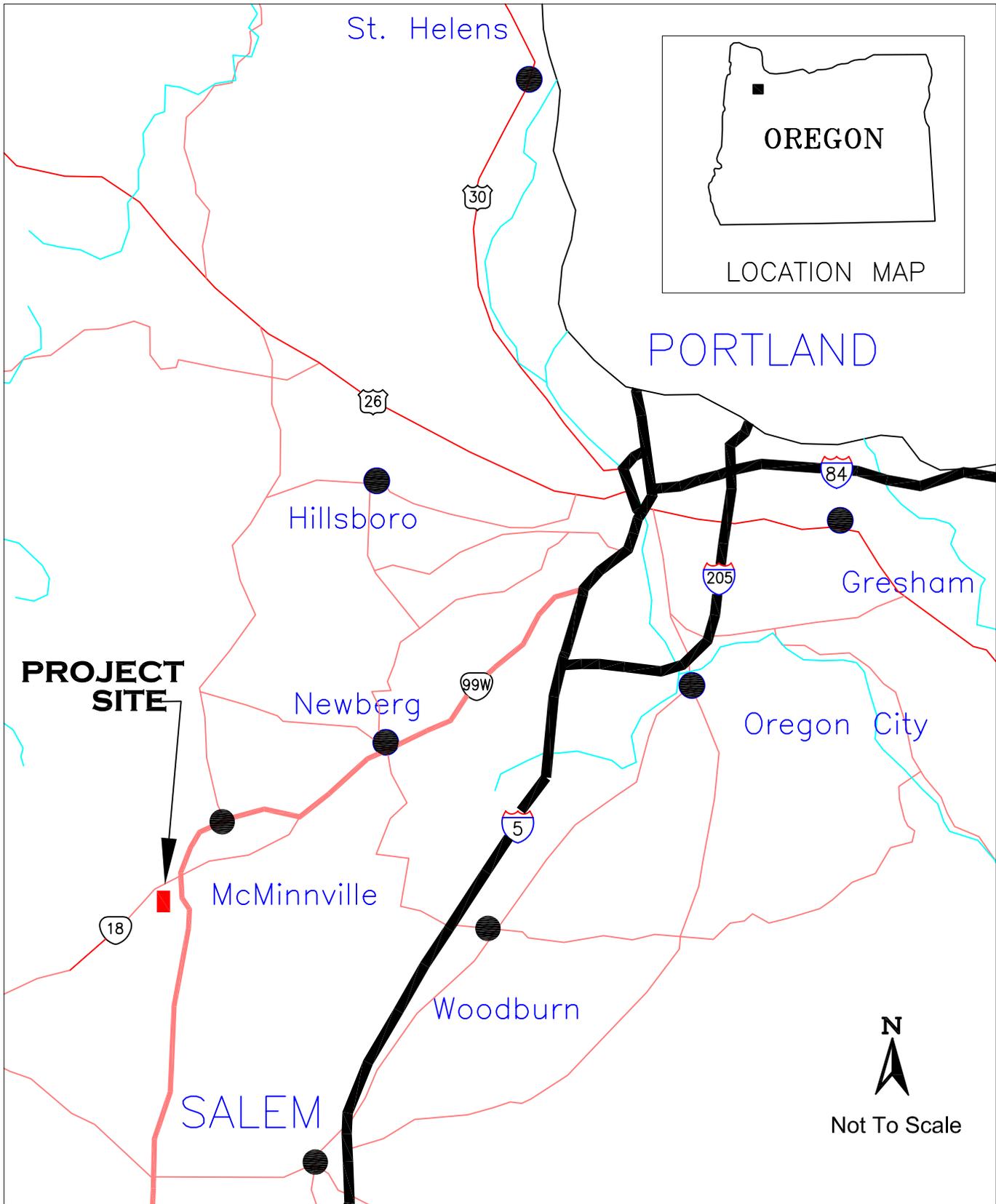
Based on a review of the operational characteristics of the existing and proposed Landfill no transportation recommendations for additional improvements or mitigation should be required as part of the proposed rezone and expansion.

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Figures

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Project:

Riverbend Landfill  
Vicinity Map

Client:

Waste Management

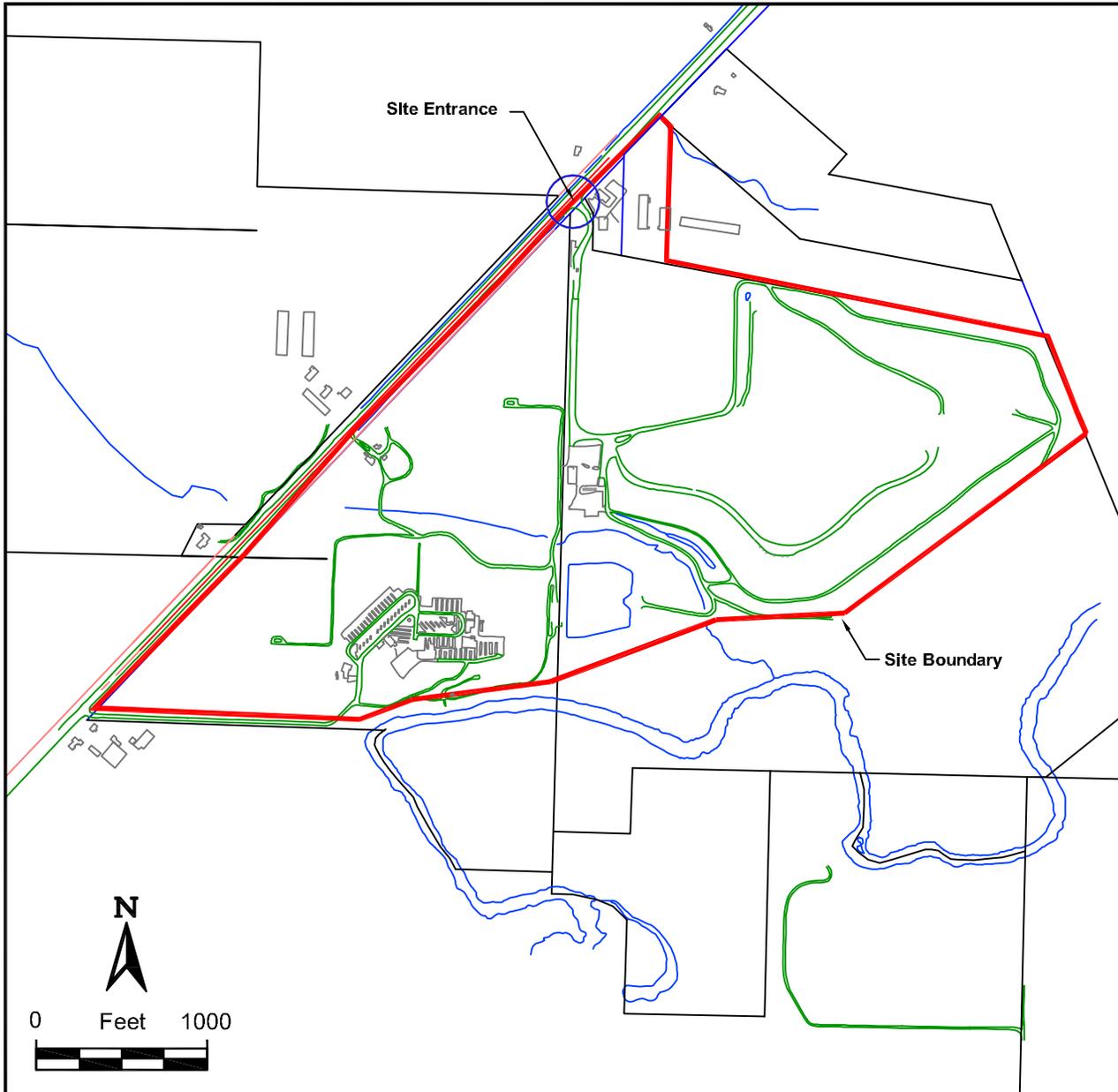
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Author:  
Aug 20, 2007 - 4:39pm

FIGURE NO.

1

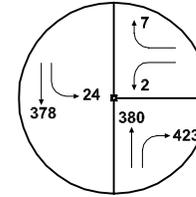
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06293.06



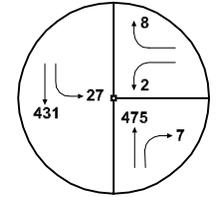
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2006 Adjusted  
Traffic Volumes

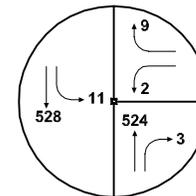
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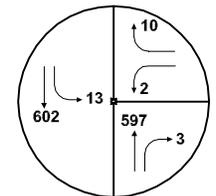
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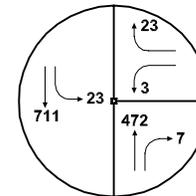
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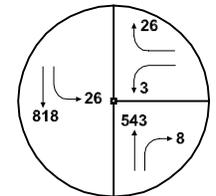
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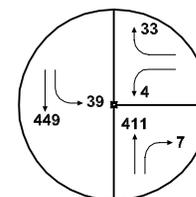
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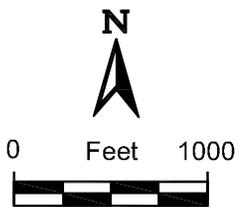
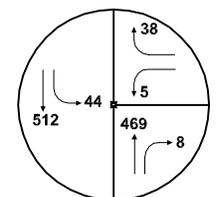
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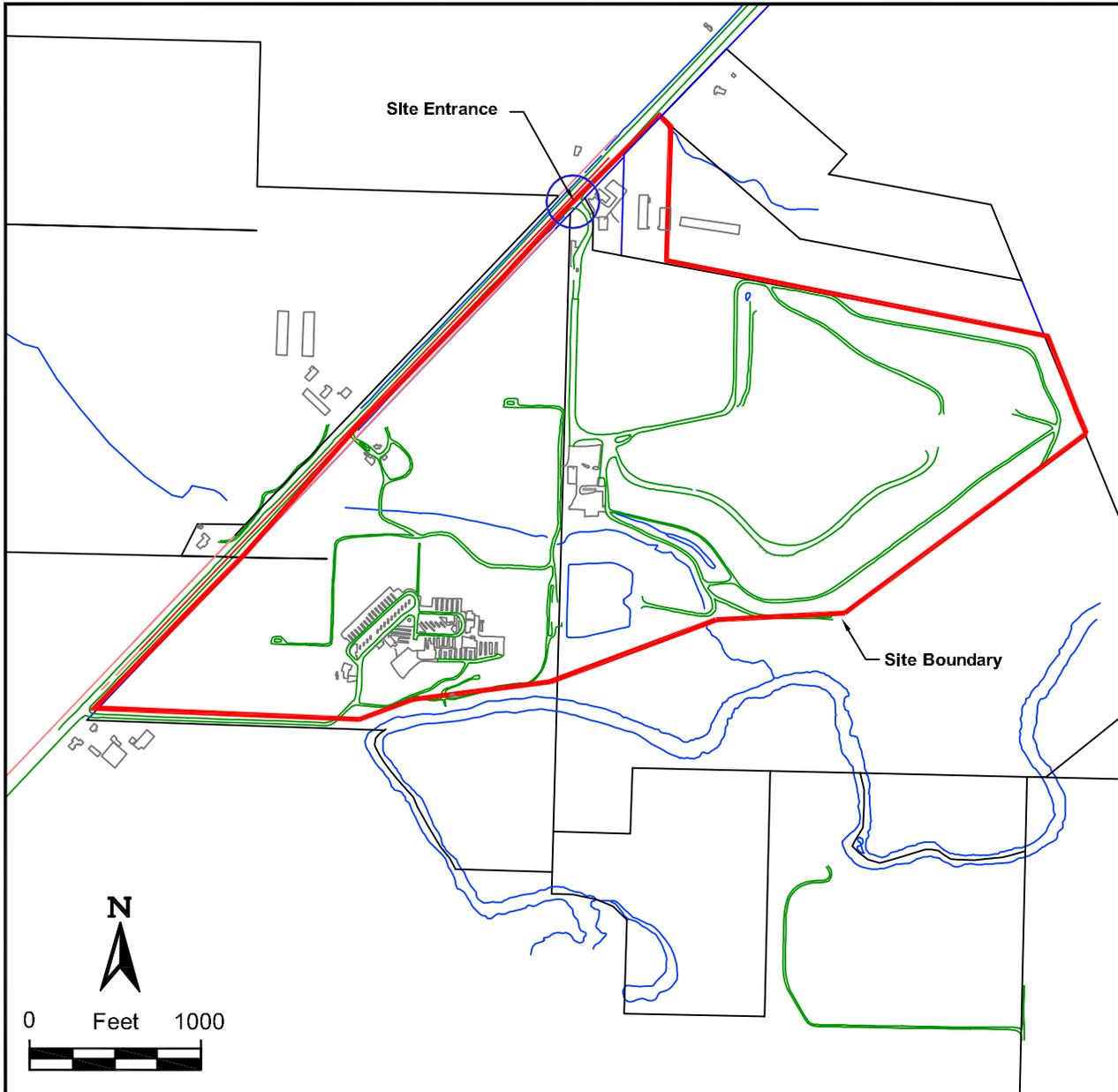
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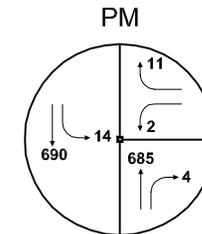
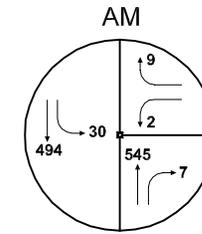
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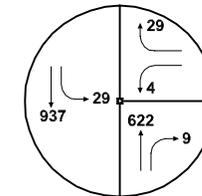
 317 SW Alder Street, Suite 800 Portland, OR 97204	<p>Existing Traffic Volumes (Seasonally Adjusted)</p>	<p>Project: Riverbend Landfill Expansion</p>	<p>Waste Management</p>	<p>Notes:  Author: Aug 20, 2007 - 11:16am</p>	<p>FIGURE NO.  2  PROJECT NO. 06293.06</p>
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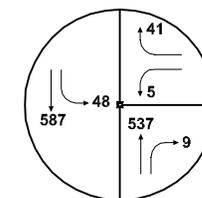
2012 Traffic Volumes with Project



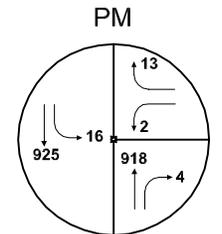
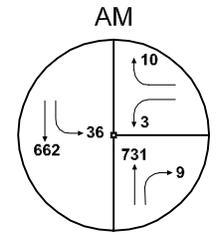
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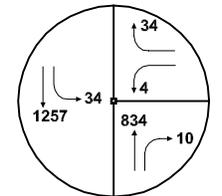
Site Weekday Peak



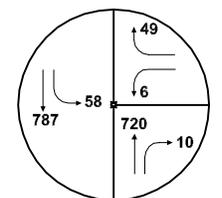
2025 Traffic Volumes with Project



Saturday Mid Day



Site Weekday Peak



317 SW Alder Street, Suite 800  
Portland, OR 97204

2012 and 2025 Traffic Volumes with Project

Project:

Riverbend Landfill Expansion

Waste Management

Notes:

Author:  
Aug 20, 2007 - 11:18am

FIGURE NO.

3

PROJECT NO.  
06293.06

## Appendix A

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ODOT Letter: Traffic Impact Analysis Scope of Work



# Oregon

Theodore R. Kulongoski, Governor

## Department of Transportation

### Region 2 Tech Center

455 Airport Road SE Building A

Salem, Oregon 97301-5397

Telephone (503) 986-2990

Fax (503) 986-2839

**Date:** September 22, 2006

**File:** T39-1

**Subject:** Zone Change/Plan Amendment  
REVISED Traffic Impact Analysis Scope of Work  
Riverbend Landfill Expansion  
Salmon River Highway – OR 18 (Highway #39)  
Milepost 40.44 – 44.60  
Pacific Highway West – OR 99W (Highway #1W)  
Milepost 38.99 – 39.93  
City of McMinnville  
Yamhill County

**Attn:** Stephen B. Lovell  
Senior Transportation Planner  
Jones & Stokes  
11820 Northup Way, Suite E300  
Bellevue, WA 98005  
[slovell@jsanet.com](mailto:slovell@jsanet.com)

The purpose of this letter is to define the scope of work for a Traffic Impact Analysis (TIA), which evaluates the impact for the proposed zone change and subsequent expansion of the **Riverbend Landfill** south of McMinnville. Under the requirements of the Transportation Planning Rule (TPR) all land-use applications shall be accompanied by a TIA to determine if there is a "significant effect" under OAR 660-012-0060. ODOT will be the lead agency regarding the traffic study coordination. This study shall also be used in conjunction with the Road Approach Permit Application that shall need to be filed under the requirements of OAR 734-051-0070. Any questions or comments will be coordinated through this office.

## Scope of Work:

### I. General:

#### Executive Summary:

Provide a description of the development, site location and study area (including a site map). Briefly describe the purpose of the analysis, principal findings, recommendations and conclusions.

**Analysis Study Area:**

Provide a text description (including tax-lot descriptions) of the proposed development; and a graphic showing the intersections and access(es), identified by highway milepost, to be evaluated as part of this analysis.

**II. Traffic Data:**

**Site Trip Generation, Distribution and Assignment:**

The proposed landfill expansion shall require a land-use zone change. If the Consultant can adequately show there will be *no net increase* in trips due to the expansion, then the requirements of the Transportation Planning Rule will be satisfied. If so, then the requirements of this revised TIA scope will be adequate for the required road approach permit application for the proposed driveway approach. If the Consultant cannot adequately show there will be *no net increase* in trips due to the expansion of the landfill, then the requirements from the original (08/21/2006) TIA scope shall still be in effect.

Site trip generation shall utilize the most current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual to estimate daily and peak hour trip volumes originating from and destined to the proposed development.

This analysis should use available transportation models in conjunction with **Yamhill County** and the **City of McMinnville**, as well as current Transportation System and Comprehensive Plans to estimate traffic distribution patterns. Approved computer models, such as Traffix, or manual calculations may also be used for determining trip assignments for site-generated traffic volumes on roadways within the study area.

All assumptions, adjustments and variables shall be approved in advance by Region 2 Traffic. Trip distribution and assignment will be shown on a vicinity map, as percentages and trips at significant intersections within the vicinity of the development. This information shall be documented and discussed in the TIA, or in the appendix.

**NOTE:** The Newberg-Dundee Bypass is NOT a planned project, and therefore cannot be assumed to be in place for any analysis scenario in this study.

**Traffic Counts:**

Traffic counts shall be made to full federal manual classification (FFMC) count standards. For this revised study, two sets of traffic data shall still be required for this study. The first set shall be collected mid-week, while the second set of data shall be collected mid-day Saturday. All counts shall have 15-minute breakdowns during the A.M. and P.M. peak hours, and should be made after March 15<sup>th</sup>, but no later than October 30<sup>th</sup>.

### **Traffic Counts (Cont.):**

All traffic data shall be made available to ODOT upon request. The Consultant or the Consultant's sub-contractor shall contact ODOT's Trans-Data Unit to obtain the appropriate format for the traffic counts. Your contact is Gretchen Harvey at (503) 986-3221 or [gretchen.a.harvey@odot.state.or.us](mailto:gretchen.a.harvey@odot.state.or.us).

For this study, the only intersection to be considered is:

1. OR 18 & Existing Riverbend Landfill Access
  - Weekday Data Set: 12-Hour Count, 5 a.m. to 5 p.m.
  - Saturday Data Set: 10-Hour Count, 6 a.m. to 4 p.m.

Raw traffic volumes will not be accepted for use in traffic analysis. All traffic volumes shall be seasonally adjusted to represent 30<sup>th</sup> Highest Hour Volumes (30HV) for Current Year, Year of Opening, and Future Year "background traffic" conditions. For guidance, please refer to the *Analysis Procedures Manual* (APM).

<http://www.oregon.gov/ODOT/TD/TP/TAPM.shtml>

### **III. Analysis Procedures:**

#### **Capacity Analysis:**

Capacity analysis of signalized intersections, unsignalized intersections, and roadway segments shall follow the established methodologies of the current Highway Capacity Manual (HCM2000). For signalized intersections, the overall intersection V/C shall be reported. For unsignalized intersections, the highest approach V/C shall be reported, along with an indication of its corresponding movement.

Refer to **Table 3.3.8** in the Development Review Guidelines; it lists ODOT's default parameters for use in signalized intersection analysis. If the parameters used in the analysis are outside those listed in **Table 3.3.8**, documentation shall be supplied as justification. If multiple intersections are analyzed, the traffic volumes shall be balanced between intersection nodes. All intersection capacity analyses shall include heavy vehicles percentages by approach, as determined from manual counts.

<http://www.oregon.gov/ODOT/TD/TP/DRG.shtml>

Mobility results (V/C) from the TIA will be compared against Highway Mobility Standards (Policy 1F) and the Maximum V/C Ratios provided in Table 6 of the 1999 Oregon Highway Plan (OHP), August 2005 Amendments.

<http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml#1999> Oregon Highway Plan

Application of Computer software shall closely follow ODOT-approved analysis methodologies. HCS2000 and Synchro/SimTraffic are examples of accepted analysis software. For further guidance, contact TPAU. All electronic files used in this analysis shall be provided via CD-ROM or ODOT's FTP site. For details, contact the Region Traffic office.

<ftp://ftp.odot.state.or.us/>

**Queue Length Analysis:**

Intersection operation analysis shall include the effects of queuing and blocking. Average queue lengths and 95<sup>th</sup> Percentile queue lengths shall be reported for all study area intersections. The 95<sup>th</sup> Percentile queuing shall be used for design purposes, and will be reported to the next nearest 25 foot increment. Any methodology used to determine queue length shall be approved in advance by either TPAU or the Region, and documented in the TIA or appendix.

**IV. Analysis Requirements:**

**Intersection Sight Distance:**

Adequate intersection sight distance shall be verified for all proposed intersections and highway approaches as required in ODOT's 2003 Highway Design Manual (HDM). For guidance, please contact the Region Access Management Engineer.

[http://egov.oregon.gov/ODOT/HWY/ENGSERVICES/hwy\\_manuals.shtml](http://egov.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml)

**Right & Left Turn Lane Criteria:**

Proposed right or left turn lanes at unsignalized intersections and private approach roads shall meet warrant requirements in Chapter 7.2 in the APM and installation criteria contained in the current HDM.

**Traffic Signal Installations & Modifications:**

Analysis and recommendations related to new and/or modified traffic signals shall follow ODOT's Traffic Signal Policy and Guidelines, and all subsequent revisions. These documents can be found on the web at:

<http://www.oregon.gov/ODOT/HWY/TRAFFIC/publications.shtml>

Any recommendations for traffic signals to be installed as part of future mitigation should meet preliminary signal warrants (MUTCD Warrant #1, Case A & B). All future proposed signals shall still require a full MUTCD warrant analysis before installation. For guidance, please contact TPAU or the Region, or refer to Chapter 7.4.1 in the APM.

**NOTE:** It is ultimately up to State Traffic Engineer to approve all signal installations, modifications and deviations. Just because an intersection may meet the MUTCD Warrants does not insure it will be approved by the State Traffic Engineer.

**Crash Analysis:**

An analysis shall be made of at least 3-years worth of crash data for all highway corridors within the study area. This shall include information on all SPIS sites within or adjacent to the study area.

**Access Management:**

Demonstrate how the proposed access, or accesses meet the minimum spacing criteria of OAR 734-051; or how it coincides with the current access management plan/strategy.

## **V. Analysis Output:**

Two analysis scenarios shall be investigated in this study for the three timeframes listed below. The first analysis scenario shall investigate traffic conditions for mid-week peak-hour traffic, while the second scenario shall investigate traffic conditions on OR 18 for mid-day Saturday traffic.

### **Existing Conditions:**

Identify current year site conditions at the proposed development location. This includes, but is not limited to the following:

- A description of the site location, zoning, existing use(s), and proposed use(s) of subject property.
- A description of surrounding land uses.
- A graphic identifying existing lane configurations and traffic control devices at the study area intersections.
- A graphic showing existing 30HV traffic; reported as AM (6-9 a.m.) and PM (2-5 p.m.) Peak Hour Volumes (PHV) for the weekday data-set; reported for the weekend peak hour of operation, and also as average daily traffic (ADT) for both data-sets. Also include in this graphic a list of heavy vehicle percentages by approach.
- An analysis of existing intersection operations, reported in terms of both Volume to Capacity (V/C) and Level of Service (LOS).

### **Traffic Volumes & Operations – Year of Opening; with & without Proposed Development:**

An analysis shall be made of all study area intersections in the Year of Opening, for both “*background traffic*” and “*total traffic*” conditions. “*Total traffic*” conditions are considered “*background traffic*” volumes plus site generated trips. This analysis should provide the following:

- A graphic showing Year of Opening “*background traffic*” and “*total traffic*” volumes.
- A graphic or table showing V/C and LOS analysis results for both “*background traffic*” and “*total traffic*” volumes.
- A graphic or table itemizing storage length requirements for all approaches, rounded to the next nearest 25 foot increment.
- If applicable, a discussion of progression performance along the analysis corridor.

### **Analysis Variable Inputs:**

A summary of traffic analysis variable inputs shall be provided in an appendix. In Synchro, the *Int: Lanes, Volumes, Timings* report is the output source for this information. TIA's submitted without an input summary will not be accepted by the Department.

**Conclusions and Recommendations:**

Summarize existing and future conditions and discuss the proposed development's impacts. Identify any operational or safety deficiencies and recommend mitigation along with the effectiveness of the mitigation. Summarize how the proposed development complies with all operational and safety standards in the applicable approval criteria.

Sincerely,

Stephen B. Wilson, PE  
Senior Traffic Analyst  
ODOT – Region 2 Tech Center  
455 Airport Road SE, Building 'A'  
Salem, OR 97301-5397  
[stephen.b.wilson@odot.state.or.us](mailto:stephen.b.wilson@odot.state.or.us)

cc: Bill Gille – Yamhill County  
Ken Friday – Yamhill County  
Dan Fricke  
Don Jordan  
Bruce Erickson  
David Warren  
Gretchen Harvey  
Cyndi Buswell  
Mike Rose  
File



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## Appendix B

Site Photographs

## Appendix B

### Site Pictures

Photo 1: Looking northeast from site entrance.



Photo 2: Looking southwest from site entrance.



Photo 3: Looking southwest across the roadway and north of site entrance.



## Appendix C

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Vehicle Counts, October 2006



16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: East to South

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
5:00 AM	0	1	0	0	0	0	0	1	5	0	0	0	1	8
5:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	1	3
5:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	1	1	0	1	2	0	0	0	0	5
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	1	2	0	1	0	0	0	0	1	0	0	1	6
7:00 AM	0	0	0	0	0	1	0	0	0	2	0	0	0	3
7:15 AM	0	0	1	0	1	0	1	0	1	1	0	0	0	5
7:30 AM	0	2	1	0	0	1	0	0	0	3	0	0	1	8
7:45 AM	0	1	2	0	2	2	0	0	0	1	0	0	0	8
8:00 AM	0	1	0	0	0	1	0	0	0	2	0	0	0	4
8:15 AM	0	0	3	0	1	0	0	0	0	1	0	0	0	5
8:30 AM	0	0	2	0	1	0	0	0	0	1	0	0	0	4
8:45 AM	0	0	1	0	0	1	0	1	0	1	0	0	0	4
9:00 AM	0	0	0	0	1	5	0	0	1	1	0	0	0	8
9:15 AM	0	1	2	0	0	0	0	0	0	1	0	0	0	4
9:30 AM	0	0	3	0	2	0	1	0	0	0	0	0	0	6
9:45 AM	0	1	4	0	0	2	0	0	0	0	0	0	0	7
10:00 AM	0	0	4	0	1	0	0	0	0	1	0	0	0	6
10:15 AM	0	0	3	0	1	1	0	0	0	0	0	0	0	5
10:30 AM	0	0	4	0	0	2	1	0	1	2	0	1	0	11
10:45 AM	0	0	1	0	3	3	0	0	0	1	0	0	0	8
11:00 AM	0	0	1	0	1	1	0	0	0	1	0	0	0	4
11:15 AM	0	0	0	0	2	3	4	2	2	0	0	0	0	13
11:30 AM	0	2	3	0	1	1	1	1	1	1	0	0	0	11
11:45 AM	0	0	5	0	0	1	1	2	0	1	0	0	0	10
12:00 PM	0	0	1	0	0	2	2	0	0	0	0	0	0	5
12:15 PM	0	0	1	0	0	1	1	0	1	1	0	0	0	5
12:30 PM	0	1	1	0	0	0	2	1	0	3	0	0	0	8
12:45 PM	0	0	1	0	1	0	0	0	0	1	0	0	0	3
1:00 PM	0	0	1	0	1	0	1	1	0	1	0	0	0	5
1:15 PM	0	0	3	0	0	2	0	2	0	2	0	0	0	9
1:30 PM	0	0	2	0	0	0	0	0	1	2	0	0	0	5
1:45 PM	0	0	3	0	0	1	0	0	0	0	0	0	0	4
2:00 PM	0	0	3	0	2	2	0	0	1	3	0	0	0	11
2:15 PM	0	1	1	0	0	0	0	0	0	1	0	0	0	3
2:30 PM	0	0	4	0	0	1	0	0	0	0	0	0	0	5
2:45 PM	0	1	2	0	1	1	0	2	0	0	0	0	0	7
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	1	1	0	0	1	0	1	0	0	0	0	0	4
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	3
4:00 PM	0	0	1	0	0	1	0	2	0	0	0	0	0	4
4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	2
4:45 PM	0	0	0	0	1	0	0	3	0	0	0	0	0	4



16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: East to West

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
5:00 AM	0	8	14	0	2	0	0	0	3	0	0	0	1	28
5:15 AM	0	10	7	0	2	1	0	0	2	2	0	0	0	24
5:30 AM	0	9	16	0	0	0	0	0	6	0	0	0	1	32
5:45 AM	0	13	18	0	0	1	0	0	2	0	0	0	0	34
6:00 AM	0	23	10	0	1	2	0	0	5	1	0	2	0	44
6:15 AM	1	23	26	0	0	3	0	0	3	2	0	0	1	59
6:30 AM	0	45	38	2	2	5	1	0	4	3	0	0	1	101
6:45 AM	0	40	35	1	2	1	0	0	5	2	0	0	0	86
7:00 AM	0	44	34	0	1	3	0	1	7	1	0	1	1	93
7:15 AM	0	44	49	1	3	4	0	1	6	2	0	0	0	110
7:30 AM	0	41	41	0	3	3	0	0	7	0	0	0	2	97
7:45 AM	0	27	41	1	1	1	1	1	5	0	0	0	0	78
8:00 AM	0	29	31	1	0	2	0	0	5	4	0	1	1	74
8:15 AM	0	19	31	0	1	2	1	1	1	2	0	0	2	60
8:30 AM	0	23	34	1	4	2	0	0	2	2	0	0	2	70
8:45 AM	0	30	35	1	7	2	0	0	2	3	0	0	0	80
9:00 AM	0	32	56	2	2	1	0	1	4	0	0	0	0	98
9:15 AM	0	29	49	1	4	0	0	1	4	3	0	0	0	91
9:30 AM	0	31	58	1	2	2	1	2	2	1	0	0	2	102
9:45 AM	0	37	41	1	2	1	0	0	4	5	0	0	2	93
10:00 AM	0	36	46	0	2	1	0	0	4	2	0	0	0	91
10:15 AM	0	33	68	0	4	1	0	0	6	0	0	0	0	112
10:30 AM	0	36	42	0	5	1	0	0	7	0	0	0	0	91
10:45 AM	0	34	49	0	2	0	0	2	4	2	0	1	1	95
11:00 AM	1	50	55	0	3	1	0	2	1	3	0	0	2	118
11:15 AM	1	54	62	0	4	0	0	0	0	4	0	0	0	125
11:30 AM	0	46	46	0	2	1	0	5	4	7	0	0	0	111
11:45 AM	0	47	47	1	2	1	0	5	3	2	0	0	0	108
12:00 PM	0	40	57	0	2	0	0	1	3	1	0	0	1	105
12:15 PM	0	65	53	0	1	1	0	4	5	1	0	1	2	133
12:30 PM	1	39	47	0	1	0	0	2	2	2	0	0	0	94
12:45 PM	0	38	45	0	4	2	0	5	4	1	0	1	1	101
1:00 PM	0	40	42	0	1	1	0	3	1	1	0	0	0	89
1:15 PM	0	42	63	0	1	0	0	1	6	2	0	0	0	115
1:30 PM	1	50	44	2	0	3	0	1	3	0	0	0	0	104
1:45 PM	0	57	45	1	4	0	0	0	2	0	0	0	1	110
2:00 PM	0	39	55	0	1	0	0	0	6	0	0	0	1	102
2:15 PM	0	56	59	0	2	1	0	3	2	0	0	0	0	123
2:30 PM	0	50	68	0	3	1	0	2	7	1	0	0	0	132
2:45 PM	0	73	69	2	0	1	0	3	6	0	0	0	3	157
3:00 PM	1	59	65	2	3	3	0	4	2	1	0	0	1	141
3:15 PM	1	56	75	0	0	1	0	2	1	2	0	0	0	138
3:30 PM	0	51	53	3	0	1	0	1	3	1	0	0	0	113
3:45 PM	1	60	74	0	2	0	0	2	4	1	0	0	1	145
4:00 PM	0	47	70	0	3	0	0	0	5	0	0	0	0	125
4:15 PM	0	70	62	0	0	0	0	1	0	0	0	0	0	133
4:30 PM	0	55	66	1	1	0	0	1	1	0	0	0	0	125
4:45 PM	0	59	67	1	0	0	0	2	0	0	0	0	0	129



16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: West to East

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
5:00 AM	0	14	17	0	1	2	0	0	0	1	0	0	1	36
5:15 AM	0	21	21	0	3	0	0	0	1	0	0	0	0	46
5:30 AM	1	32	23	0	2	3	0	0	2	0	0	1	0	64
5:45 AM	0	29	37	0	1	1	0	0	2	0	0	0	0	70
6:00 AM	0	22	21	0	0	1	0	0	2	0	0	0	0	46
6:15 AM	0	41	39	1	1	5	0	0	4	0	0	0	1	92
6:30 AM	0	40	40	0	1	1	0	0	0	0	0	0	0	82
6:45 AM	1	37	50	0	0	1	0	0	3	1	0	1	0	94
7:00 AM	0	30	41	2	1	6	0	1	3	0	0	0	1	85
7:15 AM	0	44	55	1	0	5	0	0	2	2	0	0	0	109
7:30 AM	0	38	64	0	2	6	0	0	3	1	0	0	0	114
7:45 AM	0	46	52	3	1	3	0	0	3	1	0	0	0	109
8:00 AM	1	31	56	0	1	3	0	0	0	1	0	0	3	96
8:15 AM	0	41	42	1	1	4	0	0	4	0	0	0	1	94
8:30 AM	0	31	43	0	1	5	0	0	1	2	0	0	2	85
8:45 AM	0	32	39	1	4	2	0	1	2	1	0	0	2	84
9:00 AM	0	31	33	1	2	1	0	0	1	3	0	0	4	76
9:15 AM	0	37	41	1	0	4	0	0	3	0	0	0	2	88
9:30 AM	0	36	44	0	2	5	1	1	2	2	0	0	0	93
9:45 AM	0	42	50	1	1	2	0	0	1	0	0	0	1	98
10:00 AM	0	32	55	0	4	1	0	0	5	0	0	0	1	98
10:15 AM	0	37	38	0	1	4	0	1	3	1	0	0	1	86
10:30 AM	0	38	49	0	3	5	1	0	1	1	0	0	0	98
10:45 AM	0	39	39	0	4	4	0	1	0	2	1	1	0	91
11:00 AM	0	44	54	0	1	3	1	1	2	2	0	0	1	109
11:15 AM	0	35	55	0	2	1	0	3	2	5	0	0	0	103
11:30 AM	0	34	58	0	1	6	1	2	0	1	0	0	1	104
11:45 AM	0	31	47	0	2	2	0	3	5	1	0	0	0	91
12:00 PM	0	41	50	0	5	6	0	7	3	1	0	0	0	113
12:15 PM	0	35	46	1	1	3	0	3	0	0	0	0	0	89
12:30 PM	1	44	38	0	1	3	0	2	3	2	0	0	1	95
12:45 PM	0	27	67	0	6	1	0	4	1	1	0	0	2	109
1:00 PM	0	30	41	0	3	2	0	1	3	0	0	0	0	80
1:15 PM	0	48	55	0	4	1	1	2	1	0	0	0	1	113
1:30 PM	0	36	57	0	4	0	1	0	3	3	1	0	0	105
1:45 PM	0	42	48	0	4	1	0	0	3	2	0	0	1	101
2:00 PM	0	35	54	0	2	4	0	1	4	0	0	0	0	100
2:15 PM	2	33	55	2	2	1	0	4	1	0	0	0	0	100
2:30 PM	0	43	54	3	3	1	0	1	1	2	0	0	2	110
2:45 PM	0	28	51	0	1	3	0	1	2	2	0	0	0	88
3:00 PM	0	47	55	3	3	2	0	3	2	1	0	0	1	117
3:15 PM	1	60	60	3	5	1	0	2	3	2	0	0	0	137
3:30 PM	1	47	57	1	3	2	0	2	5	0	0	0	1	119
3:45 PM	0	53	63	0	1	3	0	3	1	0	0	0	0	124
4:00 PM	1	55	69	1	0	0	3	4	1	0	0	0	0	134
4:15 PM	2	60	67	0	2	1	0	1	0	1	0	1	0	135
4:30 PM	0	49	76	0	1	1	0	2	1	1	0	0	0	131
4:45 PM	0	55	74	0	2	1	0	2	1	0	0	0	0	135





16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: South to East

	Class 1 Bikes	Class 2 Cars & Trailers	Class 3 2 Axle Long	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle Single	Class 7 4 Axle Single	Class 8 <5 Axle Double	Class 9 5 Axle Double	Class 10 >6 Axle Double	Class 11 <6 Axle Multi	Class 12 6 Axle Multi	Class 13 >6 Axle Multi	Interval Total
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 AM	0	2	1	0	0	1	0	0	2	0	0	0	0	6
5:30 AM	0	0	1	0	0	1	0	0	2	0	0	0	0	4
5:45 AM	0	0	0	0	0	0	0	0	3	0	0	1	1	5
6:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1
6:15 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	2
6:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6:45 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	3
7:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	2
7:15 AM	0	0	1	0	0	0	0	0	1	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	3
8:00 AM	0	0	2	1	1	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	2	0	1	0	0	0	2	0	0	1	0	6
8:30 AM	0	0	4	0	1	0	0	0	0	2	0	1	0	8
8:45 AM	0	0	1	0	1	1	0	0	2	0	0	0	0	5
9:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	2
9:15 AM	0	0	1	0	0	0	0	0	2	0	0	0	0	3
9:30 AM	0	2	2	0	0	4	0	0	3	0	0	0	0	11
9:45 AM	0	0	2	0	1	2	0	0	1	1	0	0	0	7
10:00 AM	0	0	4	0	1	0	0	0	0	0	0	0	0	5
10:15 AM	0	0	2	0	2	0	0	0	1	0	0	0	0	5
10:30 AM	0	0	5	0	0	1	0	0	0	0	0	0	0	6
10:45 AM	0	0	1	0	1	2	0	0	0	0	0	0	0	4
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	1	1	0	0	1	0	0	1	2	0	0	0	6
11:30 AM	0	1	3	0	1	6	0	1	1	1	0	0	0	14
11:45 AM	0	0	1	0	1	1	0	0	1	0	0	0	0	4
12:00 PM	0	0	2	0	1	2	0	2	2	0	0	0	0	9
12:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	3
12:30 PM	0	1	1	0	0	2	0	0	1	1	0	0	0	6
12:45 PM	0	1	2	0	1	1	0	0	0	0	0	0	0	5
1:00 PM	0	1	2	0	0	0	0	0	1	0	0	0	0	4
1:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:30 PM	0	0	3	0	0	1	0	0	1	0	0	0	0	5
1:45 PM	0	0	3	0	0	3	0	2	0	3	0	0	0	11
2:00 PM	0	0	2	0	0	1	0	1	1	0	0	0	0	5
2:15 PM	0	0	4	0	1	2	0	1	0	0	0	0	0	8
2:30 PM	0	0	0	0	2	2	0	0	2	0	0	0	0	6
2:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	4
3:00 PM	0	0	2	0	1	1	0	0	0	0	0	0	0	4
3:15 PM	0	1	3	0	0	0	0	1	0	0	0	0	0	5
3:30 PM	0	0	0	0	0	1	1	1	0	0	0	0	0	3
3:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	1	0	1	1	0	0	0	0	0	0	0	3
4:45 PM	0	1	3	0	0	0	0	0	1	0	0	0	0	5







16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: East to West

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
6:00 AM	0	37	15	0	0	0	0	1	1	0	0	0	0	54
6:15 AM	0	24	14	0	1	0	0	0	1	0	0	0	0	40
6:30 AM	0	30	24	0	2	0	0	0	1	0	0	0	0	57
6:45 AM	0	22	26	0	0	0	0	0	0	0	0	0	0	48
7:00 AM	0	20	39	0	0	0	0	2	0	0	0	0	1	62
7:15 AM	0	19	32	1	2	0	0	1	1	1	0	0	0	57
7:30 AM	1	33	33	0	1	0	0	1	1	0	0	0	0	70
7:45 AM	0	30	34	0	0	0	0	2	0	0	0	0	1	67
8:00 AM	0	30	35	0	1	0	0	0	2	1	0	0	0	69
8:15 AM	0	25	42	0	1	0	0	0	0	0	0	0	0	68
8:30 AM	1	33	32	0	1	0	0	2	0	1	0	0	0	70
8:45 AM	0	32	39	0	4	0	0	2	0	0	0	0	1	78
9:00 AM	0	43	42	0	0	1	0	0	0	0	0	1	0	87
9:15 AM	4	35	45	0	0	0	0	2	0	0	0	0	0	86
9:30 AM	0	42	43	0	0	0	0	5	1	0	0	0	0	91
9:45 AM	0	50	38	0	1	0	0	2	0	0	0	0	0	91
10:00 AM	0	56	68	0	0	0	0	3	0	0	0	0	0	127
10:15 AM	0	49	60	0	0	0	0	1	1	0	0	0	0	111
10:30 AM	0	52	84	0	1	0	0	3	1	1	0	0	0	142
10:45 AM	0	64	80	0	1	0	0	1	1	0	0	0	0	147
11:00 AM	0	74	76	0	1	0	0	1	1	0	0	0	0	153
11:15 AM	0	73	74	0	1	0	0	0	1	1	1	0	0	151
11:30 AM	1	78	86	0	2	0	0	1	0	0	0	0	0	168
11:45 AM	0	54	57	0	1	0	0	1	0	0	0	0	0	113
12:00 PM	4	84	82	0	3	0	0	2	1	0	0	0	0	176
12:15 PM	2	99	94	0	5	0	0	4	1	0	0	0	0	205
12:30 PM	0	83	89	0	1	0	0	4	0	0	0	0	0	177
12:45 PM	0	69	74	1	2	0	0	6	1	0	0	0	0	153
1:00 PM	0	74	79	0	1	0	0	2	0	0	0	0	0	156
1:15 PM	1	92	93	0	2	1	0	2	0	0	0	0	0	191
1:30 PM	1	91	81	0	2	0	0	0	1	0	0	0	0	176
1:45 PM	1	87	75	0	2	0	0	1	0	0	0	0	0	166
2:00 PM	3	79	86	1	0	0	0	2	0	1	0	0	0	172
2:15 PM	1	76	80	0	1	0	0	2	0	0	0	0	0	160
2:30 PM	3	85	73	1	2	0	0	4	1	1	0	0	0	170
2:45 PM	1	79	77	0	2	0	0	0	0	0	0	0	0	159
3:00 PM	3	62	93	0	1	0	0	1	0	0	0	0	0	160
3:15 PM	1	82	88	0	0	0	0	1	0	0	0	0	0	172
3:30 PM	1	68	73	0	3	0	0	5	0	1	1	0	0	152
3:45 PM	0	73	65	0	1	0	0	1	0	0	0	0	0	140



16285 SW 85th Ave, Ste 105  
 Tigard, OR 97224  
 Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
 Location/Intersection: OR-18 & Riverbend Landfill Access  
 Direction Counted: West to East

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
6:00 AM	0	16	6	0	0	0	0	0	0	0	0	0	0	22
6:15 AM	0	25	14	0	0	0	0	0	0	0	0	0	0	39
6:30 AM	0	18	17	0	0	0	0	1	1	0	0	0	0	37
6:45 AM	0	24	18	0	1	0	0	0	0	0	0	0	0	43
7:00 AM	0	15	18	0	2	1	0	1	0	0	0	0	0	37
7:15 AM	1	22	27	0	0	1	0	0	0	0	1	0	0	52
7:30 AM	0	25	41	1	0	0	0	0	0	0	0	0	0	67
7:45 AM	1	35	38	0	1	0	0	3	0	0	0	0	0	78
8:00 AM	1	30	51	0	4	0	0	1	0	1	0	0	0	88
8:15 AM	0	29	50	0	0	0	0	1	0	0	0	0	0	80
8:30 AM	0	38	49	0	0	0	0	2	1	0	0	0	0	90
8:45 AM	1	35	36	0	0	0	0	1	1	2	0	0	0	76
9:00 AM	0	27	43	0	4	1	0	1	2	0	0	0	0	78
9:15 AM	2	24	47	0	1	0	0	1	0	1	0	0	0	76
9:30 AM	0	35	57	0	1	1	0	1	0	0	0	0	0	95
9:45 AM	0	35	60	0	1	0	0	1	2	0	0	0	0	99
10:00 AM	0	41	54	0	2	0	0	6	2	0	0	0	0	105
10:15 AM	0	40	65	0	1	0	0	3	0	0	0	0	0	109
10:30 AM	0	41	63	0	0	0	0	1	0	0	0	0	0	106
10:45 AM	0	45	64	0	0	0	0	2	0	0	0	0	0	111
11:00 AM	0	47	57	0	0	0	0	0	0	0	0	0	0	104
11:15 AM	0	53	63	0	4	0	0	2	0	1	0	0	0	123
11:30 AM	0	40	61	0	3	0	0	2	1	0	0	0	0	107
11:45 AM	0	40	46	0	0	0	0	1	0	0	0	0	0	87
12:00 PM	0	55	70	0	0	0	0	3	0	0	0	0	0	128
12:15 PM	0	48	61	0	0	0	0	6	1	0	1	0	0	117
12:30 PM	0	67	51	0	0	0	0	2	0	0	0	0	0	120
12:45 PM	0	51	56	0	0	0	0	0	0	0	0	0	0	107
1:00 PM	1	55	55	1	1	0	0	1	1	0	0	0	0	115
1:15 PM	0	43	54	0	0	1	0	3	0	0	0	0	0	101
1:30 PM	0	57	69	0	1	0	0	4	0	0	0	0	0	131
1:45 PM	2	34	67	0	0	0	0	0	0	0	0	0	0	103
2:00 PM	0	51	64	0	1	0	0	2	0	1	0	0	0	119
2:15 PM	2	61	47	0	1	0	0	2	1	1	0	0	0	115
2:30 PM	0	46	58	0	3	0	0	2	0	0	0	0	0	109
2:45 PM	1	47	73	0	3	0	0	0	0	3	0	0	0	124
3:00 PM	0	60	79	1	1	0	0	6	0	0	0	0	0	147
3:15 PM	0	52	69	0	3	0	0	0	0	1	0	0	0	125
3:30 PM	0	50	76	0	1	0	0	1	0	0	0	0	0	128
3:45 PM	1	49	59	0	1	0	0	3	0	0	0	0	0	113





16285 SW 85th Ave, Ste 105  
 Tigard, OR 97224  
 Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/05/06  
 Location/Intersection: OR-18 & Riverbend Landfill Access  
 Direction Counted: South to East

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
6:00 AM	0	0	1	0	0	0	0	0	2	0	0	0	0	3
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1
6:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	1	0	0	1	1	0	0	0	3
8:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	2
8:15 AM	0	0	2	0	0	1	0	1	0	0	0	0	0	4
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	5
9:00 AM	0	0	2	0	0	0	0	1	0	1	0	0	0	4
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	5	0	0	1	0	0	0	0	0	0	0	6
10:00 AM	0	0	4	0	1	0	0	0	0	1	0	0	0	6
10:15 AM	0	0	5	0	0	0	0	1	0	1	0	0	0	7
10:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
10:45 AM	0	0	7	0	1	0	0	1	0	1	0	0	0	10
11:00 AM	0	3	6	0	0	0	0	0	0	0	0	0	0	9
11:15 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	5
11:30 AM	0	1	7	0	1	0	0	0	0	0	0	0	0	9
11:45 AM	0	0	1	0	0	0	0	3	0	2	0	0	0	6
12:00 PM	0	0	4	0	0	0	0	0	1	0	0	0	0	5
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12:30 PM	0	0	3	0	0	1	0	1	0	0	0	0	0	5
12:45 PM	0	0	5	0	0	0	0	0	0	1	0	0	0	6
1:00 PM	0	0	6	0	1	0	0	0	0	0	0	0	0	7
1:15 PM	0	0	5	0	1	1	0	2	0	1	0	0	0	10
1:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	5
2:00 PM	0	0	2	0	0	0	0	3	0	1	0	0	0	6
2:15 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
2:30 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	6
2:45 PM	0	0	3	0	1	1	0	1	0	0	0	0	0	6
3:00 PM	0	0	1	0	0	0	0	1	0	1	0	0	0	3
3:15 PM	0	0	5	0	0	0	0	1	0	1	0	0	0	7
3:30 PM	0	0	1	0	0	0	0	2	0	0	0	0	0	3
3:45 PM	0	0	6	0	0	0	0	3	1	0	0	0	0	10



16285 SW 85th Ave, Ste 105  
Tigard, OR 97224  
Ph:503-620-4242

### Vehicle Classification Counts

Date Counted: 10/07/06  
Location/Intersection: OR-18 & Riverbend Landfill Access  
Direction Counted: South to West

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Interval Total
	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:00 AM	0	1	1	0	0	0	0	1	0	0	0	0	0	3
11:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
1:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
2:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	2
2:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	2	0	0	0	0	0	3

## Appendix D

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### Seasonal Highway Factor Calculations



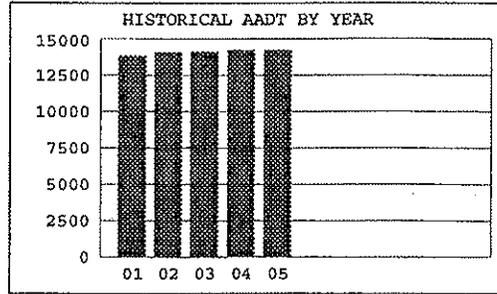
		Weekend Seasonal Factor Calculations											
Weekend	2005												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Avg Weekday Traffic	12135	13095	13434	13140	13575	14018	15286	15310	13673	13300	12800	12500	
Weekday Total	60675	65475	67170	65700	67875	70090	76430	76550	68365	66500	64000	62500	
Avg Daily Total	12182	14038	14250	13841	14523	14790	16107	16412	14814	14000	13300	12500	
Avg Week Total	85274	98266	99750	96887	101661	103530	112749	114884	103698	98000	93100	87500	
Avg Weekend Total	24599	32791	32580	31187	33786	33440	36319	38334	35333	31500	29100	25000	
Avg Weekend Day Traffic	12300	16396	16290	15594	16893	16720	18160	19167	17667	15750	14550	12500	
% of Annual Avg Weekend Daily Traffic	77%	102%	102%	97%	106%	105%	114%	120%	110%	98%	91%	78%	
Weekend	2004												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Avg Weekday Traffic	10576	12793	13679	13516	13347	14060	15348	15228	14246	13358	12688	12769	
Weekday Total	52880	63965	68395	67580	66735	70300	76740	76140	71230	66790	63440	63845	
Avg Daily Total	11376	13784	14398	14443	14167	14860	16277	16279	15000	14124	13363	12070	
Avg Week Total	79632	96488	100786	101101	99169	104020	113939	113953	105000	98868	93541	84490	
Avg Weekend Total	26752	32523	32391	33521	32434	33720	37199	37813	33770	32078	30101	20645	
Avg Weekend Day Traffic	13376	16262	16196	16761	16217	16860	18600	18906.5	16885	16039	15051	10323	
% of Annual Avg Weekend Daily Traffic	84%	102%	101%	105%	101%	105%	116%	118%	106%	100%	94%	65%	
Weekend	2003												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Avg Weekday Traffic	12070	12393	12580	12772	13526	14145	15428	15317	14101	13326	12756	12099	
Weekday Total	60350	61965	62900	63860	67630	70725	77140	76585	70505	66630	63780	60495	
Avg Daily Total	12520	13366	13254	13559	14409	14980	16184	16378	15148	14226	13129	12205	
Avg Week Total	87640	93562	92778	94913	100863	104860	113288	114646	106036	99582	91903	85435	
Avg Weekend Total	27290	31597	29878	31053	33233	34135	36148	38061	35531	32952	28123	24940	
Avg Weekend Day Traffic	13645	15799	14939	15527	16616.5	17068	18074	19030.5	17766	16476	14062	12470	
% of Annual Avg Weekend Daily Traffic	85%	99%	93%	97%	104%	107%	113%	119%	111%	103%	88%	78%	
Weekend	2002												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Avg Weekday Traffic	11670	12698	12935	13081	13733	13590	14951	15376	14072	13205	12684	12227	
Weekday Total	58350	63490	64675	65405	68665	67950	74755	76880	70360	66025	63420	61135	
Avg Daily Total	11958	13452	13648	13919	14772	14307	15852	16293	15051	14088	13237	12422	
Avg Week Total	83706	94164	95536	97433	103404	100149	110964	114051	105357	98616	92659	86954	
Avg Weekend Total	25356	30674	30861	32028	34739	32199	36209	37171	34997	32591	29239	25819	
Avg Weekend Day Traffic	12678	15337	15431	16014	17369.5	16100	18105	18585.5	17499	16296	14620	12910	
% of Annual Avg Weekend Daily Traffic	79%	96%	96%	100%	109%	101%	113%	116%	109%	102%	91%	81%	
Weekend	2001												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Avg Weekday Traffic	11827	12349	12887	12734	13086	13588	14804	15188	13688	12710	12036	11781	
Weekday Total	59135	61745	64435	63670	65430	67940	74020	75940	68440	63550	60180	58905	
Avg Daily Total	12376	13132	13678	13535	14264	14318	15557	16271	14597	13616	12766	12023	
Avg Week Total	86632	91924	95746	94745	99848	100226	108899	113897	102179	95312	89362	84161	
Avg Weekend Total	27497	30179	31311	31075	34418	32286	34879	37957	33739	31762	29182	25256	
Avg Weekend Day Traffic	13749	15090	15656	15538	17209	16143	17440	18978.5	16870	15881	14591	12628	
% of Annual Avg Weekend Daily Traffic	86%	94%	98%	97%	108%	101%	109%	119%	105%	99%	91%	79%	

Location: ORE18 MP 41.00, SALMON RIVER HWY, NO. 39  
 3.58 mile south of Ore99W

Recorder: SALMON RIVER, 36-006  
 Installed: July, 2000

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2001	13844	137	11.4	10.4	10.2	10.0
2002	14083	135	10.7	10.3	10.1	10.0
2003	14113	134	10.9	10.3	10.1	9.9
2004	14237	141	10.8	10.3	10.1	10.0
2005	14230	135	10.6	10.0	9.9	9.7



2005 TRAFFIC DATA

Month	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown of ADT	
					Classification	Percent
January	12135	85	12182	86	Passenger Cars	45.0
February	13095	92	14038	99	Other 2 axle 4 tire vehicles	45.6
March	13434	94	14250	100	Single Unit 2 axle 6 tire	2.5
April	13140	92	13841	97	Single Unit 3 axle	1.8
May	13575	95	14523	102	Single Unit 4 axle or more	0.0
June	14018	99	14790	104	Single Trailer Truck 4 axle or less	0.2
July	15286	107	16107	113	Single Trailer Truck 5 axle	2.7
August	15310	108	16412	115	Single Trailer Truck 6 axle or more	1.0
September	13673	96	14814	104	Dbl-Trailer Truck 5 axle or less	0.0
October	13300	93	14000	98	Dbl-Trailer Truck 6 axle	0.0
November	12800	90	13300	93	Dbl-Trailer Truck 7 axle or more	0.4
December	12500	88	12500	88	Triple Trailer Trucks	0.0
					Buses	0.7
					Motorcycles & Scooters	0.1

Vehicle Classification Breakdown	Percent of ADT
Passenger Cars.....	46.40
Other 2 axle 4 tire vehicles.....	43.10
Single Unit 2 axle 6 tire.....	2.90
Single Unit 3 axle.....	1.20
Single Unit 4 axle or more.....	0.00
Single Trailer Truck 4 axle or less..	0.70
Single Trailer Truck 5 axle.....	3.30
Single Trailer Truck 6 axle or more..	1.00
Dbl-Trailer Truck 5 axle or less.....	0.00
Dbl-Trailer Truck 6 axle.....	0.10
Dbl-Trailer Truck 7 axle or more.....	0.70
Triple Trailer Trucks.....	0.00
Buses.....	0.30
Motorcycles & Scooters.....	0.30

**Recorder: SALMON RIVER, 36-006**

Location: ORE18, SALMON RIVER HWY, NO. 39  
 3.58 mile south of Ore99W  
 Installed: July, 2000

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2001	13844	137	11.4	10.4	10.2	10.0
2002	14083	135	10.7	10.3	10.1	10.0

2002 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	11670	83	11958	85
February	12698	90	13452	96
March	12935	92	13648	97
April	13081	93	13919	99
May	13733	98	14772	105
June	13590	96	14307	102
July	14951	106	15852	113
August	15376	109	16293	116
September	14072	100	15051	107
October	13205	94	14088	100
November	12684	90	13237	94
December	12227	87	12422	88

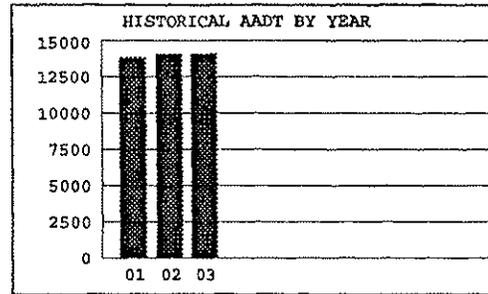
Vehicle Classification Breakdown	Percent of ADT
Passenger Cars.....	45.00
Other 2 axle 4 tire vehicles.....	45.60
Single Unit 2 axle 6 tire.....	2.50
Single Unit 3 axle.....	1.80
Single Unit 4 axle or more.....	0.00
Single Trailer Truck 4 axle or less..	0.20
Single Trailer Truck 5 axle.....	2.70
Single Trailer Truck 6 axle or more..	1.00
Dbl-Trailer Truck 5 axle or less.....	0.00
Dbl-Trailer Truck 6 axle.....	0.00
Dbl-Trailer Truck 7 axle or more.....	0.40
Triple Trailer Trucks.....	0.00
Buses.....	0.70
Motorcycles & Scooters.....	0.10

Location: OR 18 MP 41.00, SALMON RIVER HWY, NO. 39  
 3.58 mile south of OR 99W

Recorder: SALMON RIVER, 36-006  
 Installed: July, 2000

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2001	13844	137	11.4	10.4	10.2	10.0
2002	14083	135	10.7	10.3	10.1	10.0
2003	14113	134	10.9	10.3	10.1	9.9



2003 TRAFFIC DATA

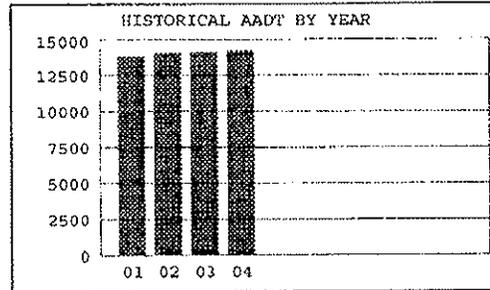
Month	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown of ADT	
					Classification	Percent
January	12070	86	12520	89	Passenger Cars.....	45.0
February	12393	88	13366	95	Other 2 axle 4 tire vehicles.....	45.6
March	12580	89	13254	94	Single Unit 2 axle 6 tire.....	2.5
April	12772	90	13559	96	Single Unit 3 axle.....	1.8
May	13526	96	14409	102	Single Unit 4 axle or more.....	0.0
June	14145	100	14980	106	Single Trailer Truck 4 axle or less...	0.2
July	15428	109	16184	115	Single Trailer Truck 5 axle.....	2.7
August	15317	109	16378	116	Single Trailer Truck 6 axle or more...	1.0
September	14101	100	15148	107	Dbl-Trailer Truck 5 axle or less.....	0.0
October	13326	94	14226	101	Dbl-Trailer Truck 6 axle.....	0.0
November	12756	90	13129	93	Dbl-Trailer Truck 7 axle or more.....	0.4
December	12099	86	12205	86	Triple Trailer Trucks.....	0.0
					Buses.....	0.7
					Motorcycles & Scooters.....	0.1

Location: OR 18 MP 41.00, SALMON RIVER HWY, NO. 39  
 3.58 mile south of OR 99W

Recorder: SALMON RIVER, 36-006  
 Installed: July, 2000

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2001	13844	137	11.4	10.4	10.2	10.0
2002	14083	135	10.7	10.3	10.1	10.0
2003	14113	134	10.9	10.3	10.1	9.9
2004	14237	141	10.8	10.3	10.1	10.0



2004 TRAFFIC DATA

Month	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown of ADT	
					Classification	Percent of ADT
January	10576	74	11376	80	Passenger Cars	45.0
February	12793	90	13784	97	Other 2 axle 4 tire vehicles	45.6
March	13679	96	14398	101	Single Unit 2 axle 6 tire	2.5
April	13516	95	14443	101	Single Unit 3 axle	1.8
May	13347	94	14167	100	Single Unit 4 axle or more	0.0
June	14060	99	14860	104	Single Trailer Truck 4 axle or less	0.2
July	15348	108	16277	114	Single Trailer Truck 5 axle	2.7
August	15228	107	16279	114	Single Trailer Truck 6 axle or more	1.0
September	14246	100	15000	105	Dbl-Trailer Truck 5 axle or less	0.0
October	13358	94	14124	99	Dbl-Trailer Truck 6 axle	0.0
November	12688	89	13363	94	Dbl-Trailer Truck 7 axle or more	0.4
December	12756	90	12769	90	Triple Trailer Trucks	0.0
					Buses	0.7
					Motorcycles & Scooters	0.1

Vehicle Classification Breakdown	Percent of ADT
Passenger Cars.....	46.40
Other 2 axle 4 tire vehicles.....	43.10
Single Unit 2 axle 6 tire.....	2.90
Single Unit 3 axle.....	1.20
Single Unit 4 axle or more.....	0.00
Single Trailer Truck 4 axle or less..	0.70
Single Trailer Truck 5 axle.....	3.30
Single Trailer Truck 6 axle or more..	1.00
Dbl-Trailer Truck 5 axle or less.....	0.00
Dbl-Trailer Truck 6 axle.....	0.10
Dbl-Trailer Truck 7 axle or more.....	0.70
Triple Trailer Trucks.....	0.00
Buses.....	0.30
Motorcycles & Scooters.....	0.30

**Recorder: SALMON RIVER, 36-006**

Location: ORE18, SALMON RIVER HWY, NO. 39  
3.58 mile south of Ore99W  
Installed: July, 2000

#### HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2001	13844	137	11.4	10.4	10.2	10.0

#### 2001 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	11827	85	12376	89
February	12349	89	13132	95
March	12887	93	13678	99
April	12734	92	13535	98
May	13086	95	14264	103
June	13588	98	14318	103
July	14804	107	15557	112
August	15188	110	16271	118
September	13688	99	14597	105
October	12710	92	13616	98
November	12036	87	12766	92
December	11781	85	12023	87

## Appendix E

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ODOT Projected Future Traffic Volume

HWY	DIR	MP	XZ	HS	DESCRIPTION	2003	2004	2005	2025	RSQ
37	1	2.54			0.01 mile east of Olson Road	5600			7800	0.9090
37	1	4.21			0.01 mile west of Fairview Road	5100			6300	0.8145
37	1	4.23			0.01 mile east of Fairview Road	5000			6800	0.8390
37	1	5.77			0.01 mile west of Mills Bridge at Wilson River	5000			6800	0.8609
37	1	10.80			0.01 mile west of Kansas Creek Road	4700			6500	0.9117
37	1	10.82			0.01 mile east of Kansas Creek Road	4600			6800	0.9307
37	1	22.64			0.01 mile west of Jones Creek Forest Camp Road	4000			5200	0.8649
37	1	32.88			Tillamook-Washington County Line	4000			5100	0.7215
37	1	38.55			Gales Creek Automatic Traffic Recorder, Sta. 34-004, 0.43 mile west of Timber Road	4900			6700	0.8843
37	1	39.08			0.10 mile east of Timber Road	4800			5700	0.5526
37	1	42.13			0.10 mile northwest of Gales Creek Road	5000			7300	MODEL
37	1	42.33			0.10 mile east of Gales Creek Road	4500			6900	MODEL
37	1	43.34			0.10 mile northeast of Parson Road	4300			6600	MODEL
37	1	48.94			0.15 mile west of Nehalem Highway (OR 47)	5100			7800	MODEL
37	1	49.24			0.15 mile east of Nehalem Highway (OR 47)	10600			15500	MODEL
37	1	51.17			0.40 mile west of Sunset Highway (US 26)	10500			15400	MODEL
38	1	0.03			0.03 mile east of Redwood Highway (US 199)	5500			7900	0.7386
38	1	0.11			0.02 mile east of Caves Avenue	5800			8500	0.8739
38	1	0.29			0.06 mile west of Old Stage Road	5300			7000	0.8679
38	1	0.36			0.01 mile east of Old Stage Road	4600			5900	0.9428
38	1	0.51			East city limits of Cave Junction	3600			5300	0.7064
38	1	1.75			0.01 mile west of Holland Loop Road	4300			6700	0.9162
38	1	2.42			0.01 mile west of White School Road	1900			2600	0.8966
38	1	3.16			0.01 mile west of Smith Sawyer Road	1400			1600	0.5274
38	1	3.74			0.01 mile east of White School Road	1200			1300	0.3435
38	1	6.15			0.03 mile west of Holland Loop Road	630			630	0.1869
38	1	6.53			On Bear Creek Bridge	600			600	0.2424
38	1	11.02			0.70 mile west of Cedar Forest Guard Station	250			250	0.7762
38	1	11.97			0.20 mile east of French Peak Road	180			180	0.5190
38	1	19.21			0.10 mile west of Oregon Caves National Monument	11900			17100	0.9388
39	1	0.40			0.40 mile east of Oregon Coast Highway (US 101)	10000			13800	0.9106
39	1	1.36			0.10 mile east of Alford Road at Otis	9200			12700	0.9229
39	1	3.96			On Bear Creek Bridge	9100			12700	0.9208
39	1	5.29			0.01 mile west of North Bank Road at Rose Lodge	10400			15700	0.9707
39	1	5.31			0.01 mile east of North Bank Road at Rose Lodge	10400			15500	0.9007
39	1	10.27			Lincoln-Tillamook County Line	10300			15100	0.9224
39	1	14.90			Tillamook-Polk County Line	11600			16400	0.9112
39	1	20.66			0.01 mile west of Fire Hall Road	12000			17300	0.9144
39	1	21.17			0.01 mile west of Grand Ronde Road	14500			20700	0.8668
39	1	21.19			0.01 mile east of Grand Ronde Road	18900			29400	0.8867
39	1	22.96			0.10 mile west of Three Rivers Highway (OR 22)	19500			29800	0.8721
39	1	23.16			0.10 mile east of Three Rivers Highway (OR 22)	19500			28600	0.8306
39	1	23.76			Valley Junction Automatic Traffic Recorder, Sta. 27-001, 0.70 mile east of Three Rivers Highway (OR 22)	19400			28000	0.7855
39	1	26.76			0.01 mile west of Williamina-Sheridan Highway (OR 18 Bus.)	8000			12200	0.8147
39	1	27.91			0.03 mile east of connection to Williamina-Salem Highway (OR 22)	8100			11400	0.7863
39	1	29.76			Polk-Yamhill County Line	8200			10900	0.6818
39	1	30.64			0.01 mile east of Harmony Road	9000			11400	0.8681
39	1	32.30			0.30 mile west of Sheridan Interchange (Balliston Road)	8700			12500	0.7344
39	1	32.90			0.30 mile east of Sheridan Interchange (Balliston Road)	9300			13100	0.9145
39	1	34.01			0.10 mile west of Williamina-Sheridan Highway (OR 18 Bus.)	15600			22200	0.8672
39	1	34.21			0.10 mile east of Williamina-Sheridan Highway (OR 18 Bus.)	13200			21600	0.9017
39	1	36.92			0.01 mile west of Bellevue-Hopewell Highway	13000			21500	0.8721
39	1	36.94			0.01 mile east of Bellevue-Hopewell Highway	14100			23200	0.8481
39	1	41.00			Salmon River Automatic Traffic Recorder, Sta. 36-006, 0.49 mile east of Delashmuth Lane	14600			21600	0.8410
39	1	43.03			0.01 mile east of Durham Lane	13200			26500	0.8167
39	1	43.76			0.60 mile west of Undercrossing Pacific Highway West (OR 99W)	8500			15800	0.8571
39	1	44.71			0.35 mile east of Pacific Highway West (OR 99W)	15700			22900	0.8750
39	1	46.46			0.20 mile east of McMinnville Spur	9600			9800	0.7788
39	1	48.58			0.01 mile west of Cruickshank Road	12600			12600	0.0609
39	1	48.60			0.01 mile east of Cruickshank Road	13900			21600	0.8564
39	1	49.81			0.10 mile west of Lafayette Highway (OR 233)					

## Appendix F

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Projected Disposal Rates

**Table 1: Projected Disposal and Air Space Usage Rates  
at the Riverbend Landfill**

Year	Disposal Rate		Annual Growth Rate	Cumulative Disposal tons	Air Space Usage	
	tpd	tpy			Annual cy	Cumulative cy
2006	1,507	550,000	1.42%	366,667	611,111	407,407
2007	1,528	557,809	1.42%	924,476	619,788	1,027,196
2008	1,550	565,730	1.42%	1,490,206	628,589	1,655,784
2009	1,572	573,763	1.42%	2,063,968	637,514	2,293,298
2010	1,594	581,909	1.42%	2,645,878	646,566	2,939,864
2011	1,617	590,172	1.42%	3,236,050	655,746	3,595,611
2012	1,640	598,552	1.42%	3,834,601	665,057	4,260,668
2013	1,663	607,050	1.42%	4,441,652	674,501	4,935,168
2014	1,687	615,670	1.42%	5,057,322	684,078	5,619,246
2015	1,710	624,140	1.38%	5,681,461	693,488	6,312,735
2016	1,733	632,726	1.38%	6,314,187	703,029	7,015,763
2017	1,757	641,430	1.38%	6,955,617	712,700	7,728,463
2018	1,782	650,254	1.38%	7,605,871	722,505	8,450,968
2019	1,806	659,200	1.38%	8,265,071	732,444	9,183,412
2020	1,831	668,268	1.38%	8,933,339	742,520	9,925,932
2021	1,856	677,461	1.38%	9,610,800	752,735	10,678,667
2022	1,882	686,781	1.38%	10,297,581	763,090	11,441,757
2023	1,907	696,229	1.38%	10,993,810	773,588	12,215,344
2024	1,934	705,807	1.38%	11,699,616	784,230	12,999,574
2025	1,959	715,132	1.32%	12,414,748	794,591	13,794,165
2026	1,985	724,580	1.32%	13,139,329	805,089	14,599,254
2027	2,011	734,153	1.32%	13,873,482	815,726	15,414,980
2028	2,038	743,853	1.32%	14,617,335	826,503	16,241,484
2029	2,065	753,681	1.32%	15,371,016	837,423	17,078,907
2030	2,092	763,639	1.32%	16,134,655	848,487	17,927,394
2031	2,120	773,728	1.32%	16,908,383	859,698	18,787,092
2032	2,148	783,950	1.32%	17,692,333	871,056	19,658,148
2033	2,176	794,308	1.32%	18,486,641	882,564	20,540,712
2034	2,205	804,802	1.32%	19,291,443	894,225	21,434,937
2035	2,219	809,996	0.65%	20,101,439	899,996	22,334,933

**Assumptions:**

1. Solid waste disposal rates increase in proportion to population projections provided by Oregon Office of Economic Analysis.
2. Solid waste in-place densities at completion equal 1800 lb per cubic yard.

## Appendix G

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Existing and Projected Traffic Volume and Landfill Entrance

**Salmon River Highway OR 18 at Riverbend Landfill**

**2006 Existing Traffic Volumes**

**Weekday AM Peak**

PHF=0.91

		0	378	24		
		RT	TH	LT		
0	LT				RT	7
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	417	6		

**Weekday PM Peak**

PHF=0.98

		0	528	11		
		RT	TH	LT		
0	LT				RT	9
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	524	3		

**Saturday Mid Day Peak**

PHF=0.92

		0	711	23		
		RT	TH	LT		
0	LT				RT	23
0	TH				TH	0
0	RT				LT	3
		LT	TH	RT		
		0	472	7		

**Weekday Site Generator Peak**

PHF=0.94

		0	449	39		
		RT	TH	LT		
0	LT				RT	33
0	TH				TH	0
0	RT				LT	4
		LT	TH	RT		
		0	411	7		

**Salmon River Highway OR 18 at Riverbend Landfill**

**2006 Adjusted Traffic Volumes**

Weekday seasonal adjustment factor 1.14

Weekend seasonal adjustment factor 1.15

**Weekday AM Peak**

		0	431	27		
		RT	TH	LT		
0	LT				RT	8
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	475	7		

**Weekday PM Peak**

		0	602	13		
		RT	TH	LT		
0	LT				RT	10
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	597	3		

**Saturday Mid Day Peak**

		0	818	26		
		RT	TH	LT		
0	LT				RT	26
0	TH				TH	0
0	RT				LT	3
		LT	TH	RT		
		0	543	8		

**Weekday Site Generator Peak**

		0	512	44		
		RT	TH	LT		
0	LT				RT	38
0	TH				TH	0
0	RT				LT	5
		LT	TH	RT		
		0	469	8		

**Salmon River Highway OR 18 at Riverbend Landfill**

**2012 Traffic Volumes**

**Weekday AM Peak**

		0	494	30		
		RT	TH	LT		
0	LT				RT	9
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	545	7		

**Weekday PM Peak**

		0	690	14		
		RT	TH	LT		
0	LT				RT	11
0	TH				TH	0
0	RT				LT	2
		LT	TH	RT		
		0	685	4		

**Saturday Mid Day Peak**

		0	937	29		
		RT	TH	LT		
0	LT				RT	29
0	TH				TH	0
0	RT				LT	4
		LT	TH	RT		
		0	622	9		

**Weekday Site Generator Peak**

		0	587	48		
		RT	TH	LT		
0	LT				RT	41
0	TH				TH	0
0	RT				LT	5
		LT	TH	RT		
		0	537	9		

**Salmon River Highway OR 18 at Riverbend Landfill**

**2025 Traffic Volumes**

**Weekday AM Peak**

		0	662	36		
		RT	TH	LT		
0	LT				RT	10
0	TH				TH	0
0	RT				LT	3
		LT	TH	RT		
		0	731	9		

**Weekday PM Peak**

		0	925	16		
		RT	TH	LT		
0	LT				RT	13
0	TH				TH	0
0	RT				LT	3
		LT	TH	RT		
		0	918	4		

**Saturday Mid Day Peak**

		0	1257	34		
		RT	TH	LT		
0	LT				RT	34
0	TH				TH	0
0	RT				LT	4
		LT	TH	RT		
		0	834	10		

**Weekday Site Generator Peak**

		0	787	58		
		RT	TH	LT		
0	LT				RT	49
0	TH				TH	0
0	RT				LT	6
		LT	TH	RT		
		0	720	10		

	Annual Rate	Factor
Landfill growth factor =	1.42%	1.088
Highway growth factor =	2.29%	1.146

	Annual Rate	Factor
Landfill growth factor =	1.39%	1.3
Highway growth factor =	2.29%	1.537

**Salmon River Highway OR 18 at Riverbend Landfill**

**ADT and Truck Traffic**

**Weekday**  
 ADT 4968 Trk % 13%  
 4719 249

	0	488	161			
	RT	TH	LT			
0	0	LT	<b>Truck Count</b>	RT	128	214 ADT 252 Trk % 59%
	0	TH		TH	0	
	0	RT		LT	20	
		LT	TH	RT		
	0	466	13			
		4676	53			

38

**Saturday**  
 ADT 4729 Trk % 10%  
 4892 180

	0	151	54			
	RT	TH	LT			
0	0	LT	<b>Truck Count</b>	RT	56	177 ADT 216 Trk % 30%
	0	TH		TH	0	
	0	RT		LT	9	
		LT	TH	RT		
	0	136	9			
		4676	49			

39

ADT 4725 Trk % 3%

## Appendix H

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ODOT Crash Analysis

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Salmon River Highway #39 (OR 18) MP 41.00 Through MP 42.00  
 January 1, 2001 Through December 31, 2005

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2005														
HEAD-ON	1	0	0	1	1	2	1	1	0	1	0	0	0	0
REAR-END	0	1	0	1	0	4	0	1	0	1	0	0	0	0
2005 TOTAL	1	1	0	2	1	6	1	2	0	2	0	0	0	0
YEAR: 2004														
NON-COLLISION	0	0	1	1	0	0	0	1	0	0	1	0	0	1
2004 TOTAL	0	0	1	1	0	0	0	1	0	0	1	0	0	1
YEAR: 2003														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	1	0	0	0	1
2003 TOTAL	0	0	1	1	0	0	0	1	0	1	0	0	0	1
YEAR: 2001														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	1	0	0	0	0
REAR-END	0	1	1	2	0	1	0	1	1	2	0	0	0	0
2001 TOTAL	0	1	2	3	0	1	0	2	1	3	0	0	0	0
FINAL TOTAL	1	2	4	7	1	7	1	6	1	6	1	0	0	2

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

## Appendix I

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ODOT Operational Standards

State Highway	Begin MP	End MP	Route Number	SCS	NHS	Freight Route	Truck Route	Scenic Byway	Expressway	Bypass	Highway Segment Designation
<b>Wilson River</b>											
037	0.00	51.62	OR6	Regional		FR	TR				
<b>Oregon Caves</b>											
038	0.00	19.33	OR46	District							
<b>Salmon River</b>											
039	-0.22	18.78	OR18	Statewide	NHS	FR	TR				
039	18.78	23.04	OR18	Statewide	NHS	FR	TR		EXPR		
039	23.04	24.23	OR18 OR22	Statewide	NHS	FR	TR		EXPR		
039	24.23	27.17	OR18 OR22	Statewide	NHS	FR	TR		EXPR	BP	
039	27.17	34.32	OR18	Statewide	NHS	FR	TR		EXPR	BP	
039	34.32	43.75	OR18	Statewide	NHS	FR	TR		EXPR		
039	43.75	49.91	OR18	Statewide	NHS	FR	TR		EXPR	BP	
039	49.91	52.65	OR18 OR233	Statewide	NHS	FR	TR		EXPR	BP	
039	52.65	52.71	OR18 OR233	Statewide	NHS						
<b>Salmon River (McMinnville Spur)</b>											
039	Y 46.26	Y 46.85	OR18	District							
<b>Beaverton-Hillsdale</b>											
040	0.97	3.41	OR10	District							
<b>Ochoco</b>											
041	-0.06	0.18	OR126	Statewide	NHS	FR					
041	0.18	1.37	OR126	Statewide	NHS	FR	TR				
041	1.37	17.92	OR126	Statewide	NHS	FR	TR		EXPR		
041	17.92	18.16	OR126	Statewide	NHS	FR	TR				
041	18.16	18.24	US26	Statewide	NHS						
041	18.24	19.38	US26	Statewide	NHS						STA
041	19.38	98.36	US26	Statewide	NHS						
KEY: CC – Commercial Center; FR - State Freight Route; NHS - National Highway System; SB - State and/or Federal Scenic Byway; SCS - State Classification System; STA – Special Transportation Area; T – Temporary Mileage; Truck Route – Federally Designated Truck Route; UBA – Urban Business Area; Y – Spur Mileage; Z – Overlap Mileage after Reroute											

MAXIMUM VOLUME TO CAPACITY RATIOS OUTSIDE METRO <sup>A, B, C, 17</sup>							
Highway Category	Inside Urban Growth Boundary					Outside Urban Growth Boundary	
	STA <sup>D</sup>	MPO	Non-MPO Outside of STAs where non-freeway posted speed $\leq$ 35 mph, or a Designated UBA	Non-MPO outside of STAs where non-freeway speed $>$ 35 mph	Non-MPO where non-freeway speed limit $\geq$ 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways <sup>E</sup>	N/A	0.80	N/A	0.70	0.70	0.70	0.70
Statewide Expressways	N/A	0.80	0.70	0.70	0.70	0.70	0.70
Freight Route on a Statewide Highway	0.85	0.80	0.80	0.75	0.70	0.70	0.70
Statewide (not a Freight Route)	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Freight Route on a Regional or District Highway	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Expressway on a Regional or District Highway	N/A	0.85	N/A	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.85	0.80	0.75	0.75	0.70
District / Local Interest Roads	0.95	0.90	0.90	0.85	0.80	0.80	0.75

**Table 6: Maximum volume to capacity ratios for peak hour operating conditions**

**Notes for Table 6**

<sup>A</sup> OHP Amendment 00-04 established alternative mobility standards for Portland Metro and the Rogue Valley MPO (RVMPO). For Metro, see Table 7, below. For RVMPO see note B, below and the OHP amendment establishing the RVMPO alternative standards located on the web at: <http://www.oregon.gov/ODOT/TD/TP/docs/orhwyplan/registry/0004.pdf>. Where there is a conflict between the Table 6 standards and the established alternative mobility standards, the more tolerant standard (higher v/c ratio) applies.

<sup>B</sup> The maximum volume to capacity ratio at the Northbound and Southbound off-ramps of the South Medford Interchange is  $>1.0$  for four hours daily until the new South Medford Interchange is constructed. The maximum v/c ratio at Highway 99 at Stewart Avenue is  $>1.0$  for two hours daily. When the new interchange is completed, the mobility standards for the ramps will be those in Table 6.

<sup>C</sup> For the purposes of this policy, the peak hour shall be the 30<sup>th</sup> highest annual hour. This approximates weekday peak hour traffic in larger urban areas.

<sup>D</sup> Interstates and Expressways shall not be identified as Special Transportation Areas.

<sup>E</sup> National Highway System (NHS) highway design requirements are addressed in the Highway Design Manual (HDM).

<sup>17</sup> Table 6 was replaced in August 2005, part of OHP Amendment 05-16.

## Appendix J

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Data Sheets



TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2012</i>			
Analysis Time Period	<i>5:00 pm</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	685	4	14	690	0		
Peak-Hour Factor, PHF	1.00	0.98	0.98	0.98	0.98	1.00		
Hourly Flow Rate, HFR	0	698	4	14	704	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	2	0	11	0	0	0		
Peak-Hour Factor, PHF	0.98	1.00	0.98	1.00	1.00	1.00		
Hourly Flow Rate, HFR	2	0	11	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		14		13				
C (m) (vph)		596		234				
v/c		0.02		0.06				
95% queue length		0.07		0.18				
Control Delay		11.2		21.3				
LOS		B		C				
Approach Delay	--	--	21.3					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-ling Kuo</i>			Intersection	<i>Salmon River/Riverband</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>6/15/2007</i>			Analysis Year	<i>2025</i>			
Analysis Time Period	<i>Sat Mid Day Peak</i>							
Project Description <i>Riverband Landfill</i>								
East/West Street: <i>Riverband Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	834	10	34	1257	0		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR	0	906	10	36	1366	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Two Way Left Turn Lane</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	4	0	34	0	0	0		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR	4	0	36	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		36		40				
C (m) (vph)		480		202				
v/c		0.08		0.20				
95% queue length		0.24		0.72				
Control Delay		13.1		27.2				
LOS		B		D				
Approach Delay	--	--	27.2					
Approach LOS	--	--	D					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2025</i>			
Analysis Time Period	<i>5:00 pm</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	918	4	16	925	0		
Peak-Hour Factor, PHF	1.00	0.98	0.98	0.98	0.98	1.00		
Hourly Flow Rate, HFR	0	936	4	16	943	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	3	0	13	0	0	0		
Peak-Hour Factor, PHF	0.98	1.00	0.98	1.00	1.00	1.00		
Hourly Flow Rate, HFR	3	0	13	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		16		16				
C (m) (vph)		468		124				
v/c		0.03		0.13				
95% queue length		0.11		0.43				
Control Delay		13.0		38.3				
LOS		B		E				
Approach Delay	--	--	38.3					
Approach LOS	--	--	E					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>06/21/2007</i>			Analysis Year	<i>2025</i>			
Analysis Time Period	<i>8:00 am</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	731	9	36	662	0		
Peak-Hour Factor, PHF	1.00	0.91	0.91	0.91	0.91	1.00		
Hourly Flow Rate, HFR	0	803	9	39	727	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	3	0	10	0	0	0		
Peak-Hour Factor, PHF	0.91	1.00	0.91	1.00	1.00	1.00		
Hourly Flow Rate, HFR	3	0	10	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		39		13				
C (m) (vph)		533		160				
v/c		0.07		0.08				
95% queue length		0.24		0.26				
Control Delay		12.3		29.5				
LOS		B		D				
Approach Delay	--	--	29.5					
Approach LOS	--	--	D					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2012</i>			
Analysis Time Period	<i>Site Peak</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	537	9	48	587	0		
Peak-Hour Factor, PHF	1.00	0.94	0.94	0.94	0.94	1.00		
Hourly Flow Rate, HFR	0	571	9	51	624	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	5	0	41	0	0	0		
Peak-Hour Factor, PHF	0.94	1.00	0.94	1.00	1.00	1.00		
Hourly Flow Rate, HFR	5	0	43	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		51		48				
C (m) (vph)		674		307				
v/c		0.08		0.16				
95% queue length		0.24		0.55				
Control Delay		10.8		18.9				
LOS		B		C				
Approach Delay	--	--	18.9					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2012</i>			
Analysis Time Period	<i>Saturday Mid Day</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	622	9	29	937	0		
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00		
Hourly Flow Rate, HFR	0	676	9	31	1018	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	4	0	29	0	0	0		
Peak-Hour Factor, PHF	0.92	1.00	0.92	1.00	1.00	1.00		
Hourly Flow Rate, HFR	4	0	31	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		31		35				
C (m) (vph)		607		209				
v/c		0.05		0.17				
95% queue length		0.16		0.59				
Control Delay		11.2		25.7				
LOS		B		D				
Approach Delay	--	--	25.7					
Approach LOS	--	--	D					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2012</i>			
Analysis Time Period	<i>5:00 pm</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	685	4	14	690	0		
Peak-Hour Factor, PHF	1.00	0.98	0.98	0.98	0.98	1.00		
Hourly Flow Rate, HFR	0	698	4	14	704	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0				0	
Lanes	0	1	1	1	1		0	
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	2	0	11	0	0	0		
Peak-Hour Factor, PHF	0.98	1.00	0.98	1.00	1.00	1.00		
Hourly Flow Rate, HFR	2	0	11	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0				0	
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		14		13				
C (m) (vph)		596		234				
v/c		0.02		0.06				
95% queue length		0.07		0.18				
Control Delay		11.2		21.3				
LOS		B		C				
Approach Delay	--	--	21.3					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction				
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2012</i>			
Analysis Time Period	<i>8:00 am</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	545	7	30	494	0		
Peak-Hour Factor, PHF	1.00	0.91	0.91	0.91	0.91	1.00		
Hourly Flow Rate, HFR	0	598	7	32	542	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	2	0	9	0	0	0		
Peak-Hour Factor, PHF	0.91	1.00	0.91	1.00	1.00	1.00		
Hourly Flow Rate, HFR	2	0	9	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		32		11				
C (m) (vph)		658		278				
v/c		0.05		0.04				
95% queue length		0.15		0.12				
Control Delay		10.8		18.5				
LOS		B		C				
Approach Delay	--	--	18.5					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom Riiver</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2006</i>			
Analysis Time Period	<i>Site Peak</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom Riiver Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	469	8	44	512	0		
Peak-Hour Factor, PHF	1.00	0.94	0.94	0.94	0.94	1.00		
Hourly Flow Rate, HFR	0	498	8	46	544	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	5	0	38	0	0	0		
Peak-Hour Factor, PHF	0.94	1.00	0.94	1.00	1.00	1.00		
Hourly Flow Rate, HFR	5	0	40	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		46		45				
C (m) (vph)		726		352				
v/c		0.06		0.13				
95% queue length		0.20		0.43				
Control Delay		10.3		16.7				
LOS		B		C				
Approach Delay	--	--	16.7					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2006</i>			
Analysis Time Period	<i>Saturday Mid Day</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	543	8	26	818	0		
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00		
Hourly Flow Rate, HFR	0	590	8	28	889	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	3	0	26	0	0	0		
Peak-Hour Factor, PHF	0.92	1.00	0.92	1.00	1.00	1.00		
Hourly Flow Rate, HFR	3	0	28	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		28		31				
C (m) (vph)		662		275				
v/c		0.04		0.11				
95% queue length		0.13		0.38				
Control Delay		10.7		19.7				
LOS		B		C				
Approach Delay	--	--	19.7					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>04/18/2007</i>			Analysis Year	<i>2006</i>			
Analysis Time Period	<i>5:00 pm</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	597	3	13	602	0		
Peak-Hour Factor, PHF	1.00	0.98	0.98	0.98	0.98	1.00		
Hourly Flow Rate, HFR	0	609	3	13	614	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	2	0	10	0	0	0		
Peak-Hour Factor, PHF	0.98	1.00	0.98	1.00	1.00	1.00		
Hourly Flow Rate, HFR	2	0	10	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		13		12				
C (m) (vph)		653		277				
v/c		0.02		0.04				
95% queue length		0.06		0.14				
Control Delay		10.6		18.6				
LOS		B		C				
Approach Delay	--	--	18.6					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	<i>Kai-Ling Kuo</i>			Intersection	<i>Riverbend/Salmom River</i>			
Agency/Co.	<i>Jones &amp; Stokes</i>			Jurisdiction	<i>ODOT</i>			
Date Performed	<i>06/21/2007</i>			Analysis Year	<i>2025</i>			
Analysis Time Period	<i>Site Peak</i>							
Project Description <i>Riverbend Landfill</i>								
East/West Street: <i>Riverbend Landfill</i>				North/South Street: <i>Salmom River Highway</i>				
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	720	10	58	787	0		
Peak-Hour Factor, PHF	1.00	0.94	0.94	0.94	0.94	1.00		
Hourly Flow Rate, HFR	0	765	10	61	837	0		
Percent Heavy Vehicles	0	--	--	90	--	--		
Median Type	<i>Undivided</i>							
RT Channelized			0			0		
Lanes	0	1	1	1	1	0		
Configuration		T	R	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	6	0	49	0	0	0		
Peak-Hour Factor, PHF	0.94	1.00	0.94	1.00	1.00	1.00		
Hourly Flow Rate, HFR	6	0	52	0	0	0		
Percent Heavy Vehicles	90	0	90	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		61		58				
C (m) (vph)		554		199				
v/c		0.11		0.29				
95% queue length		0.37		1.16				
Control Delay		12.3		30.4				
LOS		B		D				
Approach Delay	--	--	30.4					
Approach LOS	--	--	D					

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**Attachment C**  
**Photo Simulations**

**Our long-term goal is for Riverbend to blend with the natural landscape.**

We took an important step in this direction recently by removing tarps and replacing them with soil and grasses. Additional aesthetic improvements are underway as we continue to cover the existing landfill and plant more grasses. By 2016, much of the existing landfill will be covered with grasses.

The purpose of the photo simulations is to show how the landfill—including the existing landfill area and the expansion—will look to passersby and neighbors over time.

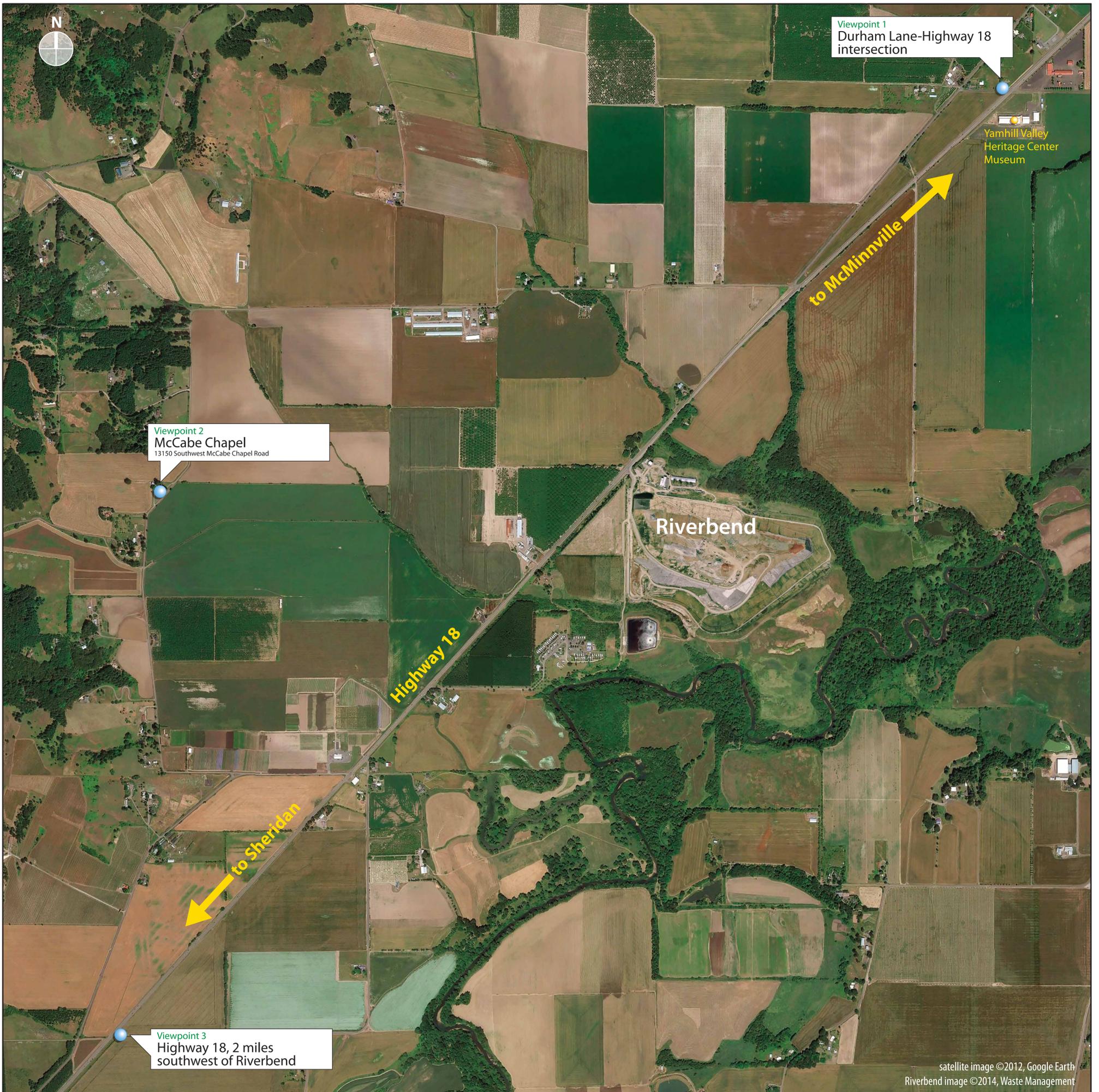
## Orientation Map for Photo Simulations

This aerial photograph shows three viewpoints:

- the intersection of Highway 18 and Durham Lane—the view as seen when traveling from McMinnville
- two miles southwest of Riverbend on Highway 18—the view when traveling from Sheridan
- the view from an elevated area in front of McCabe Chapel

The simulations will show views at three stages:

- today
- five years after construction begins for the expansion
- when the expansion areas are closed and planted with grasses and shrubs (15 years after construction begins)



## Viewpoint 1

View of Riverbend as seen from the intersection of Highway 18 and Durham Lane, when traveling from McMinnville



Riverbend today



Riverbend 5 years after construction begins for the expansion (2021)



Riverbend when the expansion areas are closed and planted with grasses and shrubs—15 years after construction begins (2031)

Simulations are based on actual engineering calculations and drawings from the Riverbend expansion application, to provide the most accurate and realistic representations possible.

Landscaping and plantings shown are based on plans submitted in the application, to show realistic simulations of visual buffers.

## Viewpoint 2

View of Riverbend as seen from McCabe Chapel, approximately one mile east of Riverbend



Riverbend today



Riverbend  
5 years after  
construction  
begins for the  
expansion  
(2021)



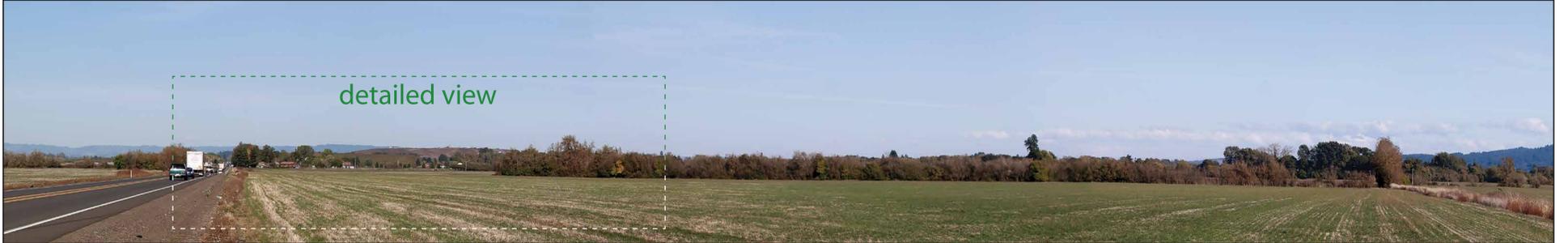
Riverbend when  
the expansion  
areas are closed  
and planted with  
grasses and  
shrubs—15 years  
after construction  
begins  
(2031)

Simulations are based on actual engineering calculations and drawings from the Riverbend expansion application, to provide the most accurate and realistic representations possible.

Landscaping and plantings shown are based on plans submitted in the application, to show realistic simulations of visual buffers.

## Viewpoint 3

View of Riverbend as seen from Highway 18 two miles southwest of Riverbend, when traveling from Sheridan



Riverbend today



Riverbend  
5 years after  
construction  
begins for the  
expansion  
(2021)



Riverbend when  
the expansion  
areas are closed  
and planted with  
grasses and  
shrubs—15 years  
after construction  
begins  
(2031)

Simulations are based on actual engineering calculations and drawings from the Riverbend expansion application, to provide the most accurate and realistic representations possible.

Landscaping and plantings shown are based on plans submitted in the application, to show realistic simulations of visual buffers.

**Attachment D**  
**Surrounding Properties/Summary of Existing Easements**



**MEMORANDUM**

**TO:** Riverbend Landfill Co.

**FROM:** Tommy A. Brooks

**DATE:** November 5, 2014

**RE:** Summary of Easements on Tax Account Numbers R5501-00101, R5501-00200, R5501-00400, R5501-00401

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Riverbend Landfill Co., an Oregon corporation, owns certain real property in Yamhill County, Oregon, identified in the County's records as R5501-00101, R5511-00200, R5501-00400 and R5501-00401. Those lots have been consolidated into one legal lot, as described in the attached Exhibit 1. For ease of reference, the individual lots that make up the consolidated lot will be referred to as follows:

- R5501-00101 - "Parcel 1"
- R5511-00200 - "Parcel 2"
- R5501-00400 - "Parcel 3"
- R5501-00401 – "Parcel 4"

According to the records we have reviewed, below are the easements that encumber the above-described parcels. We have requested additional confirmation of these easements from a title company and, if any changes to these easements are discovered, we will provide that information to the County.

<b>Easement Description</b>	<b>Recording Date</b>	<b>Recording Number</b>	<b>Parcel Affected</b>	<b>Description</b>
Access Easement	April 28, 1947	Book 141, Page 263	Parcel 1 and Parcel 2	Right of access reserved in conveyance to State of Oregon for parcel of land (described in deed recorded in Volume 122, Page 513) abutting highway, not to exceed 30 feet on the south side at Highway Engineer's Station 442+50 for ordinary travel (but not commercial activity) to and from said abutting land; said right away terminated on June 17, 1982 in favor of the following:

	June 17, 1982	Volume 170, Page 522		Right of access to and from the southerly side of the highway opposite Highway Engineer's Station 441+90 a width of 60 feet for unrestricted use
Access Easement	June 26, 1947	Book 143, Page 521	Parcel 1	<p>Right of access reserved in conveyance to State of Oregon for parcel of land (described in deed recorded in Volume 10, Page 25, Yamhill Circuit Court records) abutting highway, not to exceed 20 feet at Highway Engineer's Stations 448+00 and 468+00, which shall terminate upon alienation of said property</p> <p>Right of access reserved in conveyance to State of Oregon for parcel of land (described in deed recorded in Volume 10, Page 25, Yamhill Circuit Court records) abutting highway, not to exceed 25 feet on the south side at Highway Engineer's Station 454+00 for ordinary travel (but not commercial activity) to and from said abutting land</p>
Construction and Excavation Easement	September 24, 1947	Book 145, Page 52; Book 148, Page 182	Parcel 3	Right of State of Oregon Highway Commission to enter upon 30 foot strip of land to make a channel change in connection with the construction of the Pringle Cor-McMinnville Section of the Salmon River Highway and the right to excavate materials for such channel; correction to legal description recorded April 14, 1948
Irrigation and Access Easement	March 2, 1972	Volume 93, Page 634; and Volume 271, Page 1069-70.	Parcel 1 and Parcel 2	Permanent easement and right of way over a 10 foot strip of land for the purpose of constructing, maintaining and repairing underground irrigation water pipeline, together with the right to

				use existing roadways to gain access to irrigation pump site on the South Yamhill River; actual location amended on July 6, 1992.
Utility and Access Easement	November 1, 1984	Volume 190, Page 104	Parcels 3 & 4	Utility easement 10 foot in width in favor of McMinnville Water & Light Department for serial electrical distribution including poles, anchors, transformers, primary and secondary wires, together with a right of access.
Utility and Access Easement	January 2, 1985	Volume 191, Page 735	Parcel 1	Utility easement 20 foot in width in favor of McMinnville Water & Light Department for serial electrical distribution including poles, guying, anchors, transformers, primary and secondary wires, together with a right of access; said easement to terminate one year after electrical services is no longer needed
Access Easement	June 4, 1986	Volume 203, Page 1765	Parcels 3 & 4	Right of way 60 foot in width.
Access Easement	October 17, 1986	Volume 207, Page 1135	Parcels 3 & 4	Right of access to and from the southerly side of the highway opposite Highway Engineer's Station 400+00 a width of 35 feet for unrestricted use (benefits property described in deed recorded in Book 155, Page 511)
Access and Equipment Easement	November 7, 1986	Volume 208, Page 752	Parcels 3 & 4	Access easement 60 feet wide and the right to install subsurface equipment thereon
Irrigation and Access Easement	November 7, 1986	Volume 208, Page 767	Parcel 4	Access easement 30 feet wide and the right to install and maintain subsurface irrigation piping thereon for the benefit of therein described property
Utility and Access	October 25, 1991	Volume 260,	Parcel 1 and	Utility easement in favor of

Easement		Page 2144	Parcel 2	McMinnville Water & Light for electrical distribution equipment including poles, anchors, aerial and/or underground primary conductor, guy wire, transformers and secondary conductor to the meter base and a right of access thereto
Utility and Access Easement	May 20, 1993	Volume 286, Page 2188	Parcel 4	Utility easement 20 foot in width in favor of McMinnville Water & Light Department for unobstructed roadway access, electric distribution equipment, including but not limited to conduit, poles, padmount transformers, primary conductor, secondary conductor, and meters.
Utility and Access Easement	April 24, 1998	Rec. No. 199807420	Parcels 3 & 4	Utility easement 20 foot in width in favor of McMinnville Water & Light Commission for electric distribution equipment, including but not limited to conduit, poles, padmount transformers, vaults, primary conductor, secondary conductor, and meters and a right of access thereto.
Pipeline and Access Easement	March 17, 1999	Rec. No. 199905436	Parcel 1	Easement and right of way for constructing, maintaining and repairing underground irrigation pipeline for the propose of conveying water through the therein described property.
Planting and Access Easement	February 15, 2001	Rec. No. 200102220	Parcels 3 & 4	Right to encroach for the purpose of planting, growing and harvesting trees and the right to use existing roads for access, ingress and egress to Riverbend Landfill's property and facilities.

Leland MacDonald & Assoc.  
3765 Riverside Drive  
McMinnville, OR 97128  
Phone: 472-7904  
Fax : 472-0367

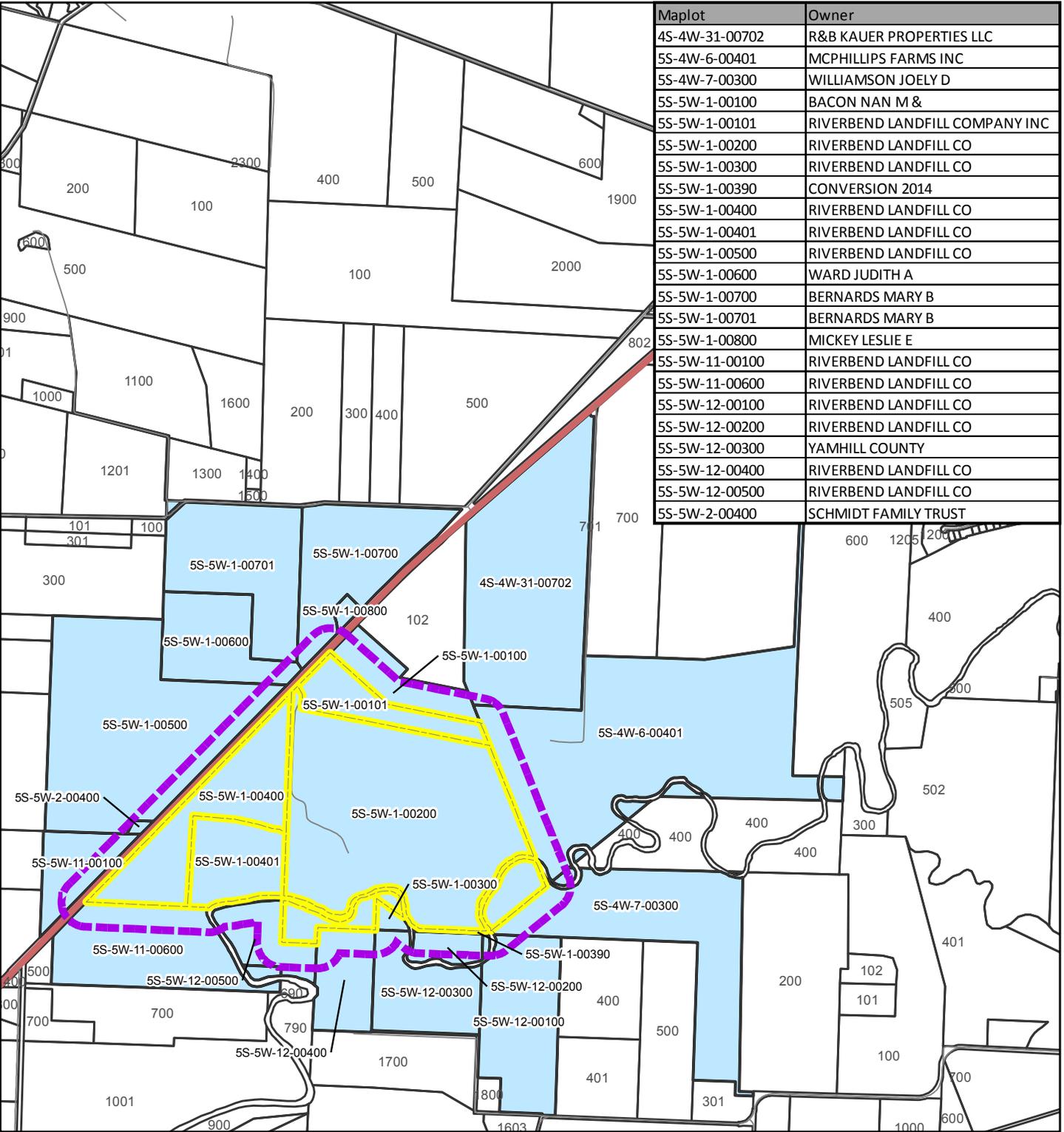


Date: 22 Aug. 2013

RBLF - Legal Description - Combined TL5501-400,401,200,101

A tract of land in Sections 1,2,11, & 12, Township 5 South, Range 5 West, Yamhill County, Oregon, being more particularly described as follows:

Beginning at the intersection of the southerly margin of State Highway No. 18 with the east line of the Alexius Miller Donation Land Claim No. 64; thence South  $43^{\circ}38'33''$  West 4151.14 feet along said southerly margin to the most northerly northwest corner of that tract of land described in deed from JOHN G. BERNARDS and MARY BETH BERNARDS to RIVERBEND LANDFILL COMPANY, INC. and recorded in Instrument No. 200629179, Yamhill County Deed Records; thence South  $88^{\circ}05'58''$  East 1700 feet more or less to the center of the South Yamhill River; thence easterly and southerly along the center of the South Yamhill River to the north line of the John Munroe Donation Land Claim No. 74 and No. 65; thence South  $88^{\circ}41'48''$  East 1114 feet more or less along the north line of said Munroe DLC to the southerly extension of the easterly line of the J.A. Cornwall Donation Land Claim No. 63; thence North  $49^{\circ}33'27''$  East 1039.29 feet along the easterly line of the Cornwall DLC to the division line of said Cornwall DLC; thence North  $22^{\circ}27'46''$  West 2533.29 feet along said division line to the northeast corner of that tract of land described in deed from MICHAEL J. BERNARDS and CHRIS BERNARDS to RIVERBEND LANDFILL COMPANY, INC. and recorded in Instrument No. 199907961, Yamhill County Deed Records; thence North  $79^{\circ}26'19''$  West 1340.00 feet along the northerly line of said tract; thence North  $48^{\circ}41'19''$  West 1092.20 feet along said northerly line to the southerly margin of State Highway No. 18; thence South  $43^{\circ}38'33''$  West 784.02 feet along said southerly margin to the POINT OF BEGINNING, containing 226 acres, more or less.



### Legend

-  Subject Property
-  350-foot buffer
-  Tax Lots
-  Notice Lots

### Surrounding Properties

Site Design Review Application  
Riverbend Landfill Expansion Modules 10 and 11



0 1,000 2,000 Feet



Print Date: 11-4-2014