



# INFORMATION PACKET

541-497-6514

Oregonfarmbrokers.com

Oregonfarmbrokers@gmail.com

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330



# LIST PACK

541-497-6514

Oregonfarmbrokers.com

Oregonfarmbrokers@gmail.com

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330



Parcel Information		Assessment Information	
Parcel #:	R46916	Market Value Land:	\$123,988.00
Tax Lot:	25062300200	Market Value Impr:	\$0.00
Site Address:	0 Fort McKay Rd	Market Value Total:	\$123,988.00
	Oakland OR 97462	Assessed Value:	\$6,418.00
Owner:	Wilde, Dennis J & Jean B	<b>Tax Information</b>	
Owner2:		Levy Code Area:	00100
Owner Address:	13801 Knaus Rd	Levy Rate:	6.7968
	Lake Oswego OR 97034	Tax Year:	2018
Twn/Range/Section:	25S / 06W / 23	Annual Tax:	\$62.29
Parcel Size:	10.00 Acres (435,600 SqFt)	Exemption Description:	
Plat/Subdivision:	Calapooia Walnut Farms	<b>Legal</b>	
Lot:	3	CALAPOOIA WALNUT FARMS, BLOCK 2, LOT 3, ACRES 10.00	
Block:	2		
Map Page/Grid:			
Census Tract/Block:	060000 / 2005		

Land			
Cnty Land Use:	502 - FARM - VACANT - EFU ZONE	Std Land Use:	VMSC - Vacant Misc
Zoning:	FG - Exclusive Farm Use-Grazing	Neighborhood:	SH
Watershed:	Calapooya Creek	View:	
Recreation:		School District:	1 - Oakland School District
Primary School:	Oakland Elementary School	Middle School:	Lincoln Middle School
High School:	Oakland High School		

Improvement			
Year Built:		Condition:	Fin. SqFt: 0
Bedrooms:	0	Bathrooms:	0.00
Foundation:		Attic Fin SqFt:	0
Exterior Walls:		Basement Fin SqFt:	0
Carport SqFt:	0	Deck SqFt:	0
Pool:	No	Roof Type:	
			Roof Covering:
			Heat:

Transfer Information			
Sale Date:	2/1/2013	Sale Price:	
Doc Num:	2013-2990	Doc Type:	

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

Owner: WILDE, DENNIS J & JEAN B

Prop ID : R46916 (34100.01) (216369) 13801 KNAUS RD  
Map Tax Lot: 25-06W-23-00200 (34100.01) LAKE OSWEGO, OR 97034  
Legal : CALAPOOIA WALNUT FARMS, BLOCK 2,  
LOT 3, ACRES 10.00

Acreage : 10.00 Zoning: Deferral : 2 PrCls: 550

DBA : Sale Info : 02/01/13 \$0 L

Situs : 0 FORT MCKAY RD Deed Type : BARGAIN

OAKLAND, OR 97462 Instrument# : 2013-2990

Code Areas : 00100 (Tax Rate: 6.7968) Year Built :

Living Area :

**2019 Tax Status**

Curr Tax & Assessments: 38.14

Payments or Adjust : 0.00

Discount Allowed : 1.14

Unpaid Balance : 37.00

Interest Due : 0.00

Total Due Current Year: 37.00

Delq Tax + Int + Fees : 0.00

Balance Due : 37.00

Pot Add Tax Liab:EFU FARM

**2019 Roll Values**

RMV Land, LSU Only \$ 2,889 (+)

RMV Improvements \$ 0 (+)

RMV Total \$ 129,821 (=)

Total Exemptions \$ 0 (-)

Net RMV \$ 129,821 (=)

M50 Assd Value \$ 2,889

Special Assessments: 18.75

Exemption(Type) : NONE

Enter <RET> to Exit:

Property: R46916

\*\*\* Appraisal Detail \*\*\*

Appraised: 04/01/98 Appraiser: BL

Map & Tax Lot	Code Area	PCL	MCL	MA	NBHD	Zone
25-06W-23-00200	00100	550	502	2	SH	

Legal Desc: CALAPOOIA WALNUT FARMS, BLOCK 2, LOT 3, ACRES 10.00

Owner: WILDE, DENNIS J & JEAN B      Situs: 0 FORT MCKAY RD      Sale Info: \$0      Date: 02/01/13  
 13801 KNAUS RD      OAKLAND, OR 97462      Deed Type: BARGA  
 LAKE OSWEGO, OR 97034      Potential Liability: Yes      Instrument: 2013-2990

Exemptions:

Utilities:

Access:

Topography:

Building Permits:

General Appraisal Comments

\*\*\* Related Accounts \*\*\*

Owner	Map & Tax Lot	Code Area	Acres
-------	---------------	-----------	-------

\*\*\* 2020 Uncertified Value Summary \*\*\*

	RMV	M5 Value	LSU	MAV	Assessed Value
Land :	\$0	\$0			
LSU Mkt Val:	\$129,821	\$3,201			
Structures :	\$0	\$0			
Total :	\$129,821	\$3,201			
Exemptions :	\$0	\$0			
After Exmpt:	\$129,821	\$3,201	\$2,974	\$0	\$2,974

\*\*\* Land Segments \*\*\*

Land Summary

Land#	Description	Type	Prop. Class	Size	Market	Special Use
L1	RS3	RS3	0	3.25 -AC	\$19,793	\$257
L2	RS1	RS1	0	5.75 -AC	\$55,028	\$2,315
L3	USHA	USHA	0	1 -AC	\$55,000	\$402
Land Totals: Legal: 10.00-AC				10 -AC	\$129,821	\$2,974

\*\*\* Land Detail \*\*\*

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
1	RS3	0	550	SH	3.25-AC	2020	A	RS3	\$19,793
Total Trends: 100.00 %						Total Market Value:		\$19,793	

Adjustments: SIZE 87%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2H5	3.25-AC	79.31	%	100%	\$257

Comments: 01/05/00-99 LEASED BY SPENCER



**Property:** R46916

**\*\*\* Land Detail \*\*\* continued**

01/29/99-98 LEASED BY SPENCER  
02/04/98-PT FM 34107.00, PT TO 34100.04,5976.03, & 34100.05 2-98 DT  
01/02/97-EST TO REMOVE FU IN BAG  
01/01/00-w/others 185.5a NEW MAP-SEG;COMB-HERE 34107.01; EST TO REMOVE FU IN BAG

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
2	RS1	0	550	SH	5.75-AC	2020	A	RS1	\$55,028
<b>Total Trends: 100.00 %</b>									<b>Total Market Value: \$55,028</b>

**Adjustments:** SIZE 87%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2B3	5.75-AC	402.73	%	100%	\$2,315

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
3	USHA	0	550	SH	1-AC	2020	CD	USHA	\$55,000
<b>Total Trends: 100.00 %</b>									<b>Total Market Value: \$55,000</b>

**Adjustments:**

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2B3	1-AC	402.73	%	100%	\$402

**\*\*\* No Improvements \*\*\***

**\*\*\* No Improvement Details \*\*\***

**\*\*\* Special Assessments \*\*\***

SA#	Code	Description	Unit Count	Unit Price	Amount	
S1	5015	FI DOUGLAS FIRE PATROL	10.00	\$ 0.8481	\$18.75	* Min/Max Value Used
<b>Special Assessments Totals:</b>					\$18.75	

Douglas County Official Records  
Patricia K. Hitt, County Clerk

**2013-002990**

02/06/2013 11:53:56 AM

File No 12020220

DEED-BS      Cnt=1 Stn=12 HEDI  
\$15.00 \$11.00 \$10.00 \$15.00

**\$51.00**

<b>Grantor</b>
Popeye's Girlfriend, LLC, an Oregon limited liability company
<b>Grantee</b>
Dennis J Wilde Jean B Wilde
<b>After recording return to</b>
Dennis J Wilde Jean B Wilde 2201 Fort McKay Rd Sutherlin, OR 97479
<b>Until requested, all tax statements shall be sent to</b>
Dennis J Wilde Jean B Wilde 2201 Fort McKay Rd Sutherlin, OR 97479 Tax Acct No(s): <b>R26384</b>

Reserved for Recorder's Use

**STATUTORY BARGAIN AND SALE DEED**

**Popeye's Girlfriend, LLC, an Oregon limited liability company, Grantor,** conveys to **Dennis J Wilde and Jean B Wilde, As Tenants By The Entirety, Grantee,** the following described real property:

See Attached Exhibit "A"

The true consideration for this conveyance is **\$0.00**. (Here comply with requirements of ORS 93.030 )

**BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009 AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.**

WESTERN TITLE & ESCROW COMPANY 1088100

Executed this 18<sup>th</sup> day of February, 2013

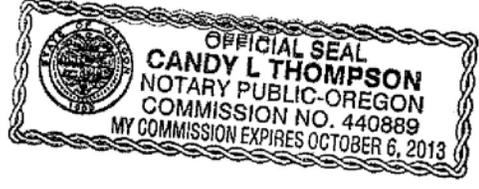
[Signature]  
Popeye's Girlfriend, LLC  
By: Dennis J Wilde, Managing Member

[Signature]  
Popeye's Girlfriend, LLC  
By: Jean B Wilde, Managing Member

State of Oregon, County of Douglas ) ss.

This instrument was acknowledged before me on this 18<sup>th</sup> day of February, 2013  
by Dennis J Wilde and Jean B Wilde as Managing Members of Popeye's Girlfriend, LLC.

[Signature]  
Notary Public for Oregon  
My commission expires: 10/06/2013



### Exhibit "A"

Real property in the County of Douglas, State of Oregon, described as follows:

#### Parcel 1:

Beginning at a 5/8 inch iron rod at a fence corner post junction which bears South 35° 28' 37" East 1529.47 feet from the Southwest Section Corner of Section 14, Township 25 South, Range 6 West Willamette Meridian and which bears North 02° 25' 13" West 982.59 feet along an existing fence line from a 5/8 inch iron rod at a fence corner post on the north right of way of Douglas County Road 9; thence North 00° 08' 02" East 1088.06 feet to a 5/8 inch iron rod in the fence line; thence North 00° 20' 22" East 156.36 feet to a 5/8 inch iron rod at a fence corner post junction; thence South 89° 12' 06" East 903.11 feet along the existing fence line to a 5/8 inch iron rod at a fence corner post; thence North 00° 33' 15" West 656.02 feet along the existing fence line to a 5/8 inch iron rod at a fence corner post; thence North 89° 34' 12" East 771.87 feet along the existing fence line to a fence corner point, from which a reference 5/8 inch iron rod bears North 02° 52' 06" West 5.00 feet; thence South 87° 54' 33" East 5.00 feet along the existing fence line to a 5/8 inch iron rod in the fence line; thence South 88° 52' 05" East 921.56 feet along the existing fence line to a 5/8 inch iron rod at the edge of a cultivated field; thence leaving the fence line and continuing South 88° 49' 41" East 344.34 feet through a wet land and pond to a calculated point in Ford's Pond on the west line of neighboring Woodruff property, from which a reference 5/8 inch iron rod on the bank of Ford's Pond bears North 05° 51' 56" West 22.06 feet; thence along the west line of the neighboring Woodruff property South 05° 59' 56" East 538.73 feet to a 5/8 inch iron rod in a fence line from which the fence line bears North 05° 59' 66" West 88.75 feet to a fence corner post; thence South 05° 51' 20" East 1028.14 feet to a 5/8 inch iron rod in the fence line; thence South 05° 51' 16" East 401.39 feet to a 5/8 inch iron rod in the fence line; thence South 05° 51' 33" East 448.59 feet to a 5/8 inch iron rod at a fence corner post on the north right of way boundary of Douglas County Road 9; thence Westerly along said northerly right of way line of Douglas County Road a distance of 2,360.00 feet, more or less, the Southwest corner of Lot 4, Block 2, CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County Oregon; thence leaving said Northerly right of way line of Douglas County Road No. 9 and bearing North along the West line of said Lot 4 a distance of 1,080.00 feet, more or less to the Northwest corner of said Lot 4; thence South 79° 36' West along the North line of Lot 3, Block 2, said Calapooya (of record as Calapooia) Walnut Farm a distance of 300.00 feet, more or less; thence South 71° 43' West along the North line of said Lot 3 and the North line of Lot 2, Block 2, said Calapooya (of record as Calapooia) Walnut Farm, a distance of 610.00 feet, more or less, to the Northeast corner of Lot 1, Block 2, said Calapooya (of record as Calapooia) Walnut Farm; thence North 02° 18' 00" West a distance of 150.00 feet to the point of beginning.

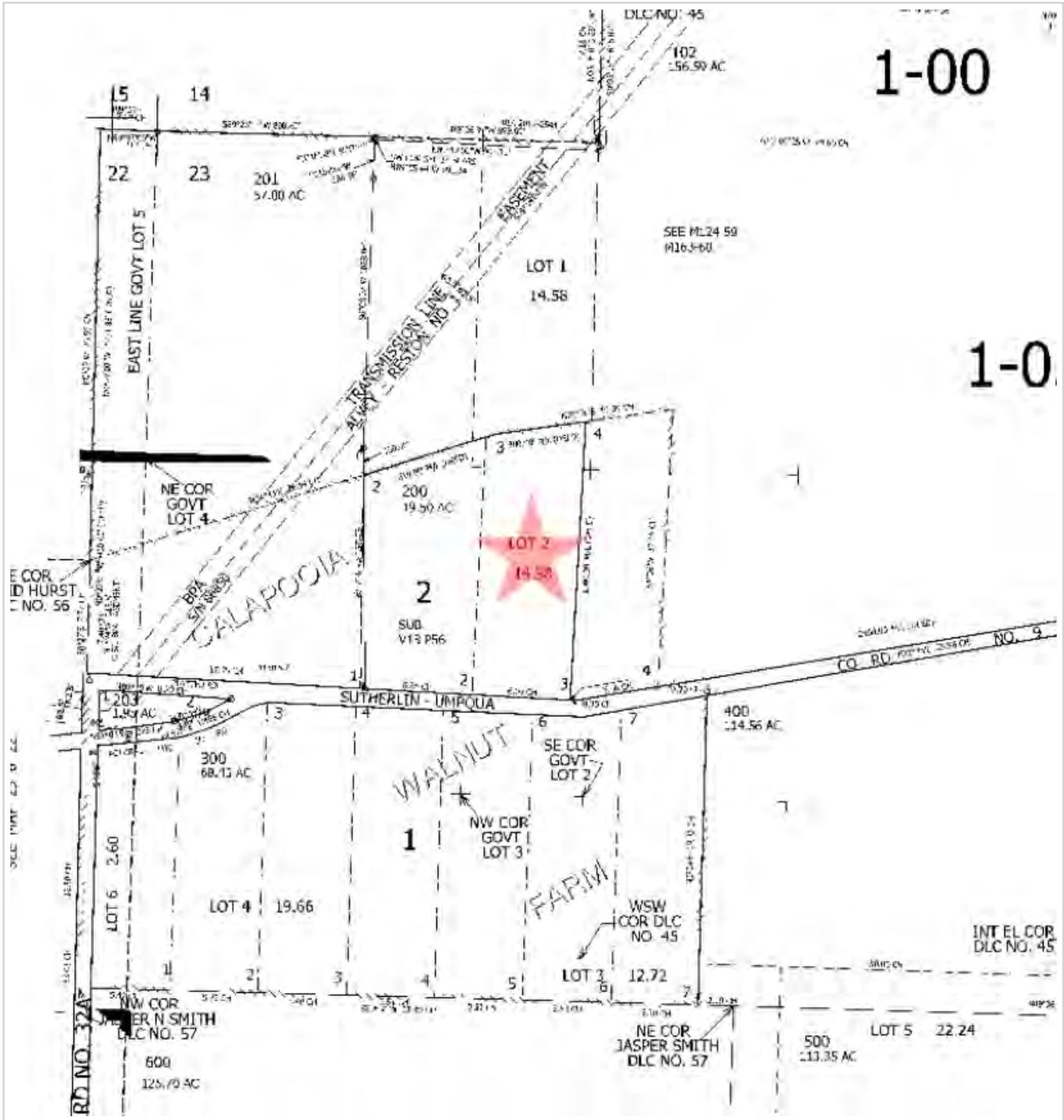
#### Parcel 2:

All of Lots 2 and 3 of Block 2 of the CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon;

EXCEPTING THEREFROM all that portion of Lot 2, Block 2, CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon, lying west of the following described line:

Beginning at a 5/8 inch iron rod at a fence corner post junction which bears South 35° 28' 37" East 1529.47 feet from the Northwest corner of Section 23, Township 25 South, Range 6 West, W.M.; thence South 2° 25' 13" East a distance of 982.59 feet to a 5/8 inch iron rod on the Northerly right of way line of the Douglas County Road No. 9 and the South boundary of Block 2 of the CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon and thence terminating

Assessor Map



1-00

1-0



Parcel ID: R46916

Site Address: 0 Fort McKay Rd

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

Aerial Map



**Parcel ID: R46916**

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

  
**Western** Title & Escrow



Parcel Information		Assessment Information	
Parcel #:	R26384	Market Value Land:	\$567,512.00
Tax Lot:	25062300102	Market Value Impr:	\$92,506.00
Site Address:	2201 Fort McKay Rd	Market Value Total:	\$660,018.00
	Sutherlin OR 97479	Assessed Value:	\$140,436.00
Owner:	Wilde, Dennis J & Jean B	<b>Tax Information</b>	
Owner2:		Levy Code Area:	00100
Owner Address:	13801 Knaus Rd	Levy Rate:	6.7968
	Lake Oswego OR 97034	Tax Year:	2018
Twn/Range/Section:	25S / 06W / 23	Annual Tax:	\$1,094.54
Parcel Size:	86.09 Acres (3,750,080 SqFt)	Exemption Description:	
Plat/Subdivision:		<b>Legal</b>	
Lot:		P.P. 2019-11, PARCEL 1, ACRES 86.09, Mult Home ID's 370439; 370437, IMPS OUTSIDE FIRE DIST	
Block:			
Map Page/Grid:			
Census Tract/Block:	060000 / 2005		

Land	
Cnty Land Use:	502I - FARM - IMPROVED - EFU ZONE
Zoning:	FG - Exclusive Farm Use-Grazing
Watershed:	Calapooya Creek
Recreation:	
Primary School:	Oakland Elementary School
High School:	Oakland High School
Std Land Use:	AFAR - Farms And Crops
Neighborhood:	SH
View:	
School District:	1 - Oakland School District
Middle School:	Lincoln Middle School

Improvement		
Year Built:	Condition:	Fin. SqFt: 0
Bedrooms: 0	Bathrooms: 0.00	Garage: 0 SqFt
Foundation:	Attic Fin SqFt: 0	Attic Unfin SqFt: 0
Exterior Walls:	Basement Fin SqFt: 0	Basement Unfin SqFt: 0
Carport SqFt: 0	Deck SqFt: 384	Roof Covering:
Pool: No	Roof Type:	Heat:

Transfer Information			
Rec. Date:	2/6/2013	Sale Price:	
Owner:	Dennis J Wilde	Doc Num:	2990
Orig. Loan Amt:	\$200,000.00	Doc Type:	Deed
Finance Type:	ADJ	Grantor:	
Loan Type:	Conventional	Title Co:	WESTERN TITLE & ESCROW CO
		Lender:	UMPQUA BK

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

- - Property Data Summary Screen - -

Owner: WILDE, DENNIS J & JEAN B

Prop ID : R26384 (5976.03) (216369) 13801 KNAUS RD  
 Map Tax Lot: 25-06W-23-00102 (5976.03) LAKE OSWEGO, OR 97034  
 Legal : P.P. 2019-11, PARCEL 1, ACRES  
 86.09, Mult Home ID's 370439;\*

Acreage : 86.09 Zoning: FG Deferral : 2 PrCls: 551  
 DBA : Sale Info : 02/01/13 \$0 L  
 Situs : 2201 FORT MCKAY RD Deed Type : BARGAIN  
 OAKLAND, OR 97462 Instrument# : 2013-2990  
 Code Areas : 00100 (Tax Rate: 6.7968) Year Built :

Living Area :

**2019 Tax Status**

Curr Tax & Assessments: 803.46  
 Payments or Adjust : 0.00  
 Discount Allowed : 24.10  
 Unpaid Balance : 779.36  
 Interest Due : 0.00  
 Total Due Current Year: 779.36  
 Delq Tax + Int + Fees : 0.00  
 Balance Due : 779.36  
 Pot Add Tax Liab:EFU FARM

**2019 Roll Values**

RMV Land, LSU Only \$ 32,616 (+)  
 RMV Improvements \$ 75,790 (+)  
 RMV Total \$ 477,745 (=)  
 Total Exemptions \$ 0 (-)  
 Net RMV \$ 477,745 (=)  
 M50 Assd Value \$ 108,406  
 Special Assessments: 120.51  
 Exemption(Type) : NONE

Enter <RET> to Exit:

Property: R26384

\*\*\* Appraisal Detail \*\*\*

Appraised: 12/29/15 Appraiser: AJS

Map & Tax Lot	Code Area	PCL	MCL	MA	NBHD	Zone
25-06W-23-00102	00100	551	502I	2	SH	FG

Legal Desc: P.P. 2019-11, PARCEL 1, ACRES 86.09, Mult Home ID's 370439; 370437, IMPS OUTSIDE FIRE DIST

Owner: WILDE, DENNIS J & JEAN B 13801 KNAUS RD LAKE OSWEGO, OR 97034	Situs: 2201 FORT MCKAY RD OAKLAND, OR 97462	Sale Info: \$0 Deed Type: BARGA Instrument: 2013-2990	Date: 02/01/13
Potential Liability: Yes			

Exemptions:

Utilities:

Access:

Topography:

Building Permits:

General Appraisal Comments

\*\*\* Related Accounts \*\*\*

	Owner	Map & Tax Lot	Code Area	Acres
M142050	WILDE, DENNIS J & WILDE,	25-06W-23-00102	00100	
M142051	WILDE, DENNIS J & WILDE,	25-06W-23-00102	00100	

\*\*\* 2020 Uncertified Value Summary \*\*\*

	RMV	M5 Value	LSU	MAV	Assessed Value
Land :	\$0	\$0			
LSU Mkt Val:	\$401,955	\$35,381			
Structures :	\$74,893	\$74,893			
Total :	\$476,848	\$110,274			
Exemptions :	\$0	\$0			
After Exmpt:	\$476,848	\$110,274	\$33,353	\$74,893	\$108,246

\*\*\* Land Segments \*\*\*

Land Summary

Land#	Description	Type	Prop.Class	Size	Market	Special Use
L1	1H5	1H5	0	22.64 -AC	\$27,338	\$1,795
L2	1B5	1B5	0	14.94 -AC	\$46,389	\$3,477
L3	1B3	1B3	0	39.50 -AC	\$195,328	\$15,907
L4	1B2	1B2	0	8.01 -AC	\$47,900	\$4,174
L5	HSWA	HSWA	0	1 -AC	\$85,000	\$8,000
<b>Land Totals:</b>		Legal: 86.09-AC		86.09 -AC	\$401,955	\$33,353

Property: R26384

\*\*\* Land Detail \*\*\*

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
1	1H5	0	551	SH	22.64-AC	2020	A	1H5	\$27,338
						<b>Total Trends:</b> 100.00 %		<b>Total Market Value:</b> \$27,338	

Adjustments: SIZE 115%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2H5	22.64-AC	79.31	%	100%	\$1,795

Comments: 01/05/00-99 LEASED BY SPENCER  
01/29/99-98 LEASED BY SPENCER  
01/29/99-98 LEASED BY SPENCER  
02/04/98-PT FM 34100.01 & 5976.02 2-98 DT  
01/01/00-w/others 185.5a

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
2	1B5	0	551	SH	14.94-AC	2020	A	1B5	\$46,389
						<b>Total Trends:</b> 100.00 %		<b>Total Market Value:</b> \$46,389	

Adjustments: SIZE 115%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2B5	14.94-AC	232.78	%	100%	\$3,477

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
3	1B3	0	551	SH	39.50-AC	2020	A	1B3	\$195,328
						<b>Total Trends:</b> 100.00 %		<b>Total Market Value:</b> \$195,328	

Adjustments: SIZE 115%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2B3	39.50-AC	402.73	%	100%	\$15,907

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
4	1B2	0	551	SH	8.01-AC	2020	A	1B2	\$47,900
						<b>Total Trends:</b> 100.00 %		<b>Total Market Value:</b> \$47,900	

Adjustments: SIZE 115%

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	ASU	2B2	8.01-AC	521.18	%	100%	\$4,174

L#	Type	PCL	PrmCl	Nbhd	Dimensions	Year	Metd	Land Table	Market Value
5	HS HA	0	551	SH	1-AC	2020	CD	HS HA	\$85,000
						<b>Total Trends:</b> 100.00 %		<b>Total Market Value:</b> \$85,000	

Adjustments:

LSU Code	D	Class	Year	Mthd	Land Table	Size	Price	Adj	Trends	LSU Value
2			2020	USU	OSDL400	1-AC	4000	100%	100%	\$8,000

Comments: 01/05/00-99 LEASED BY SPENCER  
01/29/99-98 LEASED BY SPENCER  
01/29/99-98 LEASED BY SPENCER  
02/04/98-SEG FM 5976.00 2-98 DT  
01/01/00-w/others 185.50a



Property: R26384

\*\*\* Improvement Details \*\*\* continued

I#1 -Seg#2 Desc: GP BLDG Make: Model: X# :  
 Dimensions: 113L x 40W x 14H Eff Area for Calculations: 4520 Area: 4520 Home ID:  
 Type: GPB Method: F98 Class: 5  
 Base Cost and Adjustments to the Base Units Cost/Units Total

Ext. Wall	R-BKE	R BAKED/ENAMEL		
Ext. Wall	14FT	14FT WALL		
Roof Style	GABLE	GABLE		
Roof Cover	R-BKE	R BAKED ENAMEL		
Flooring	GRV	GRAVEL		
Flooring	\$4100	Dollar Adjmt.	1	
Electric	F-ELE	FARM 98 ELECT/SQFT		
Add Factor1	\$-225	Dollar Adjmt.	1	
Add Factor1	NO DO			

Bedrooms: Base Cost: \$56,723  
 Year Built: 2014 Eff Year: 2014 Cond: Depre%: 95 Nbh%:  
 Adjustments:  
 Total Adjustments: 95%  
 Total Segment Value: \$53,887

Improvement#: 2 Type: MHX Description: MH ROLL &/OR IMPS  
 Appr Method: C Trend %: 100 % Total Impr Value: \$13,000

I#2 -Seg#1 Desc: DECK GOOD (WD) Make: Model: X# :  
 Dimensions: 24L x 16W Eff Area for Calculations: 384 Area: 384 Home ID:  
 Type: DKG Method: R93 Class:  
 Base Cost and Adjustments to the Base Units Cost/Units Total

Bedrooms: Base Cost: \$5,760  
 Year Built: 2012 Eff Year: 2012 Cond: Depre%: 93 Nbh%:  
 Adjustments:  
 Total Adjustments: 93%  
 Total Segment Value: \$5,357

I#2 -Seg#2 Desc: DECK GOOD (WD) Make: Model: X# :  
 Dimensions: 16L x 8W Eff Area for Calculations: 128 Area: 128 Home ID:  
 Type: DKG Method: R93 Class:  
 Base Cost and Adjustments to the Base Units Cost/Units Total

Bedrooms: Base Cost: \$1,920  
 Year Built: 2012 Eff Year: 2012 Cond: Depre%: 93 Nbh%:  
 Adjustments:  
 Total Adjustments: 93%

Total Segment Value:

\$1,786

---

Property: R26384

\*\*\* Improvement Details \*\*\* continued

I#2 -Seg#3 Desc: PAVERS, BRICK, STMPD C Make: Model: X# :  
Dimensions: 24L x 16W Eff Area for Calculations: 384 Area: 384 Home ID:  
Type: PVR Method: R93 Class:  
Base Cost and Adjustments to the Base Units Cost/Units Total

Bedrooms: Base Cost: \$3,072  
Year Built: 2012 Eff Year: 2012 Cond: Depre%: 93 Nbh%:  
Adjustments:  
Total Adjustments: 93%  
Total Segment Value: \$2,857

I#2 -Seg#4 Desc: GATE (FLAT) Make: Model: X# :  
Dimensions: Eff Area for Calculations: 0 Area: Home ID:  
Type: GATE Method: F Class:  
Base Cost and Adjustments to the Base Units Cost/Units Total

Bedrooms: Base Cost: \$0  
Year Built: Eff Year: Cond: Depre%: Nbh%:  
Adjustments:  
Total Adjustments: %  
Total Segment Value: \$3,000

\*\*\* Special Assessments \*\*\*

SA#	Code	Description	Unit Count	Unit Price	Amount
S1	5015	FI DOUGLAS FIRE PATROL	86.09	\$ 0.8481	\$73.01
S2	5016	FI DOUGLAS ODF SUR CHG	1	\$ 47.50	\$47.50
Special Assessments Totals:					\$120.51



Parcel Information		Assessment Information	
Parcel #:	M142050	Market Value Land:	\$0.00
Tax Lot:	25062300102	Market Value Impr:	\$15,996.00
Site Address:	2201 Fort McKay Rd	Market Value Total:	\$15,996.00
	Sutherlin OR 97479	Assessed Value:	\$15,996.00
Owner:	Wilde, Dennis J	<b>Tax Information</b>	
Owner2:	Wilde, Jean B	Levy Code Area:	00100
Owner Address:	13801 Knaus Rd	Levy Rate:	6.7968
	Lake Oswego OR 97034	Tax Year:	2018
Twn/Range/Section:	25S / 06W / 23	Annual Tax:	\$108.73
Parcel Size:		Exemption Description:	
Plat/Subdivision:		<b>Legal</b>	
Lot:		MFD STRUCT SERIAL # HER027035ORM, Home ID 370439 ON REAL ACCT 25-06W-23-00102, PERSONAL MS	
Block:			
Map Page/Grid:			
Census Tract/Block:	060000 / 2005		

Land	
Cnty Land Use:	M167
Std Land Use:	RSFR - Single Family Residence
Zoning:	FG - Exclusive Farm Use-Grazing
Neighborhood:	MH2
Watershed:	Calapooya Creek
View:	
Recreation:	
School District:	1 - Oakland School District
Primary School:	Oakland Elementary School
Middle School:	Lincoln Middle School
High School:	Oakland High School

Improvement					
Year Built:	2009 (2009)	Condition:	A	Fin. SqFt:	288
Bedrooms:	1	Bathrooms:	0.00	Garage:	0 SqFt
Foundation:	M-PPCC;R-CCBLK	Attic Fin SqFt:	0	Attic Unfin SqFt:	0
Exterior Walls:	M-CLAD	Basement Fin SqFt:	0	Basement Unfin SqFt:	0
Carport SqFt:	0	Deck SqFt:	0	Roof Covering:	GUT;M-MET-RF
Pool:	No	Roof Type:	FLAT	Heat:	HP

Transfer Information			
Sale Date:	11/15/2012	Sale Price:	\$35,000.00
Doc Num:	M2013-370439/0415	Doc Type:	

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

Owner: WILDE, DENNIS J &

Prop ID : M142050 (ACTIVE P)  
Map Tax Lot: 25-06W-23-00102 (ACTIVE)  
Legal : MFD STRUCT SERIAL # HER027035ORM,  
Home ID 370439 ON REAL ACCT\*

(217281) WILDE, JEAN B  
13801 KNAUS RD  
LAKE OSWEGO, OR 97034

Acreage : Zoning:  
DBA :  
Situs : 2201 FORT MCKAY RD  
OAKLAND, OR 97462  
Code Areas : 00100 (Tax Rate: 6.7968)

Deferral : PrCls: M167  
Sale Info : 11/15/12 \$35,000 R  
Deed Type : BCD  
Instrument# : M2013-3704  
Year Built : 2009  
Living Area : 288

**2019 Tax Status**

Curr Tax & Assessments: 105.14  
Payments or Adjust : 0.00  
Discount Allowed : 3.15  
Unpaid Balance : 101.99  
Interest Due : 0.00  
Total Due Current Year: 101.99  
Delq Tax + Int + Fees : 0.00  
Balance Due : 101.99  
Pot Add Tax Liab:

**2019 Roll Values**

RMV Land \$ 0 (+)  
RMV Improvements \$ 15,414 (+)  
RMV Total \$ 15,414 (=)  
Total Exemptions \$ 0 (-)  
Net RMV \$ 15,414 (=)  
M50 Assd Value \$ 15,414  
Special Assessments: 10.00  
Exemption(Type) : NONE

Enter <RET> to Exit:

Property: M142050

\*\*\* Appraisal Detail \*\*\*

<b>Map &amp; Tax Lot</b>	<b>Code Area</b>	<b>PCL</b>	<b>MCL</b>	<b>MA</b>	<b>NBHD</b>	<b>Appraised:</b>	<b>Appraiser:</b>	<b>Zone</b>
25-06W-23-00102	00100	M167	M167	2	MH2			

**Legal Desc:** MFD STRUCT SERIAL # HER027035ORM, Home ID 370439 ON REAL ACCT 25-06W-23-00102, PERSONAL MS

<b>Owner:</b> WILDE, DENNIS J & WILDE, JEAN B 13801 KNAUS RD LAKE OSWEGO, OR 97034	<b>Situs:</b> 2201 FORT MCKAY RD OAKLAND, OR 97462 <b>Potential Liability:</b> No	<b>Sale Info:</b> \$35,000 <b>Deed Type:</b> BCD <b>Instrument:</b> M2013-370439/0415	<b>Date:</b> 11/15/12
---	---	---	-----------------------

Exemptions:

Utilities:

Access:

Topography:

Building Permits:

General Appraisal Comments

\*\*\* Related Accounts \*\*\*

	<b>Owner</b>	<b>Map &amp; Tax Lot</b>	<b>Code Area</b>	<b>Acres</b>
M142051	WILDE, DENNIS J & WILDE,	25-06W-23-00102	00100	
R26384	WILDE, DENNIS J & JEAN B	25-06W-23-00102	00100	86.09

\*\*\* 2020 Uncertified Value Summary \*\*\*

	<b>RMV</b>	<b>M5 Value</b>	<b>LSU</b>	<b>MAV</b>	<b>Assessed Value</b>
<b>Land :</b>	\$0	\$0			
<b>LSU Mkt Val:</b>	\$0	\$0			
<b>Structures :</b>	\$14,542	\$14,542			
<b>Total :</b>	\$14,542	\$14,542			
<b>Exemptions :</b>	\$0	\$0			
<b>After Exmpt:</b>	\$14,542	\$14,542	\$0	\$21,135	\$14,542

\*\*\* No Land Segments \*\*\*

\*\*\* No Land Detail \*\*\*

\*\*\* Improvements \*\*\*

Improvement Summary

<b>Imp#</b>	<b>Description</b>	<b>Type</b>	<b>BldgType</b>	<b>#Segs</b>	<b>Market Value</b>
I1	MFD STRUCT	M	SW7	1	\$14,542
<b>Improvement Totals:</b>					<b>\$14,542</b>





Parcel Information		Assessment Information	
Parcel #:	M142051	Market Value Land:	\$0.00
Tax Lot:	25062300102	Market Value Impr:	\$33,533.00
Site Address:	2201 Fort McKay Rd	Market Value Total:	\$33,533.00
	Sutherlin OR 97479	Assessed Value:	\$33,533.00
Owner:	Wilde, Dennis J	<b>Tax Information</b>	
Owner2:	Wilde, Jean B	Levy Code Area:	00100
Owner Address:	13801 Knaus Rd	Levy Rate:	6.7968
	Lake Oswego OR 97034	Tax Year:	2018
Twn/Range/Section:	25S / 06W / 23	Annual Tax:	\$206.98
Parcel Size:		Exemption Description:	
Plat/Subdivision:		<b>Legal</b>	
Lot:		MFD STRUCT SERIAL # HER027034ORM, Home ID 370437 ON REAL ACCT 25-06W-23-00102, REAL MS	
Block:			
Map Page/Grid:			
Census Tract/Block:	060000 / 2005		

Land			
Cnty Land Use:	M167	Std Land Use:	RSFR - Single Family Residence
Zoning:	FG - Exclusive Farm Use-Grazing	Neighborhood:	MH2
Watershed:	Calapooya Creek	View:	
Recreation:		School District:	1 - Oakland School District
Primary School:	Oakland Elementary School	Middle School:	Lincoln Middle School
High School:	Oakland High School		

Improvement					
Year Built:	2009 (2009)	Condition:	A	Fin. SqFt:	1,056
Bedrooms:	2	Bathrooms:	1.00	Garage:	0 SqFt
Foundation:	M-PP;R-CCBLK	Attic Fin SqFt:	0	Attic Unfin SqFt:	0
Exterior Walls:	M-CLAD	Basement Fin SqFt:	0	Basement Unfin SqFt:	0
Carport SqFt:	0	Deck SqFt:	0	Roof Covering:	GUT;M-MET-RF
Pool:	No	Roof Type:	FLAT	Heat:	HP

Transfer Information							
Sale Date:	11/15/2012	Sale Price:	\$84,900.00	Doc Num:	M2013-370437/0415	Doc Type:	

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

Owner: WILDE, DENNIS J &

Prop ID : M142051 (ACTIVE R)  
Map Tax Lot: 25-06W-23-00102 (ACTIVE)  
Legal : MFD STRUCT SERIAL # HER027034ORM,  
Home ID 370437 ON REAL ACCT\*

(217281) WILDE, JEAN B  
13801 KNAUS RD  
LAKE OSWEGO, OR 97034

Acreage : Zoning:  
DBA :  
Situs : 2201 FORT MCKAY RD  
OAKLAND, OR 97462  
Code Areas : 00100 (Tax Rate: 6.7968)

Deferral : PrCls: M167  
Sale Info : 11/15/12 \$84,900 R  
Deed Type : BCD  
Instrument# : M2013-3704  
Year Built : 2009  
Living Area : 1056

**2019 Tax Status**

Curr Tax & Assessments: 199.46  
Payments or Adjust : 0.00  
Discount Allowed : 5.98  
Unpaid Balance : 193.48  
Interest Due : 0.00  
Total Due Current Year: 193.48  
Delq Tax + Int + Fees : 0.00  
Balance Due : 193.48  
Pot Add Tax Liab:

**2019 Roll Values**

RMV Land \$ 0 (+)  
RMV Improvements \$ 32,314 (+)  
RMV Total \$ 32,314 (=)  
Total Exemptions \$ 0 (-)  
Net RMV \$ 32,314 (=)  
M50 Assd Value \$ 32,314  
Special Assessments: NONE  
Exemption(Type) : NONE

Enter <RET> to Exit:

Property: M142051

\*\*\* Appraisal Detail \*\*\*

<b>Map &amp; Tax Lot</b>	<b>Code Area</b>	<b>PCL</b>	<b>MCL</b>	<b>MA</b>	<b>Appraised:</b> NBHD	<b>Appraiser:</b>	<b>Zone</b>
25-06W-23-00102	00100	M167	M167	2	MH2		

**Legal Desc:** MFD STRUCT SERIAL # HER027034ORM, Home ID 370437 ON REAL ACCT 25-06W-23-00102, REAL MS

<b>Owner:</b> WILDE, DENNIS J & WILDE, JEAN B 13801 KNAUS RD LAKE OSWEGO, OR 97034	<b>Situs:</b> 2201 FORT MCKAY RD OAKLAND, OR 97462	<b>Potential Liability:</b> No	<b>Sale Info:</b> \$84,900 <b>Deed Type:</b> BCD <b>Instrument:</b> M2013-370437/0415	<b>Date:</b> 11/15/12
---	---	--------------------------------	---	-----------------------

**Exemptions:**

**Utilities:**

**Access:**

**Topography:**

**Building Permits:**

**General Appraisal Comments**

\*\*\* Related Accounts \*\*\*

	<b>Owner</b>	<b>Map &amp; Tax Lot</b>	<b>Code Area</b>	<b>Acres</b>
M142050	WILDE, DENNIS J & WILDE,	25-06W-23-00102	00100	
R26384	WILDE, DENNIS J & JEAN B	25-06W-23-00102	00100	86.09

\*\*\* 2020 Uncertified Value Summary \*\*\*

	<b>RMV</b>	<b>M5 Value</b>	<b>LSU</b>	<b>MAV</b>	<b>Assessed Value</b>
<b>Land :</b>	\$0	\$0			
<b>LSU Mkt Val:</b>	\$0	\$0			
<b>Structures :</b>	\$30,485	\$30,485			
<b>Total :</b>	\$30,485	\$30,485			
<b>Exemptions :</b>	\$0	\$0			
<b>After Exmpt:</b>	\$30,485	\$30,485	\$0	\$46,522	\$30,485

\*\*\* No Land Segments \*\*\*

\*\*\* No Land Detail \*\*\*

\*\*\* Improvements \*\*\*

**Improvement Summary**

<b>Imp#</b>	<b>Description</b>	<b>Type</b>	<b>BldgType</b>	<b>#Segs</b>	<b>Market Value</b>
I1	MFD STRUCT	M	SW7	1	\$30,485
<b>Improvement Totals:</b>					<b>\$30,485</b>

Property: M142051

\*\*\* Improvement Details \*\*\*

Improvement#: 1                    Type: M            Description: MFD STRUCT  
Appr Method: C                    Trend %: 100    %                    Total Impr Value:                    \$30,485

I#1 -Seg#1 Desc: MAIN AREA                    Make: MARLETTE                    Model: I-HOUSE 1602                    X# :  
Dimensions: 66L x 16W                    Eff Area for Calculations: 1056                    Area: 1056                    Home ID: 370437  
Type: MA                    Method: M93                    Class: 7S

Base Cost and Adjustments to the Base                    Units                    Cost/Units                    Total

Foundation	M-PP	MH PIER/POST
Foundation	R-CCB	CC BLOCK
Ext. Wall	M-CLA	MH CLAD
Int. Finish	M-DRY	DRYWALL
Roof Style	FLAT	FLAT R OR MH
Roof Cover	GUT	GUTTERS/ALL
Roof Cover	M-MET	MH MET ROOF
Flooring	HDWD	HARDWOOD
Heat/AC	HP	HEAT PUMP
Plumbing	BATH1	1.0 BATH,HTR,SINK
Inter Comp.	M-CAB	MH CABNETS GD
Inter Comp.	M-DW	MH DISHWASHER
Inter Comp.	M-FS	MH FREESTANDING RANG
Inter Comp.	M-GD	MH GARB DISP

Bedrooms: 2                    Base Cost:                    \$64,178  
Year Built: 2009    Eff Year: 2009    Cond: A                    Depre%: 50                    Nbh%:  
Adjustments: MH¢60 95%                    Total Adjustments:                    47.5%  
Total Segment Value:                    \$30,485

\*\*\* No Special Assessments \*\*\*

Douglas County Official Records  
Patricia K. Hitt, County Clerk

**2013-002990**

02/06/2013 11:53:56 AM

File No 12020220

DEED-BS      Cnt=1    Stn=12 HEDI  
\$15.00 \$11.00 \$10.00 \$15.00

**\$51.00**

<b>Grantor</b>
Popeye's Girlfriend, LLC, an Oregon limited liability company
<b>Grantee</b>
Dennis J Wilde Jean B Wilde
<b>After recording return to</b>
Dennis J Wilde Jean B Wilde 2201 Fort McKay Rd Sutherlin, OR 97479
<b>Until requested, all tax statements shall be sent to</b>
Dennis J Wilde Jean B Wilde 2201 Fort McKay Rd Sutherlin, OR 97479 Tax Acct No(s): <b>R26384</b>

Reserved for Recorder's Use

**STATUTORY BARGAIN AND SALE DEED**

**Popeye's Girlfriend, LLC, an Oregon limited liability company, Grantor, conveys to Dennis J Wilde and Jean B Wilde, As Tenants By The Entirety, Grantee, the following described real property:**

See Attached Exhibit "A"

The true consideration for this conveyance is **\$0.00**. (Here comply with requirements of ORS 93.030 )

**BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009 AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.**

WESTERN TITLE & ESCROW COMPANY 1088100

Executed this 18<sup>th</sup> day of February, 2013

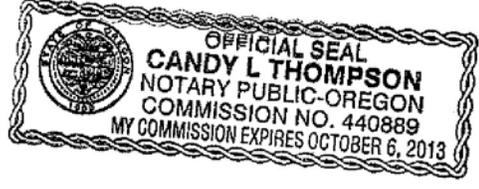
[Signature]  
Popeye's Girlfriend, LLC  
By: Dennis J Wilde, Managing Member

[Signature]  
Popeye's Girlfriend, LLC  
By: Jean B Wilde, Managing Member

State of Oregon, County of Douglas ) ss.

This instrument was acknowledged before me on this 18<sup>th</sup> day of February, 2013  
by Dennis J Wilde and Jean B Wilde as Managing Members of Popeye's Girlfriend, LLC.

[Signature]  
Notary Public for Oregon  
My commission expires: 10/06/2013



## Exhibit "A"

Real property in the County of Douglas, State of Oregon, described as follows:

### Parcel 1:

Beginning at a 5/8 inch iron rod at a fence corner post junction which bears South 35° 28' 37" East 1529.47 feet from the Southwest Section Corner of Section 14, Township 25 South, Range 6 West Willamette Meridian and which bears North 02° 25' 13" West 982.59 feet along an existing fence line from a 5/8 inch iron rod at a fence corner post on the north right of way of Douglas County Road 9; thence North 00° 08' 02" East 1088.06 feet to a 5/8 inch iron rod in the fence line; thence North 00° 20' 22" East 156.36 feet to a 5/8 inch iron rod at a fence corner post junction; thence South 89° 12' 06" East 903.11 feet along the existing fence line to a 5/8 inch iron rod at a fence corner post; thence North 00° 33' 15" West 656.02 feet along the existing fence line to a 5/8 inch iron rod at a fence corner post; thence North 89° 34' 12" East 771.87 feet along the existing fence line to a fence corner point, from which a reference 5/8 inch iron rod bears North 02° 52' 06" West 5.00 feet; thence South 87° 54' 33" East 5.00 feet along the existing fence line to a 5/8 inch iron rod in the fence line; thence South 88° 52' 05" East 921.56 feet along the existing fence line to a 5/8 inch iron rod at the edge of a cultivated field; thence leaving the fence line and continuing South 88° 49' 41" East 344.34 feet through a wet land and pond to a calculated point in Ford's Pond on the west line of neighboring Woodruff property, from which a reference 5/8 inch iron rod on the bank of Ford's Pond bears North 05° 51' 56" West 22.06 feet; thence along the west line of the neighboring Woodruff property South 05° 59' 56" East 538.73 feet to a 5/8 inch iron rod in a fence line from which the fence line bears North 05° 59' 66" West 88.75 feet to a fence corner post; thence South 05° 51' 20" East 1028.14 feet to a 5/8 inch iron rod in the fence line; thence South 05° 51' 16" East 401.39 feet to a 5/8 inch iron rod in the fence line; thence South 05° 51' 33" East 448.59 feet to a 5/8 inch iron rod at a fence corner post on the north right of way boundary of Douglas County Road 9; thence Westerly along said northerly right of way line of Douglas County Road a distance of 2,360.00 feet, more or less, the Southwest corner of Lot 4, Block 2, CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Section 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County Oregon; thence leaving said Northerly right of way line of Douglas County Road No. 9 and bearing North along the West line of said Lot 4 a distance of 1,080.00 feet, more or less to the Northwest corner of said Lot 4; thence South 79° 36' West along the North line of Lot 3, Block 2, said Calapooya (of record as Calapooia) Walnut Farm a distance of 300.00 feet, more or less; thence South 71° 43' West along the North line of said Lot 3 and the North line of Lot 2, Block 2, said Calapooya (of record as Calapooia) Walnut Farm, a distance of 610.00 feet, more or less, to the Northeast corner of Lot 1, Block 2, said Calapooya (of record as Calapooia) Walnut Farm; thence North 02° 18' 00" West a distance of 150.00 feet to the point of beginning.

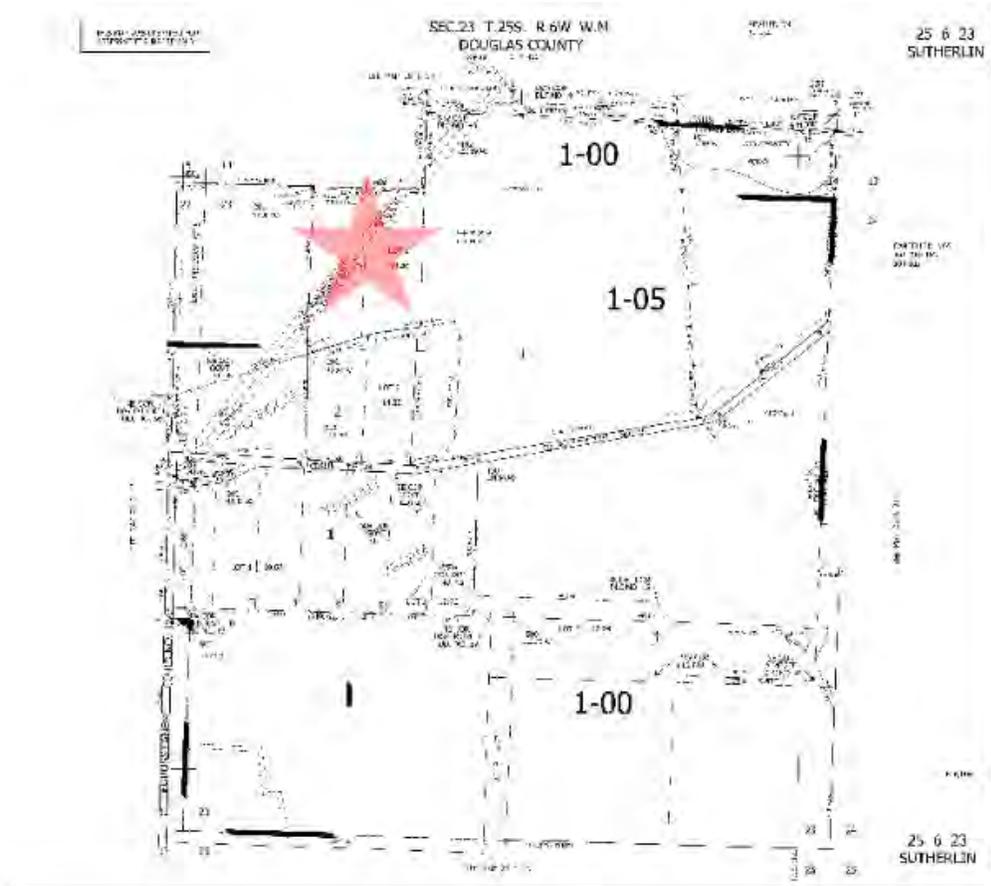
### Parcel 2:

All of Lots 2 and 3 of Block 2 of the CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon;

EXCEPTING THEREFROM all that portion of Lot 2, Block 2, CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon, lying west of the following described line:

Beginning at a 5/8 inch iron rod at a fence corner post junction which bears South 35° 28' 37" East 1529.47 feet from the Northwest corner of Section 23, Township 25 South, Range 6 West, W.M.; thence South 2° 25' 13" East a distance of 982.59 feet to a 5/8 inch iron rod on the Northerly right of way line of the Douglas County Road No. 9 and the South boundary of Block 2 of the CALAPOOYA (of record as CALAPOOIA) WALNUT FARM, a subdivision in Sections 22 and 23, Township 25 South, Range 6 West, W.M., Douglas County, Oregon and thence terminating

Assessor Map

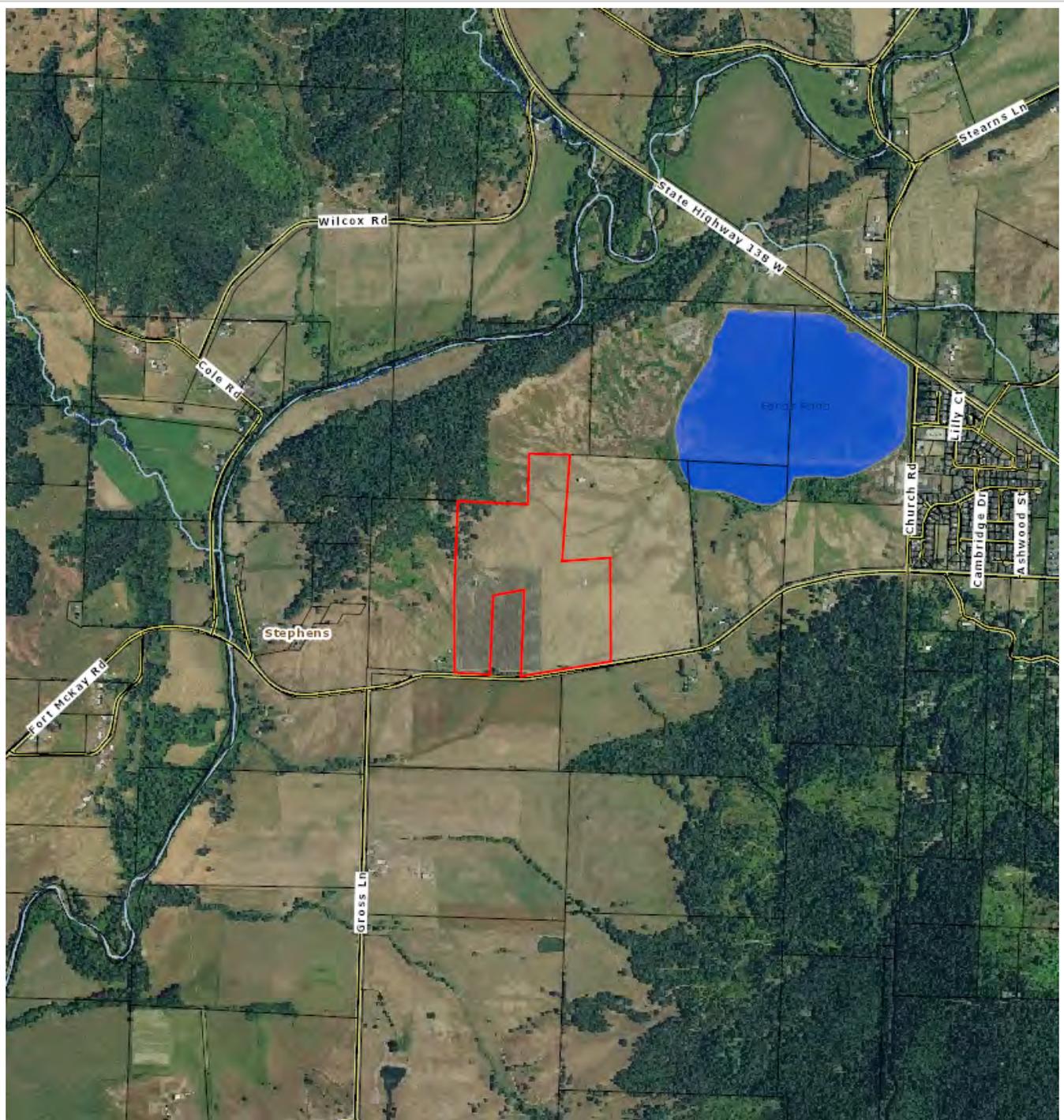


**Parcel ID: R26384**

**Site Address: 2201 Fort McKay Rd**

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

Aerial Map



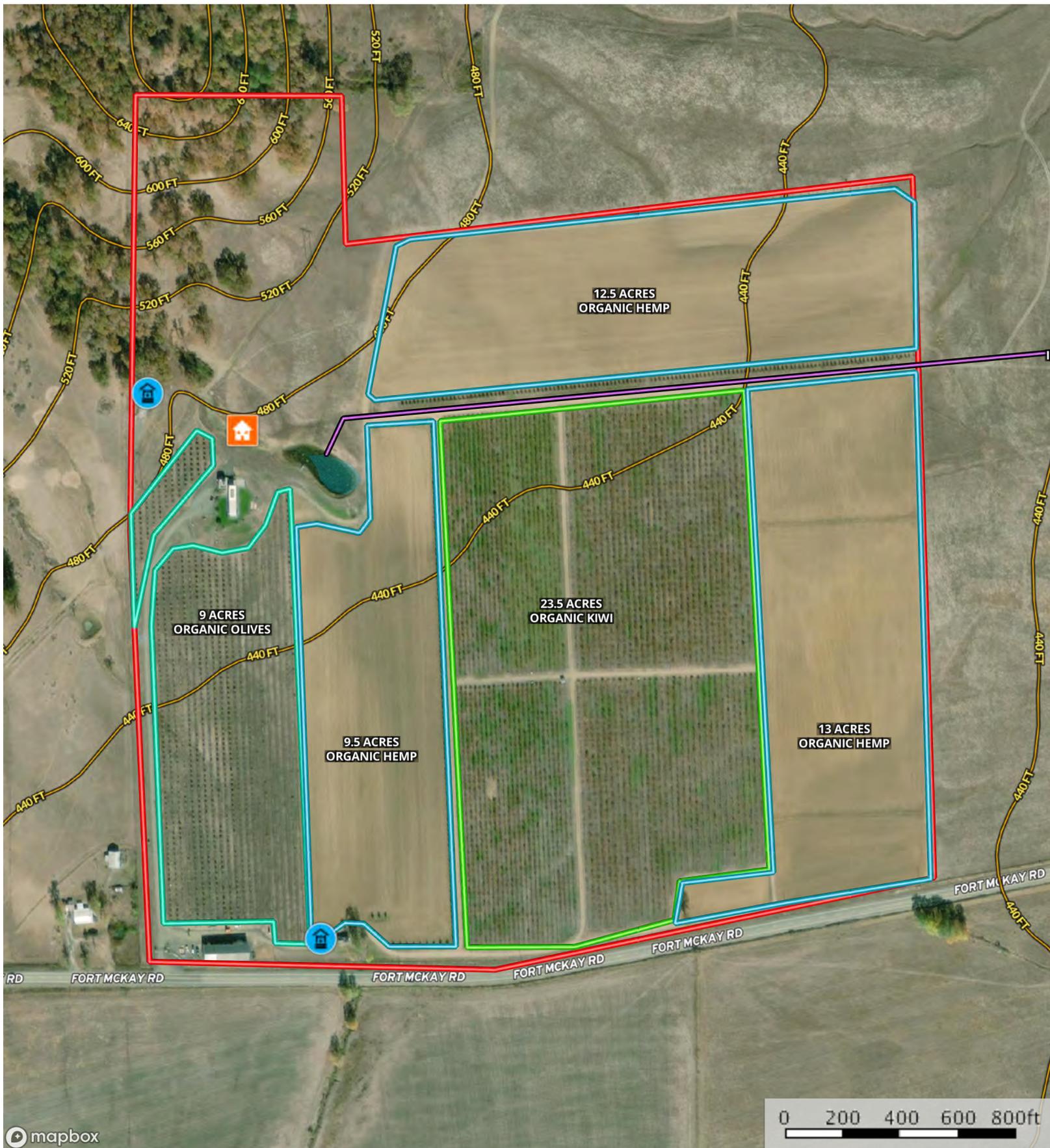
**Parcel ID: R26384**

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.



# 201 Fort McKay Rd Oakland 96.09 ACRES (Link Share)

Oregon, AC +/-



mapbox

- House
- Well
- Pipeline
- Road / Trail
- Boundary
- Boundary
- Boundary
- Boundary
- Pond / Tank

Paul Terjeson Steve Helms

P: 541-999-6777

OregonFarmBrokers.com

2125 Pacific Blvd. Albany, OR 97321

The information contained herein was obtained from sources deemed to be reliable. MapRight Services makes no warranties or guarantees as to the completeness or accuracy thereof.



# SOIL REPORT

541-497-6514

Oregonfarmbrokers.com

Oregonfarmbrokers@gmail.com

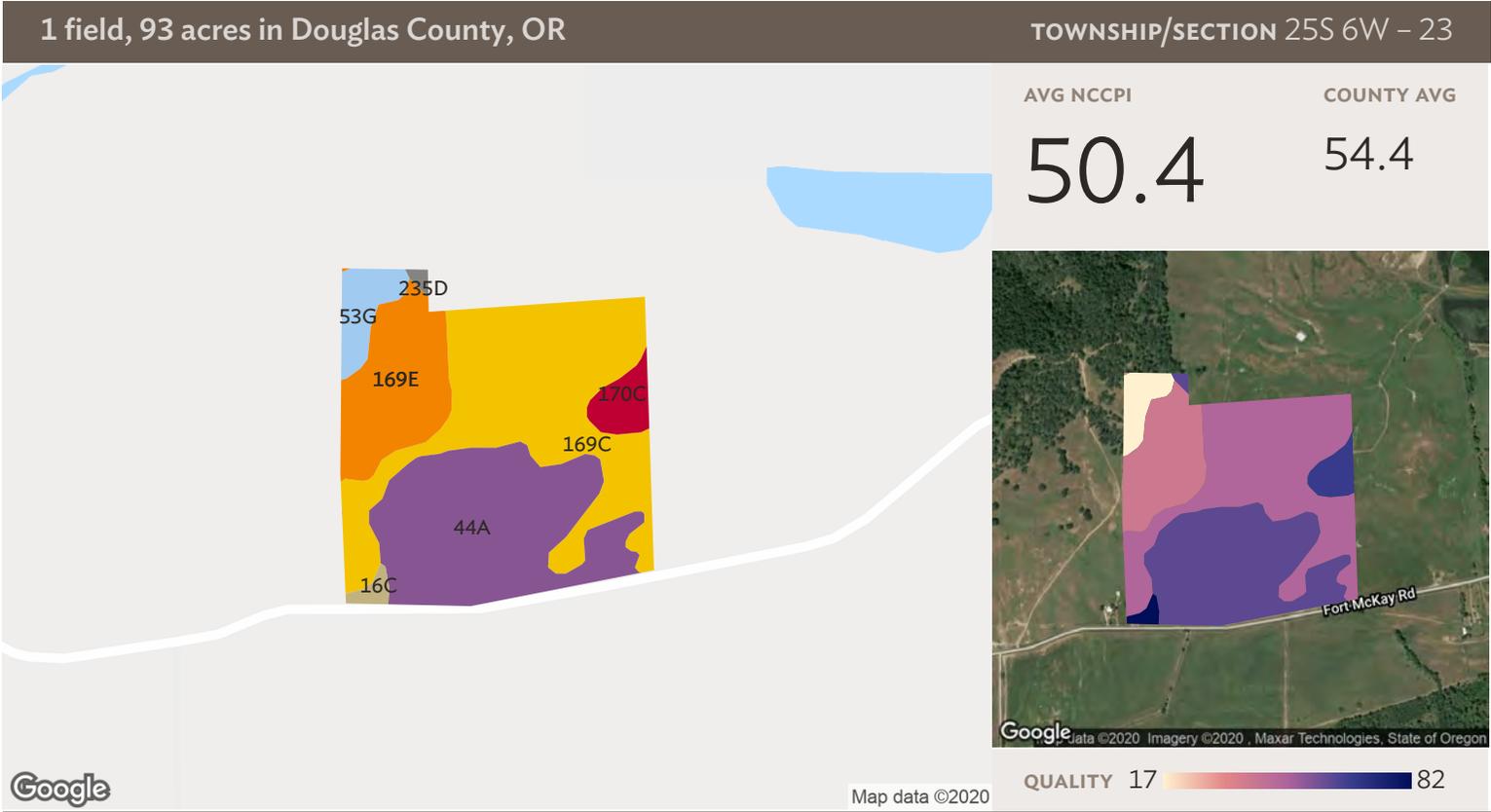
2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330

**KW MID-WILLAMETTE**  
KELLERWILLIAMS. REALTY

KELLERWILLIAMS  
**LAND**

KELLERWILLIAMS  
*Luxury*  
INTERNATIONAL



## All fields

Source: NRCS Soil Survey

93 ac

SOIL CODE	SOIL DESCRIPTION	ACRES	PERCENTAGE OF FIELD	SOIL CLASS	NCCPI
169C	Nonpareil-Oakland complex, 3 to 12 percent slopes	37.79	40.6%	6	48.4
44A	Conser silty clay loam, 0 to 3 percent slopes	31.71	34.1%	3	60.9
169E	Nonpareil-Oakland complex, 12 to 30 percent slopes	14.76	15.9%	6	39.9
53G	Dickerson loam, 30 to 90 percent slopes	4.20	4.5%	7	5.6
170C	Oakland silt loam, 3 to 12 percent slopes	3.24	3.5%	3	66.7
16C	Bateman silt loam, 3 to 12 percent slopes	0.92	1.0%	2	82.0
235D	Sutherlin silt loam, 12 to 20 percent slopes	0.36	0.4%	3	61.2
<b>92.98</b>					<b>50.4</b>



# WATER RIGHTS

541-497-6514

[Oregonfarmbrokers.com](http://Oregonfarmbrokers.com)

[Oregonfarmbrokers@gmail.com](mailto:Oregonfarmbrokers@gmail.com)

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330

STATE OF OREGON

COUNTY OF DOUGLAS

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO:

POPEYE'S GIRLFRIEND LLC  
 3720 SW BOND AVE UNIT 408  
 PORTLAND OR 97239

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-87856

SOURCE OF WATER: FORD'S POND, CONSTRUCTED UNDER PERMIT R-1669, TRIBUTARY OF CALAPOOYA CREEK

PURPOSE OR USE: IRRIGATION OF 163.1 ACRES

MAXIMUM VOLUME: 50.0 ACRE FEET

DATE OF PRIORITY: JANUARY 7, 2013

PERIOD OF USE: MARCH 1 THROUGH OCTOBER 31

**Authorized Point of Diversion:**

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
25 S	6 W	WM	14	SW SE	715 FEET NORTH AND 1550 FEET WEST FROM SE CORNER, SECTION 14

The amount of water used for irrigation, together with the amount secured under any other right existing for the same lands, shall be limited to a diversion of not to exceed 2.5 acre-feet per acre for each acre irrigated during the irrigation season of each year. The right to the use of the water for the above purpose is restricted to beneficial use on the lands or place of use described.

**Authorized Place of Use:**

Twp	Rng	Mer	Sec	Q-Q	Acres
25 S	6 W	WM	14	SE SW	11.4
25 S	6 W	WM	14	SW SE	12.4
25 S	6 W	WM	23	NE NE	1.1
25 S	6 W	WM	23	NW NE	38.1
25 S	6 W	WM	23	SW NE	19.7
25 S	6 W	WM	23	SE NE	1.5
25 S	6 W	WM	23	NE NW	39.3
25 S	6 W	WM	23	NW NW	5.3
25 S	6 W	WM	23	SW NW	7.5
25 S	6 W	WM	23	SE NW	26.8

**Measurement, recording and reporting conditions:**

- A. Before water use may begin under this permit, the permittee shall install a totalizing flow meter at each point of diversion, and maintain the meter(s) in good working order.

- B. The permittee shall allow the watermaster access to the meter(s); where a meter is located within a private structure, the watermaster shall request access upon reasonable notice.
- C. The Director may require the permittee to keep and maintain a record of the amount (volume) of water used, and may require the permittee to report water use on a periodic schedule as established by the Director. In addition, the Director may require the permittee to report general water-use information, the periods of water use, and the place and nature of use of water under the permit. The Director may provide an opportunity for the permittee to submit alternative reporting procedures for review and approval.
- D. The Director may provide an opportunity for the permittee to submit alternative measuring and reporting procedures for review and approval.

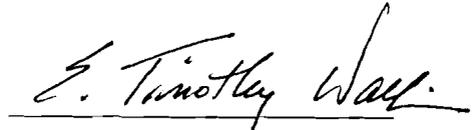
The water user shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion, while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional, and approved in writing by ODFW prior to diversion of water. The water user may submit evidence in writing that ODFW has determined screens and/or by-pass devices are not necessary.

#### STANDARD CONDITIONS

1. Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.
2. Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to such agreement.
3. This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.
4. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.
5. The use of water allowed herein may be made only at times when sufficient water is available to satisfy all prior rights, including prior rights for maintaining instream flows.
6. If the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR Chapter 635, Division 415, shall be followed.
7. Completion of construction and application of the water shall be made within five years of the date of permit issuance. If beneficial use of permitted water has not been made before this date, the permittee may submit an application for extension of time, which may be approved based upon the merit of the application

8. Within one year after making beneficial use of water, the permittee shall submit a claim of beneficial use, which includes a map and report, prepared by a Certified Water Rights Examiner.

Issued APRIL 18 2013.



E. Timothy Wallin, Water Rights Program Manager  
for Phillip C. Ward, Director



# WELL LOGS

541-497-6514

Oregonfarmbrokers.com

Oregonfarmbrokers@gmail.com

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330

STATE OF OREGON  
WATER SUPPLY WELL REPORT

(ORS 537.765 & OAR 690-205-0210)

DOUG 56289

WELL LABEL # L 109057

START CARD # 208695

ORIGINAL LOG #

Instructions for completing this report are on the last page of this form.

(1) LANDOWNER Owner Well I.D. #2  
First Name Dennis Last Name Wilde  
Company  
Address 3720 SW Bond Ave. #408  
City Portland State OR Zip 97239

(2) TYPE OF WORK  New  Conversion  Deepening  
 Alteration (complete Sections 2a & 10)  Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth \_\_\_\_\_ ft.

Seal Material \_\_\_\_\_

Casing Type:  Steel  Plastic  Other \_\_\_\_\_

Casing Gauge \_\_\_\_\_ Casing Diameter \_\_\_\_\_

(3) DRILL METHOD  Rotary Air  Rotary Mud  Auger

Cable  Cable Mud  Reverse Rotary  Other \_\_\_\_\_

(4) PROPOSED USE  Domestic  Irrigation  Community

Industrial/Commercial  Livestock  Dewatering  Injection

Thermal  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well 64' ft. Special Standard:  Yes (attach copy)

BORE HOLE			SEAL			
Dia	From	To	Material	From	To	Amount Scks/lbs
10"	0	18	Bentonite	0	18	7 SCKS
6"	18	64				

How was seal placed: Method  A  B  C  D  E

Other Poured and Tamped

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_

Filter pack from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Size \_\_\_\_\_

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: \_\_\_\_\_ sacks/lbs

Actual Amount Used: \_\_\_\_\_ sacks/lbs

(6) CASING/LINER

Csng/Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X	6"	+	1 1/2	18 1/2	250	X			
X	4"	-	4	64	SDR26		X		

Shoe  Inside  Outside  Other Location of shoe(s) 18 1/2'

Temporary casing  Yes Diameter \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

(7) PERFORATIONS/SCREENS

Perforations Method Skill Saw

Screens Type \_\_\_\_\_ Material \_\_\_\_\_

Perf	Sern	Csng	Linr	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size
X			X		20	60	1/4	8	45	

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailer  Air  Flowing Artesian

Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)

10 G.P.M. 64' 1 hr.

Temperature 55°F Lab analysis  Yes By \_\_\_\_\_

Water quality concerns?  Yes (describe below) TDS \_\_\_\_\_ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Douglas Twp 25 N or 0 Range 6 E or W W.M.

Sec 23 1/4 of the \_\_\_\_\_ 1/4 Tax Lot 102

Tax Map Number \_\_\_\_\_ Lot \_\_\_\_\_

Lat \_\_\_\_\_ " or 43.38265 DMS or DD

Long \_\_\_\_\_ " or 123.38119 DMS or DD

Street Address of Well (or nearest address) East side of 2251

Fort McKay Rd. Sutherlin, OR.

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration				
Completed Well	9-6-12			11'

Flowing Artesian?  Yes Dry Hole?  Yes

WATER BEARING ZONES Depth water was first found 22'

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
9-6-12	22	24	8 G.P.M.			11
9-6-12	39	40	2 G.P.M.			11
9-6-12	10	12	3-4 G.P.M. CHSed-out			

MAY Fluctuate

(11) WELL LOG

Ground Elevation \_\_\_\_\_

Material	From	To
Clay yellow	0	5
Claystone-soft	5	9
Claystone-Broken	9	12
Claystone-Med-Hard	12	22
Claystone-Fract.	22	24
Claystone-med-Hard	24	39
Claystone-Fract.	39	40
Claystone-med-Hard	40	64

RECEIVED BY: OWRD

SEP 14 2012

SALEM, OR

Date Started 9-6-12 Completed 9-6-12

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number \_\_\_\_\_ Date \_\_\_\_\_

Signed \_\_\_\_\_

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1686 Date 9-13-12

Signed Todd Moore

Contact Info. (optional) \_\_\_\_\_

STATE OF OREGON  
WATER SUPPLY WELL REPORT

(ORS 537.765 & OAR 690-205-0210)

DOUG 56290

WELL LABEL # L 109056

START CARD # 206607

ORIGINAL LOG #

Instructions for completing this report are on the last page of this form.

(1) LANDOWNER Owner Well I.D. #1  
First Name Dennis Last Name Wilde  
Company \_\_\_\_\_  
Address 3720 S.W. Bond Ave. #408  
City Portland State OR Zip 97239

(2) TYPE OF WORK  New  Conversion  Deepening  
 Alteration (complete Sections 2a & 10)  Abandonment (complete Section 5a)

(2a) PRE-ALTERATION: Well Depth \_\_\_\_\_ ft.

Seal Material \_\_\_\_\_  
Casing Type:  Steel  Plastic  Other \_\_\_\_\_  
Casing Gauge \_\_\_\_\_ Casing Diameter \_\_\_\_\_

(3) DRILL METHOD  Rotary Air  Rotary Mud  Auger  
 Cable  Cable Mud  Reverse Rotary  Other \_\_\_\_\_

(4) PROPOSED USE  Domestic  Irrigation  Community  
 Industrial/Commercial  Livestock  Dewatering  Injection  
 Thermal  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION  
Depth of Completed Well 358' ft. Special Standard:  Yes (attach copy)

BORE HOLE			SEAL			Amount	Scks/lbs
Dia	From	To	Material	From	To		
10"	0	21	Bentonite	0	21	8 scks	
6"	21	358					

How was seal placed: Method  A  B  C  D  E  
 Other Poured and Tamped  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Filter pack from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Size \_\_\_\_\_

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:  
Calculated Amount Proposed to be Used: \_\_\_\_\_ sacks/lbs  
Actual Amount Used: \_\_\_\_\_ sacks/lbs

(6) CASING/LINER

Csng	Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X		6"	+	112	30	.250	X		X	

Shoe  Inside  Outside  Other Location of shoe(s) 30'  
Temporary casing  Yes Diameter \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

(7) PERFORATIONS/SCREENS  
Perforations Method \_\_\_\_\_  
Screens Type \_\_\_\_\_ Material \_\_\_\_\_

Perf	Scrn	Csng	Linr	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size
				N/A						

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian

Yield gal/min 1/4 g.p.m. Drawdown 358' Drill stem/Pump depth 1 hr.  
Temperature 56° °F Lab analysis  Yes By \_\_\_\_\_

Water quality concerns?  Yes (describe below) TDS \_\_\_\_\_ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)  
County Douglas Twp 25 N or S Range 6 E or W W.M.  
Sec 23 1/4 of the \_\_\_\_\_ 1/4 Tax Lot 102  
Tax Map Number \_\_\_\_\_ Lot \_\_\_\_\_  
Lat \_\_\_\_\_ " or 43.38651 DMS or DD  
Long \_\_\_\_\_ " or 123.38302 DMS or DD

Street Address of Well (or nearest address) Next to 2251 on East Side of Fort McKay Rd. Sutherlin, OR.

(10) STATIC WATER LEVEL

Existing Well/Pre-Alteration	Date	SWL (psi)	+	SWL (ft)
Completed Well	<u>9-5-12</u>			<u>226'</u>

Flowing Artesian?  Yes Dry Hole?  Yes  
WATER BEARING ZONES Depth water was first found 226'

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
<u>9-5-12</u>	<u>226</u>	<u>227</u>	<u>1/4 g.p.m.</u>			<u>226'</u>
						<u>MAY Fluctuate</u>

(11) WELL LOG Ground Elevation \_\_\_\_\_

Material	From	To
<u>Clay yellow</u>	<u>0</u>	<u>6</u>
<u>Claystone-weathered</u>	<u>6</u>	<u>18</u>
<u>Brown</u>		
<u>Claystone-soft</u>	<u>10</u>	<u>74</u>
<u>Claystone-med-soft</u>	<u>74</u>	<u>112</u>
<u>Claystone-Hard</u>	<u>112</u>	<u>113</u>
<u>Claystone-med-soft</u>	<u>113</u>	<u>119</u>
<u>Claystone-med-Hard</u>	<u>119</u>	<u>120</u>
<u>Claystone-med-soft</u>	<u>120</u>	<u>226</u>
<u>Claystone-Broken</u>	<u>226</u>	<u>227</u>
<u>Claystone-med-Hard</u>	<u>227</u>	<u>358</u>

Date Started 9-4-12 Completed 9-5-12

(unbonded) Water Well Constructor Certification  
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well regulations. Materials used and information reported above are true to the best of my knowledge and belief.

License Number \_\_\_\_\_ Date \_\_\_\_\_  
Signed \_\_\_\_\_

(bonded) Water Well Constructor Certification  
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1686 Date 9-13-12

Signed Todd Moore  
Contact Info. (optional) \_\_\_\_\_



# PARCEL MAP

541-497-6514

Oregonfarmbrokers.com

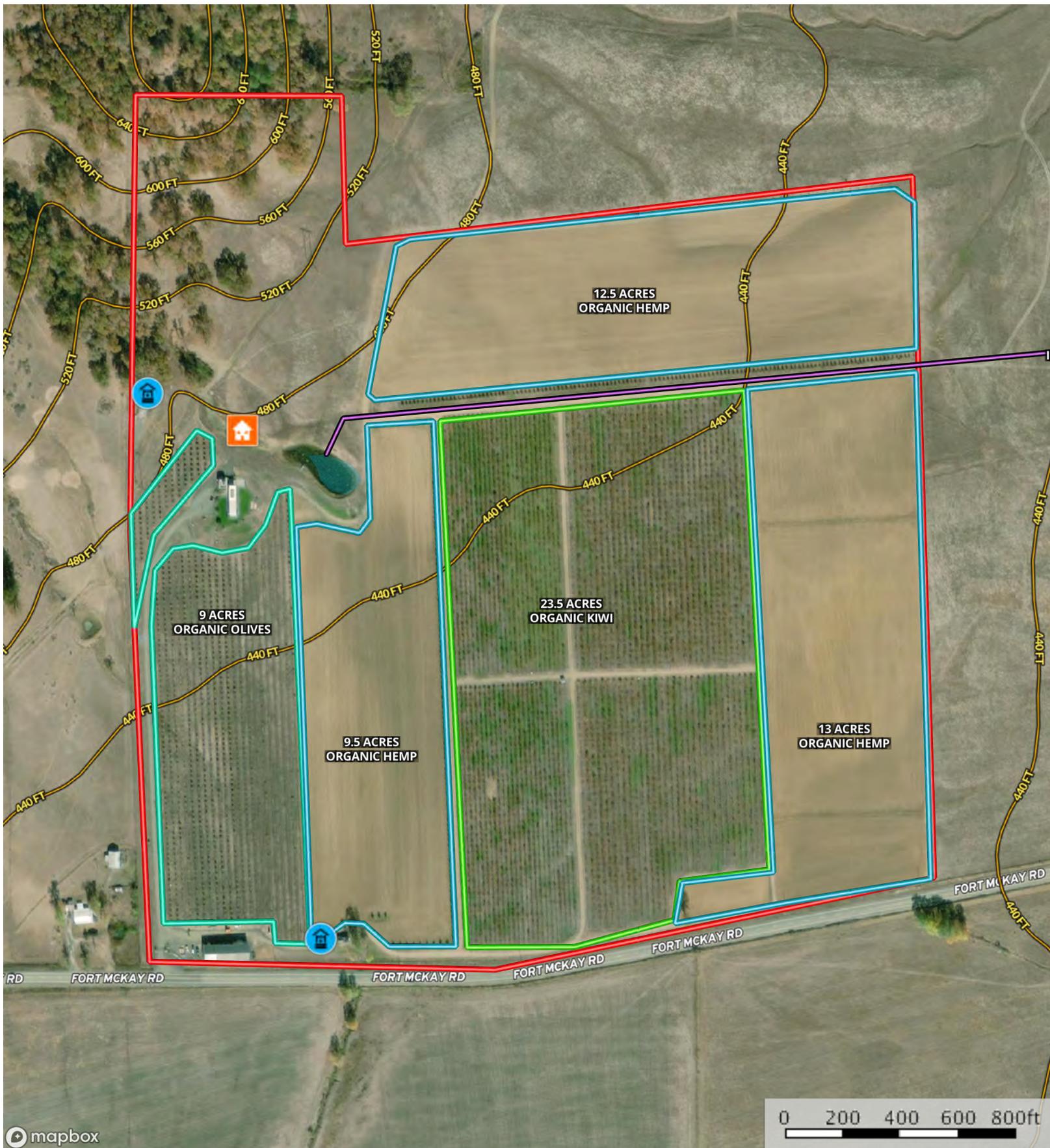
Oregonfarmbrokers@gmail.com

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330

# 201 Fort McKay Rd Oakland 96.09 ACRES (Link Share)

Oregon, AC +/-



mapbox

House Well Pipeline Road / Trail Boundary Boundary Boundary Boundary Pond / Tank



# ADDITIONAL DOCS

541-497-6514

Oregonfarmbrokers.com

Oregonfarmbrokers@gmail.com

2125 Pacific Blvd. Albany 97321

1121 NW 9th Ave Corvallis 97330



*Cascade  
Environmental  
Geographics*

Gregory V. Jones, Ph.D.  
641 Faith Avenue  
Ashland, OR 97520  
Tel: 541-552-9192  
Email: [ceg@ashlandhome.net](mailto:ceg@ashlandhome.net)

Friday, October 10, 2008

## **Site Assessment**

Gary Sowder  
Development Manager  
Oregon PacificWest Development

**Property Location:** Fort McKay Road, Sutherlin (Tax lots/Property IDs: 25062300102 / R26364 & R26368; 25062300200 / R46916)

### **Summary:**

Overall, this site is extremely viable for winegrape production and should produce high quality fruit and wine. The relatively openness of the landscape, good air drainage, good soil structure and drainage that can be enhanced where needed, available water for irrigation, and the mesoclimate structure of the area should produce the conditions needed to optimally ripen many cool to intermediate to warm climate varieties. In addition, the location near Interstate 5, Sutherlin, and along a main east-west secondary road with visible exposure offers outstanding potential for a commercial winery operation.

While the overall suitability of the site is clear, choosing varieties to plant presents a decision by which a balance of proper varietal-site matching, market-driven needs, and personal interest should be made. Given the site exposure and climate structure, this site provides many cool to intermediate to warm climate ripening varieties to choose from. From this assessment, but dependent on whether the site plan is to sell fruit or make wine, a Rhône, Bordeaux, or Spanish program of wine production is possible. For red varieties, the site appears to best suited to Malbec, Merlot, Syrah, and Tempranillo while for white varieties, Chardonnay, Pinot Gris, Sauvignon Blanc, and Viognier are well suited to the site. However, many other varieties offer potential and need to be balanced with the intent of the operation and the prevailing market.

As this property further develops into a vineyard site a suggested plan of continued assessment and preparation of the property should include the following; 1) decisions on how much of the estimated are to be planted; 2) further site assessment for block structure, row orientation, and avenues and turn around zones, etc, 3) soil sampling and ground prep including ripping/tillage, enhancing the natural drainage zones, and soil

amendments as specified from the sampling reports, 4) development of the irrigation infrastructure (this is the one aspect that I do not fully know the potential of completely and is critical to developing a sound plan), 5), installation of an exterior fence to limit deer predation, and 6) a business plan for marketing the fruit and/or wine.

### **Enclosed Maps:**

The maps included with this assessment make use of the available spatial GIS data to provide a general overview of the site in question. Map 1 uses a 2005 aerial photograph to depict the property area in consideration and the estimated plantable vineyard, while Maps 2 A/B contain a topographic view of the landscape indicating the site's elevation/contours, and Maps 3 A/B display the property soil types. Included in the frames of both maps are estimated blocks<sup>1</sup> (based on a single site visit, landscape variations visual on the aerial image, and tax lot structure) that are considered to have the best potential for planting winegrapes.

### **General characteristics of the property and plantable area (Maps 1 & 2):**

- Acreage – for all tax lots associated with the property – 185.5 acres (from county records, Map A), with an estimated plantable area of approximately 145-155 acres depending on further site assessment for the final block delineation
- Elevation – estimated plantable area average of 448 ft and range of 410-642 ft (Map B)
- Slope – estimated plantable area of flat to over 80% (isolated areas), with an average of 7.3% and moderate variation within the estimated blocks (Map B)
- Aspect –the estimated plantable area has a range of slope exposures from ESE, SSE, WSW, to NNW with some flat and undulating zones (Map B)

### **Topography:**

The site provides an open landscape that undulates across its E-W and N-S extent with a predominant drainage toward the retention pond to the northeast (Maps 2 A,B). The site has an average elevation of ~450 ft with the highest areas in the NW section of the property that approaches 660 ft and a secondary maximum of ~480 ft found on the isolated hill on the eastern boundary of the property. The majority of the landscape has gradual slopes from flat to ~10% with the steepest slopes being found in the NW section of the property (Maps 2 A,B). The slope exposures (aspects) reflect the undulating nature of the

---

<sup>1</sup> Note that the plantable areas depicted in the maps are estimated from a single site visit, aerial imagery, tax lot structure and other landscape criteria. These blocks are not meant to depict the final planting areas and are only used as a convenient way to depict the landscape. Block A represents a more realistic division, while the division between Block B and C is artificial and could have easily been combined.

property with no predominant direction ranging from flat to ESE and NNW. The estimated plantable areas depicted in each of the maps are generally representative of the entire property.

Block A is ~25 acres with undulating exposures from flat to ESE, gradual slopes, and was mapped based upon the evident drainage that runs between it and Block B toward the retention pond. The estimated area was also stopped short of the pond due to the flattening of the landscape (frost potential) and soil issues (high water table and poor drainage, see the soils discussion below)

Block B represents a broad area covering the width of the property and is ~48 acres. This area encompasses the steepest slopes of the property in the NW section (>60% in some locations) that may preclude planting. However, the NW section's aspects of WSW to ESE would provide for very good planting exposures. The rest of Block B is gradually undulating with flat to low slopes and a more predominant NNW exposure toward the eastern side of the property. Note the secondary elevation maximum on the isolated topographic feature would likely limit planting to some degree.

Block C covers the entire width of the property and encompasses ~77 acres. The slopes across this block are more uniform and present the most consistent plantable area. The gradual slopes vary from SSE exposures on the western side of the property through flat in the center and WNW on the eastern side of the property.

The most important topographical considerations for the estimated planting areas include the surface and sub-surface water drainage and air drainage. The water drainage issue is evident where the landscape had developed over time to move water toward the retention pond in the NE (see all maps, but especially Maps 3 A,B). These zones likely have high water tables, ponding of water in many rain events, and heavier soils (see soils discussion below). The issue can easily be managed with proper block area development and drainage enhancement (installing tiles). The air flow from the surrounding hills downslope and off the properties is important and appears to not be hindered to any degree. The only issue might be the lower elevations of the NE sector where there might be some pooling of cool air, however the moderating properties of the pond might be enough to counteract the pooling.

Overall, the estimated blocks have slopes that will provide average to enhanced solar receipt (see the footnote in Table 1) and likely produce slightly advanced early spring growth with moderate to high heating during the summer (Table 2). In addition, the relative openness of the landscape in all of the plantable areas to a full solar path in the sky

(especially the south-southeast), should provide for moderately rapid evaporative potential during the morning hours.

### **Geology and Soils:**

The underlying geology of the greater Umpqua Valley is mixed, occurring from the joining of three mountain ranges, the Klamath Mountains, the Coastal Range, and the Cascades. The Klamath Mountains extend into the southwestern portion of the Umpqua Valley AVA as a thrust fault that consists of intricate folded and faulted igneous and metamorphic rocks that are the oldest in the region. The Cascade Mountains to the east are divided into the younger High Cascades and the older, more deeply eroded Western Cascades that make up the eastern boundary of the region. The valleys are protected from the ocean largely by the Coastal Mountains, which are composed of mostly oceanic sedimentary rocks and volcanic islands that were accreted to the landscape over the last 50 million years. From the Western Cascades to the Coast Mountains, the geologic features in the Umpqua Valley record a history of continental margin sedimentation, magmatism, and accretion of oceanic terrains that occurred during the Jurassic to late Eocene.

The property in question lies over geologic parent material that mostly consists of conglomerate, sandstone, siltstone, and limestone from the Eocene and Paleocene along with alluvial deposits from the Holocene. The alluvial deposits make up the bulk of the underlying geology of the property and consist of sands, gravels, and silt forming from an older and larger stream system that used to drain toward the Umpqua River to the west. The sedimentary geology, which makes up the majority of the surrounding landscape, was derived from mixed marine and continental based sedimentary bedrock that either formed in place (continental) or was accreted to the coastal range (marine) over long periods of time. The most common geology of this formation are the marine sandstone, siltstone, and mudstone along with minor amounts of conglomerate, which were largely deep-sea fan deposits on submarine basalts of the Siletz River volcanics. Erosional processes over time have combined material from these marine sediments with that of the alluvial deposits to produce the silty/clayey soil structure of the property (see below).

While soil characteristics vary across any portion of the landscape, a published soil survey of the region (National Resource Conservation Service, August 1997) provides general characteristics of the site (see Map 3 A/B). The soil survey indicates that thirteen soil series/types/complexes make up the property and estimated plantable areas, including (as numbered on Map 3 A/B):

- 1) Bateman Silt Loam
- 2) Coburg Silty Clay Loam
- 3) Conser Silty Clay Loam

- 4) Dickerson Loam
- 5) Malabon Silty Clay Loam
- 6) Nonpareil Loam
- 7) Oakland-Nonpareil Complex
- 8) Oakland-Nonpareil-Sutherlin Complex
- 9) Oakland Silt Loam
- 10) Rosehaven Loam
- 11) Sutherlin Silt Loam
- 12) Veneta Loam
- 13) Waldo Silty Clay Loam

These thirteen geographically associated soils are found mostly in Southern Oregon and Northern California in the intermountain valleys (i.e., mostly the Umpqua and southern Willamette Valley) along the Western Cascades and variations in each these soil types are found at a many of the planted vineyards in the Umpqua and Rogue Valley AVAs (Jones and Light, 2001; Jones, 2003). For the property in question, it is largely composed of soils from the Oakland, Nonpareil, and Sutherlin series along with Conser and Dickerson soils (Maps 3 A/B).

From the NRCS soils data and information, the Oakland series and the associated Nonpareil and Sutherlin soils (7,8,9) are the most common on the property. The Oakland series consists of moderately deep, well drained soils that formed in colluvium and residuum weathered from sedimentary rocks (sandstone, siltstone and shale). Oakland soils are on hillsides and broadly convex footslopes and ridges and are found on slopes of 3 to 60 percent. Oakland soils tend to exhibit medium to rapid runoff; moderately slow permeability, and are moderately to strongly acid (5.4-5.8). Depth to soft bedrock is commonly 20 to 40 inches with silty clay loam, silty clay or clay interspersed with some coarse fragments and soft weathered gravel and cobbles. Oakland soils are of moderate extent and found throughout southwestern Oregon. For the property in question the Oakland soils are shown to occur across the majority of the property (Maps 3 A,B) from the SE corner across the middle of the property to the western and northern border.

The Nonpareil series (6,7,8) consists of moderately shallow, well-drained soils that formed in colluvium and residuum weathered from sandstone and siltstone. Nonpareil soils are typically found on ridgetops, hillslopes and convex footslopes. The soils are a mixed loam, often with low pH (4.8-5.2), and exhibit moderate permeability. The typically shallow depths to bedrock (20-30 inches) leave soft gravel to soft cobble sized fragments in the soil column which are very weathered and crushable. Nonpareil soils are not extensive, being found only in the Douglas County region. Associated with the Oakland soils, the Nonpareil soils are extensive over the center portion of the property (Maps 3 A,B).

The Sutherlin series (8,11) consists of very deep, moderately well drained soils that formed in mixed alluvium and colluvium over residuum weathered from sandstone and siltstone. Sutherlin soils are on foot slopes, hill slopes and drainage ways found throughout the interior valleys of southern and west-central Oregon and northern California. These soils can be strongly to moderately acidic (pH 5.3-5.9), contain a mix of silt and clay with some cobbles and pebbles, that provide moderate drainage but typically very slow permeability, with depths of 60 inches or more to bedrock. While the Sutherlin soils are associated with the Oakland and Nonpareil soils, for this property the NRCS maps them as being confined to a portion of the steeper hillside in the NW section of the property (Maps A,B).

The Conser series (3) consists of very deep (often > 60 inches), poorly drained soils that formed in silty and clayey alluvium derived from igneous and sedimentary materials. Conser soils are mostly found in depressions on low alluvial stream terraces with gradual slopes from flat to 3 percent. These soils are commonly slightly acid (pH 6.2-6.4) but can be neutral with depth (pH 6.8-7.0). Being found in depressions, Conser soils are usually moist and are saturated with water during the winter season. As a result the soils have slow permeability, slow runoff, can pond easily, and flood at high intensity rain events due to a high water table that is at its uppermost limit from December to April. The soils are silty clay loam, silty clay or clay and have moderate to strong granular or subangular blocky structure. Conser soils are of moderate extent being found in many locations in the Willamette and Umpqua Valleys. Conser soils are the second most extensive over the property being mapped by the NRCS as occurring over a large area of the SW corner and throughout the drainage zones of the NE section of the property (Maps 3 A,B).

The Dickerson series (4) consist of very shallow, well drained soils that formed in material weathered from medium and coarse grained sandstone, conglomerate sandstone and metavolcanic rocks. The soils are commonly found on rounded ridgetops, foothills and mountains over a wide range of slopes. Dickerson loam soils are typically moderately or strongly acid (pH 5.4-5.6); with roughly 25% clay within the main horizon that produces medium permeability. These soils are used primarily for grazing and improved pasture, and are of moderate extent throughout the interior valleys of southern and west-central Oregon. Dickerson soils occur in a small section of the NW corner of the property over the steeper slopes where the soils are likely thinner (Maps 3 A,B).

The majority of the soils found throughout the estimated blocks are generally considered fine for agriculture in general and do not pose any overall limiting characteristics. However, areas of concern are the drainage zones flowing toward the NE section of the property and the body of water just outside the boundary. These drainage areas are clear on the aerial imagery ((Maps 1, 2B, 3B, taken in the early summer) and are mostly mapped

as Conser soils. The soils in these areas likely have high clay content, are poorly drained, easily ponded and can hold water, either at the surface or with depth, over the winter and even into the growing season. It would be important to assess these zones, either putting in sufficient drainage tiles or planting around those that simply can not be tiled.

Furthermore, while there is some grape growing experience with each of these soil types in the region, to properly assess the soils on the property it would be important to do site-specific soil sampling. Soil samples can provide more precise site characteristics regarding pH, salinity, cation exchange capacity, organic matter content, and nutrient structure. While there is no set recommendation as to how many acres one sample should represent, the samples should represent an area of similar soil with similar growing conditions. Given the broad similarities across these estimated blocks, sampling could be done at a more coarse spatial arrangement.

**Regional and Site Climate Assessment:**

This climate assessment includes two components: 1) a regional overview of climate from the closest station observed by the National Weather Service and the National Climatic Data Center (Roseburg); and 2) results from a modeling approach to spatial differences in climate using PRISM (a climate model that has been extensively used for studying climate-varietal maturity potential for grapevines) from [The Climate Source](#). Below is a list of the PRISM modeled climate data for a one-kilometer grid cell covering the potential site, which indicates the following:

Climate Parameter	Sutherlin Property
Annual Precipitation	37-39 inches
Average Maximum Temperature – July	83-85°F
Average Minimum Temperature – January	34-36°F
Growing Season Average Temperature	62-64°F
Growing Degree-days (base 50°F, Apr-Oct)	2400-2600
Last Frost in the Spring (median, 32°F)	April 16-19
First Frost in the Fall (median, 32°F)	November 2-5
Frost-Free Growing Season Length	197-203 days
The Number of Wet Days in Sep-Oct	12-14 days

Modeled climate characteristics for the Nichols Brothers property (derived from PRISM), 1971-2000 climate normals).

In comparison to the data summarized for the general climate of the Umpqua Valley AVA stations in Table 3 and 4, the information above reveals that the potential site is near the average to slightly warmer for most parameters. Since Sutherlin unfortunately does not have a first order climate station, the best comparison for the site is with the Roseburg

long-term (1971-2000) climate normals (Table 5), although the site's elevation and location will make it slightly cooler and result in lower heat accumulation than found in Roseburg.

The site's estimated heat accumulation of 2400-2600 degree-days is near the average for the Umpqua Valley AVA. From a growing season length perspective, the site has a relatively long frost-free period of 197-203 days, which should provide an optimum season length to ripen fruit in the vast majority of years. Frost timing for the site shows a median last spring frost that is estimated to be April 16-19 and an estimated median first fall frost of November 2-5, which is similar to outer lying areas in the Umpqua Valley. An instrumented vineyard (five years of data) just northeast of this site shows that the numbers derived from the PRISM data are accurate with an average of 2512 degree-days, along with a last spring frost of April 17 and a first fall frost of October 28. In addition, the site has an open landscape and good air drainage characteristics that should provide for early morning heating that would further minimize frost potential. In terms of rainfall, the site is near the valley-wide average, however, more importantly the site only experiences 15-20% of its rainfall during the growing season (April-October) with an estimated average 12-14 days of rain during ripening (mostly in late October).

From this general assessment the site in question has mesoclimate characteristics that make it conducive to winegrape production. Heat accumulation is sufficient to ripen many cool to intermediate to warm climate varieties (see below). The climate parameter of most concern would be spring frost potential as the average bud break in the Umpqua Valley is near the median last date of spring frost (~April 5-15 depending on variety). However, maintaining and enhancing the site's air drainage will minimize most low level frost events.

#### **Potential Vineyard Layout and Block Characteristics:**

Vineyard layout issues are typically related to optimizing block areas, row orientation, row length, water delivery, and machinery operating areas. The estimated block areas depicted in Maps 1-3 are generalized based on a single site visit, landscape variations visual on the aerial image, and general slope orientations. For most vineyards, north-south row orientation is most advantageous as it allows for maximum solar receipt. Row orientation, however, should be balanced with row length because longer rows are more efficient from a farming perspective. Given the undulating nature of the property along with some the surface and sub-surface drainage issues, block areas would need to be optimized to the slope, aspect, and drainage characteristics. Given the previous use of the property, development for vineyards would be much easier with little to no tree removal (depending on how high planting would occur in the NW section of the property) but would require some surface and sub-surface water drainage enhancement.

**Irrigation Needs:**

In terms of irrigation, how much water is required to grow quality winegrapes depends upon site, the age of the vines, the stage of vine growth, row spacing, size of the vine's canopy, and amount of rainfall occurring during the growing season. The amount of water and frequency of application necessary to meet the needs of grapevines grown in different soil types vary considerably. Available soil moisture must always be present in the root zone during the growing season, especially when the most rapid growth of the berries occurs. Young vines must be watered more frequently than older vines, particularly during the first three years. Irrigation needs in Southern Oregon are approximately 1/3-3/4 acre foot or 4-9 inches of replenishment. On a per plant basis, irrigation requirements will be approximately 25-35 gallons per vine per season with dryer zones needing more and wetter zones much less or even none. While it is very possible to not irrigate at all in many of the cooler areas of the Umpqua and Willamette valleys, most find that having irrigation is a sound management tool.

Not fully knowing the water availability for this site, this report can not completely assess its adequacy. However, this issue will need to be examined in more depth before beginning. First, the site would appear to have sufficient sub-surface moisture, at least in the winter and spring, but care must be taken to limit wet feet (roots constantly reaching the water table). This needs to be enhanced through optimizing the planting zones and tiling to maximize drainage in the existing flow zones (Maps 3 A,B). Then as the site is developed there will need to be a sufficient delivery system (control head, filter, etc.) from your water source (well, creek, pond) to the highest points in the blocks, downhill if possible.

**Weather Station:** Given that the site is not located near a first order weather station for direct comparison, I would also recommend that a weather station be installed and used to develop a site-specific climate normal data for future use. They can range from very simple single instrument devices for recording just temperature to more complete weather stations. Besides the type of device, there are many issues to consider, namely who will be analyzing the data, and what type of software the system comes with. If it is something you are interested in doing I would be happy to assist you in the location, installation, and training of the proper instrumentation for your site or to help monitor and analyze the data independently.

**Overview and Recommendations:**

**Location** – the property is located in an attractive landscape in the central portion of the Umpqua Valley AVA. While this area has not been fully explored for winegrape potential (there are only a few vineyards within ~10 miles), the openness of the landscape and prior use (ease of development) add to its potential.

**Topography** – the estimated plantable areas on the site provide flat to gradual to moderate slopes that are oriented mostly from the ESW to WNW. Cold air should drain effectively to the lower portions of the NE section of the property with no clear pooling issues except near the retention pond which will likely provide a moderating effect during frost events. In addition, the consistency in the landscape of the site with gradual slopes and slight exposure variations provides relatively easy development of that should ripen many cool to warm climate varieties grown in the region (see below). The openness of the landscape should provide adequate solar radiation receipt and minimize frost pressure, while maintaining surface and sub-surface water flow along the natural drainage zones will allow for greater control of plant available water.

**Soil** – the site’s soils are mostly derived from the marine sedimentary geology of the surrounding landscape and the alluvial geology of the stream system that has historically run through the area. The surrounding geology weathers to produce a mix of silt and clay loams and is evident in the NRCS soils that are mapped on the property. They are typically moderately to strongly acidic, with moderate to slow permeability and have good to poor drainage. While the majority of the site will likely find good, plantable silt loams, the existing areas draining into the retention pond will likely have heavier clays, pond water during moderate to high rain events and have a high water table for much of the year. Additional tiling and rip-rap should mitigate this issue and provide for sound development of the surrounding land. In addition, while these soils have been planted to both orchards and vineyards in Southern Oregon, a site-specific set of soil samples will provide more insight into their structure, composition, potential, and amendment needs.

**Climate** – the site has mesoclimate characteristics that make it highly conducive to winegrape production. Heat accumulation is sufficient to ripen many cool to intermediate to warm climate varieties (see next item), with some minor within site variations coming from the undulating slope exposures. The frost-free period is sufficient to ripen the vast majority of varieties and provides a low risk environment for viticulture. However, spring frost would still be a concern with the median last spring frost coming near the median bud break for varieties grown in the region. But the openness of the landscape and maintaining adequate air drainage to the NE would minimize most low level frost events, and should mitigate much of the concern.

**Varieties** - Choosing which varieties to plant presents a decision by which a balance of proper varietal-site matching, market-driven needs, and personal interest should be made. Given healthy plant material, a good matching of root stocks to soil characteristics, and sound husbandry practices, the mesoclimate characteristics indicate that the site has the potential to grow many of the cool to intermediate to warmer climate varieties that are currently being grown in the region (such as depicted by Gladstones, 1992 and others).

Furthermore, the decision about what to grow should also be assessed relative to whether the site will be devoted to a complete growing and winemaking operation or just selling the fruit. For a full scale operation, varietal choices should be based upon a “wine program” or portfolio of varieties that produce a marketable style of wine. If the sites will be devoted to fruit for selling on the open market, then an assessment of what current winery operations are looking for is critical.

In the table below are listed, in alphabetical order, what could be deemed as the varieties “best suited” (from a climate, market, and experience standpoint), “has potential” (varieties that have climatic potential, but with which there is little experience in the region), “interesting” (varieties that likely have climatic potential, but with which there is virtually no experience in the region), and “not suited” (varieties that would not likely ripen):

<b>Red Varieties</b>	<b>Best Suited</b>	<b>Has Potential</b>	<b>Interesting</b>	<b>Not Suited</b>
Barbera			X	
Cabernet Franc				X
Cabernet Sauvignon				X
Corvina				X
Dolcetto		X		
Graciano				X
Grenache		X		
Malbec	X			
Merlot	X			
Mourvèdre			X	
Nebbiolo				X
Petite Syrah				X
Petite Verdot		X		
Pinot Noir	X			
Sangiovese				X
Syrah	X			
Tannat				X
Tempranillo	X			
<b>White Varieties</b>	<b>Best Suited</b>	<b>Has Potential</b>	<b>Interesting</b>	<b>Not Suited</b>
Albariño		X		
Chardonnay	X			
Gewurztraminer				X
Müller Thurgau				X
Marsanne			X	
Pinot Blanc		X		
Pinot Gris	X			
Reisling		X		
Rousanne			X	
Sauvignon Blanc	X			
Sémillon			X	
Verdejo			X	
Viognier	X			

All of the varieties suggested above have sound marketability in the area currently and for the foreseeable future. For the red varieties, Malbec, Merlot, Syrah, and Tempranillo are best suited from all standpoints. Pinot Noir would also work on the site, especially due to today's market for the variety, however the climate is at the upper margin in terms of heat accumulation and will likely produce a different style of fruit/wine. In addition, Dolcetto, Grenache, and Petit Verdot should do well in the climate structure, though there is little overall experience with these in this area. In terms of white varieties, Chardonnay, Pinot Gris, Sauvignon Blanc, and Viognier are well suited to the site. Other white varieties that should do well are Albariño, Pinot Blanc, and Riesling. Of all of the white varieties Viognier is best suited to the warmer exposures on the property while all of the others would do better on ESE to ENE exposures.

If the operation were focused to full scale vineyard and winery production, the site would offer a range of wine programs that could include: 1) a "Rhône" program (Syrah, Grenache, and Viognier with possible additions of Marsanne and Roussanne); 2) a "Bordeaux" program (Merlot, Malbec, Sauvignon Blanc and possibly Petit Verdot and Sémillon); and 3) a "Spanish" program (Tempranillo, Grenache, Albariño, and possibly Verdejo). A "Burgundy" program (Pinot Noir, Chardonnay, and even Pinot Gris and Pinot Blanc) are possible on the site, but again the climate is more intermediate than cool and would not be the best for these cooler climate varieties in the warmer years. If the operation is solely for fruit production to market, then the decisions on what to grow should be balanced with market needs and planted acreage in mind. Larger acreage lends itself to a planting a wider range of varieties, which increases the volume of production to market, versus smaller acreage needing to be limited to two or three varieties.

The estimated plantable areas evaluated in this report appear, from all the information presented in this study, to be very favorable sites for growing winegrapes.

**Data Sources:**

National Climatic Data Center (NCDC): 1971-2000 Climate Normals Data  
(<http://www.ncdc.noaa.gov/>).

PRISM Climate Mapping Program - Spatial Climate Analysis Service and Oregon Climate Service (<http://www.climatesource.com/>).

**References:**

Gladstones, J., (1992): Viticulture and Environment, Winetitles, Adelaide.  
Jones, G. V. (2003). "Umpqua Valley AVA: A GPS and GIS Vineyards Mapping and Analysis of Varietal, Climate, Landscape, and Management Characteristics." Open

Report to the Oregon Wine Advisory Board and the Umpqua Chapter of the Oregon Winegrape Growers Association. 65 pp.

Jones, G. V. and Light, S. (2001). "Site Characteristics of Vineyards in the Rogue and Applegate Valley American Viticultural Areas." Open Report to the Oregon Wine Board and the Rogue Chapter of the Oregon Winegrape Growers Association. 55 pp.

USDA-Natural Resources Conservation Service (1997). State Soil Geographic (STATSGO) Data Base for Douglas County Area, Oregon:  
[http://www.ftw.nrcs.usda.gov/ssur\\_data.html](http://www.ftw.nrcs.usda.gov/ssur_data.html)

Gregory V. Jones, Ph.D.

10/10/2008

Cascade Environmental Geographics

Table 1: Variations in the noon sun angle by latitude and month during the growing season for Oregon.

Latitude	April 1st	May 1st	June 1st	July 1st	Aug. 1st	Sept. 1st	Oct. 1st
42°N	52°	62°	70°	71°	66°	56°	46°
43°N	51°	61°	69°	70°	65°	55°	45°
44°N	50°	60°	68°	69°	64°	54°	44°
45°N	49°	59°	67°	68°	63°	53°	43°
46°N	48°	58°	66°	67°	62°	52°	42°

\*All values are for perpendicular rays on a flat surface. To find the approximate sloping land value, simply add the vineyard slope degrees to the tabled values. For example, on July 1st a potential vineyard site with a south facing slope of 8°, would provide a 77° noon sun angle at 44°N latitude (a 12% increase).

\*\*All sun angles are rounded to the nearest degree.

Table 2: Relative effects of site aspect (compass direction of slope) on climate characteristics and grapevine phenology.

Parameter	Aspect							
	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Initial Growth in Spring	Retarded	Retarded	Retarded	Advanced	Earliest	Earliest	Advanced	Retarded
Daily Maximum Canopy Temperatures	Minimum	Less	Less	Less	Maximum	Greater	Greater	Less
Speed of evaporation in the morning	Slow	Moderate	Rapid	Moderate	Slow	Slow	Very Slow	Slow
Radiant heating of fruit in summer	Minimum	Less	Less	Less	Maximum	Greater	Greater	Moderate
Radiant heating of vines in winter	Minimum	Less	Less	Moderate	Maximum	Greater	Greater	Less

Table 3: Average climate characteristics for representative stations in the Umpqua Valley AVA.

Station (Elevation)	Average July Maximum Temperature (°F)	Average January Minimum Temperature (°F)	Average Mean Growing Season <sup>1</sup> Temperature (°F)	Growing Degree Days (Apr-Oct., 50°F base)	Precipitation (inches)
Drain (292 ft.)	82.5	33.7	59.7	2268	47.9
Elkton (122 ft.)	83.3	35.9	60.9	2383	52.5
Flournoy Valley (700 ft.)	NA <sup>2</sup>	NA	NA	NA	45.2
Riddle (680 ft.)	83.3	33.7	60.7	2436	31.6
Roseburg (465 ft.)	85.6	34.8	62.5	2544	33.6
Winchester (460 ft.)	81.5	33.9	60.3	2426	35.7

\*All data are from the 1971-2000 climate normals for that station, except for Flournoy Valley which are from monthly climate summaries over for 1948-1998 and 1978-1998, respectively (OCS and WRCC, 2003).

<sup>1</sup>April through October.

<sup>2</sup>NA = data not available.

Table 4: Median frost dates for representative stations in the Umpqua AVA.

Station	Median Date of Last Spring Occurrence				Median Date of First Fall Occurrence				Frost-Free Period (# of days last to first, 32°F)
	24°F	28°F	32°F	36°F	24°F	28°F	32°F	36°F	
Drain (292 ft.)	2-Feb	13-Mar	24-Apr	16-May	23-Dec	30-Nov	26-Oct	30-Sep	193
Elkton (122 ft.)	16-Jan	10-Feb	2-Apr	6-May	NA	15-Dec	9-Nov	15-Oct	220
Flournoy Valley (700 ft.)	NA <sup>1</sup>	NA	NA	NA	NA	NA	NA	NA	NA
Riddle (680 ft.)	30-Jan	6-Mar	22-Apr	13-May	NA	28-Nov	31-Oct	4-Oct	191
Roseburg (465 ft.)	16-Jan	10-Feb	7-Apr	6-May	NA	20-Dec	8-Nov	15-Oct	215
Winchester (460 ft.)	31-Jan	3-Feb	28-Mar	11-Apr	NA	9-Dec	5-Nov	23-Oct	222

Data Source: WRCC, 2003 (from the period of record for that station).

<sup>1</sup>NA = data not available.

Table 5 - Monthly Means and Extremes

Monthly Means and Extremes  
Roseburg KQEN, OR

Period: 1971-2000

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Mean Temperature (°F)													
Maximum	50.1	54.9	59.6	64.6	70.9	77.7	85.6	86.3	80.9	69.1	55.7	48.9	67.0
Minimum	34.8	36.5	38.4	40.7	45.5	50.5	54.7	54.7	49.9	43.9	39.6	35.1	43.7
Mean	42.5	45.7	49.0	52.7	58.2	64.1	70.2	70.5	65.4	56.5	47.7	42.0	55.4
Extreme Temperature (°F)													
Maximum	66	67	76	95	96	101	109	101	105	88	76	66	109
Minimum	29	29	28	32	34	38	47	46	35	32	30	9	9
Precipitation (inches)													
Monthly mean	4.97	4.10	3.81	2.75	1.82	.92	.44	.67	1.07	2.27	5.42	5.42	33.66
Extreme 24 hr	1.95	1.78	1.09	2.43	.92	.30	.13	.40	.41	1.28	2.23	1.59	2.43
Snowfall (inches)													
Monthly mean	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Average number of days													
Temperature													
Maximum 90 or more	.0	.0	.0	1.0	.7	4.3	12.0	12.7	8.7	.0	.0	.0	39.3
Maximum 32 or less	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	1.3
Minimum 32 or less	3.7	3.0	5.0	.3	.0	.0	.0	.0	.0	.7	1.0	7.0	19.0
Minimum 0 or less	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Precipitation													
.01 inches or more	25.0	24.0	21.7	14.0	17.7	4.3	1.3	2.0	1.7	9.0	20.7	18.0	159.3
.10 inches or more	15.3	15.7	9.0	6.3	9.3	1.3	.7	1.0	1.3	5.0	11.7	8.3	85.3
.50 inches or more	6.0	3.3	1.7	1.0	1.7	.0	.0	.0	.0	2.3	2.7	2.3	21.3
1.00 inches or more	1.0	.7	.3	.7	.0	.0	.0	.0	.0	1.0	1.0	.5	5.3
Degree Days													
Heating days @ 65 (°F)	636	529	536	360	262	71	15	6	47	270	495	712	3935
Growing days @ 50 (°F)	6	8	36	128	228	459	648	657	508	200	51	4	2933

Data Source: Oregon Climate Service

**Winegrape Fertilization Practices for Oregon**  
**Edward Hellman**  
**North Willamette Research & Extension Center**  
**Oregon State University**

A vineyard nutrition management program should complement the soil's ability to provide the nutrients needed to sustain adequate vigor and produce the desired quantity and quality of crop. Soil conditions and production systems can vary considerably from vineyard to vineyard. Therefore, fertilization practices should be customized for individual vineyards and blocks within vineyards, and should be based on a thorough knowledge of the existing conditions.

**Soil Characteristics.** Every vineyard should be mapped for soil characteristics. A starting point is the soil type descriptions found in your county soil survey map. Such a map is a useful general guide for the soil associations and soil types within a site, but can not be used for the management of that site. The soils in any one association ordinarily vary in slope, depth, drainage, and other characteristics that affect their management. Develop a map of your vineyard that locates variations in soil types, depth, drainage, water holding capacity, slope, and other notable characteristics.

Soil analyses should be done for each recognizably different area within your vineyard. Soil nutrient content does not rapidly change for most nutrients, so analyses are generally not necessary to do more frequently than every 5-10 years unless major applications of fertilizer or lime are made.

A fertilization program must also be based on the production system that is being used. The relative nutritional needs and efficiency of nutrient uptake varies among grape varieties, clones, and rootstocks. Vine spacing, and the nutritional needs and/or contributions of cover crops must also be considered.

Monitor grapevine nutrient status annually with separate petiole analyses of each block, variety, rootstock, or other significantly different area of the vineyard. Petiole analyses should be conducted at the same time every year, using the same procedure, so that the results can be used to monitor trends in nutrient status. The changing trends in nutrient status are more important than single season results, which can be influenced by seasonal climatic differences or localized episodes of stress from factors such as drought or overcropping.

Keep records on all fertilizer applications; include product, rate and timing in your records. Follow up with written comments on the observed response to the fertilizer application.

**Oregon Vineyards.** Soil tests of Oregon vineyards frequently indicate low levels of phosphorus and boron, sometimes low potassium, and usually a relatively low pH. Keep in mind, however, that soil tests rarely are representative of the entire rooting depth of grapevines. Nutrient content and pH vary with soil depth. Interpreting soil tests in combination with the results of petiole analyses and observations of grapevine vigor provide the most complete picture of the nutrient status of your vineyard.

Grapevine petiole analysis results (Table 1.) from Oregon State University's Central Analytical Lab indicate that nutrient deficiencies were relatively infrequent in Oregon vineyards. Only nitrogen (38%) and boron (14%) were commonly deficient, and petiole nitrogen levels are generally ignored in favor of observations of grapevine vigor and crop production. Phosphorus, potassium, magnesium, and zinc were not commonly deficient.

**Table 1. Summary of Oregon winegrape petiole analysis reports, 1986-1995.**

	<b>% Samples Deficient</b>
Nitrogen	38
Phosphorus	5
Potassium	4
Boron	14
Calcium	1
Zinc	7
Magnesium	4

Source: Oregon State University

Vineyard fertilization practices in Oregon match the petiole analysis results fairly well. It was estimated by the Oregon Agricultural Statistics Service (Table 2.) that 23% of the grape acreage in 1995 received nitrogen fertilizer, 10% received phosphorus, and 9% received potassium. No figures are available for micronutrient applications, but boron and zinc are commonly applied.

**Table 2. Estimated fertilizer primary nutrient applications to Oregon vineyards in 1995.**

	<b>% Acres</b>	<b>lb/acre</b>
Nitrogen	23	27
Phosphorus	10	32
Potassium	9	43

Source: Oregon Agricultural Statistics Service.

**Nitrogen.** Nitrogen (N) is the most commonly needed fertilizer element in vineyards. Grapevines, however, do not have as high a nitrogen requirement as many other crops. Nitrogen fertilization

always raises the concern of encouraging excessive vigor that can result in shading and reduced fruit quality. A common approach to nitrogen fertilization on relatively fertile Oregon vineyard soils is to fertilize new vines with 20 to 30 lbs. of actual nitrogen per acre during the first two years. Once vines are established, no nitrogen is applied until decreased vigor is observed. Then, a conservative nitrogen fertilization rate (25 to 30 lbs. N/acre) is applied and the vine response is closely observed. This may be a sensible approach, but keep in mind that vine growth and yields are usually reduced before symptoms are clearly expressed. Fertilization programs must also consider the nutritional requirements of annual and permanent cover crops.

The decision of which type of nitrogen fertilizer to use is primarily dependant on cost and the rate at which the nitrogen becomes available from the fertilizer product. The nitrate form of nitrogen found in calcium nitrate (15.5% N) is immediately available to the plant. It is also the most expensive dry fertilizer source of nitrogen. Ammonium nitrate has half of its 33% nitrogen in the readily available nitrate form. The other half is in the ammonium form which must undergo conversion to nitrate by soil microbes, requiring from 1-2 weeks. Urea fertilizer (46% N) also must be converted to the nitrate form before it is available to the vine. To prevent nitrogen loss from volatilization, urea and ammonium nitrate fertilizers should be drilled or incorporated at least two inches deep. Urea can be incorporated by rainfall or irrigation following application, but rain does not prevent volatilization loss when dry ammonium nitrate is applied to the soil surface. It must also be noted that urea and ammonium nitrate are acid-forming in the soil, while calcium nitrate does not acidify the soil. Monitor topsoil pH when these nitrogen fertilizers are used on a regular basis.

Complete fertilizers, those containing nitrogen, phosphorous, and potassium (N-P-K) are a more expensive source of nitrogen fertilizer because you are paying for P and K that your vineyard may not necessarily require. Foliar fertilizers usually are the most expensive source of nitrogen, and often contain many additional elements that do not require supplemental applications. Foliar fertilizers are usually not the best choice for nitrogen fertilization because the relatively large amounts of nitrogen required are difficult to supply with the dilute formulas that are necessary. Organic materials, such as manure, grape pomace (acid-forming), or an annual cover crop turned under, can be a good source of nitrogen as well as provide other soil-improving benefits. Be aware that organic sources vary in their nitrogen content and the rate of nitrogen availability. Compare the cost of the nitrogen they contain and their application to the cost of applying dry nitrogen fertilizers.

Nitrogen fertilizers traditionally have been applied in late winter or early spring so that it would be in the root zone at bud break. We now know that new vine growth in the spring is primarily dependent on nitrogen stored in the wood and roots. Therefore, the most efficient time to apply nitrogen has been shown to be from fruit set to the post-harvest period.

**Phosphorus.** Grapevine phosphorus (P) deficiency has not been a problem in Oregon despite the sometimes low soil P content. Several factors contribute to this: grapevines have a good ability to extract P from the soil, P is very mobile in the vine, and crop removal of P is relatively small. Generally, P fertilization is not necessary, but if soil and petiole tests indicate very low P levels you may consider a trial application in a portion of your vineyard. Apply triple superphosphate (0-45-0) at the rate of 1,500 pounds per acre in a band close to the vine. Observe the treated vines over the next several seasons to determine if there was any response to the fertilizer application.

**Potassium.** Grapevines have a relatively high need for potassium (K), comparable to nitrogen, and much of the potassium is removed from the vineyard in the fruit. Potassium deficiencies, however, were only seen in 4% of the petiole samples tested by O.S.U. over a ten year period (Table 1). The

reasons are that many Oregon soils have adequate levels of K, potassium is resistant to losses from leaching, and deficiencies are generally confined to small (less than 1 to 3 acres) areas in a vineyard. However, levels of K often decline considerably from the topsoil to subsoil layers. This can lead to temporary deficiencies in nonirrigated vineyards, particularly during the fruit ripening period when considerable K is accumulating in the fruit. Overcropping a vine also can lead to a temporary K deficiency during fruit ripening.

If a potassium deficiency appears, first try to determine the cause of the deficiency before deciding a course of action. The temporary deficiencies caused by drought or overcropping probably can be ignored if soil tests from the deficient area indicate that adequate K levels are present. If soil K levels are quite low, it may be due to an overabundance of calcium (Ca) or magnesium (Mg). These three elements compete for fixation sites on soil particles, and a large excess of any one element can cause reduced availability of one or both of the other elements. This situation is difficult to correct, requiring massive applications of K fertilizer to correct an excess Ca or Mg problem.

If potassium fertilization is warranted, potassium sulfate (0-0-51) is an effective fertilizer source. Because potassium is rapidly fixed by the soil, the quickest response can be achieved by applying the fertilizer in a single heavy application. Apply the fertilizer in a concentrated band to the root zone at a rate of 3-5 pounds per vine, in 6-8 inch furrows, 18-24 inches from the vine.

Avoid unnecessary applications of potassium. High K levels can lead to high K content in fruit and elevated must pH. Extremely high K levels may induce a magnesium deficiency. Remember, K deficiencies tend to be localized in relatively small areas; spot treat these areas, not the whole vineyard.

**Boron.** Boron (B) deficiencies are relatively common in Oregon ([Table 1](#)) because of naturally low levels in our soils. Adding to the low soil boron problem, B is very immobile in the plant, which sometimes makes it unavailable when and where it is in critical need by the vine. Boron is needed for early shoot growth in the spring, and plays an important role in pollination and fruit set. Boron deficiencies have been associated with: drought the preceding fall or early winter, cold weather combined with cold wet soils in the spring, and pruning in late fall or early winter.

Unlike the other previously discussed mineral nutrients, boron fertilization is most effectively achieved with a soluble B foliar-applied fertilizer. Because boron is so important to grape production and B fertilizer is relatively inexpensive, it is recommended that boron foliar applications routinely be made to most Oregon vineyards. A post-harvest application that wets the buds is the best way to prevent the shoot-stunting symptom sometimes seen in the spring. Pre-bloom sprays seem to be an effective way to get B into flower parts. Use foliar applications at an annual rate of one pound of actual boron per acre to maintain adequate B levels without building up excesses. A note of caution about B; there is a narrow range of B levels between deficiency and excess (toxicity) for grapevines. A spray concentration of 0.4 lbs. actual B per 100 gallons of water should be safe for pre-bloom or other growing-season sprays. The post-harvest spray can be up to 0.8 lbs. actual B in 100 gallons of water.

**Zinc.** Zinc (Zn) deficiencies can be a serious problem in grapes, causing poor fruit set and stunted shoots with small, misshapen leaves. Deficient levels of zinc have occasionally been seen in Oregon petiole samples, but usually are localized within a small portion of a vineyard. Low Zn levels are generally associated with sandy soils and soils with high pH or high P levels; none of these

conditions are common in western Oregon vineyards. Clay soils with a high magnesium content also can be low in available Zn.

Foliar application of zinc is the most effective method for treating Zn deficiency. Neutral zinc products containing 50-52% Zn, or zinc oxide (75-80% Zn) are both effective as foliar sprays. Use 4-5 pounds per acre of neutral zinc or 2-3 pounds per acre of zinc oxide in dilute applications of 100-150 gals/acre. Both of these materials are not very soluble and require good agitation and occasional flushing of sprayer lines to prevent clogging. Chelated zinc products are fully soluble in the spray tank, and are the preferred form when low volume or concentrate foliar sprays are applied.

Zinc spray applications are most effective in improving fruit set when applied during the period of two weeks prior to bloom up to full bloom. If foliar deficiency symptoms persist or reappear, a second application may be necessary.

**Soil pH.** Excessive soil acidity can reduce growth and yield of grapevines, and potentially cause fruit quality problems. Western Oregon vineyard soils are naturally acidic, with a pH generally in the range of 5.2 to 6.0. Soil pH can decline over time due to the acidifying effects of urea or ammonium fertilizers and sulfur used for powdery mildew control. Therefore, many of our soils are below the optimal pH range (6.0 to 6.5) for grapevines. Watch for rising Manganese (Mn) levels in your annual petiole analysis as an indicator of declining soil pH.

Low soil pH is not a simple or quick situation to correct, especially in an established vineyard. Soil pH is increased by the application of lime in the form of ground limestone (calcium carbonate) or dolomitic lime (calcium carbonate and magnesium carbonate). Lime should be spread evenly over the soil surface and incorporated (turned under), which is difficult, if not impossible, in an established vineyard. It is most effective to adjust pH prior to planting, when deep mixing of lime is possible.

The soil pH test indicates if lime is needed. The lime requirement (SMP) test determines how much lime should be applied to adjust the pH to the desired level. Accurate lime recommendations cannot be made without performing an SMP or similar lime test procedure. Refer to your soil test analysis for the SMP buffer value. This value is used with the SMP lime requirement table (Table 3) to determine the quantity of lime to apply to raise the soil pH to a target level. If quantities greater than one ton/acre are needed for an established vineyard where incorporation of the lime is not possible, apply the total lime requirement over several years. When planning lime applications, consider that your lime source is also providing calcium (Ca), and magnesium (Mg) if you use dolomitic lime. The amounts of available Ca, Mg, and K in the soil are interrelated; an extreme excess of any one of them can cause deficiencies of the others.

**Conclusions.** A vineyard nutrition management program should be based on a thorough knowledge of the specific conditions and circumstances within the varied sites and blocks of your vineyard. Utilize soil tests and petiole analysis to monitor the nutrient status of the soil and grapevines. Keep records of vine growth, production, and fruit quality on a block-by-block basis. Apply fertilizer nutrients only when there is a demonstrated need; if there is doubt, conduct a small trial application and evaluate the vines' response.

**Table 3. SMP Lime Requirement**

	<b>Tons/acre of 100-score lime needed to raise pH of surface 6 inches of soil to a target pH.</b>			
<b>SMP Buffer</b>	<b>5.3</b>	<b>5.6</b>	<b>6.0</b>	<b>6.4</b>
6.7	---	---	---	---
6.6	---	---	---	1.1
6.5	---	---	1.0	1.7
6.4	---	---	1.1	2.2
6.3	---	---	1.5	2.7
6.2	---	1.0	2.0	3.2
6.1	---	1.4	2.4	3.7
6.0	1.0	1.7	2.9	4.2
5.9	1.4	2.1	3.3	4.7
5.8	1.7	2.5	3.7	5.3
5.7	2.0	2.8	4.2	5.8
5.6	2.3	3.2	4.6	6.3
5.5	2.6	3.6	5.1	6.8
5.4	2.9	3.9	5.5	7.3
5.3	3.2	4.3	6.0	7.8
5.2	3.6	4.7	6.4	8.3
5.1	3.9	5.0	6.9	8.9
5.0	4.2	5.4	7.3	9.4
4.9	4.5	5.8	7.7	9.9
4.8	4.8	6.2	8.2	10.4

This table was adapted from Oregon State University Extension Publication EC 1478, Soil Test Interpretation Guide.