9438777

EXHIBIT J
ACCESS
EASEMENT

Send tax statements to:
Bailey Hill Land Company
366 E. 40th Ave. Suite 250
Eugene, Oregon 97405

FILE COPY

After recording return to
Bailey Hill Land Company
366 E. 40th Ave. Suite 250
Eugene, Oregon 97405

20 /
10 /
20 /

EASEMENT

GRANTORS: Breeden Bros., Inc., an Oregon Corporation, and (Breedens)

Bailey Hill Land Company an Oregon partnership (Bailey Hill)

GRANTEE: Bailey Hill South an Oregon partnership (Bailey Hill South)

EFFECTIVE DATE: MAY 23, 1994

3035MAY.23'94#09REC 20.00
3035MAY.23'94#09PFUND 10.00
3035MAY.23'94#09A&T FUND 20.00

RECITALS:

THIS ROADWAY EASEMENT is made this 23rd day of MAY, 1994 by Bailey Hill South, an Oregon partnership, Bailey Hill Land Company, an Oregon partnership, and Breeden Bros., Inc., an Oregon corporation, hereinafter collectively referred to as "Grantors" and Bailey Hill South, an Oregon partnership, hereinafter referred to as "Grantee".

RECITALS:

A. Grantors are the owners of the real property described as Parcel 3 of Land Partition Plat for Bailey Hill South and Bailey Hill Land Co., Land Partition Plat No. 94-P0510, Lane County Oregon Official Records (hereafter "Parcel 3").

B. Grantee is the owner of the real properties described as Parcels 1 and 2 of Land Partition Plat for Bailey Hill South and Bailey Hill Land Co., Land Partition Plat No. 94-P0510, Lane County Oregon Official Records (hereafter "Parcels 1 and 2").

C. The Parcels 1 and 2 properties border and are contiguous to the Parcel 3 property.

D. The parties agree that a roadway easement shall exist across the Parcel 3 property for the use and benefit of the Parcels 1 and 2 properties in accordance with the terms and conditions set forth below.

AGREEMENT:

1. GRANT AND RESERVATION. Grantors grant and convey to Grantee and reserve unto themselves a perpetual nonexclusive easement to use a strip of land thirty (30) feet wide located across the Parcel 3 property, the centerline of which is identified and described as the "30 foot access easement" of the Land Partition Plat for

Bailey Hill South and Bailey Hill Land Co., Land Partition Plat No. 94-P0510, Lane County Oregon Official Records (hereafter "the Easement").

2. USES PERMITTED. Grantee, its agents, independent contractors and invitees shall have the right to use the Easement for road purposes only for access to the Parcels 1 and 2 properties and in conjunction with such use may construct, reconstruct, maintain and repair a road thereon. "Road purposes" shall be interpreted and limited to permit all ordinary and reasonable uses of the easement strip for access purposes for residential, agricultural and forestry uses of the Parcels 1 and 2 properties and including installation of utilities.

3. MAINTENANCE. The road shall be maintained in good repair at all times, and the owners of the Parcels 1 and 2 properties shall share equally the costs and expenses of repairing, maintaining and resurfacing the road. Each such party shall indemnify the other against all liability for injury to themselves or damage to their property when such injury or damage shall result from, arise out of, or be attributable to any maintenance or repair undertaken pursuant hereto.

4. RELOCATION RIGHTS. Grantors shall have the right to relocate all or any portion of the roadway at any time to facilitate future development and improvement of the Parcel 3 property, provided that Grantors shall reconstruct the road at such new location in as good or better condition as existed at the prior location. If, from time to time, all or any portion of the road is relocated to a location comprising a street and/or right of way dedicated to the public or to a private association of property owners and available as access for Grantee, such dedication shall eliminate the rights of Grantee in the original Easement. If the road is relocated, Grantors may record an instrument indicating the relocated road centerline and such instrument shall serve to amend this Easement and eliminate any rights of Grantee in the original Easement. Such amendment of the description shall be effective whether or not signed by Grantee, but Grantee shall execute it or such other document necessary to indicate relocation of the Easement when and if requested by Grantors. The parties recognize that if, from time to time, all or a portion of the road is relocated, disturbance of the road may necessarily result for periods of time during the installation of the street and/or right of way. Grantors shall have no liability to Grantees or others for such temporary disturbance.

5. INDEMNIFICATION. Grantee agrees to indemnify and defend Grantors from any loss, claim or liability to Grantors arising in any manner out of Grantee's use of the Easement. Grantee assumes all risk arising out of its use of the Easement and Grantors shall have no liability to Grantee or others for any condition existing thereon.

6. ABANDONMENT. This Easement shall be perpetual; however, in the event that it is abandoned by Grantee, the Easement shall automatically expire and Grantee shall, upon request, execute a recordable document evidencing such expiration.

7. NONIMPAIRMENT OF RIGHTS. The roadway shall be used with due regard to the rights of others and their use thereof and shall not be used in any manner that would impair the rights of others to use it.

8. PRIOR ENCUMBRANCES. This Easement is granted subject to all prior easements or encumbrances of record.

9. APPURTENANT. This grant and reservation of Easement shall run with the land and be binding on and inure to the benefit of the owners of the Parcels 1, 2, and 3 properties, their heirs, successors, and assigns and shall be appurtenant to the Parcels 1 and 2 properties.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed the day and year above written.

GRANTORS:

Bailey Hill Land Company

Bailey Hill South

Breeden Bros., Inc.
By John F. Breeden, its President

GRANTEE:

Bailey Hill South

9438777

STATE OF OREGON, County of Lane, SS. MARCH 22, 1994

Personally appeared John F. Breeden who, being first duly sworn, did say that he is the President of Breeden Bros., Inc., and that said instrument was signed in behalf of said corporation by authority of its board of directors; and he acknowledged said instrument to be its voluntary act and deed.

OFFICIAL SEAL
TROY A MUELLER
NOTARY PUBLIC - OREGON
COMMISSION NO. 020088
MY COMMISSION EXPIRES JAN. 18, 1997

Before me: Troy A. Mueller
Notary Public for Oregon
My Commission Expires: 1-18-97

STATE OF OREGON, County of Lane, SS. MARCH 22, 1994

Personally appeared John F. Breeden, partner of Bailey Hill Land Company and acknowledged that the said instrument was signed in behalf of said partnership by authority of the partners, and he acknowledged said instrument to be his voluntary act and deed.

OFFICIAL SEAL
TROY A MUELLER
NOTARY PUBLIC - OREGON
COMMISSION NO. 020088
MY COMMISSION EXPIRES JAN. 18, 1997

Before me: Troy A. Mueller
Notary Public for Oregon
My Commission Expires: 1-18-97

STATE OF OREGON, County of Lane, SS. MARCH 22, 1994

Personally appeared John F. Breeden, partner of Bailey Hill South and acknowledged that the said instrument was signed in behalf of said partnership by authority of the partners, and he acknowledged said instrument to be his voluntary act and deed.

OFFICIAL SEAL
TROY A MUELLER
NOTARY PUBLIC - OREGON
COMMISSION NO. 020088
MY COMMISSION EXPIRES JAN. 18, 1997

Before me: Troy A. Mueller
Notary Public for Oregon
My Commission Expires: 1-18-97

EXHIBIT K
F.E.M.A MAP

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100–YEAR FLOOD

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 To be protected from 100–year flood by Federal flood protection system under construction ; no base flood elevations determined.

ZONE V Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

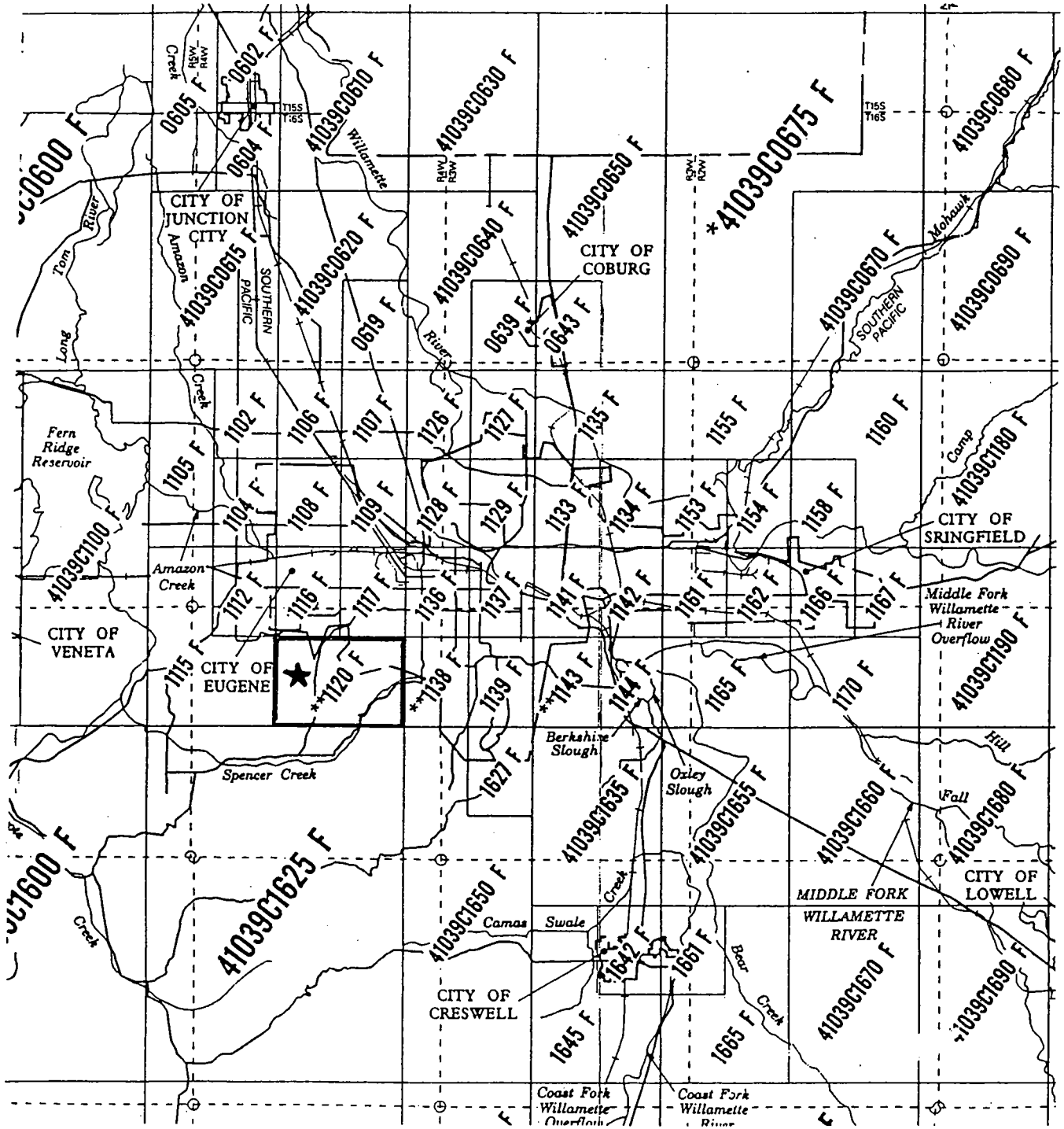
ZONE X Areas of 500–year flood; areas of 100–year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100–year flood.

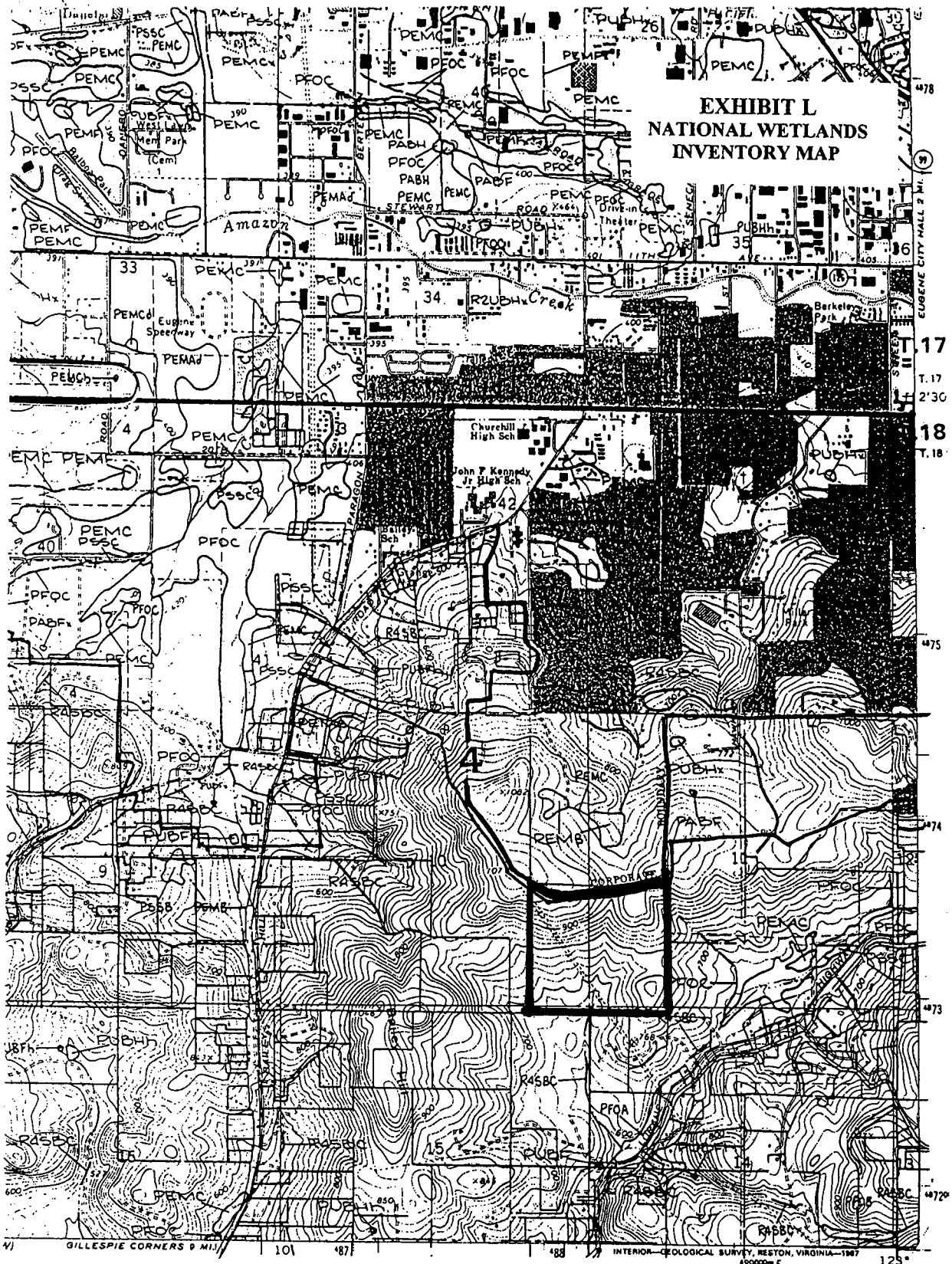
OTHER AREAS

ZONE X Areas determined to be outside 500–year floodplain.

ZONE D Areas in which flood hazards are undetermined.

*PANEL NOT PRINTED–AREA IN ZONE D
**PANEL NOT PRINTED–AREA IN ZONE X
***PANEL NOT PRINTED–NATIONAL FOREST AREAS IN ZONE D, REST OF PANEL IN ZONE X
†PANEL NOT PRINTED–OUTSIDE STUDY AREA





Lane County

PARCEL-BASE MAPS (Use with National Wetlands Inventory)

1000 0 1000 2000 3000 4000 Feet

Scale 1" = 2000'

N

Eugene West 4

INVENTORY

Eugene West 4

EXHIBIT M
WELL RECORDS

SECTION 10 WELL LOG SUMMARY

18 WELLS **28.9 G.P.M AVERAGE**

SECTION 11 WELL LOG SUMMARY

9 WELLS **11.94 G.P.M AVERAGE**

SECTION 10 + SECTION 11 WELL LOG SUMMARY

27 WELLS **23.25 G.P.M AVERAGE**

Well Log Report - Page 1 of 2

Township: 18S, Range: 04W, Section: 10, Well Log ID: NONE

Click on the column heading to re-sort the results, Click on Well Log to view image, Click here if you are having problems

Well Log	T-R-S/ QQ-Q	Taxlot	Street of Well	Owner	Company	Well Type	First Water	Completed Depth	Static Water Level	Yield	Completed Date	Received Date	Bonded Constructor	Startcard	Well Id #	Construction Type						
																New	Abandon	Deepen	Recond.	Repair	Conversion	Domestic
LANE 1385	18S-4W-10 -			KUNKLER, KEN		W	30	90	1	150	9/14/1981	9/18/1981	PITCHER, CARL PITCHER PUMP & DRILLING			X						X
LANE 1386	18S-4W-10 -			GILBERT, MR JERRY		W	62	200	41	20	7/11/1978	8/7/1978	PITCHER, CARL PITCHER PUMP & DRILLING CO.			X						X
LANE 2927	18S-4W-10 SW-SW			PARKER, MARION		W	90	160	45	12	6/1/1992	6/5/1992	WHITE, HAROLD	40517		X						X
LANE 16990	18S-4W-10 -NW	501000000		PURVIS, MEL		W	0	215	40	40	7/2/1985	8/5/1985	CARTER, JAMES I		42393			X				X
LANE 16991	18S-4W-10 NE-NE			BENNETT, STEVEN		W	85	90	30	25	6/1/1984	6/11/1984	WILSON, FRANK			X						X
LANE 16992	18S-4W-10 -NW	501000000		PURVIS, MEL	PURVIS REAL ESTATE	W	70	100	30	10	5/3/1983	5/9/1983	CARTER, JAMES I		42393	X						X
LANE 16993	18S-4W-10 -			DUNCAN, MR ROY		W	190	192	140	60	3/2/1979	3/8/1979	CHRISTENSEN, MARK W			X						X
LANE 16994	18S-4W-10 -			DUNCAN, MR ROY		W	125	0	0		2/28/1979	3/8/1979	CHRISTENSEN, MARK W			X	X					X
LANE 16995	18S-4W-10 -			DEALY, DON		W	52	97	30	30	10/12/1977	12/21/1977	PITCHER, CARL A			X						X
LANE 16996	18S-4W-10 -			GILBERT, GERALD		W	0	250	147	50	4/5/1968	3/10/1969	CHRISTENSEN, MARK W			X						X
LANE 16997	18S-4W-10 -				MANLEY PLUMBING & HEATING	W	0	132	75	0.8	6/24/1959	9/25/1959	JONES, DELBERT S			X						X
LANE 16999	18S-4W-10 -			HONOCHICK, ROBERT		W	0	140	62	25	11/17/1966	1/26/1967	CHRISTENSEN, MARK W					X				X
LANE 17000	18S-4W-10 -			ANSELMO, MR JOE		W	78	105	46	20	6/8/1977	7/5/1977	JONES, CASEY L			X						X
LANE 17001	18S-4W-10 -NW				ROSEMEAD REALTY INC.	W	240	250	50	20	5/17/1977	5/27/1977	CARTER, JAMES I			X						X
LANE 17002	18S-4W-10 NE-NW			GILBERT, JERRY		W	83	294	56	15	7/16/1976	8/5/1976	COX, GARLAND					X				X
LANE 17003	18S-4W-10 NW-SE			ANSELMO, JOE		W	110	112	95	15	3/25/1977	6/20/1977	MAY, THOMAS O			X						X
LANE 52916	18S-4W-10 -	101	3250 BAILEY HILL RD, EUGENE		LELAND INC.	W	65	145	60	10	7/11/1997	9/23/1997	HENDRICKSON, JEFF HENDRICKSON WELL DRILLING INC	102146	14788	X						X
LANE 52917	18S-4W-10 -	101	3250 BAILEY HILL RD, EUGENE		LELAND INC.	W	280	360	60	8	7/15/1997	9/23/1997	HENDRICKSON, JEFF HENDRICKSON WELL DRILLING INC	102147	14789	X						X
LANE 59411	18S-4W-10 SW-SE	900	ACROSS FROM 86838 BAILEY HILL RD.-TO END OF GRAVEL ROAD, EUGENE	BRIAN, HUEY	HUEY ENTERPRISES	W	180	330	97	11	4/3/2001	4/5/2001	JONES JR, CASEY CASEY JONES WELL DRILLING	139225	46294	X						X

Well Log Report - Page 1 of 1

Township: 18S, Range: 04W, Section: 11, Well Log ID: NONE

Click on the column heading to re-sort the results, Click on Well Log to view image, Click here if you are having problems

Well Log	T-R-S/ QQ-Q	Taxlot	Street of Well	Owner	Company	Well Type	First Water	Completed Depth	Static Water Level	Yield	Completed Date	Received Date	Bonded Constructor	Startcard	Well Id #	Construction Type						
																New	Abandon	Deepen	Recond.	Repair	Conversion	Domestic
LANE 1387	18S-4W-11 -NW			FOX , DR DON		W	80	240	55	25	3/29/1974	4/29/1974	CARTER , J I CARTER DRILLING & PUMP SERVICE			X						X
LANE 17004	18S-4W-11 -			CAPPS , DOUGLAS		W	44	95	15	9	8/7/1972	10/24/1977	JONES , CASEY L			X						X
LANE 17005	18S-4W-11 SE-NE			CUDDEBACK , S GILBERT		W	32	255	18	12	5/21/1976	6/1/1976	COX , GARLAND			X						X
LANE 17006	18S-4W-11 -			CHAPMAN , HERB		W	92	100	20	11	8/17/1972	9/7/1972	JONES , BERT D			X						X
LANE 17007	18S-4W-11 NE-SE			MOORE , GORDAN		W	0	210	42	9	11/11/1959	11/30/1958	CHRISTENSEN , MARK W			X						X
LANE 50594	18S-4W-11 SW-NW	304	END OF TIMBERLINE DR		BREEDEN BROS.	W	58	380	58	2.5	3/8/1996	4/8/1996	JONES , CASEY JR CASEY JONES WELL DRILLING	91798		X						X
LANE 50595	18S-4W-11 SW-NW	303	OFF END OF TIMBERLINE DR		BREEDEN BROS	W	68	160	14	13	3/13/1996	4/8/1996	JONES , CASEY JR CASEY JONES WELL DRILLING	91799		X						X
LANE 50600	18S-4W-11 SW-NW	304	OFF END OF TIMBERLINE DR		BREEDEN BROS	W	113	220	75	21	3/19/1996	4/8/1996	JONES , CASEY JR CASEY JONES WELL DRILLING	91804		X						X
LANE 51061	18S-4W-11 SE-SE	805	LORAINE HWY	COMPTON , NEIL		W	74	170	28	5	6/20/1996	7/25/1996	LOVING , DONALD J. MID VALLEY DRILLING	90389	2217	X						X

Go to page: 1

EXHIBIT N
OWNERSHIP RECORDS

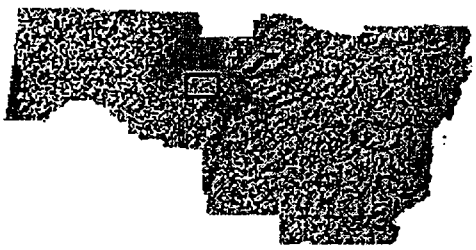
LANE COUNTY REGIONAL LAND INFORMATION DATABASE

Site Address: **3101 TIMBERLINE DR**
Map & TaxLot #: **18-04-11-00-00303**
A & T Account #: **1544731**

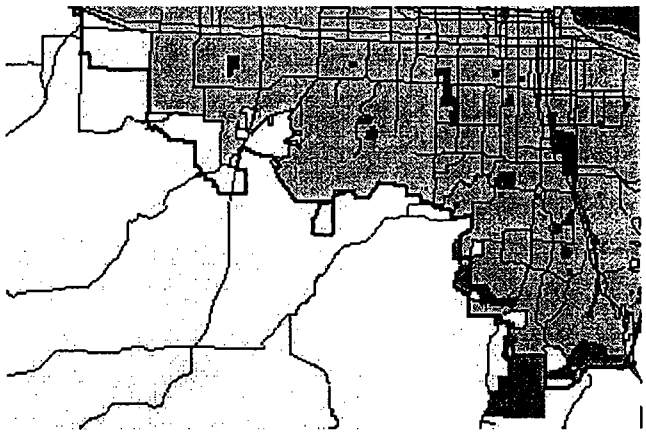
Special Interest Code:

Map 1 | View Plat | Tax Map | View Taxmap | Convert to PDF document

Vicinity Map



Detail Map



Site Address State Plane Coordinates

X-Coord: **1304509** Y-Coord: **866613**

Site Address Information

House	Suffix	Predir.	Street Name	PostDir.	Street Type	Unit Type	Unit
3101			**TIMBERLINE**		**DR**		

Mailing City	State	Zip Code	Zip+4	Carrier Route
EUGENE	**OR**	**97405**	**1595**	**C039**

Create Date: **1999-06-09** Update Date: **1999-06-09**

Land Use Land use information has not been field verified.

	Code:	Description:
Land Use Code and Description:	**1111**	**Single Family Housing**
Use Code and Description:	**S**	**Single Family**

Zoning Split Zoning is not shown. Please verify zoning information with local jurisdiction.

Boundary Information

General

Incorporated City Limits:	
Urban Growth Boundary:	
Fire Protection Providers:	**BAS**
Plan Designation:	
1990 Census Tract:	**4402**
1990 Block Group:	**7**
Year Annexed:	
Annexation #:	
1995 Transportation Analysis Zone:	**294**
Approximate Acreage:	**58.40**
Approximate Square Footage:	**2,543,904**

Environmental Findings

Metro Greenway:
Metro Flood Hazards:
Metro Wetlands:
Soil Map Unit Number: **107C**
Soil Description: **PHILOMATH SILTY CLAY, 3 TO 12 PERCENT SLOPES**

Schools

	Code:	Name:
District:	**4J**	**EUGENE**
Elementary School:	**358**	**WESTMORELAND**
Middle School:	**536**	**JEFFERSON**
High School:	**678**	**CHURCHILL**

Service Districts

LTD Service Area: **YES**
LTD Ride Source:
Ambulance District: **WC**
Emerald People's Utility District:

Political Districts Districts may not include recent annexations.

Election Precinct: **100004**
County Commissioner District: **1** **WEST**
County Commissioner: **ANNA MORRISON**
State Representative District: **43**
State Representative Name: **CEDRIC HAYDEN**
City Council Ward:
City Councilor Name:
EWEB Commissioner District:

Lane County Assessor's Office | Account Number: 1544731 | Map & Lot: 18-04-11-00-00303

Property Owner

Owner1 Name: **CHILDS MARK H & CINDI K**
Owner Address: **3101 TIMBERLINE DR**

EUGENE	**OREGON**	**UNITED STATES**	**97405**
City	State	Country	Zip Code

Taxpayer

Taxpayer Name: **CHILDS MARK H & CINDI K**
Taxpayer Address: **3101 TIMBERLINE DR**

EUGENE	**OREGON**	**UNITED STATES**	**97405**
City	State	Country	Zip Code

Remarks:

Potential Tax Liability

Property Legal Description

Not Available

Property Value and Taxes

	Land Value	Improvement Value	Total Value	
	Real Market	Real Market	Real Market	Assessed
2001	**16,377**	**462,870**	**479,247**	**313,292**
2000	**17,704**	**406,030**	**423,734**	**304,167**
1999	**121,690**	**0**	**121,690**	**2,040**
1998	**102,280**	**0**	**102,280**	**2,003**
1997	**100,270**	**0**	**100,270**	**1,945**
1996	**93,710**	**0**	**93,710**	**2,280**

1995	82,200	0	82,200	2,160

313,292	0	0
Taxable Value	Exemption Amount Regular (EAR)	Frozen Assessed Value (FZNPU)

Tax Year	Tax (See Explanation of Tax)
2001	3,782.75
2000	3,661.48
1999	51.26
1998	46.07
1997	49.75
1996	49.64
1995	46.04

Explanation of Tax

The *tax* shown is the amount of tax which currently exists with Lane County's Department of Assessment and Taxation. It is possible there is a pending value change on this account. To determine this, please refer to the Account Status indicators to see if Pending Value change is selected. If a value change has already been processed for this account and year in question, the tax currently showing may not match what was *certified* for that particular year.

Account Status

- ◉ Active
- ◉ Locally Assessed
- ○ Pending Seg/Merge
- ○ Pending Value Change
- ○ Delinquency
- ○ Delayed Foreclosure
- ○ Bankruptcy
- ◉ Code Split Indicator 1645892

Land Characteristics

Code	Description
FORDF	Forest Deferral

General Information

Property Class:	641
Statistical Class:	150
Neighborhood Code:	20663
Property Use Type:	515
Account Type:	RP
Category:	LAND AND IMPROVEMENTS
Mortgage Company Name:	
Total Acreage for this Account:	5.00
Fire Acres:	

2000 Tax Code Area (Levy Code): 00470

Bailey Spencer RFPD
Eugene School District
Eugene School District Bond
Eugene School District Local Option
Lane Community College
Lane Community College Bond
Lane County
Lane County Bond

Lane Education Service Dist

View Taxing District Information from Lane County Department of Assessment and Taxation's site.

Sales Information

Sales Date	Sales Price	Grantor	Grantee	Instrument #	Analysis Code
12-01-1998	231,000	BREEDEN, DERWIN P		98-09590500	N
12-20-1996		BREEDEN, JOHN F		96-08518600	6
03-25-1996		BAILEY HILL SOUTH		96-02453600	6

Manufactured Structures

Building 1 Characteristics

Property ID:	1544731	Map & TL:	18-04-11-00-00303		
Occupancy:	SINGLE FAMILY	Roofstyle:	GABLE	Bedrooms:	4
Building Type:	51 STAT 150	Roof Cover:	COMP SHINGLE MEDIUM	Full Baths:	3
Class:	5	Heating:		Half Baths:	
Year Built:	1999	Exterior Wall:	WOOD SIDING	Fireplaces:	NO
Depreciation:	1	Percent Improv. Complete:	100		

Floor	Base Area	Finished Area		Parking Area
Basement			Bsmt Gar sqft:	
First	2382	2382	Att Gar sqft:	948
Second	1119	1119	Att Port sqft:	
Attic			Det Gar sqft:	
			Driveway Sqft:	
TOTAL	3501	3501	Paved Patio Sqft:	1218

Search Results |New Property Search |Applications Menu

LANE COUNTY REGIONAL LAND INFORMATION DATABASE

Site Address:
Map & TaxLot #: **18-04-11-00-00303** Special Interest Code:
A & T Account #: **1645892**

Map 1 View Plat | Tax Map View Tabmap | Convert to PDF Document

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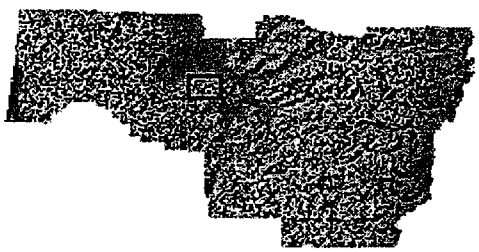
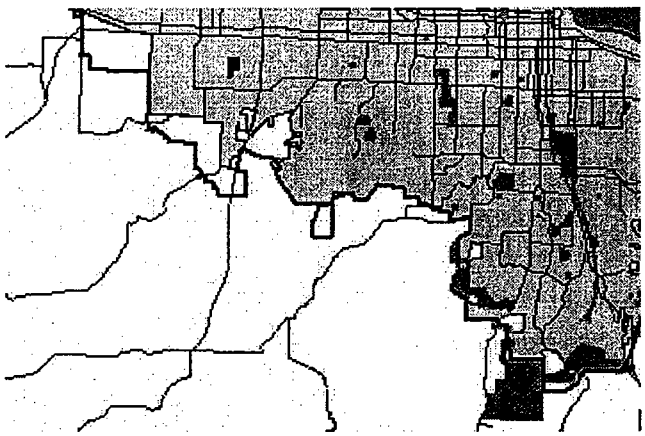


Detail Map



Site Address State Plane Coordinates

X-Coord: **1304519** Y-Coord: **866906**

Land Use Land use information has not been field verified.

	Code:	Description:
Land Use Code and Description:	**1111**	**SINGLE FAMILY HOUSING**
Use Code and Description:	**S**	**SINGLE FAMILY**
Land Use Code and Description:	**9100**	**VACANT, UNUSED, UNDEVELOPED LAND**
Use Code and Description:	**V**	**VACANT**

Zoning Split Zoning is not shown. Please verify zoning information with local jurisdiction.

Boundary Information

General

Incorporated City Limits:	
Urban Growth Boundary:	
Fire Protection Providers:	**BAS**
Plan Designation:	
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1990 Block Group:	**7**
Year Annexed:	
Annexation #:	
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Metro Flood Hazards:
Metro Wetlands:
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Ambulance District: **WC**
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County Commissioner: **ANNA MORRISON**
State Representative District: **43**
State Representative Name: **CEDRIC HAYDEN**
City Council Ward:
City Councilor Name:
EWEB Commissioner District:

Lane County Assessor's Office | Account Number: 1645892 | Map & Lot: 18-04-11-00-00303

Property Owner
Owner1 Name: **CHILDS MARK H & CINDI K**
Owner Address: **3101 TIMBERLINE DR**

EUGENE	**OREGON**	**UNITED STATES**	**97405**
City	State	Country	Zip Code

Taxpayer
Taxpayer Name: **CHILDS MARK H & CINDI K**
Taxpayer Address: **3101 TIMBERLINE DR**

EUGENE	**OREGON**	**UNITED STATES**	**97405**
City	State	Country	Zip Code

Remarks:
potential tax liability

Property Legal Description
Not Available

Property Value and Taxes

	Land Value	Improvement Value	Total Value	
	Real Market	Real Market	Real Market	Assessed
2001	**103,788**	**0**	**103,788**	**2,001**
2000	**112,203**	**0**	**112,203**	**1,943**

2,001	0	0
Taxable Value	Exemption Amount Regular (EAR)	Frozen Assessed Value (FZNPU)

Tax Year	Tax (See Explanation of Tax)
2001	**93.70**
2000	**60.96**

Explanation of Tax

The *tax* shown is the amount of tax which currently exists with Lane County's Department of Assessment and Taxation. It is possible there is a pending value change on this account. To determine this, please refer to the Account Status indicators to see if Pending Value change is selected. If a value change has already been processed for this account and year in question, the tax currently showing may not match what was *certified* for that particular year.

Account Status

- (•) Active
- (•) Locally Assessed
- ( ) Pending Seg/Merge
- ( ) Pending Value Change
- ( ) Delinquency
- ( ) Delayed Foreclosure
- ( ) Bankruptcy
- (•) Code Split Indicator **1544731**

Land Characteristics

Code	Description
FORDF	**Forest Deferral**

General Information

Property Class:	**641**
Statistical Class:	
Neighborhood Code:	**20663**
Property Use Type:	**515**
Account Type:	**RP**
Category:	**LAND AND IMPROVEMENTS**
Mortgage Company Name:	
Total Acreage for this Account:	**53.40**
Fire Acres:	**58.40**

2000 Tax Code Area (Levy Code): 00401

Eugene School District
Eugene School District Bond
Eugene School District Local Option
Lane Community College
Lane Community College Bond
Lane County
Lane County Bond
Lane Education Service Dist

View Taxing District Information from Lane County Department of Assessment and Taxation's site.

Sales Information

Sales Date	Sales Price	Grantor	Grantee	Instrument #	Analysis Code

Manufactured Structures

LANE COUNTY REGIONAL LAND INFORMATION DATABASE

Site Address: **3103 TIMBERLINE DR**
Map & TaxLot #: **18-04-11-00-00304**
A & T Account #: **1544723**

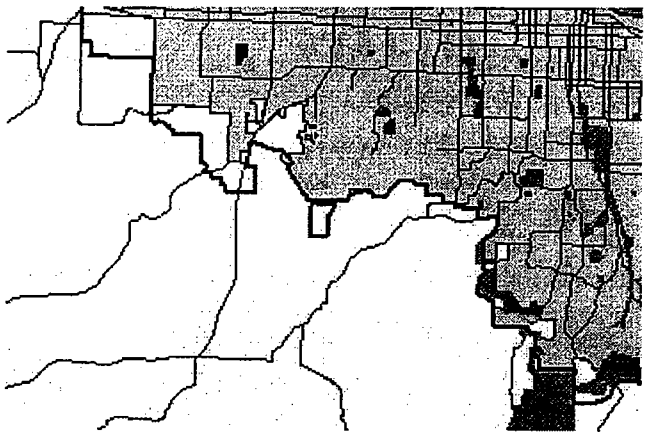
Special Interest Code:

Map 1 | Tax Map | Convert to PDF document

View Plat | View Tax Map

Vicinity Map

Detail Map



Site Address State Plane Coordinates

X-Coord: **1303383** Y-Coord: **866727**

Site Address Information

House	Suffix	Predir.	Street Name	PostDir.	Street Type	Unit Type	Unit
3103			**TIMBERLINE**		**DR**		

Mailing City	State	Zip Code	Zip+4	Carrier Route
EUGENE	**OR**	**97405**	**1595**	

Create Date: **2000-08-09** Update Date:

Land Use Land use information has not been field verified.

	Code:	Description:
Land Use Code and Description:	**1111**	**Single Family Housing**
Use Code and Description:	**S**	**Single Family**

Zoning Split Zoning is not shown. Please verify zoning information with local jurisdiction.

Boundary Information

General

Incorporated City Limits:	
Urban Growth Boundary:	
Fire Protection Providers:	**BAS**
Plan Designation:	
1990 Census Tract:	**4402**
1990 Block Group:	**7**
Year Annexed:	
Annexation #:	
1995 Transportation Analysis Zone:	**294**
Approximate Acreage:	**55.35**
Approximate Square Footage:	**2,411,046**

Environmental Findings
Metro Greenway:
Metro Flood Hazards:
Metro Wetlands:
Soil Map Unit Number: **108F**
Soil Description: **PHILOMATH COBBLY SILTY CLAY, 12 TO 45 PERCENT SLOPES**

Schools

	Code:	Name:
District:	**4J**	**EUGENE**
Elementary School:	**343**	**TWIN OAKS**
Middle School:	**545**	**KENNEDY**
High School:	**678**	**CHURCHILL**

Service Districts
LTD Service Area: **YES**
LTD Ride Source:
Ambulance District: **WC**
Emerald People's Utility District:

Political Districts **Districts may not include recent annexations.**
Election Precinct: **100004**
County Commissioner District: **1** **WEST**
County Commissioner: **ANNA MORRISON**
State Representative District: **43**
State Representative Name: **CEDRIC HAYDEN**
City Council Ward:
City Councilor Name:
EWEB Commissioner District:

Lane County Assessor's Office | Account Number: 1544723 | Map & Lot: 18-04-11-00-00304

Property Owner
Owner1 Name: **OGLE K BRAD & JULIE A**
Owner Address: **PO BOX 25509**

EUGENE	**OREGON**	**UNITED STATES**	**97402**
City	State	Country	Zip Code

Taxpayer
Taxpayer Name: **OGLE K BRAD & JULIE A**
Taxpayer Address: **PO BOX 25509**

EUGENE	**OREGON**	**UNITED STATES**	**97402**
City	State	Country	Zip Code

Remarks:
Potential Tax Liability
Property Legal Description
Not Available
Property Value and Taxes

	Land Value	Improvement Value	Total Value	
	Real Market	Real Market	Real Market	Assessed
2001	**107,620**	**45,860**	**153,480**	**36,648**
2000	**116,345**	**0**	**116,345**	**2,013**
1999	**115,380**	**0**	**115,380**	**1,940**
1998	**96,930**	**0**	**96,930**	**1,898**
1997	**95,030**	**0**	**95,030**	**1,843**
1996	**88,810**	**0**	**88,810**	**2,160**

1995	77,900	0	77,900	2,050

36,648	0	0
Taxable Value	Exemption Amount Regular (EAR)	Frozen Assessed Value (FZNPU)

Tax Year	Tax (See Explanation of Tax)
2001	492.63
2000	59.29
1999	48.64
1998	43.65
1997	47.15
1996	47.03
1995	43.67

Explanation of Tax

The *tax* shown is the amount of tax which currently exists with Lane County's Department of Assessment and Taxation. It is possible there is a pending value change on this account. To determine this, please refer to the Account Status indicators to see if Pending Value change is selected. If a value change has already been processed for this account and year in question, the tax currently showing may not match what was *certified* for that particular year.

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- ( ) Pending Seg/Merge
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Code	Description
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Account Type:	**RP**
Category:	**LAND AND IMPROVEMENTS**
Mortgage Company Name:	
Total Acreage for this Account:	**55.34**
Fire Acres:	**55.34**

2000 Tax Code Area (Levy Code): 00470

Bailey Spencer RFPD
Eugene School District
Eugene School District Bond
Eugene School District Local Option
Lane Community College
Lane Community College Bond
Lane County
Lane County Bond

Lane Education Service Dist

View Taxing District Information from Lane County Department of Assessment and Taxation's site.

Sales Information

Sales Date	Sales Price	Grantor	Grantee	Instrument #	Analysis Code
06-20-1999	220,000	BREEDEN JOHN F ET AL	OGLE K BRAD & JULIE A	99-17	N
12-20-1996		BREEDEN, JOHN F		96-08518600	6

Manufactured Structures

Search Results |New Property Search |Applications Menu

W9C

EXHIBIT O
COMMISSIONER'S
2/26/97 ML POLICY
INTERPRETATION

AGENDA COVER MEMO

DATE: FEBRUARY 26, 1997 Board Date

TO: BOARD OF COUNTY COMMISSIONERS

DEPT: PUBLIC WORKS/LAND MANAGEMENT DIVISION

PRESENTED BY: KENT HOWE, ACTING PLANNING DIRECTOR

AGENDA ITEM TITLE: REPORT BACK/ MARGINAL LANDS: POLICY ALTERNATIVES AND REQUEST FOR DIRECTION REGARDING THE INTERPRETATION AND ADMINISTRATION OF MARGINAL LANDS APPLICATIONS.

I. MOTION:

NO MOTION NECESSARY AS THIS IS A DISCUSSION ITEM ONLY.

II. ISSUE OR PROBLEM

On February 20, 1996, the Board conducted a work session to provide policy direction on issues related to the implementation of the marginal lands provisions (ORS 197.247, 1991 Edition). The Board addressed all of the issues except how to deal with the forest "income test". LMD staff and the consultants group were asked to conduct additional research on that issue, with emphasis on two aspects: a) legislative intent regarding the income test and b) a statistically valid way to administer the law consistent with legislative intent. This is a report back on the results of the research.

III. DISCUSSION

A. BACKGROUND

At a public work session on February 20, 1996, the Board discussed seven issues in the marginal lands provisions identified as needing clarification. The following section sets forth those issues and lists, for each issue: a) the issue, b) the various factors and evidence or options discussed by the participants, and c) the position adopted by the Board.

Research on the legislative intent regarding the forest income test, and a statistically valid way to administer the income test consistent with the legislative intent, is provided in attached materials in addition to the discussion of Issue 4.

B. ANALYSIS

ISSUE 1: What is the Marginal Lands concept?

This is a fundamental question from which all of the more technical issues flow.

Board's 2/20/96 Direction:

The Board recognized that marginal land is intended to be a sub-set of resource land, i.e., there are "prime" resource lands and "marginal" resource lands. The marginal lands are to be available for occupancy and use as smaller tracts than are required in the better resource lands. The criteria in the law define which lands may be designated as marginal. Evidence for this position is found in the legislative history and the fact that marginal lands are recognized in both Statewide Goal 3 - Agricultural Lands and Goal 4 - Forest Lands.

ISSUE 2: **Definition of "Management".**

ORS 197.247(1)(a)(1991 Edition) and the Ericsson case create two categories: (a) land which is managed and (b) land which is not. Outside of a brief mention of "reasonable management practices" in Ericsson, the law provides no guidance as to what "management" means. See DLCD v. Lane County, 23 Or LUBA 33, 36 (1992).

For either option listed below, it is reasonable, when considering forest land, to look throughout the entire growth cycle for evidence of management. This is because even the best managed forest operations may have nothing occurring on the land during the five-year window (1978 - 1982) stated in the marginal lands statute (ORS 197.247(1)(a)(1991 Edition). For farm operations, however, it is hard to conceive of an operating farm on which nothing occurred for five years.

Option 1:

"Management" requires evidence of some overt activity on, or related to, the land. For forest operations, this must include some combination of the following: seedbed preparation, tree planting, control of competing vegetation, control of plant eating predators, fertilization, thinning, selective cut harvesting, clear cutting, keeping of forest management records, etc. Simply harvesting trees which occurred naturally would not constitute "management". For farm land, no evidence of farm use during the 5-year statutory window would indicate that land was not managed for farm use.

Option 2:

No evidence of human activity on the land is required for forest land to be "managed". The conscious decision not to convert the land to another use is enough evidence of management to meet the statutory intent, provided there is a significant amount of

merchantable or potentially merchantable trees on the property. Likewise, evidence of timber harvest since 1978 would suffice to show management even if there were no trees currently on the property. For farm land, no evidence of farm use during the 5-year statutory window would indicate that land was not managed for farm use.

Board's 2/20/96 Direction :

Option 2

ISSUE 3. Managed "as part of" a (farm or forest) operation during (1978-1982).

Does this phrase in ORS 197.247(1)(a)(1991) mean, for example, that if a large timber company owned and managed a 2000 acre tract during the five-year window, and then sold someone a 40 acre portion of non-forest land in 1985, that 40 acres would not be eligible for Marginal Lands designation?

Board's 2/20/96 Direction :

The Board found that the law creates a general presumption that all contiguous land owned during 1978-82 was part of the owner's "operation". That presumption could be rebutted, however, by substantial evidence that the parcel in question was not, in fact, a "contributing part" of the operation. The applicant would bear the burden of producing such evidence.

ISSUE 4: What price data should be used to calculate gross annual income for forest lands?

SUMMARY OF STAFF RECOMMENDATION:

The legislative intent of the "management and income test" of the Marginal Lands Law was to identify those lands which were not, at the time the Marginal Lands law was enacted (1983), making a "significant contribution" to commercial forestry. Therefore, it is appropriate and statistically valid to use the following methodology:

1. Based on the best information available regarding soils, topography, etc., determine the optimal level of timber production for the tract assuming reasonable management.
2. Assume that the stand was, in 1983, fully mature and ready for harvest.
3. Using the volumes calculated in step (1), and 1983 prices, calculate the average gross annual income over the growth cycle.

This methodology achieves symmetry with the calculation of agricultural income, for which the law clearly specifies using 1978 - 1983 prices. (See Attachment 2.)

ISSUE 5: What "growth cycle" should be used to calculate gross annual income?

Board's 2/20/96 Direction :

The consensus of the Board was that a 50-year growth cycle should be adopted as the usual standard, with the option that another standard could be used if substantiated by compelling scientific evidence presented by the applicant. The Board's choice was based on evidence that the USDA Natural Resource Conservation Service (former SCS) has adopted the 50-year cycle for rating soil productivity, plus the administrative ease of having a standardized figure.

ISSUE 6: Weight of evidence.

One of the main holdings of the Ericsson case, which arose in Lane County, is that on-site evaluation by a qualified expert is weightier evidence than published data. Given this ruling, what is the appropriate role of the parcelization table in Lane Code 16.211(10)(b) and the legislative findings for Goal 4 of the Rural Comprehensive Plan as an income standard?

Board's 2/20/96 Direction :

As a matter of administrative ease, and in the absence of other substantial evidence, the parcelization test could still be used. It is one method of identifying the acreage required of a given forest capability classification to achieve the $10,000 income standard.

ISSUE 7: Ambiguities in the parcelization tests of ORS 197.247(1)(b)(A) & (B).

Is the parcelization test measuring the percent of an area (acreage) or the percent of the number of parcels a "parcel count"? If test (A) is an area test, does the percentage requirement apply to an acreage or number of parcels of the entire area that lies wholly or partly within the 1/4 mile of the subject tract?

Option 1:

Regard (A) and (B) as "area" tests with the difference being that (A) specifies an area including the subject parcel and land within 1/4 mile and uses a 50% small lot test, whereas (B) increases the area to a minimum of 240 acres but raises the small lot test to 60%. (Note: This is the position adopted by Lane County in the Jackson case and is also the interpretation favored by DLCD. In that case, Lane County ruled that the area was limited to the 1/4-mile line, whereas DLCD held that the area line should expand to include the entirety of any parcel partly located within the 1/4 mile boundary. DLCD threatened to appeal the Jackson case on that basis, but did not do so.)

Option 2:

Regard (A) and (B) as a "parcel counting" test for the areas defined in each test area. In other words, 50% of the number of parcels identified in test A (a 1/4 mile line around the proposed marginal lands) and 60% of the number of parcels identified in test B (a gerry-mandered area not less than 240 acres).

Board's 2/20/96 Direction :

The Board decided to follow its precedent in the Jackson case and adopt Option 1.

C. ALTERNATIVE/OPTIONS

1. Direct staff to utilize the methodology recommended in Issue 4 and reaffirm 2/20/96 Board direction.
2. Modify previous Board direction and/or staff recommendation on Issue 4.
3. Take no action on giving staff additional policy direction.

D. RECOMMENDATION

Staff recommends Option 1.

IV. IMPLEMENTATION/FOLLOW-UP

Staff will begin implementing Board direction immediately.

ATTACHMENTS:

1. Legislative History of the Marginal Lands Law dated November 1996
2. Letter from Pete Sikora dated January 22, 1997
3. ORS 197.247 (1991 Edition)
4. Table of Marginal Lands Zone Changes Since 1984
5. Oregon Land Use Allocation System

Marc E. Setchko
CONSULTING FORESTER

870 Fox Glenn Avenue
Eugene, Oregon 97405
Phone: (541) 344-0473
FAX: (541) 344-7791

EXHIBIT P
FORESTER'S REPORT

FOREST PRODUCTIVITY ANALYSIS
for
Brad Ogle and Mark Childs

SUBJECT PARCEL: ASSESSORS MAP NO. 18-04-11
Tax Lots 303 & 304, totalling ±113.76 acres.

I. INTRODUCTION

An evaluation of the site, as described above, from a timber productivity and income producing standpoint is reviewed in this analysis. The analysis will determine if:

1) The subject property produces less than 85 cu. ft./ac./yr. of conifer timber volume. This has been determined by Lane County to be the measuring parameter for marginal soils.
2) The income generated averages less than $10,000/year, based on 1978 through 1983 log prices. If this is the case, the property meets the following statutory test for Marginal Lands: ORS 197.247 (1)(a) "The proposed marginal land was not managed during three of the five calendar years preceding January 1, 1983, as part of a ... forest operation capable of producing an average, over the growth cycle, of $10,000 in annual gross income."

The above figures can be calculated by:

1. Using actual cutout data from when any logging was done on the parcel.
2. Using a combination of the 1) Lane County Soil Ratings for Forestry & Agriculture (August, 1997), 2) U.S. Dept. of Agriculture SCS Data, as presented in the Soil Survey of Lane County Area, 3) Lane County Soil Ratings taken from the Office of the State Forester Memorandum (Feb. 8, 1990 General File 7-1-1) and 4) estimates of growth from the CMAI (Culmination of Mean Annual Increment) FOR DOUGLAS-FIR Table and the Empirical Yield Tables for the Douglas-fir Zone, Washington Department of Natural Resources by Charles Chambers and Franklin Wilson.

II. SITE INFORMATION

The subject parcel is 113.74 acres in size, with 11.8 acres in B.P.A. easement corridors (see Exhibit 1). The site aspect is south to southwest with slopes of 10-45%. Grasses, blackberry, poison oak and scrub white oak cover most of the property, with exposed bedrock, broken rock and cobbly soils prevalent throughout the parcel. There are also scattered Douglas-fir, ponderosa pine and incense cedar, left from previous logging activities. An LCOG soil survey confirms SCS map data, which shows the parcel is composed of seven different soil types (see Exhibits 2 and 3). Over half of the property (≈69.8 acres) is underlaid with Philomath silty clay (Soil Type 107C) and Philomath cobbly silty clay (Soil Type 108F). These soil types are extremely poor for growing conifers. The remaining portions of the parcel are underlaid with Dixonville-Philomath-Hazelair complex (Soil Types 43C and E), McDuff clay loam (Soil Type 81D), Panther silty clay loam (Soil Type 102C), Ritner cobbly silty clay loam (Soil Types 113C, E and G) and Steiwer loam (Soil Type 125C). Of these soil types, only the McDuff clay loam and Ritner cobbly silty clay loam are good soils for growing conifer, and these particular soil types only cover approximately 19 acres of the entire parcel.

Marc E. Setchko
CONSULTING FORESTER

870 Fox Glenn Avenue
Eugene, Oregon 97405
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The Lane County Soil Ratings for Forestry and Agriculture (see Exhibit 4) show a 100 year site class rating for only two of these soil types, the McDuff clay loam and the Ritner cobbly silty clay loam. A cu.ft./ac./yr. figure is also shown for these two soil types; only a cu.ft./ac./yr. figure is shown for the Dixonville-Philomath-Hazelair complex, it doea not have a site class rating. The remaining soil types are very poor conifer growing soils and are not assigned any forestland site class rating, in the Lane County Soil Ratings. The cu.ft./ac./yr. growth, for these soil types, was obtained from the soil ratings shown in the Office of the State Forester Memorandum (see Exhibit 5). All of these soils are incapable of producing 85 cu.ft./ac./yr., the parameter used by Lane County for determining marginal soils.

III. RESULTS OF PRODUCTIVITY AND INCOME CALCULATIONS

CUBIC FEET PER YEAR PER ACRE GROWTH

The parcel was logged over the last ten years, before the current owners purchased the property. They have no records of the amount of timber removed. Therefore, the calculations of growth were taken from the tables cited above and the potential income calculated from theses figures. In order to obtain a yearly growth figure, in cu.ft./ac. for the entire parcel, the production potential of the different soil types was first calculated for the acres within each soil type. This will give a weighted figure for each soil type and can then be divided by the total acres for an overall average. These calculations are shown below.

Soil Type	Acres	Cu.Ft./Ac./Yr.	ΣCu.Ft.
43C Dixonville-Philomath-Hazelair complex	6.64	54 Cu.Ft./Ac.	358.56 Cu.Ft.
43E Dixonville-Philomath-Hazelair complex	.44	63 Cu.Ft./Ac.	27.72 Cu.Ft.
81D McDuff clay loam	5.60	158 Cu.Ft./Ac.	884.80 Cu.Ft.
102C Panther silty clay loam	14.68	45 Cu.Ft./Ac.	660.60 Cu.Ft.
107C Philomath silty clay	39.61	45 Cu.Ft./Ac.	1,782.45 Cu.Ft.
108F Philomath cobbly silty clay	30.20	45 Cu.Ft./Ac.	1,359.00 Cu.Ft.
113C, E & G Ritner cobbly silty clay loam	13.38	149 Cu.Ft./Ac.	1,993.62 Cu.Ft.
125C Steiwer loam	3.19	30 Cu.Ft./Ac.	95.7 Cu.Ft.
Totals	113.74		7,162.45 Cu.Ft.

Average Growth Potential -- 113.74 Acres ÷ 7,162.45 Cu.Ft. = 62.97 Cu.Ft./Ac./Yr.

AVERAGE GROSS ANNUAL INCOME GENERATED PER YEAR THROUGH A COMPLETE ROTATION

Since no cutout records are available, the Empirical Yield Tables were used to obtain total volume per acre in scribner board feet volume, the measurement needed in order to calculate income potential. These yield tables are calculated using King's 50 year site class index. Since the Lane County Soil Ratings for Forestry and Agriculture are based on McArdle's 100 year site index rating, these ratings must be converted first. Using the 50 year Site Index ratings, for each different soil type, the volume per acre for each soil type can be calculated. Adding all the soil types together will give a total for the entire parcel. A sixty year rotation (growth cycle to final harvest) was used, this time span being a reasonable rotation age on this site class, which is very poor. A 40 to 50 year rotation would be used on a better site class.

Marc E. Setchko
CONSULTING FORESTER

870 Fox Glenn Avenue
Eugene, Oregon 97405
Phone: (541) 344-0473
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Once a total volume at harvest age has been calculated, the average gross annual income can be found by dividing the total revenue at the time of harvest by the number of years in the rotation. Since the Empirical Yield Tables are based on Douglas-fir volumes, Douglas-fir log prices were used. This should also give the highest figure because Ponderosa pine has never been worth as much as Douglas-fir and incense cedar has only recently approached Douglas-fir prices.

Using industry-recognized price information from the Oregon State Department of Forestry Quarterly Report of Douglas-fir log prices for 1983, the gross worth of a fully stocked stand on this parcel can be calculated, for the time period required by the Marginal Lands Statute ORS 197.247 (1)(a). By calculating a gross worth based on a fully stocked stand of Douglas-fir, a maximum gross worth scenario for the applicant can be shown.

CALCULATIONS:

Site Index Ratings from Tables (see Exhibits 6, 7 and 8)

	100 Year Site Index	50 Year Site Index
McDuff clay loam	112	98
Ritner cobbly silty clay loam	107	95

Dixonville-Philomath-Hazelair complex - no Site Index given due to multiple soil types

Panther silty clay loam - poorly suited for conifer growth, no Site Index given
Philomath silty clay - poorly suited for conifer growth, no Site Index given
Philomath cobbly silty clay - poorly suited for conifer growth, no Site Index given
Ritner cobbly silty clay loam - poorly suited for conifer growth, no Site Index given
Steiwer loam - poorly suited for conifer growth, no Site Index given

The soil types above which have no Site Index given were assigned a Site Index in order to obtain a growth figure from the Empirical Yield Tables. This was accomplished by comparing the Cu.Ft./Ac./Yr. figures shown in the Lane County Soil Ratings for Forestry and Agriculture or the Lane County Soil Ratings taken from the Office of the State Forester Memorandum (see calculations shown in previous section) with the Cu.Ft./Ac./Yr. figures shown in the CMAI (Culmination of Mean Annual Increment) FOR DOUGLAS-FIR Tables. From these comparisons it can be seen that the Cu.Ft./Ac./Yr. figures, for the five soil types not assigned a Site Index, do not even equal the figures shown for the lowest site class shown on the tables. Therefore, for the purposes of this analysis, the volume figures from the lowest site class shown on the tables, Site Class 70, will be used for these five soil types. This will actually show a higher volume projection than could be expected on the site, but will serve the purpose needed for this analysis. These calculations are shown below.

McDuff clay loam - 5.6 acres @ 27,953 bd.ft./ac.* =	156,537 bd.ft.
Ritner cobbly silty clay loam - 13.38 acres @ 26,012 bd.ft./ac.* =	348,041 bd.ft.
Remaining soil types - 94.76 acres @ 12,572 bd.ft./ac.* =	1,191,323 bd.ft.
Total	1,695,901 bd.ft.

*See Exhibit 9.

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A 60 year old stand on this site should have approximately 40% 2 SAW, 50% 3 SAW and 10% 4 SAW. If anything, these grade estimates err on the high side. In all probability there would be less 2 SAW and more 4 SAW. However, these figures are used to represent the highest possible log price scenario for the applicant.

Total Volume - 1,695.90 MBF (thousand board feet)

678.36 MBF of 2 SAW @ $255/MBF**	$172,982
847.95 MBF of 3 SAW @ $215/MBF**	182,309
169.59 MBF of 4 SAW @ $200/MBF**	33,918
Total Projected Gross Revenue	$389,209

**See Exhibit 10.

AVERAGE GROSS INCOME -- $389,209 ÷ 60 YEARS = $6,487/YEAR

IV. CONCLUSION

The analysis presented shows conclusively that this property will not support a merchantable stand of timber, of sufficient production capability, to meet or exceed the Marginal Lands Income test:

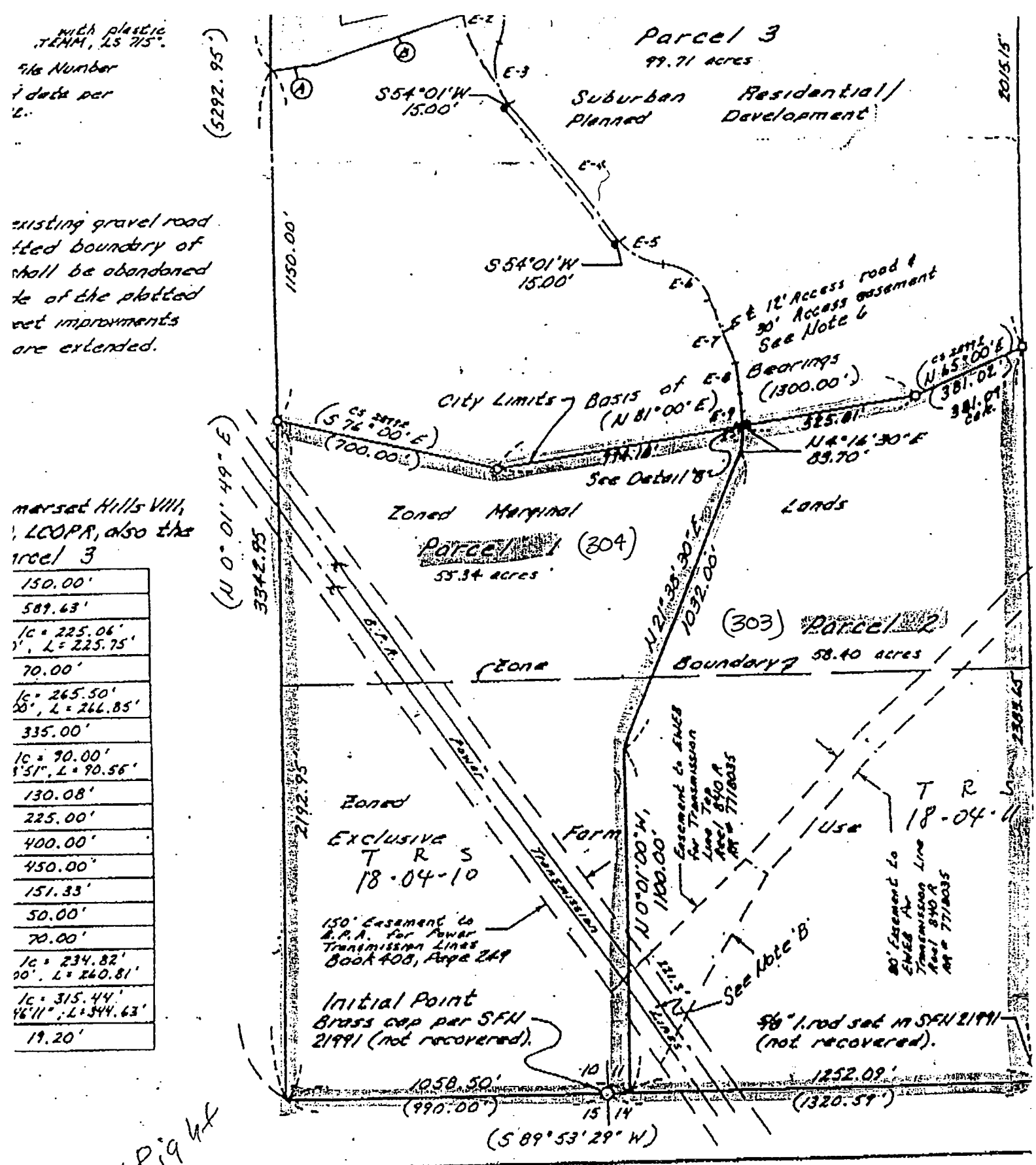
1) The subject property produces less than 85 cu. ft./ac./yr. of conifer timber volume; only 62.97 cubic feet. The above mentioned figure has been determined by Lane County to be measuring parameter for marginal soils.

2) The estimated gross income based on a 60 year rotation for the 113.74 acre site would have been $389,209 in 1983. The average annual gross income would have been $6,487/year. Because $6,487 is less than $10,000/year, the property meets the following statutory test for Marginal Lands: ORS 197.247 (1)(a) "The proposed marginal land was not managed during three of the five calendar years preceding January 1, 1983, as part of a ... forest operation capable of producing an average, over the growth cycle, of $10,000 in annual gross income."

In summary, I find from the specific site conditions present, empirical yield tables, SCS data, Lane County Data and experience with similar lands, that this property is ill suited to the production of timber and use as land for forestry purposes. It is my opinion that this parcel should be classified as marginal land.

Sincerely,

Marc E Setchko



150.00'
589.43'
lc = 225.06', L = 225.75'
70.00'
lc = 265.50', L = 266.85'
335.00'
lc = 90.00', L = 90.56'
130.08'
225.00'
400.00'
450.00'
151.33'
50.00'
70.00'
lc = 234.82', L = 240.81'
lc = 315.44', L = 344.63'
19.20'

EXHIBIT 1

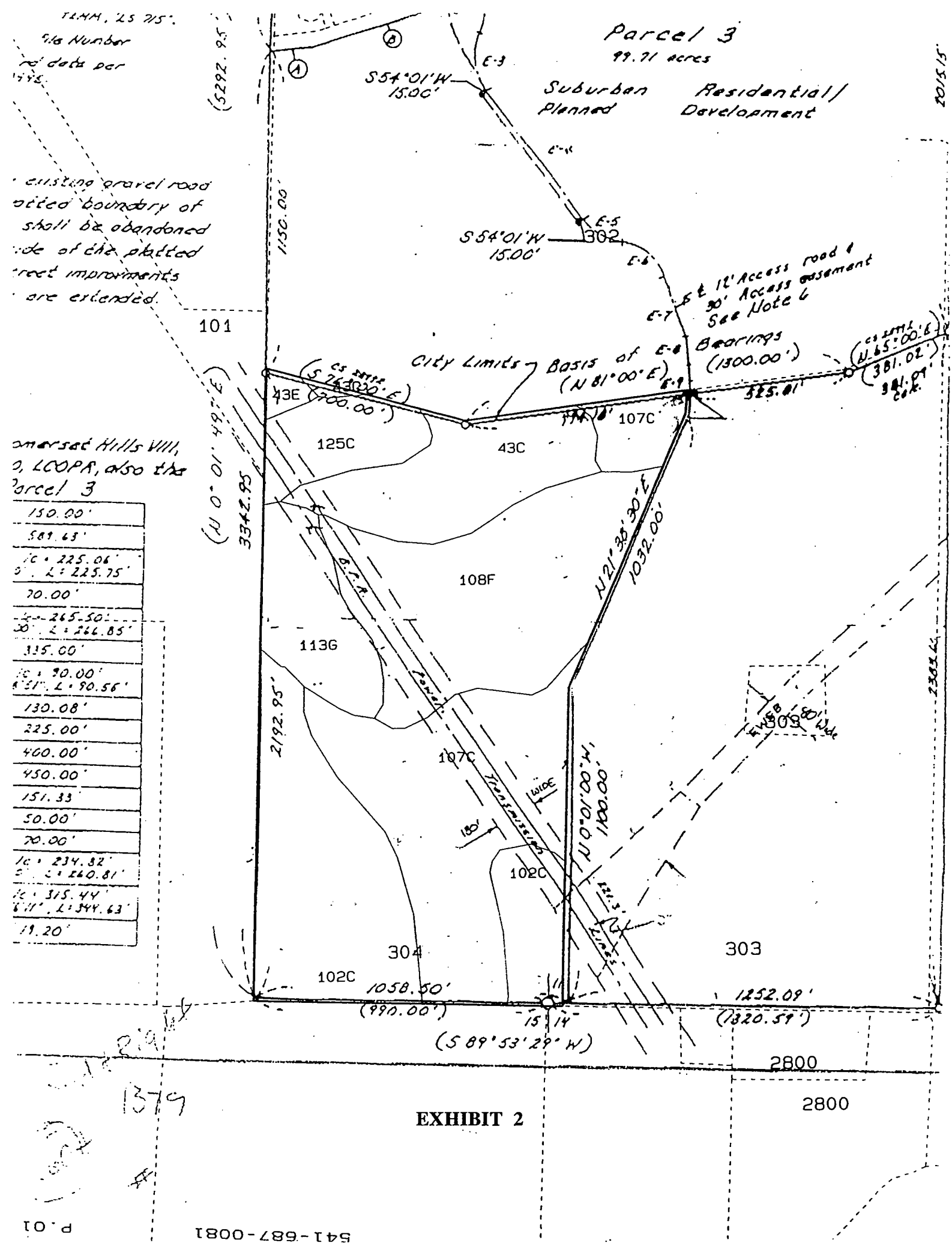


EXHIBIT 2

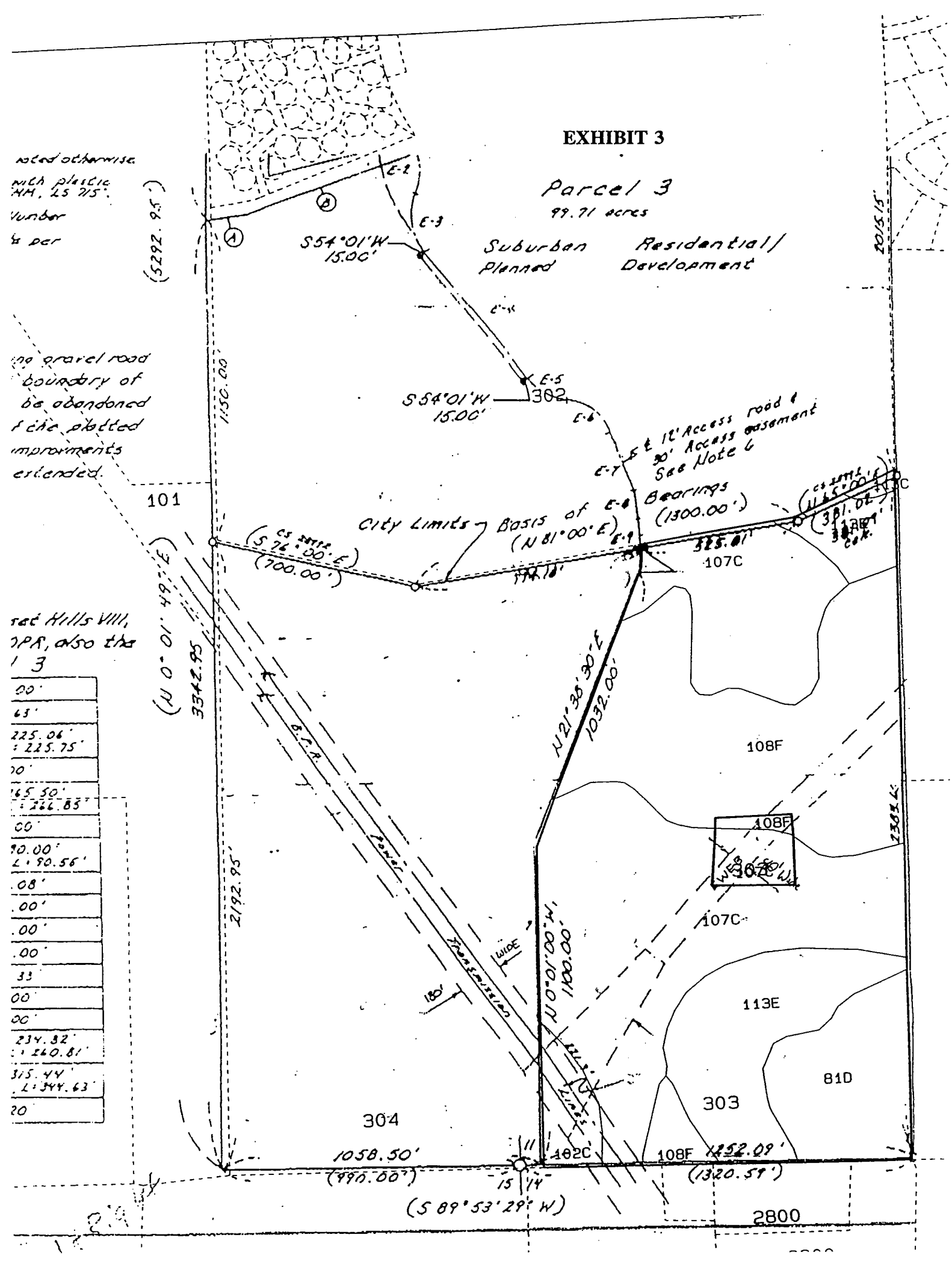


EXHIBIT 3
Parcel 3
99.71 acres
Suburban Residential/
Planned Development
S54°01'W
15.00'
E-1
E-2
E-3
E-4
E-5
E-6
E-7
E-8
E-9
302
S54°01'W
15.00'
5 & 12' Access road &
30' Access easement
See Note 6
Bearings
(1300.00')
City Limits
Basis of
(N 81°00' E)
(S 74°00' E
(700.00')
325.81'
107C
101
(N 0°01'49" E)
3342.95'
2192.95'
B.P.A.
Power
Transmission
180'
WIDE
N21°36'30"E
1032.00'
108F
107C
N10°01'00"W
1100.00'
113E
81D
303
304
1058.50'
(990.00')
102C
108F
1352.09'
(1320.59')
(S 89°53'29" W)
2800
(5292.95')
1150.00'
20/15'

EXHIBIT 4

Lane County
Soil Ratings for Forestry and Agriculture

Lane County
Land Management Division

August 1997

Prepared by
Lane Council of Governments

LCOG Lane Council of Governments

125 East Eighth Avenue Eugene, Oregon 97401 (541) 682-4283 Fax: (541) 682-4099 TDD: (541) 682-4567

January 9, 1998

TO: File, Lane County Soil Ratings For Forestry And Agriculture (August 1997)

FROM: Kathi Wiederhold

SUBJECT: Agricultural Capability Class

This memo documents the background discussion about the agricultural capability class for soil complexes reported in the document entitled Lane County Soil Ratings for Forestry and Agriculture (August 1997). The document reports the agricultural capability class for only the most predominant component of a soil complex (which is the soil series named first in the name of the complex), as stated on page 8 in the section about source and description of the data.

The Natural Resources Conservation Service (NRCS) has changed how they report agricultural capability classes for soil complexes. Previously, the SCS soil survey (1987 publication date, 1981 date of data) reported a single capability class for each complex, which was the most limiting rating of the individual components of the complex. The information was aimed for use in agricultural management, not for planning.

The NRCS now maintains a state soils data base as its most current source of soils information. The data base replaced the soil survey and the green sheets (called Soil Interpretations Records by the NRCS), which also are now out of date, and is the source for the data in the soil ratings document. The data base reports an agricultural capability class for each component of the complex and does not give a single composite rating for the complex.

I consulted with Kent Howe, Lane County Planning Director, and Thor Thorson, Soil Data Quality Specialist, NRCS, to decide how to report agricultural capability class for soil complexes in the soil rating document. We considered the options of listing the capability class for each component of the complex, listing it for only the most predominant component, and not listing a capability class for complexes. We decided to list the agricultural capability class for only the most predominant component because most users of the document will consult it for the forestry ratings, and it would add a lot of detail and clutter to the document to report the capability class for each component. We further reasoned that most applicants would first test whether they qualify for a resource dwelling by using the capability class for the predominant component of the complex.

NRCS recommends using the agricultural capability class for the predominant component (this is the way the agricultural and forest soil ratings document reports it) for marginal lands calculations on parcels greater than 10 acres in size. The methodology for marginal lands zone change applications also uses the capability class for the predominant component. As always, applicants may choose to submit more detailed information.

For parcels 10 acres or less in size that are mapped as a soil complex, NRCS recommends requiring an on-site investigation to determine the composition of the complex on that specific site. For example, the soil survey describes map unit 43C Dixonville-Philomath-Hazelair as having 30% Dixonville, 30% Philomath, and 25% Hazelair. Due to the less detailed nature of mapping a complex, the soils actually present on a small parcel may be dramatically different than the percentages given in the map unit description, with perhaps some components missing or the components occurring in a different order of abundance.

Lane County Soil Ratings for Forestry and Agriculture

he Lane County Land Management Division, with technical assistance from Lane Council of Governments, compiled this ata to assist the public in preparing land use applications. The Natural Resources Conservation Service (NRCS) reviewed ie data and methodology.

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
01A	Abiqua silty clay loam, 0 - 3% slopes	135	203	1	X
01B	Abiqua silty clay loam, 3 - 5% slopes	135	203	2	X
02E	Astoria silt loam, 5 - 30% slopes	130	193	6	
03E	Astoria Variant silt loam, 3 - 30% slopes	none		6	
03G	Astoria Variant silt loam, 30 - 60% slopes	none		6	
04G	Atring-Rock outcrop complex, 30 - 60% slopes	***	81	6	
05	Awbrig silty clay loam	none		4	X
06	Awbrig-Urban land complex	none		4	
07B	Bandon sandy loam, 0 - 7% slopes	105	145	3	
07C	Bandon sandy loam, 7 - 12% slopes	105	145	3	
07F	Bandon sandy loam, 12 - 50% slopes	105	145	6	
08	Bashaw clay	none		4	X
09	Bashaw-Urban land complex	none		4	
10	Beaches	none		8	
11C	Bellpine silty clay loam, 3 - 12% slopes	115	163	3	X
11D	Bellpine silty clay loam, 12 - 20% slopes	115	163	3	X
11E	Bellpine silty clay loam, 20 - 30% slopes	115	163	4	X
11F	Bellpine silty clay loam, 30 - 50% slopes	115	163	6	
12E	Bellpine cobbly silty clay loam, 2 - 30% slopes	115	163	4	
13F	Blachly clay loam, 30 - 50% slopes	119	173	6	
13G	Blachly clay loam, 50 - 70% slopes	119	173	7	
14E	Blachly silty clay loam, 3 - 30% slopes	125	184	6	
14F	Blachly silty clay loam, 30 - 50% slopes	125	184	6	
15E	Blachly-McCully clay loam, 3 - 30% slopes	***	172	6	
16D	Bohannon gravelly loam, 3 - 25% slopes	118	171	6	
16F	Bohannon gravelly loam, 25 - 50% slopes	118	171	6	
16H	Bohannon gravelly loam, 50 - 90% slopes	118	171	7	
17	Brallier muck, drained	none		4	
18	Brallier Variant muck	none		5	
19	Brenner silty clay loam	none		3	X
20B	Briedwell cobbly loam, 0 - 7% slopes	103	141	3	X
21B	Bullards-Ferrelo loams, 0 - 7% slopes	***	84	3	
21C	Bullards-Ferrelo loams, 7 - 12% slopes	***	84	3	
21E	Bullards-Ferrelo loams, 12 - 30% slopes	***	76	4	
21G	Bullards-Ferrelo loams, 30 - 60% slopes	***	76	6	

Lane County Soil Ratings for Forestry and Agriculture

Map ymbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
22	Camas gravelly sandy loam, occasionally flooded	none		4	
23	Camas-Urban land complex	none		4	
24	Chapman loam	none		1	X
25	Chapman-Urban land complex	none		1	X
26	Chehalis silty clay loam, occasionally flooded	none		2	X
27	Chehalis-Urban land complex	none		2	X
28C	Chehulpum silt loam, 3 - 12% slopes	none		6 *	
28E	Chehulpum silt loam, 12 - 40% slopes	none		6	
29	Cloquato silt loam	none		2	X
30	Cloquato-Urban land complex	none		2	X
31	Coburg silty clay loam	none		2	X
32	Coburg-Urban land complex	none		2	X
33	Conser silty clay loam	none		3	X
34	Courtney gravelly silty clay loam	none		4	X
35D	Cruiser gravelly clay loam, 3 - 25% slopes	140**	145	6	
35F	Cruiser gravelly clay loam, 25 - 50% slopes	140**	145	6	
35G	Cruiser gravelly clay loam, 35 - 70% slopes	140**	145	7	
36D	Cumley silty clay loam, 2 - 20% slopes	114	162	6	
37C	Cupola cobbly loam, 3 - 12% slopes	100	136	6	
37E	Cupola cobbly loam, 12 - 30% slopes	100	136	6	
38	Dayton silt loam, clay substratum	none		4	X
39E	Digger gravelly loam, 10 - 30% slopes	102	140	6	
39F	Digger gravelly loam, 30 - 50% slopes	102	140	6	
40H	Digger-Rock outcrop complex, 50 - 85% slopes	***	114	7	
41C	Dixonville silty clay loam, 3 - 12% slopes	109	152	3	
41E	Dixonville silty clay loam, 12 - 30% slopes	109	152	4	
41F	Dixonville silty clay loam, 30 - 50% slopes	109	152	6	
42E	Dixonville-Hazelair-Urban land complex, 12 - 35% slopes	***	89	4	
43C	Dixonville-Philomath-Hazelair complex, 3 - 12% slopes	***	54	3	
43E	Dixonville-Philomath-Hazelair complex, 12 - 35% slopes	***	63	4	
44	Dune land	none		8	
45C	Dupee silt loam, 3 - 20% slopes	none		3	
46	Eilertsen silt loam	133	199	2	X
47E	Fendall silt loam, 3 - 30% slopes	125	184	6	
48	Fluvents, nearly level	none		--	
49E	Formader loam, 3 - 30% slopes	121	176	6	
49G	Formader loam, 30 - 60% slopes	121	176	6	
50G	Formader-Hembre-Klickitat complex, 50 - 80% slopes	***	176	7	

Lane County Soil Ratings for Forestry and Agriculture

Map /mbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
51B	Haflinger-Jimbo complex, 0 - 5% slopes	***	165	6	X
52B	Hazelair silty clay loam, 2 - 7% slopes	none		3	
52D	Hazelair silty clay loam, 7 - 20% slopes	none		4	
53	Heceta fine sand	none		4	
54D	Hembre silt loam, 5 - 25% slopes	127	188	6	
54G	Hembre silt loam, 25-60% slopes	127	188	6	
55E	Hembre-Klickitat complex, 3 - 30% slopes	***	177	6	
55G	Hembre-Klickitat complex, 30 - 60% slopes	***	176	6	
56	Holcomb silty clay loam	none		3	X[1]
57D	Holderman extremely cobbly loam, 5 - 25% slopes	119**	113	6	
57F	Holderman extremely cobbly loam, 25 - 50% slopes	119**	113	6	
57G	Holderman extremely cobbly loam, 50 - 75% slopes	119**	113	7	
58D	Honeygrove silty clay loam, 3 - 25% slopes	122	178	6	
58F	Honeygrove silty clay loam, 25 - 50% slopes	122	178	6	
59E	Hullt loam, 2 - 30% slopes	121	176	3	X
59G	Hullt loam, 30 - 60% slopes	121	176	6	
60D	Hummington gravelly loam, 5 - 25% slopes	131**	131	6	
60F	Hummington gravelly loam, 25 - 50% slopes	131**	131	6	
60G	Hummington gravelly loam, 50 - 75% slopes	131**	131	7	
61	Jimbo silt loam	121	176	1	X
62B	Jimbo-Haflinger complex, 0 - 5% slopes	***	171	1	X
63C	Jory silty clay loam, 2 - 12% slopes	122	178	2	X
63D	Jory silty clay loam, 12 - 20% slopes	122	178	3	X
63E	Jory silty clay loam, 20 - 30% slopes	122	178	4	X
64D	Keel cobbly clay loam, 3 - 25% slopes	132**	133	6	
64F	Keel cobbly clay loam, 25 - 45% slopes	132**	133	6	
64G	Keel cobbly clay loam, 45 - 75% slopes	132**	133	7	
65G	Kilchis stony loam, 30 - 60% slopes	90	116	6	
65H	Kilchis stony loam, 60 - 90% slopes	90	116	7	
66D	Kinney cobbly loam, 3 - 20% slopes	122	178	6	
67F	Kinney cobbly loam, 20 - 50% north slopes	122	178	6	
67G	Kinney cobbly loam, 50 - 70% north slopes	122	178	7	
68F	Kinney cobbly loam, 20 - 50% south slopes	122	178	6	
68G	Kinney cobbly loam, 50 - 70% south slopes	122	178	7	
69E	Kinney cobbly loam, slump, 3 - 30% slopes	122	178	6	
70E	Klickitat stony loam, 3 - 30% slopes	112	158	6	
71F	Klickitat stony loam, 30 - 50% north slopes	112	158	6	
71G	Klickitat stony loam, 50 - 75% north slopes	112	158	7	

Lane County Soil Ratings for Forestry and Agriculture

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
72F	Klickitat stony loam, 30 - 50% south slopes	112	158	6	
72G	Klickitat stony loam, 50 - 75% south slopes	112	158	7	
73	Linslaw loam	none		3	X[1]
74B	Lint silt loam, 0 - 7% slopes	117	169	3	
74C	Lint silt loam, 7 - 12% slopes	117	169	3	
74D	Lint silt loam, 12 - 20% slopes	117	169	3	
74E	Lint silt loam, 20 - 40% slopes	117	169	4	
75	Malabon silty clay loam	none		1	X
76	Malabon-Urban land complex	none		1	X
77B	Marcola cobbly silty clay loam, 2 - 7% slopes	none		4	
78	McAlpin silty clay loam	none		2	X
79	McBee silty clay loam	none		3	X[2]
80F	McCully clay loam, 30 - 35% slopes	118	171	6	
80G	McCully clay loam, 50 - 70% slopes	118	171	7	
81D	McDuff clay loam, 3 - 25% slopes	112	158	6	
81F	McDuff clay loam, 25 - 50% slopes	112	158	6	
81G	McDuff clay loam, 50 - 70% slopes	112	158	7	
82C	Meda loam, 2 - 12% slopes	none		3	X
83B	Minniece silty clay loam, 0 - 8% slopes	none		6	
84D	Mulkey loam, 5 - 25% slopes	none		6	
85	Natroy silty clay loam	none		4	X
86	Natroy silty clay	none		4	X
87	Natroy-Urban land complex	none		4	X
88	Nehalem silt loam	none		2	X
89C	Nekia silty clay loam, 2 - 12% slopes	113	160	3	X
89D	Nekia silty clay loam, 12 - 20% slopes	113	160	3	X
89E	Nekia silty clay loam, 20 - 30% slopes	113	160	4	
89F	Nekia silty clay loam, 30 - 50% slopes	113	160	6	
90	Nekoma silt loam	none		3	
91D	Neskowin silt loam, 12 - 20% slopes	none		6	
91E	Neskowin silt loam, 20 - 40% slopes	none		6	
92G	Neskowin-Salander silt loams, 40 - 60% slopes	none		6	
93	Nestucca silt loam	none		3	
94C	Netarts fine sand, 3 - 12% slopes	none		6	
94E	Netarts fine sand, 12 - 30% slopes	none		6	
95	Newberg fine sandy loam	none		2	X
96	Newberg loam	none		2	X

Lane County Soil Ratings for Forestry and Agriculture

Map ymbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
97	Newberg-Urban land complex	none		2	X
98	Noti loam	none		4	X
99H	Ochrepts & Umbrepts, very steep	none		--	
100	Oxley gravelly silt loam	none		3	
101	Oxley-Urban land complex	none		3	
102C	Panther silty clay loam, 2 - 12% slopes	none		6	
103C	Panther-Urban land complex, 2 - 12% slopes	none		6	
104E	Peavine silty clay loam, 3 - 30% slopes	125	184	6	
.04G	Peavine silty clay loam, 30 - 60% slopes	125	184	6	
.05A	Pengra silt loam, 1 - 4% slopes	none		3	X[1]
.06A	Pengra-Urban land complex, 1 - 4% slopes	none		3	
.07C	Philomath silty clay, 3 - 12% slopes	none		6	
.08C	Philomath cobbly silty clay, 3 - 12% slopes	none		6	
108F	Philomath cobbly silty clay, 12 - 45% slopes	none		6	
.09F	Philomath-Urban land complex, 12 - 45% slopes	none		6	
110	Pits	none		8	
.11D	Preacher loam, 0 - 25% slopes	128	190	6	
.11F	Preacher loam, 25 - 50% slopes	128	190	6	
12G	Preacher-Bohannon-Slickrock complex, 50 - 75% slopes	***	188	7	
13C	Ritner cobbly silty clay loam, 2 - 12% slopes	107	149	4	
.13E	Ritner cobbly silty clay loam, 12 - 30% slopes	107	149	6	
13G	Ritner cobbly silty clay loam, 30 - 60% slopes	107	149	7	
114	Riverwash	none		8	
15H	Rock outcrop-Kilchis complex, 30 - 90% slopes	***	27	8	
16G	Rock outcrop-Witzel complex, 10 - 70% slopes	***	none	8	
.17E	Salander silt loam, 12 - 30% slopes	125	184	6	
118	Salem gravelly silt loam	none		2	X
119	Salem-Urban land complex	none		2	X
20B	Salkum silt loam, 2 - 6% slopes	116	167	2	X
21B	Salkum silty clay loam, 2 - 8% slopes	116	167	2	X
21C	Salkum silty clay loam, 8 - 16% slopes	116	167	3	X
122	Saturn clay loam	123	180	3	
123	Sifton gravelly loam	124	182	3	X
24D	Slickrock gravelly loam, 3 - 25% slopes	137	209	6	
24F	Slickrock gravelly loam, 25 - 50% slopes	137	209	6	
25C	Steiwer loam, 3 - 12% slopes	none		3	
25D	Steiwer loam, 12 - 20% slopes	none		4*	

Lane County Soil Ratings for Forestry and Agriculture

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
125F	Steiwer loam, 20 - 50% slopes	none		6	
126F	Tahkenitch loam, 20 - 45% slopes	124	182	6	
126G	Tahkenitch loam, 45 - 75% slopes	124	182	7	
127C	Urban land-Hazelair-Dixonville complex, 3 - 12% slopes	***	68	8	
128B	Veneta loam, 0 - 7% slopes	108	150	2	X
129B	Veneta Variant silt loam, 0 - 7% slopes	124	182	2	X
130	Waldo silty clay loam	none		3	
131C	Waldport fine sand, 0 - 12% slopes	none		6	
131E	Waldport fine sand, 12 - 30% slopes	none		7	
131G	Waldport fine sand, 30 - 70% slopes	none		7	
132E	Waldport fine sand, thin surface, 0 - 30% slopes	none		7	
133C	Waldport-Urban land complex, 0 - 12% slopes	none		6	
134	Wapato silty clay loam	none		3	X[3]
135C	Willakenzie clay loam, 2 - 12% slopes	110	154	3	X
135D	Willakenzie clay loam, 12 - 20% slopes	110	154	3	X
135E	Willakenzie clay loam, 20 - 30% slopes	110	154	4	X
135F	Willakenzie clay loam, 30 - 50% slopes	110	154	6	
136	Willanch fine sandy loam	none		3	
137F	Winberry very gravelly loam, 10 - 45% slopes	none		7	
138E	Witzel very cobbly loam, 3 - 30% slopes	none		6	
138G	Witzel very cobbly loam, 30 - 75% slopes	none		6	
139	Woodburn silt loam	none		2	X
140	Yaquina loamy fine sand	none		4	
141	Yaquina-Urban land complex	none		4	
142G	Yellowstone-Rock outcrop, 10 - 60% slopes	none		7	

*	Indicates soils which have an irrigated capability class which is different from the non-irrigated capability class.
**	Indicates productivity calculated using 100-year Douglas fir data.
***	Indicates soil complexes with multiple site indices, refer to the CuFt/Acre/Year column for a composite volume rating for the complex.
"none"	Indicates soil map units that lack site index information on Douglas fir. The soil map unit may have the capability to produce Douglas fir, but this productivity may be very low to very high. No site index has been collected by the NRCS due to lack of suitable sites or lack of time and or funds.
X[1]	Only drained areas are high value farmland.
X[2]	Only areas protected from flooding or not frequently flooded during the growing season are high value farmland.
X[3]	Only drained areas that are either protected from flooding or not frequently flooded during the growing season are high value farmland.

SOURCE AND DESCRIPTION OF THE DATA

Map Symbol

Data Source

USDA-Soil Conservation Service, September 1987. *Soil Survey of Lane County Area, Oregon.*

Soil Map Unit

Data Source

USDA-Soil Conservation Service, September 1987. *Soil Survey of Lane County Area, Oregon.*

Site Index

Data Source

USDA-Natural Resources Conservation Service, August 1997 printout from the National Soils Information System (NASIS). *Soils Database for Lane County, Woodland Management and Productivity* table.

Description

These site indices indicate the average height, in feet, that dominant and codominant Douglas fir trees attain in 50 years. The site index applies to fully stocked, even-aged, unmanaged stands. This table lists only site indices for Douglas fir and does not list site indices for soil complexes. The Description under Cubic Feet/Acre/Year explains the composite volume rating in this table for soil complexes.

Cubic feet/acre/year

Data Source

USDA-Soil Conservation Service, June 1986. *Technical Note No. 2 Revised, Culmination of Mean Annual Increment for Commercial Forest Trees of Oregon.*

Description

Converting site index to cubic feet/acre/year expresses productivity as a volume of wood fiber produced. For map units that are predominantly one soil type, it is straightforward to use the tables in Technical Note No. 2 to look up the cubic feet/acre/year that a soil could potentially produce based on the site index in the State Soils Database. Calculating a volume rating for a complex is more problematic. The NRCS reports site index data for each component of a soil complex but does not calculate a composite volume for the entire complex. A complex is a soil map unit which has two or more kinds of soil in such an intricate pattern or so small in area that the soils cannot be delineated separately at the scale of mapping.

The methodology used in this table to calculate forest productivity volume ratings for soil complexes involves applying a weighted average to each component of the complex and then normalizing to base it on 100% excluding the inclusions. The following example illustrates this calculation for a soil complex which has a site index for only one of the two components.

43 C	*Dixonville-Philomath-Hazelair complex 3-12%*				
Component	*Actual %*	*Normalized %**	*Site Index*	*CuFt/ Ac/Yr*	*Normalized % x Cu.F.t/Ac./Year*
Dixonville	30%	35%	97	130	46
Philomath	30%	35%	-	-	-
Hazelair	25%	29%			
Total	85%	100%			46

* $\text{Normalized \%} = \dfrac{\%\ of\ Individual\ Component}{100 - (\%\ Inclusions + \%\ Urban\ Land)}$

Agricultural Capability Class

Data Source

USDA-Natural Resources Conservation Service, August 1997 printout from the National Soils Information System (NASIS). *Soils Database for Lane County, Land Capability and Yields Per Acre of Crops and Pasture* table.

Description

Land capability class, often called agricultural capability class, generally shows the suitability of soils for most kinds of field crops. The Soil Survey describes capability class: "The soils are grouped according to their limitations for field crops, the risk of damage if they are used for field crops, and the way they respond to management." There are eight capability classes, I through VIII (sometimes written as 1 through 8), indicating progressively greater limitations for use as cropland. The land capability classification is discussed in USDA Agriculture Handbook No. 210, issued September 1961 and reprinted January 1973.

The NRCS reports both irrigated and non-irrigated capability classes. In Lane County, because of adequate rainfall, the ratings are the same for irrigated and non-irrigated except for all but two map units (28C, Chehulpum silt loam, 3-12%, and 125D, Steiwer loam, 3-12%). This table lists the non-irrigated capability class. For soil complexes, this table lists only the capability class of the most predominant soil in the complex (which is the first soil in the name of the map unit).

High Value Soils

Data Source

Land Conservation and Development Commission, adopted February 18, 1994. *Oregon Administrative Rules, Chapter 660, Division 33* (OAR 660-33).

Description

The Agricultural Land Rule (OAR 660-33) defines "high value farmland" as land in a tract composed predominantly of soils that are prime, unique, Class I or II, and other soils as specified in the rule. These other soils include the wet clay soils on valley terraces that are generally used for grass seed production, and moderately sloping soils on low foothills.

NRCS is the agency responsible for classifying soils as prime, unique, or land capability class I through VIII (1 through 8). The names 'prime' and 'unique' are what they imply. Prime soils are the best soils from a national perspective—easy to farm, suitable for a wide variety of crops, producing the highest yields. NRCS designates unique soils in conjunction with the state and county so as to recognize soils suited for growing a specialty crop of state or local importance, e.g., the soils on the southern Oregon coast used for growing cranberries and the organic soils in the Willamette Valley used for growing onions. Lane County has not requested the designation of any unique soils. Class I and II are land capability classes—the soils in them have the fewest limitations for crop growth. Refer to the description of Agricultural Capability Class (immediately above) for more information.

Note: The Soil Conservation Service and Natural Resources Conservation Service are the same USDA agency. A name change to Natural Resources Conservation Service was approved in 1994.

LANE COUNTY FOREST SOIL RATINGS

EXHIBIT 5

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
001A	Abiqua sicl, 0-3%	135	203
001B	Abiqua sicl, 3-5%	135	203
002E	Astoria sicl, 5-30%	130	193
003E	Astoria Variant sil, 3-30%	115	163
003G	Astoria Variant sil, 30-60%	115	163
004G	Atring-Rock outcrop complex, 30-60%	***	86**
005	Awbrig sicl	none	40**
006	Awbrig-Urban land complex	***	20**
007B	Bandon sl, 0-7%	105	145
007C	Bandon sl, 7-12%	105	145
007F	Bandon sl, 12-50%	105	145
008	Bashaw c	none	30**
009	Bashaw-Urban land complex	***	20**
010	Beaches	none	none
011C	Bellpine sicl, 3-12%	118	171
011D	Bellpine sicl, 12-20%	118	171
011E	Bellpine sicl, 20-30%	118	171
011F	Bellpine sicl, 30-50%	118	171
012E	Bellpine cob sicl, 2-30%	118	171
013F	Blachly cl, 30-50%	119	173
013G	Blachly cl, 50-70%	119	173
014E	Blachly sicl, 3-30%	127	188
014F	Blachly sicl, 30-50%	127	188
015E	Blachly-McCully cls, 3-30%	***	155
016D	Bohannon gr l, 3-25%	118*	171
016F	Bohannon gr l, 25-50%	118*	171
016H	Bohannon gr l, 50-90%	118*	171
017	Brallier muck, drained	none	none
018	Brallier muck, tidal	none	none
019	Brenner sicl	none	none
020B	Briedwell cob l, 0-7%	108	150
021B	Bullards-Ferrelo loams, 0-7%	***	80
021C	Bullards-Ferrelo loams, 7-12%	***	80
021E	Bullards-Ferrelo loams, 12-30%	***	80
021G	Bullards-Ferrelo loams, 30-60%	***	80
022	Camas gr sl, occ flooded	none	40**
023	Camas-Urban land complex	---	20**
024	Chapman l	120	175
025	Chapman-Urban land complex	***	100**
026	Chehalis sicl, occ flooded	130	193

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All ratings are for Douglar Fir unmanaged, fully stocked stands.
* ratings for additional tree species are listed on SCS green sheets
** These estimated soils ratings are taken from an Office of State Forester Memorandum, February 8, 1990, General File 7-1-1
*** multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex
[1] 50 year base
[2] volume produced at age of culmination

LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
027	Chehalis-Urban land complex	***	90**
028C	Chehulpum sil, 3-12%	none	40**
028E	Chehulpum sil, 12-40%	none	40**
029	Cloquato sil	130	193
030	Cloquato-Urban land complex	***	100**
031	Coburg sicl	none	100**
032	Coburg-Urban land complex	***	90**
033	Conser sicl	none	45**
034	Courtney gr sicl	none	40**
035D	Cruiser gr cl, 3-25%	140*	214
035F	Cruiser gr cl, 25-50%	140*	214
035G	Cruiser gr cl, 35-70%	140*	214
036D	Cumley sicl, 2-20%	114	162
037C	Cupola cob l, 3-12%	120	175
037E	Cupola Cob l, 12-30%	120	175
038	Dayton sil, clay sub	none	40**
039E	Digger gr l, 10-30%	116	167
039F	Digger gr l, 30-50%	116	167
040H	Digger-Rock outcrop complex, 50-85%	***	114**
041C	Dixonville sicl, 3-12%	97	130
041E	Dixonville sicl, 12-30%	97	130
041F	Dixonville sicl, 30-50%	97	130
042E	Dixonville-Hazelair-Urban land, 12-35%	***	35**
043C	Dixonville-Philomath-Hazelair, 3-12%	***	45**
043E	Dixonville-Philomath-Hazelair, 12-35%	***	45**
044	Dune land	none	none
045C	Dupee sil, 3-20%	none	70**
046	Eilertsen sil	124	182
047E	Fendall sil, 3-30%	127	188
048	Fluvents, nearly level	none	none
049E	Formader l, 3-30%	124	182
049G	Formader l, 30-60%	124	182
050G	Formader-Hembre-Klickitat, 50-80%	***	170**
051B	Haflinger-Jimbo complex, 0-5%	***	161**
052B	Hazelair sicl, 2-7%	none	40**
052D	Hazelair sicl, 7-20%	none	40**
053	Heceta fs	none	40**
054D	Hembre sil, 5-25%	127*	188
054G	Hembre sil, 25-60%	127*	188
055E	Hembre-Klickitat complex, 3-30%	***	170**

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*** multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

[2] volume produced at age of culmination

LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	Site Index [1]	Cubic Foot /Acre/Year [2]
055G	Hembre-Klickitat complex, 30-60%	***	168**
056	Holcomb sicl	none	100**
057D	Holderman ext cob l, 5-25%	121	176
057F	Holderman ext cob l, 25-50%	121	176
057G	Holderman ext cob l, 50-75%	121	176
058D	Honeygrove sicl, 3-25%	129	191
058F	Honeygrove sicl, 25-50%	129	191
059E	Hullt l, 2-30%	118	171
059G	Hullt l, 30-60%	118	171
060D	Hummington gr l, 5-25%	145	224
060F	Hummington gr l, 25-50%	145	224
060G	Hummington gr l, 50-75%	145	224
061	Jimbo soil	124	182
062B	Jimbo-Haflinger complex, 0-5%	***	167**
063C	Jory sicl, 2-12%	122	178
063D	Jory sicl, 12-20%	122	178
063E	Jory sicl, 20-30%	122	178
064D	Keel cob cl, 3-25%	118*	171
064F	Keel cob co, 25-45%	118*	171
064G	Keel cob cl, 45-75%	118	171
065G	Kilchis st l, 30-60%	92	120
065H	Kilchis st l, 60-90%	92	120
066D	Kinney cob l, 3-20%	124*	182
067F	Kinney cob l, 20-50%, N	124*	182
067G	Kinney cob l, 50-70%, N	124*	182
068F	Kinney cob l, 20-50%, S	124*	182
068G	Kinney cob l, 50-70%, S	124*	182
069E	Kinney cob l, slump, 3-30%	124*	182
070E	Klickitat st l, 3-30%	120	175
071F	Klickitat st l, 30-50%, N	120	175
071G	Klickitat st l, 50-75%, N	120	175
072F	Klickitat st l, 30-50%, S	110	154
072G	Klickitat st l, 50-75%, S	110	154
073	Linslaw l	none	80**
074B	Lint sil, 0-7%	114*	162
074C	Lint sil, 7-12%	114*	162
074D	Lint sil, 12-20%	114*	162
074E	Lint sil, 20-40%	114*	162
075	Malabon sicl	123	180
076	Malabon-Urban land complex	***	50**

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*** multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

[2] volume produced at age of culmination

LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	Site Index [1]	Cubic Foot /Acre/Year [2]
077B	Marcola cob sicl, 2-7%	97	130
078	McAlpin sicl	125	184
079	McBee sicl	119	173
080F	McCully cl, 30-35%	125	184
080G	McCully cl, 50-70%	125	184
081D	McDuff cl, 3-25%	115	163
081F	McDuff cl, 25-50%	115	163
081G	McDuff cl, 50-70%	120	175
082C	Meda l, 2-12%	128	190
083B	Minniece sicl, 0-8%	112	158
084D	Mulkey l, 5-25%	90*	116
085	Natroy sicl	none	60**
086	Natroy sic	none	60**
087	Natroy-Urban land complex	***	40**
088	Nehalem sil	124	182
089C	Nekia sicl, 2-12%	115	163
089D	Nekia sicl, 12-20%	115	163
089E	Nekia sicl, 20-30%	115	163
089F	Nekia sicl, 30-50%	112	158
090	Nekoma sil	140	214
091D	Neskowin sil, 12-20%	109*	152
091E	Neskowin sil, 20-40%	109*	152
092G	Neskowin-Salander sil, 40-60%	***	205**
093	Nestucca sil	99	134
094C	Netarts fs, 3-12%	95	125
094E	Netarts fs, 12-30%	95	125
095	Newberg fsl	110	154
096	Newberg l	110	154
097	Newberg-Urban land complex	***	100**
098	Noti l	none	30**
099H	Ochrepts & Umbrepts, v. steep	***	130**
100	Oxley gr sil	none	80**
101	Oxley-Urban land complex	***	60**
102C	Panther sicl, 2-12%	none	45**
103C	Panther-Urban land complex, 2-12%	***	40**
104E	Peavine sicl, 3-30%	124	182
104G	Peavine sicl, 30-60%	124	182
105A	Pengra sil, 1-4%	none	45**
106A	Pengra-Urban land complex, 1-4%	***	30**
107C	Philomath sic, 3-12%	none	45**

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*** multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

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LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
108C	Philomath cob sic, 3-12%	none	45**
108F	Philomath cob sic, 12-45%	none	45**
109F	Philomath-Urban land complex, 12-45%	***	20**
110	Pits	none	none
111D	Preacher l, 0-25%	128*	190
111F	Preacher l, 25-50%	128*	190
112G	Preacher-Bohannon-Slickrock, 50-75%	***	185**
113C	Ritner cob sicl, 2-12%	102*	140
113E	Ritner cob sicl, 12-30%	102*	140
113G	Ritner cob sicl, 30-60%	102*	140
114	Riverwash	none	none
115H	Rock outcrop-Kilchis complex, 30-90%	***	34**
116G	Rock outcrop-Witzel complex, 10-70%	***	21**
117E	Salander sil, 12-30%	125*	184
118	Salem gr sil	114	162
119	Salem-Urban land complex	***	100**
120B	Salkum sil, 2-6%	119	173
121B	Salkum sil, 2-6%	126	186
121C	Salkum sicl, 8-16%	126	186
122	Saturn cl	104	143
123	Sifton gr l	110	154
124D	Slickrock gr l, 3-25%	137*	209
124F	Slickrock gr l, 25-50%	137*	209
125C	Steiwer l, 3-12%	none	30**
125D	Steiwer l, 12-20%	none	30**
125F	Steiwer l, 20-50%	none	30**
126F	Tahkenitch l, 20-45%	120	175
126G	Tahkenitch l, 45-75%	112	158
127C	Urban land-Hazelair-Dixonville, 3-12%	***	45**
128B	Veneta l, 0-7%	108	150
129B	Veneta variant sil, 0-7%	128	190
130	Waldo sicl	none	45**
131C	Waldport fs, 0-12%	90	116
131E	Waldport fs, 12-30%	90	116
131G	Waldport fs, 30-70%	90	116
132E	Waldport fs, thin surf., 0-30%	none	29**
133C	Waldport-Urban land complex, 0-12%	***	20**
134	Wapato sicl	none	none
135C	Willakenzie cl, 2-12%	110	154
135D	Willakenzie cl, 12-20%	110	154

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[1] 50 year base
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LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
135E	Willakenzie cl, 20-30%	110	154
135F	Willakenzie cl, 30-50%	110	154
136	Willanch fsl	none	40**
137F	Winberry v gr l, 10-45%	80	98
138E	Witzel v cob l, 3-30%	none	70**
138G	Witzel v cob l, 30-75%	none	70**
139	Woodburn sil	133	199
140	Yaquina lfs	none*	none
141	Yaquina-Urban land complex	***	45**
142G	Yellowstone-Rock outcrop, 10-60%	***	38**

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*** multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

[2] volume produced at age of culmination

Lane County Soil Ratings for Forestry and Agriculture

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
72F	Klickitat stony loam, 30 - 50% south slopes	112	158	6	
72G	Klickitat stony loam, 50 - 75% south slopes	112	158	7	
73	Linslaw loam	none		3	X[1]
74B	Lint silt loam, 0 - 7% slopes	117	169	3	
74C	Lint silt loam, 7 - 12% slopes	117	169	3	
74D	Lint silt loam, 12 - 20% slopes	117	169	3	
74E	Lint silt loam, 20 - 40% slopes	117	169	4	
75	Malabon silty clay loam	none		1	X
76	Malabon-Urban land complex	none		1	X
77B	Marcola cobbly silty clay loam, 2 - 7% slopes	none		4	
78	McAlpin silty clay loam	none		2	X
79	McBee silty clay loam	none		3	X[2]
80F	McCully clay loam, 30 - 35% slopes	118	171	6	
80G	McCully clay loam, 50 - 70% slopes	118	171	7	
81D	McDuff clay loam, 3 - 25% slopes	112	158	6	
81F	McDuff clay loam, 25 - 50% slopes	112	158	6	
81G	McDuff clay loam, 50 - 70% slopes	112	158	7	
82C	Meda loam, 2 - 12% slopes	none		3	X
83B	Minniece silty clay loam, 0 - 8% slopes	none		6	
84D	Mulkey loam, 5 - 25% slopes	none		6	
85	Natroy silty clay loam	none		4	X
86	Natroy silty clay	none		4	X
87	Natroy-Urban land complex	none		4	X
88	Nehalem silt loam	none		2	X
89C	Nekia silty clay loam, 2 - 12% slopes	113	160	3	X
89D	Nekia silty clay loam, 12 - 20% slopes	113	160	3	X
89E	Nekia silty clay loam, 20 - 30% slopes	113	160	4	
89F	Nekia silty clay loam, 30 - 50% slopes	113	160	6	
90	Nekoma silt loam	none		3	
91D	Neskowin silt loam, 12 - 20% slopes	none		6	
91E	Neskowin silt loam, 20 - 40% slopes	none		6	
92G	Neskowin-Salander silt loams, 40 - 60% slopes	none		6	
93	Nestucca silt loam	none		3	
94C	Netarts fine sand, 3 - 12% slopes	none		6	
94E	Netarts fine sand, 12 - 30% slopes	none		6	
95	Newberg fine sandy loam	none		2	X
96	Newberg loam	none		2	X

Lane County Soil Ratings for Forestry and Agriculture

Map ymbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
97	Newberg-Urban land complex	none		2	X
98	Noti loam	none		4	X
99H	Ochrepts & Umbrepts, very steep	none		--	
100	Oxley gravelly silt loam	none		3	
101	Oxley-Urban land complex	none		3	
L02C	Panther silty clay loam, 2 - 12% slopes	none		6	
L03C	Panther-Urban land complex, 2 - 12% slopes	none		6	
L04E	Peavine silty clay loam, 3 - 30% slopes	125	184	6	
L04G	Peavine silty clay loam, 30 - 60% slopes	125	184	6	
L05A	Pengra silt loam, 1 - 4% slopes	none		3	X[1]
L06A	Pengra-Urban land complex, 1 - 4% slopes	none		3	
L07C	Philomath silty clay, 3 - 12% slopes	none		6	
L08C	Philomath cobbly silty clay, 3 - 12% slopes	none		6	
L08F	Philomath cobbly silty clay, 12 - 45% slopes	none		6	
L09F	Philomath-Urban land complex, 12 - 45% slopes	none		6	
110	Pits	none		8	
.11D	Preacher loam, 0 - 25% slopes	128	190	6	
L11F	Preacher loam, 25 - 50% slopes	128	190	6	
.12G	Preacher-Bohannon-Slickrock complex, 50 - 75% slopes	***	188	7	
.13C	Ritner cobbly silty clay loam, 2 - 12% slopes	107	149	4	
.13E	Ritner cobbly silty clay loam, 12 - 30% slopes	107	149	6	
.13G	Ritner cobbly silty clay loam, 30 - 60% slopes	107	149	7	
114	Riverwash	none		8	
.15H	Rock outcrop-Kilchis complex, 30 - 90% slopes	***	27	8	
.16G	Rock outcrop-Witzel complex, 10 - 70% slopes	***	none	8	
L17E	Salander silt loam, 12 - 30% slopes	125	184	6	
118	Salem gravelly silt loam	none		2	X
119	Salem-Urban land complex	none		2	X
L20B	Salkum silt loam, 2 - 6% slopes	116	167	2	X
.21B	Salkum silty clay loam, 2 - 8% slopes	116	167	2	X
.21C	Salkum silty clay loam, 8 - 16% slopes	116	167	3	X
122	Saturn clay loam	123	180	3	
123	Sifton gravelly loam	124	182	3	X
.24D	Slickrock gravelly loam, 3 - 25% slopes	137	209	6	
L24F	Slickrock gravelly loam, 25 - 50% slopes	137	209	6	
L25C	Steiwer loam, 3 - 12% slopes	none		3	
.25D	Steiwer loam, 12 - 20% slopes	none		4*	

Comparative values of site index from old and new site index curves.

Total age	Site index by McArdle (USDA Tech. Bul. 201)													
	Class V		Class IV			Class III			Class II			Class I		
	80	90	100	110	120	130	140	150	160	170	180	190	200	210
years	site index at 50 years bh age [1]													
20	76	83	90	97	104	112	119	126	133	140	148	155	162	169
30	74	81	88	95	103	110	117	124	131	139	146	153	160	168
40	72	79	86	94	101	108	115	122	130	137	144	151	158	166
50	70	77	85	92	99	106	113	121	128	135	142	149	157	164
60	68	76	83	90	97	104	112	119	126	133	140	148	155	162
70	66	74	81	88	95	103	110	117	124	131	139	146	153	160
80	65	72	79	86	94	101	108	115	122	130	137	144	151	158
90	63	70	77	84	92	99	106	113	121	128	135	142	149	157
100	61	68	76	83	90	97	104	112	119	126	133	140	148	155
110	59	66	74	81	88	95	102	110	117	124	131	139	146	153
120	57	65	72	79	86	94	101	108	115	122	130	137	144	151

[1] Site indexes greater than 160 at 50 years bh age are extrapolations beyond the range of the new curves. Lines through the table separate site classes I through V, right to left, respectively.

EXHIBIT 8

TABLE 2

DOUGLAS FIR EMPIRICAL YIELD TABLE

SOURCE: For Douglas fir tables 2 through 10, D.N.R. Report No. 20 - May 1971, "Empirical Yield Tables for the Douglas fir Zone" by Charles Chambers, and Franklin Wilson. "Comprehensive Tree Volume Tarif Tables" by Dr. K. J. Turnbull, Gene Little, and Gerald Hoyer, June 1972. Stepwise multiple regression conversion made by Tom Wheatley, Publishers Paper Co., June 1978.

SITE 70

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	9	8.25	---	---	---	---
30	38	8.57	517	517	1,185	.436
40	91	9.36	1,874	1,847	4,196	.440
41	96	9.44	2,004	1,963	4,554	.431
50	128	10.11	3,126	3,008	8,115	.371
60	158	10.80	4,275	4,138	12,572	.329
70	182	11.43	5,320	5,196	17,176	.302
80	202	11.98	6,261	6,141	21,544	.285
90	220	12.43	7,099	6,941	25,350	.274
100	235	12.78	7,833	7,574	28,374	.267
110	249	13.01	8,463	8,021	30,405	.264
120	261	13.10	8,989	8,266	31,279	.264
130	273	13.04	9,412	8,297	30,900	.269

TABLE 3

SITE 80

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	26	8.52	269	269	633	.425
30	55	8.91	921	921	1,614	.570
40	108	9.87	2,479	2,330	5,870	.397
41	113	9.96	2,630	2,467	6,342	.389
50	146	10.79	3,934	3,707	11,118	.333
60	175	11.65	5,285	5,060	17,062	.297
70	199	12.45	6,532	6,330	23,187	.273
80	219	13.17	7,675	7,473	29,038	.257
90	237	13.79	8,715	8,454	34,240	.247
100	252	14.31	9,651	9,251	38,541	.240
110	266	14.71	10,482	9,842	41,709	.236
120	279	14.97	11,211	10,216	43,565	.235
130	290	15.08	11,835	10,365	44,000	.236

TABLE 4

SITE 90

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	49	8.91	777	777	1,351	.575
30	77	9.36	1,506	1,426	2,708	.526
40	128	10.49	3,256	2,985	8,393	.356
41	132	10.60	3,425	3,145	9,019	.349
50	165	11.57	4,902	4,591	15,209	.302
60	193	12.60	6,444	6,160	22,777	.270
70	217	13.56	7,883	7,630	30,483	.250
80	236	14.44	9,217	8,949	37,795	.237
90	254	15.23	10,448	10,087	44,347	.227
100	269	15.90	11,576	11,016	49,807	.221
110	283	16.45	12,599	11,726	53,977	.217
120	295	16.87	13,519	12,204	56,690	.215
130	306	17.14	14,335	12,432	57,813	.215

EXHIBIT 9

SITE CLASS 95 | 26,012 ★

SITE CLASS 98 | 27,953 ★

DOUGLAS FIR EMPIRICAL YIELD TABLE

TABLE 5

SITE 100

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	17	8.53	85	85	335	.254
26	70	9.33	1,324	1,236	2,561	.483
30	97	9.85	2,130	1,913	4,601	.416
40	146	11.14	4,071	3,703	11,450	.323
41	150	11.27	4,259	3,886	12,248	.317
50	181	12.39	5,909	5,541	19,972	.277
60	209	13.59	7,643	7,325	29,247	.250
70	232	14.71	9,273	8,982	38,528	.233
80	252	15.75	10,799	10,468	47,294	.221
90	269	16.69	12,222	11,750	55,131	.213
100	284	17.53	13,541	12,805	61,760	.207
110	297	18.24	14,756	13,624	66,922	.204
120	310	18.81	15,867	14,190	70,448	.201
130	321	19.24	16,875	14,502	72,234	.201

TABLE 6

SITE 110

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	30	8.74	327	327	666	.491
26	83	9.63	1,688	1,494	3,299	.453
30	109	10.23	2,574	2,253	5,812	.388
40	158	11.69	4,717	4,275	14,125	.303
41	162	11.83	4,926	4,482	15,074	.297
50	194	13.11	6,757	6,345	24,305	.261
60	222	14.47	8,693	8,344	35,244	.237
70	245	15.76	10,525	10,200	46,141	.221
80	264	16.97	12,253	11,863	56,425	.210
90	281	18.09	13,878	13,304	65,675	.203
100	296	19.09	15,398	14,503	73,549	.197
110	310	19.97	16,815	15,448	79,836	.193
120	322	20.72	18,129	16,126	84,358	.191
130	333	21.31	19,338	16,528	86,957	.190

TABLE 7

SITE 120

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	51	9.11	819	770	1,355	.568
26	101	10.10	2,294	1,961	4,810	.408
30	126	10.77	3,257	2,821	7,992	.353
40	173	12.39	5,592	5,093	18,116	.281
41	177	12.55	5,820	5,324	19,255	.277
50	208	13.98	7,823	7,389	30,132	.245
60	235	15.50	9,951	9,588	42,783	.224
70	258	16.96	11,974	11,611	55,265	.210
80	277	18.33	13,894	13,424	66,954	.200
90	294	19.60	15,710	14,992	77,437	.194
100	309	20.76	17,423	16,297	86,410	.189
110	322	21.80	19,031	17,334	93,643	.185
120	334	22.70	20,536	18,091	98,946	.183
130	345	23.45	21,937	18,561	102,187	.182

EXHIBIT 9

LOG PRICES - 3rd Quarter 1983

WEST OREGON, SANTIAM, LANE, FOREST GROVE, TILLAMOOK AND ASTORIA UNITS

Douglas-Fir

#1P	$505
#2P	425
#3P	340
SM	285
#2S	255
#3S	215
#4S	200
SC	140
Utility	75
CR	240

Hemlock

P	$375
SM	260
#2S	220
#3S	190
#4S	175
Utility	65
CR	190

Spruce

SM	$255
#2S	230
#3S	180
#4S	160
Utility	45

W. R. Cedar

#1S	$390
#2S	380
#3S	310
#4S	230
CR	330
Wormy	135

Alder

Sawlogs CR	$190
Pulp	125

EXHIBIT 10

EXHIBIT Q
AFFIDAVIT

AFFIDAVIT

Bailey Hill South, a Partnership, owns approximately 113 acres of property immediately south of the Eugene city limits which is identified as Tax Lot 300 on Assessor's Map 18-04-11. The subject property was purchased by Breeden Bros., Inc. (dba Bailey Hill South, a Partnership) on May 2, 1962 (Reel 194, Instrument #69289). I hereby certify that this property was not managed during any three calendar years between January 1, 1978 and January 1, 1983, or at any other time since 1962, as part of a farm operation that produced $20,000 or more in annual gross income or a forest operation capable of producing an average, over the growth cycle, of $10,000 in annual gross income.

John F. Breeden, General Partner
Bailey Hill South, a Partnership

STATE OF OREGON)
)ss
County of Lane)

The foregoing instrument was acknowledged before me this 22 day of January, 1992, by John F. Breeden of Bailey Hill South, a Partnership.

Notary Public for Oregon
My commission expires: 1-18-93

EGR & Associates, Inc.

2535B Prairie Road
Eugene, Oregon 97402
(541) 688-8322
Fax (541) 688-8087

Aquifer Test For Tax Lot # 304, Sections 10 and 11, Township 16 South, Range 2 West of the Willamette Meridian

May 2002

Prepared For:

Brad Ogle
3103 Timberline Drive
Eugene, OR.

Principal Authors:

EGR and Associates, Inc.
Phillip Stallings, R.P.G.
Robert Murray, Geologic Associate

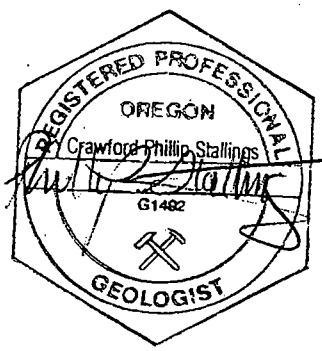

TABLE OF CONTENTS

Aquifer Test for PA 3826-92, Tax Lot 304 Sections 10 and 11, Township 16 South, Range 2 West of the Willamette Meridian,

INTRODUCTION

EGR & Associates (EGR) was retained by Brad Ogle to investigate whether the proposed partition of Tax Lot 304 would adversely impact the neighboring wells or properties, or deplete the aquifer (Lane County Code 13.050 for groundwater quantity limited areas, Appendix A).

The subject property consists of Parcels one and two of Tax Lot 304 totaling 55.34 and 58.4 acres in size (113.7 acres). Parcels 1 and 2 of Tax Lot 304 is proposed to be partitioned into nine lots (Figures 1 and 2). The property is zoned (F-2) Impacted Forest Lands.

To satisfy the requirements of the Lane conditions for approval (under Lane Code 13.050), an aquifer pumping and recovery test was performed on Tax Lot 304 between May 6 and 7, 2002. The purpose of the test and interpretation is to estimate aquifer potential and assess whether the aquifer is sufficiently productive to support additional demands caused by the development of seven new residential homes to the site (two homes are currently located on the property). In addition to the aquifer test, drill logs from neighboring wells were used to characterize local groundwater production.

HYDROLOGY, GEOLOGY, AND HYDROGEOLOGY

The property is located between approximately 680 to 1020 feet elevation in the Spencer Creek Watershed. Surface water from the site drains to the south to an unnamed tributary to Spencer Creek (Figure 1).

The Soil Survey of Lane County indicates five soil types are presented on the site[1]. The locations of the different soil types relative to approximate property boundaries is included in Figure 3.

These soils include the McDuff clay loam (81D), Panther silty clay loam (102C), Philomath silty clay (107C), Philomath cobbly silty clay (108 F), and Ritner cobbly, silty clay loam (113E).

The McDuff clay loam (81D) is a moderately deep, well drained soil commonly found in swales and benches on broad ridges and slump benches. The surface layer is typically very dark brown clay loam about 6 inches thick. The upper 8 inches of the subsoil is very dark grayish brown clay loam, and the lower 23 inches is dark brown and brown clay and silty clay. Weathered bedrock is at a depth of 20 to 40 inches below the surface. The available water capacity is 0.19-0.21inches/inch.

[1]*Patching, W.R. (1987) Soil Survey of the Lane County Area, U.S.D.A. Soil Conservation Service Publication, map sheet 89.*

The Panther silty clay loam (102C) is a deep, poorly drained soil commonly found in swales and benches on foothills. The surface layer is typically very dark brown silty clay loam about 10 inches thick. The subsoil is very dark brown and dark grayish brown clay about 19 inches thick. The substratum is dark grayish brown mottled clay about 13 inches thick. Weathered bedrock ranges between 40 to 60 inches below the surface. The available water capacity is 0.19-0.21 inches/inch.

The Philomath silty clay (107C) is a shallow, well drained soil commonly found in colluvium and residium derived from igneous rock. The surface layer is typically very dark brown silty clay approximately 6 inches thick. The subsoil is very dark brown clay about 8 inches thick. Depth to bedrock ranges from 12 to 20 inches. The available water capacity is 0.18-0.21 inches/inch.

The Philomath cobbly silty clay (108F) is a shallow, well drained soil commonly found in colluvium and residium derived from igneous rock. The surface layer is typically very dark brown cobbly silty clay approximately 6 inches thick. The subsoil is very dark brown cobbly silty clay about 8 inches thick. Depth to weathered bedrock ranges from 12 to 20 inches below the surface. The available water capacity is 0.14-0.17 inches/inch.

The Ritner cobbly, silty clay loam (113E) is a moderately deep, well drained soil commonly found on foothills. The surface layer is typically dark reddish brown cobbly sitly clay loam about 7 inches thick. The subsoil is dark reddish brown and yellowish red very cobbly silty clay loam about 25 inches thick. Weathered bedrock, consisting of fractured basalt, ranges between 20 to 40 inches. The available water capacity is 0.12-0.19 inches/inch.

Beneath these top soils are marine deposited sediments of the Eugene Formation. The Eugene Formation consists of fine grained arkosic micaceous sandstone, with intercalated shale and occasional lenses of fine volcanic ash from the Oligocene (approximately 34-38 million years old)[2]. Lithologic descriptions found in drillers' well logs in the area corroborate the presence of mixed sedimentary deposits consisting of sand and clay overlying sandstone, and claystone.

The well log for the pumping well (P-1) describes the underlying geology of the site as a 1/2 foot layer of topsoil overlying sandstone to a depth of at least 220 feet below the surface. The observation well (O-1), also located on the site, describes the underlying geology as a 3 foot layer of topsoil overlying sandstone and claystone to a depth of 380 feet below the surface. O-1 is located approximately 600 feet northwest of P-1. Drillers' logs from 85 wells of record in sections 10, 11, 14, and 15, Township 18 South, Range 4 West of the Willamette Meridian are presented with summary statistics in Appendix B. The well logs pertaining to the pumping well and observation well (Appendix C) indicate that the local water bearing zone encountered by the well on site is confined. A confined aquifer is defined as a water bearing zone isolated from the atmosphere by impermeable confining geologic formations, and which is generally subject to pressures higher than

[2] *Frank Geologic Map of the Eugene-Springfield Area, Southern Willamette Valley, Oregon 1973*

atmospheric (water rises in the well above the point where it is initially encountered during drilling).[3]

Well completion depths in Sections 10, 11, 14, and 15 average 206 feet, with a minimum and maximum of 50 and 600 feet, respectively. Yields reported in well logs within Sections 10, 11, 14, and 15, Township 18 South, Range 4 West from recorded wells range from 0.8 gallon per minute (gpm) to 180 gpm. The average production is 20 gpm.

PUMP TEST

The pump test and data interpretation was used to estimate the hydraulic conductivity (K), transmissivity (T), and storage coefficient (S) of the confined aquifer underlying the property. Although there is inconsistent information on the well log for O-1, this well log seems to indicate a confined aquifer. The well log for P-1 indicates the aquifer underneath the subject property is confined.

The total depth of the pumping and observation wells was determined using a 300 foot tape. The pumping well (P-1) is approximately 220 feet deep and has a six-inch casing. The observation well (O-1) was too deep to measure with the tape, according to the well log the well is 380 feet deep.

Initial depth to water in P-1 was 80.96 feet from the top of casing (TOC). Initial depth to water in O-1 was 7.29 feet from TOC. Water levels in the pumping well and observation well were recorded on one-minute intervals using a pressure transducer and data logger. Transducer recordings were confirmed manually using an electronic water probe (Appendix D). Prior to the test, 200 feet of 1 inch diameter schedule 40 PVC pipe was inserted down the well to create a conduit for the transducer.

In addition to the constant pumping of the well P-1 at 5.5 gpm, sporadic domestic use of the well occurred. The observation well was not in use.

The submersible pump at P-1 was turned on at 9:36 AM on May 6, 2002 at an initial rate of 20 gpm. It was determined that pumping the well at this rate would overly stress the aquifer and the pumping was halted at 9:44 AM. A 7-gallon per minute flow restrictor was used to maintain a flow of 7 gpm during the test. The actual flow, as timed into a 5 gallon bucket, was 5.5 gpm. The pump was turned on again at 10:53 AM at a continual flow rate of 5.5 gpm. This constant pumping rate was maintained throughout the test and confirmed periodically during the pump test by timing the flow into a 5-gallon bucket.

Pumping was discontinued at 11:20 AM the next day and the water level recovery was recorded for approximately 127 minutes. The maximum drawdown from the constant pumping and sporadic use of the well was 19 feet from TOC during the test. This was caused by the sporadic domestic use of the well however, and does not represent the maximum drawdown caused by the constant pumping of the well. The actual maximum drawdown due to the constant pumping in the pumping well was approximately 13.4 feet. The well recovered to within 4.16 feet of static water level (80.93 feet) during the 127 minutes following the pump shut off. The observation well, located approximately 500

[3] *Driscoll, F.G., (1986) Groundwater and Wells, U.S. Filter/Johnson Screens. St. Paul MN. pp.62.*

feet to the east, fluctuated, however did not show any obvious effects from the constant pumping at P-1.

The 24-hour pumping period exceeds the minimum 5-hour test indicated by the Lane Code requirements. The pump test on P-1 was run for this extended amount of time to identify potential flow boundaries further out in the aquifer.

Appendix D contains a tabulation of the transducer data collected from the pumping and observation wells. These data were used to estimate aquifer properties (Appendix E).

Plots illustrating the drawdown in the two wells versus time are presented in Appendix E. There is no evidence from the drawdown curve that, either a no-flow boundary or recharge boundary (near infinite source of water, such as a surface water stream), was intersected by the drawdown cone* which developed around the well.

AQUIFER TEST ANALYSIS

Three primary characteristics of the aquifer are needed to assess aquifer potential, hydraulic conductivity, transmissivity, and storage coefficient. These properties were estimated by interpreting the pump test data with mathematical models.

Transmissivity (T) is the rate at which water is transmitted through a 1-foot-wide vertical section of the entire thickness of the aquifer under a unit hydraulic gradient. More intuitively, T is a measure of how easily water moves through a formation of a given thickness. The units of T used in this report are gallons per day per foot (gpd/ft).

Hydraulic Conductivity (K) is a measure of the rate at which water can be transmitted through a unit area under a unit hydraulic gradient. It is directly proportional to T (K = T / formation thickness). The units of K used in this report are gallons per day per square foot (gpd/ft^2).

In confined aquifers the storage coefficient (S) represents the volume of water that an aquifer releases from storage per unit area per unit decline in hydraulic head (a dimensionless value) and typically ranges between 10^{-3} and 10^{-5} for confined aquifers. The drill logs for the area indicate that the aquifer beneath the property is confined. Data collected from the pump test was used to calculate S. Since the observation well used for the test appears to be affected by an additional source, the storage coefficient could not be calculated.

The most suitable and simple mathematical models for interpretation are the Theis[4] non-equilibrium equation and the Cooper-Jacob modification of the Theis equation[5]. Like all

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* A cone of depression or drawdown cone is a depression in the groundwater table or potentiometric surface that has the shape of an inverted cone and develops around a well from which water is being withdrawn. It defines the area of influence of a well.

[4] *Theis C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage. Trans. Amer. Geophys. Union. 2 pp. 519-524.*

mathematical models, application of the Theis and Jacob equations requires certain simplifying assumptions apply to the aquifer. These assumptions and the degree to which they are satisfied by the aquifer are noted below. The Jacob solution has all the same assumptions as the Theis plus the first assumption listed below, regarding the size of the exponential integral (μ). The exponential integral is inversely proportional to the transmissivity and duration of the test, and directly proportional to the storage coefficient and distance from pumping well.

Theis equation: $$s = \frac{114.6\, Q\, W(\mu)}{T}$$

Where: s= drawdown in feet at any point in the vicinity of a well discharging at a constant rate.
Q= pumping rate.
T= coefficient of transmissivity of the aquifer in gpd/ft.
W(μ)= is read "well function of u" and represents an exponential integral.

In the W(μ) function, *u* is equal to:

$$\mu = \frac{1.87 r^2 S}{Tt}$$

Where r = distance, in ft, from the center of a pumped well to a point where the drawdown is measured.
S= coefficient of storage Dimensionless).
T= coefficient of transmissivity, in gpd/ft.
t= time since pumping started, in days.

Cooper-Jacob equation: $$T = \frac{264Q}{\Delta s}$$

Where: T= coefficient of transmissivity of the aquifer in gpd/ft.
Q= pumping rate in gpd.
Δs= (read "delta s") slope of the time-drawdown graph expressed as the change in drawdown between any two times on the log scale whose ratio is 10 (one log cycle).

The exponential integral of μ is sufficiently small to simplify the Theis equation to the Jacob solution. *In this example μ is approximately less than $2X10^{-7}$ for a day-long test, sufficiently small for a simple solution. Driscoll suggests μ be less than 0.05 for use of Jacob*[6].

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[5] *Jacob C.E. ,1946b.Drawdown test to determine effective radius of artesian well. Trans. Am. Society of Civil Engineer. Vol.112. pp 1047-1070.*

[6] *Driscoll, F.G., (1986) Groundwater and Wells, U.S. Filter/Johnson Screens. St. Paul MN. pp.219-220*

- Aquifer has infinite areal extent. *No aquifer actually has an infinite areal extent. However, because the areal extent of the aquifer is likely much larger than the study area, it can usually be assumed infinite for the purposes of the model.*
- Aquifer is homogeneous, isotropic, and of uniform thickness. *While an aquifer composed of sedimentary rock can not generally be assumed to be perfectly isotropic and homogenous and uniformally thick over a large enough area, the aquifer begins to take on the characteristics due to scale changes relative to the inhomogeneity. Therefore, the response to pumping in real aquifers (which are rarely perfectly homogeneous, isotropic, or uniform in thickness) can be interpreted. The longer the test, the closer the test comes to this assumption thus the 24 hour test versus the 5 hour test.*
- Aquifer potentiometric surface is initially horizontal. *The well was most likely in use prior to the test, therefore locally induced gradients may have been present. Any induced gradients from neighboring wells are assumed to be sufficiently low and distant to not interfere.*
- The aquifer receives no recharge from any source. *Over a 24-hour pumping test this assumption is essentially met.*
- The pumping well is fully penetrating. *The pumping well is probably not fully penetrating. Therefore, aquifer potential (yield per feet drawdown) will be underestimated because some of the groundwater produced by the well must travel upward through a smaller cross-sectional area.*
- Flow to pumping well is horizontal and laminar. *We do not have enough information to determine if flow to the well is exclusively horizontal. On average, flow to the well is expected to be primarily horizontal and laminar.*
- All water removed from the well comes from aquifer storage. *This criteria is essentially met.*
- Aquifer is confined. *This criteria is essentially met.*
- Flow is unsteady. *Flow in the aquifer is unsteady.*
- The pumping well is 100 % efficient. *The well is not perfectly efficient, since there probably are head loses at the intake. Water level changes due to friction head loss at the intake will indicate a greater aquifer response to pumping than is actually occurring in the aquifer, yielding a more conservative estimate of transmissivity.*
- Diameter of pumping well is small so that the storage in the well can be neglected. *The volume of water in the well is negligible compared to the volume of water in storage in the surrounding aquifer and the amount of water pumped during the test.*

Experience has shown that even though real aquifers are rarely as simply as the model requires, the Jacob method yields results of sufficient accuracy for most engineering purposes[7].

Interpretation of the drawdown in the pumping and observation wells yields aquifer transmisivities ranging between 283 (Theis) and 484 (Cooper-Jacob) gpd/ft. Assuming an

[7] *Driscoll F.G., (1986). Groundwater and Wells 2nd Ed. Johnson Screens, St. Paul, MN. P.266.*

aquifer thickness of 140 feet (depth of water in the well), the hydraulic conductivity is approximately 2.02 to 3.46 gpd/ft^2, within the range commonly observed for sandstone[8].

To test the validity of the calculated transmissivity (T), the transmisivities derived from the Cooper Jacob solution (484 gpd/ft) and the Theis recovery solution (283 gpd/ft) were inserted into the full Theis[9] non-equilibrium equation. The Theis recovery solution, derived in *Aqtesolve*, uses a storativity ratio (storativity pumping/storativity recovery) of 1.155. Since S could not be calculated due to the indeterminate results at the observation well, a conservative estimate of 0.0001 was used for both solutions.

As shown in Appendix E, the estimated T from the Cooper Jacob equation (484 gpd/ft) provides a close match when inserted back into the Theis solution. The Cooper Jacob model predicts a drawdown of 19.3 feet (from TOC), while the actual drawdown observed at the well was 13.4 feet (from TOC). This can be attributed to an inefficient well resulting from head loss at the intake. Inserting the more conservative transmissivity of 283 gpd/ft (derived from Theis recovery data) into the Theis non-equilibrium equation predicted a drawdown of 31.5 feet (from TOC).

WATER USE

To determine whether adequate water is available for the proposed use, the maximum drawdown possible in the aquifer under peak summer use with no recharge (rain) was approximated using cumulative Theisian drawdown cone calculations (Appendix E). To estimate cumulative drawdown due to pumping from the proposed use and existing users, drawdown in overlapping cones was added together[8]. The Theis model provides a first approximation of aquifer drawdown and is commonly used for this application.
The conservative estimate of transmissivity derived from the Theis equation (283gpd/ft) was used for aquifer prediction. A conservative (high) estimate of the water needed to supply a single-family dwelling averages 500 gpd (0.35 gpm) on an annual basis. (Eugene Water and Electric Board figures indicate approximately 300 gpd including irrigation for domestic use). Peak use, during the irrigation months of July and August, is expected to be three times average use. For maximum drawdown in the aquifer, the typical use is assumed to be 1 gpm (more than three times the EWEB average).

Maximum drawdown of the overlapping cones, was calculated by eight new theoretical wells spaced approximately 250 feet from the old well (Appendix E). The actual distance between wells is expected to be greater than 250 feet and the maximum drawdown is therefore a conservative estimate. The model estimates maximum drawdown where the drawdown cones intersect after six months of pumping. Using the Theis solution, the drawdown where all the cones intersect is approximately 33.3 feet after 6 months (maximum potential rainless season) without recharge. The estimated saturated thickness

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[8] *Freeze R.A., Cherry J.A. (1979). Groundwater. Prentice Hall. Toronto ON. p.29*
[9] *Theis C.V., (1935). The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage. Trans. Amer. Geophys. Union. 2 pp. 519-524.*
[8] *Freeze R.A. Cherry J.A. 1979. I.bid. p.328*

of the aquifer is 140 feet, thus the maximum expected drawdown is less than 24% (approximately 3% per well) of the saturated thickness observed in the well.

Thus, a combined total withdrawal at a rate of 9 gpm (nine wells spaced 250 feet apart) over an entire summer without recharge in the vicinity of the proposed development will result in acceptable drawdown to the aquifer.

POTENTIAL FOR AQUIFER DEPLETION

The potential for aquifer depletion was addressed in the peak water use calculations above. Based on these calculations, which omit natural precipitation recharge, induced recharge from pumping or recharge from irrigation or drainage fields, a six month cycle would result in less than 34 feet of combined drawdown from nine wells.

Recharge for the aquifer underlying the subject property occurs primarily from precipitation.

Annual aquifer recharge to the Willamette Aquifer in the Willamette Valley area is estimated to be 13 inches[9] Although, the property, located in the Spencer Creek watershed, most likely receives less recharge than the Willamette Aquifer, it is reasonable to assume aquifer recharge at the site will be greater than paved urban areas (3.1 inches)[10] Therefore, over 114 acres (Parcels 1 and 2), 3.1 inches amounts to *29.45 acre feet* of water each year. Assuming average water consumption of a single-family dwelling is 500 gallons per day, approximately *0.56 acre feet* per year are used by a family. The combined use by nine dwellings (5.04 acre feet of water per year) constitutes approximately 18% of the recharge volume provided by precipitation. Since the aquifer receives adequate recharge to offset the residential withdrawal, aquifer depletion is unlikely and its ability to store or transmit water is unchanged. Therefore, the predicted temporary drawdown of the aquifer, contributed to by peak use and lack of recharge, will be mitigated during fall, winter, and spring months, when precipitation recharge to the surrounding aquifer will resupply the seasonal drawdown. Water use associated with the proposed partition does not constitute aquifer depletion.

LIMITATIONS

The aquifer test analysis presented above is based on assumptions that are conservative. The estimates given herein are in accordance with generally accepted principles and practices. The analyses, conclusions, and recommendations in this report are based upon site conditions as they presently exist and assume that the limited data reviewed is generally representative of subsurface conditions.

If, during further evaluation, information is found which has not been previously reviewed, EGR must be advised at once so these conditions and our recommendations can

[9] *Woodward D.G., M.W. Gannett, J.J.Vaccaro. 1998. Hydrogeologic Framework of the Willamette Lowland Aquifer System. Oregon and Washington. USGS Professional Paper 1424-B. Table 10.*
[10] *Woodward D.G., M.W. Gannett, J.J.Vaccaro. 1998. I.bid. Table 11*

be reviewed and revised, if necessary. Should a substantial lapse of time occur between this investigation and its use as an evaluation of site conditions, or if conditions have changed due to nearby construction or natural causes the data contained in this report should be reviewed to determine its applicability.

EGR does not warrant the use of this report to assess other sites which neighbor or abut the specific property referenced in this report.

CONCLUSIONS

Per Lane County Code 13.050, we conclude that the underlying aquifer will yield an adequate residential water supply for the additional proposed dwellings without adversely affecting wells on adjacent properties or the underlying aquifer. Due to the additional demands of the aquifer caused by the sporadic domestic use of P-1 during the test, the results concluded in this report are conservative.

Based on the aquifer test results, mathematical modeling and review of published information, the aquifer beneath the subject property can accommodate nine domestic use wells at normal or peak usage. Not every well drilled in the area will have the same production.

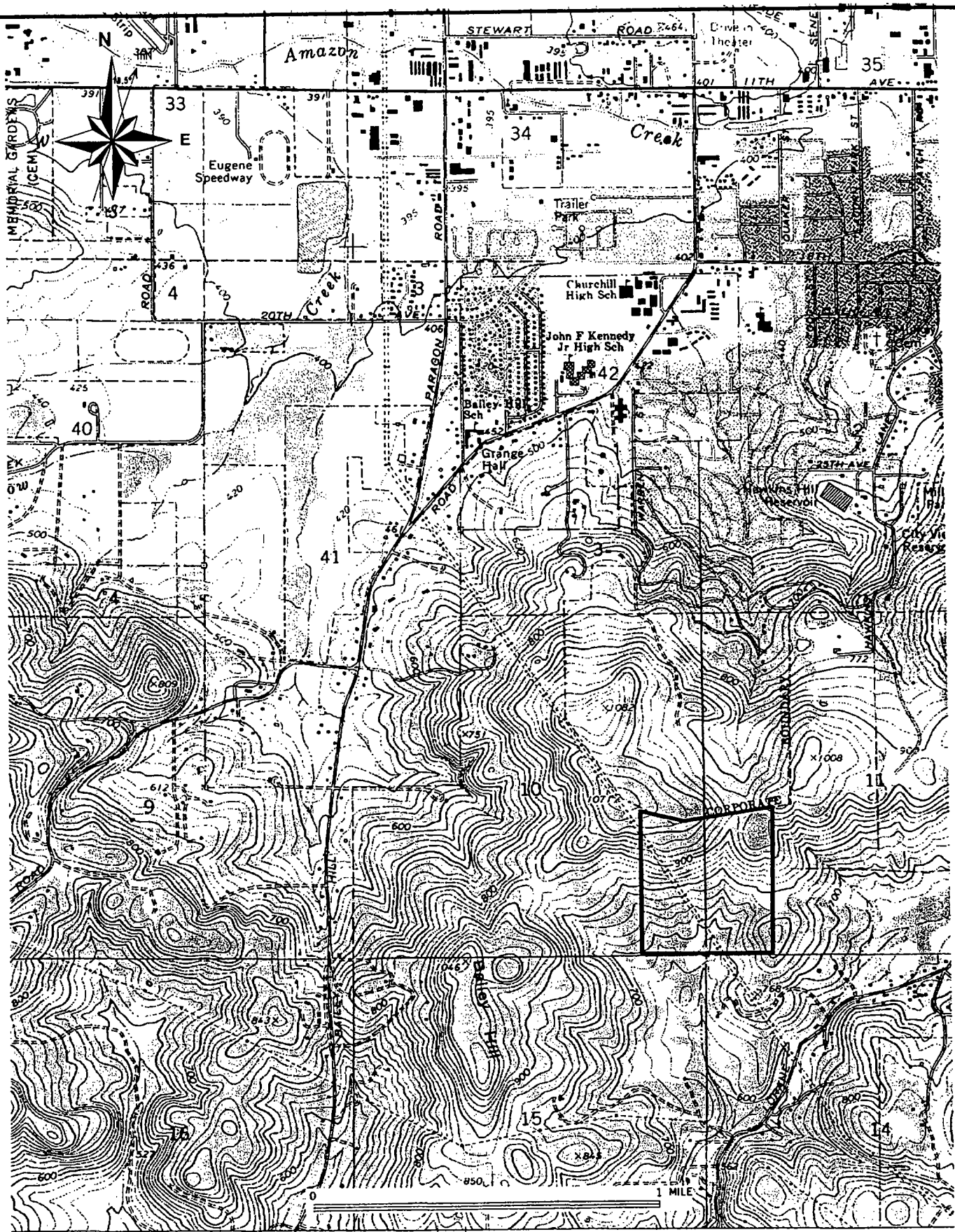

Figure 1:
Location Map

EGR & Associates, Inc.
Engineers, Geologists and Surveyors
2535 B Prairie Road
Phone (541) 688-8322
FAX (541) 688-8087

Ogle Aquifer Test
Eugene, OR

#5415-02-0039

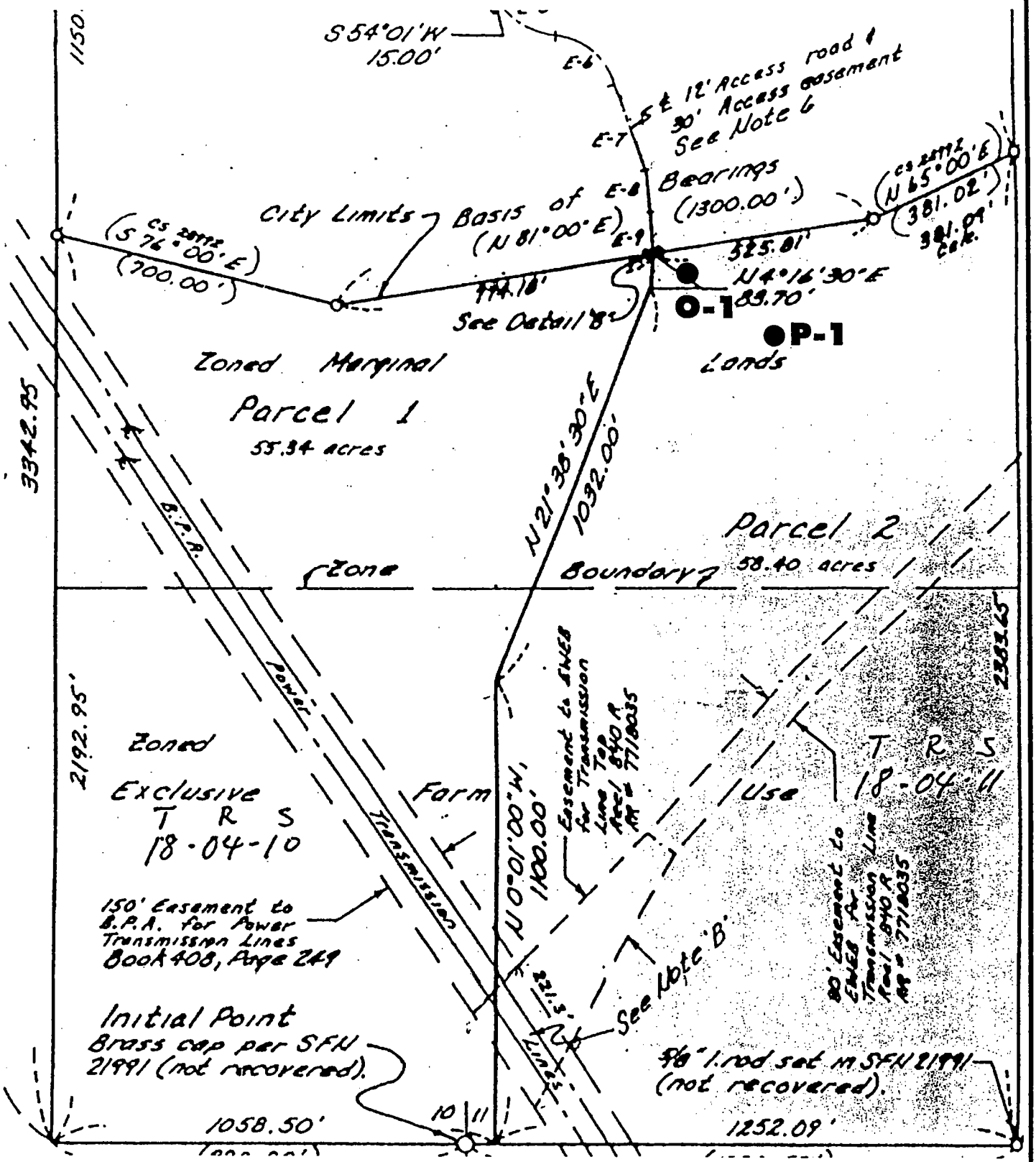

Figure 2:
Tax Lot Map

EGR & Associates, Inc.
Engineers, Geologists and Surveyors
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Phone (541) 688-8322
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Ogle Aquifer Test
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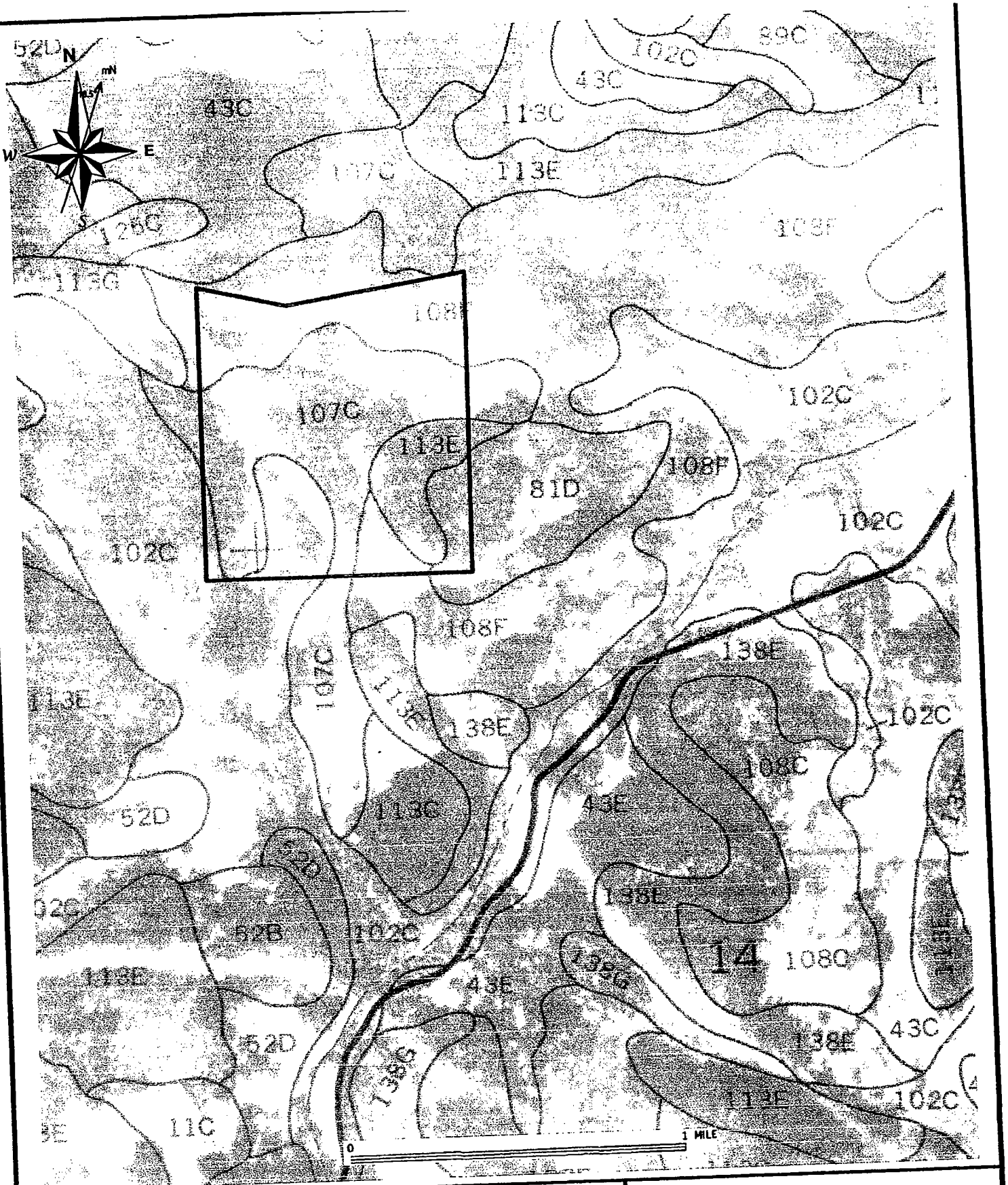

Figure 3:
USDA Soil Map

EGR & Associates, Inc.
Engineers, Geologists and Surveyors

2535 B Prairie Road
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FAX (541) 688-8087

Ogle Aquifer Test
Eugene, OR

APPENDIX A

LANE COUNTY CODE 13.050

system and replacement area are designed to serve, then a variance must first be applied for and may be approved if in compliance with the variance section of this Chapter.

(13) Water Supply. Lots and parcels shall be served by an approved public, community or individual water system. No construction or development work on proposed lots or parcels shall be started until information pertaining to water availability and quality is submitted to and approved by the Department. Water system shall be in accordance with and subject to applicable provisions of ORS, as well as all appropriate rules, regulations and policies promulgated under authority of these statutes, Lane Code and Manual. The establishment of rural water systems shall be consistent with RCP Goal 2 policy #24 and RCP Goal 11 policies.

(a) Public or Community Water System. The County may require that a new community or public water system be developed to serve lots or parcels when no existing public or community water system is available or suitable for use by the lots or parcels, and individual water systems are not feasible due to the density of the lots or parcels and/or the possibility of problems concerning the long-term availability of adequate quantities of suitable water. Aquifer and quality tests as discussed in LC 13.050(13)(c) below shall be required.

(b) Individual Water Systems. When lots or parcels are to be served by individual water systems, sufficient evidence shall be submitted to show that each parcel or lot will have available at time of development an adequate supply of potable water which will meet minimum County standards for drinking water. Aquifer and quality tests as discussed in LC 13.050(13)(c) below may be required.

(c) Aquifer and Quality Tests or Geological Evaluation. Aquifer and quality tests or geological evaluation may be required by Lane County for any lot or parcel. These requirements may include, but need not be limited to, evaluation of existing well logs and preparation of a geological report on the area, an evaluation of the site by a professional geologist or engineering geologist or full scale aquifer tests as required. In determining the detail of analysis required, the following apply:

(1) Areas designated by Board order as having problems in the quantity or quality of available water as adopted, documented in Lane Manual and filed in the office of the Department shall meet the following requirements for all parcels less than 20 acres in size. The applicant must affirmatively demonstrate, in a manner acceptable to Lane County, that the proposed subdivision/partition is capable of sustaining the development anticipated with

sufficient potable water. This demonstration must include, but need not be limited to, aquifer tests. More specifically, the aquifer test shall show coefficient of transmissivity, permeability, storage and the specific yield. The bacteriology/chemical tests shall show compliance with standards set by the Oregon State Health Division and Lane County. The test procedure shall utilize standard acceptable practices for aquifer tests using pumped and observation wells and records of static water level, date, clock, elapsed time (in min.), depth of water, drawdown and recovery. Analysis using the non-equilibrium method (or other methods where appropriate) must be performed by a licensed geologist or engineer. A copy of all field notes and test results shall be submitted with the report, together with summary statements which indicate whether the proposed use of the aquifer could adversely impact the neighboring wells or properties or deplete the aquifer and the general impact of the proposed use.

(d) For all areas not designated as problem areas by the procedures documented in LC 13.050(13)(a) above, a pump test report or a well log report shall be supplied, unless determined by Lane County to be not necessary. Pump test and well log reports shall be prepared according to the following criteria:

(i) Pump Test. The test shall be a minimum five-hour pumping duration and record the following information: static water level, pumping level, drawdown, recovery, residual drawdown, well yield (pumping rate) and specific capacity. Measurements shall be made before pumping begins, during the pumping phase and during the recovery phase as necessary.

(ii) Well log reports shall include tax map showing the subject property and surrounding area, all well logs of record from adjacent and surrounding properties and the location of the wells on the tax lot map.

(14) Additional Cluster Subdivision Requirements.

(a) The land in a cluster subdivision not platted as a building lot shall be secured and maintained as private open space and recreation area by covenant or association prepared by the applicant and approved by Director or County Counsel. Said approved covenant shall be recorded with and referenced on the cluster subdivision plat.

(b) The largest lot in a cluster subdivision, if platted as a mobile home or dwelling lot, shall be restricted from further development, unless future zoning and/or changes in the comprehensive plan increase the density allowed for the overall cluster subdivision. Said restriction shall be in the form of a covenant prepared by the applicant and approved by the Director or County Counsel, and recorded with and referenced on the cluster subdivision plat.

(c) The type and number of living units intended for each cluster subdivision lot shall be specified in the covenants, and each lot shall be restricted from an increase in the number of living units, unless the future zoning and/or changes in the comprehensive plan increase the density allowed for the overall subdivision and unless new cluster subdivision plans are submitted and approved. Said restriction shall be in the form of a covenant prepared by the applicant and approved by the Director or County Counsel, and recorded with and referenced on the cluster subdivision plat.

13.100 Application Requirements for Preliminary Partition Plans.

(1) An application for preliminary partition approval shall be filed with the Department pursuant to LC 14.050.

(2) The application shall be accompanied by 5 copies of the preliminary partition plan one of which must be 8 1/2" x 11".

(3) Preliminary partition plans shall show all required information and shall be clearly and legibly drawn to a scale sufficient enough to enable the approving authority to have an adequate understanding of what is proposed. The following information is required on a preliminary partition plan:

(a) North point, scale and date of the preliminary plan.

(b) Appropriate identification clearly stating the drawing is a preliminary partition plan.

(c) Names and addresses of the landowners, applicant and the engineer, surveyor, land planner, landscape architect or any other person responsible for designing the preliminary plan.

(d) The map number (township, range and section) and tax lot number of the tract being divided.

(e) The boundary lines of the tract to be divided and approximate acreage of the property.

(f) For partitions of land within an adopted urban growth boundary, contour lines sufficient to show the direction and general grade of land slope having the following intervals: