Oregon
Theodore R. Kulongoski, Governor

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

NOTICE OF ADOPTED AMENDMENT

12/08/2008

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

FROM: Mara Ulloa, Plan Amendment Program Specialist

SUBJECT: Josephine County Plan Amendment
DLCD File Number 003-06

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. Due to the size of amended material submitted, a complete copy has not been attached. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office. This amendment was submitted without a signed ordinance.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Tuesday, December 23, 2008

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

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

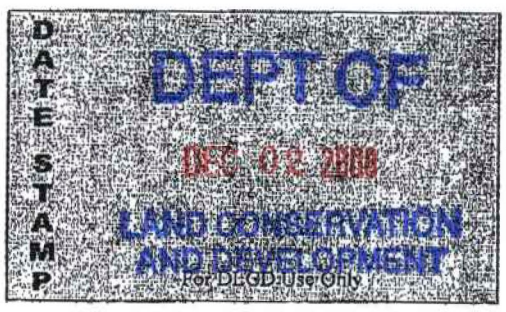
*NOTE: THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAT IT WAS MAILED TO DLCD. AS A RESULT, YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.

Cc: Michael Snider, Josephine County
Doug White, DLCD Community Services Specialist
John Renz, DLCD Regional Representative

<paa> YA

FORM 2 Notice of Adoption

THIS FORM **MUST BE MAILED** TO DLCD
WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18



Jurisdiction: **Josephine County** Local file number: **35-06-08, TL 100**

Date of Adoption: **10/6/2008** Date Mailed: **10/6/2008**

Date original Notice of Proposed Amendment was mailed to DLCD: **4/4/2006**

- ☒ Comprehensive Plan Text Amendment
- ☐ Land Use Regulation Amendment
- ☐ New Land Use Regulation
- ☒ Comprehensive Plan Map Amendment
- ☒ Zoning Map Amendment
- ☐ Other: _____

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

Approvals of requests for: [1] Amending the Josephine County Comprehensive Plan at the Soils Inventory by adding new mapping unit descriptions, tables data for the Schefflein and Tallowbox soils series; and [2] Amending the Josephine County Comp Plan by changing the designations from Forest/Agriculture to Residential and the Zoning Map from Woodlot Resource (WR) and Farm Resource (FR) to Rural Residential 5 acre minimum (RR-5).

Describe how the adopted amendment differs from the proposed amendment. If it is the same, write "SAME". If you did not give Notice for the Proposed Amendment, write "N/A".

Same

Plan Map Changed from: **Forest Resource/Agriculture** to: **Residential**

Zone Map Changed from: **Woodlot & Farm Resource** to: **Rural Residential 5 (RR-5)**

Location: **3200 block of Hugo Road** Acres Involved: **157.93**

Specify Density: Previous: _____ New: _____

Applicable Statewide Planning Goals: **Goal 3 - Agricutural Lands & Goal 4 - Forest Lands**

Was and Exception Adopted? ☐ YES ☒ NO

DLCD File No.: 003-06 (15133)

Did the Department of Land Conservation and Development receive a Notice of Proposed Amendment.....

Forty-five (45) days prior to first evidentiary hearing?	☒ **Yes**	☐ **No**
If no, do the statewide planning goals apply?	☐ **Yes**	☐ **No**
If no, did Emergency Circumstances require immediate adoption?	☐ **Yes**	☐ **No**

Affected State or Federal Agencies, Local Governments or Special Districts:

Local Contact: Michael Snider Phone: (541) 474-5421 Extension: 5424

Address: 700 NW Dimmick Ste C City: Grants Pass

Zip Code + 4: 97526- Email Address: msinder@co.josephine.or.u

ADOPTION SUBMITTAL REQUIREMENTS

This form **must be mailed** to DLCD **within 5 working days after the final decision**
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and **TWO (2) Copies** of the Adopted Amendment to:

ATTENTION: PLAN AMENDMENT SPECIALIST
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
635 CAPITOL STREET NE, SUITE 150
SALEM, OREGON 97301-2540

2. Submit **TWO (2) copies** the adopted material, if copies are bounded please submit **TWO (2) complete copies** of documents and maps.

3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.

4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.

5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **TWENTY-ONE (21) days** of the date, the Notice of Adoption is sent to DLCD.

6. In addition to sending the Notice of Adoption to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.

7. **Need More Copies?** You can copy this form on to 8-1/2x11 green paper only; or call the DLCD Office at (503) 373-0050; or Fax your request to:(503) 378-5518; or Email your request to **mara.ulloa@state.or.us** - ATTENTION: PLAN AMENDMENT SPECIALIST.

Josephine County, Oregon

Board of Commissioners: Dave Toler • Dwight F Ellis • Jim Raffemburg

THE PLANNING OFFICE
Michael Snider, Director
700 NW Dimmick Street, Suite C / Grants Pass, OR 97526
(541) 474-5421 / FAX (541) 474-5422
E-MAIL - planning@co.Josephine.or.us

FAX

TO: Mara Ulloa	DATE: December 2, 2008	# of Pgs ▶ 36*
DEPT: DLCD/Plan Amendments	FROM: ANNE INGALLS	
PH. #: (503) 373-0050, x238	PH # : (541) 474-5423	
FAX #: (503) 378-5518	FAX #: (541) 474-5422	

* Number of pages includes this fax cover

COMMENT:

Re: An amendment to the Josephine County Comprehensive Plan at the Soils Inventory (Soil Survey for Josephine County, Oregon by the Natural Resource Conservation Service) by adding new mapping unit descriptions, tables data for the Schefflein and Tallowbox Soils Series and an amendment to the Josephine County Comprehensive Plan (Ordinance 81-11, as amended) by changing the designations from Forest and Agriculture to Residential and amending the Zoning Map of Josephine County (Ordinance 85-1, as amended) from Woodlot Resource (WR) and Farm Resource (FR) to Rural Residential - 5 Acre minimum (RR-5) for 157.93 acres located in the 3200 block of Hugo Road. Property Owner: Ward Ockenden.

Mara:
Attached are the following documents for the above noted matter:

1. *Notice of Legislative Land Use Decisions/Certificate of Mailings dated 12/2/08;*
2. *Mailing list;*
3. *Ordinances 2008-002 and 2008-003, unsigned; and*
4. *DLCD Notice of Adoption dated 12/2/08.*

I have not included the copy of *Exhibit A* for the Findings for the soils as it is quite lengthy, but that is included in the mail. Should you have any questions, please do not hesitate to call. Thank you.

Anne Ingalls
Sr. Department Specialist
Josephine County Planning Office
510 NW 4th Street, Grants Pass OR 97526
541/474-5423
aingalls@co.josephine.or.us

FORM 2

Notice of Adoption

THIS FORM **MUST BE MAILED** TO DLCD
WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18

DATE STAMP
DEPT OF
DEC 04 2008
LAND CONSERVATION AND DEVELOPMENT
For DLCD Use Only

Jurisdiction: **Josephine County** Local file number: **35-06-08, TL 100**

Date of Adoption: **10/6/2008** Date Mailed: **10/6/2008**

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Zone Map Changed from: **Woodlot & Farm Resource** to: **Rural Residential 5 (RR-5)**

Location: **3200 block of Hugo Road** Acres Involved: **157.93**

Specify Density: Previous: _____ New: _____

Applicable Statewide Planning Goals: **Goal 3 - Agricutural Lands & Goal 4 - Forest Lands**

Was and Exception Adopted? ☐ YES ☒ NO

DLCD File No.: 003-06 (15133)

Did the Department of Land Conservation and Development receive a Notice of Proposed Amendment.....

Forty-five (45) days prior to first evidentiary hearing?	☒ **Yes**	☐ **No**
If no, do the statewide planning goals apply?	☐ **Yes**	☐ **No**
If no, did Emergency Circumstances require immediate adoption?	☐ **Yes**	☐ **No**

Affected State or Federal Agencies, Local Governments or Special Districts:

Local Contact: **Michael Snider** Phone: **(541) 474-5421** Extension: **5424**

Address: **700 NW Dimmick Ste C** City: **Grants Pass**

Zip Code + 4: **97526-** Email Address: **msinder@co.josephine.or.u**

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BEFORE THE BOARD OF COUNTY COMMISSIONERS FOR JOSEPHINE COUNTY STATE OF OREGON

ORDINANCE NO. 2008-002

AN ORDINANCE AMENDING THE JOSEPHINE COUNTY COMPREHENSIVE PLAN AT THE SOILS INVENTORY (SOIL SURVEY FOR JOSEPHINE COUNTY, OREGON BY THE NATURAL RESOURCE CONSERVATION SERVICE) BY ADDING NEW MAPPING UNIT DESCRIPTIONS, TABLES DATA FOR THE SCHEFFLEIN AND TALLOWBOX SOILS SERIES. THE SUBJECT PROPERTY IS IDENTIFIED IN THE JOSEPHINE COUNTY ASSESSOR'S RECORDS AS MAP 35-06-08, TAX LOT 100. THE PROPERTY OWNER IS WARD OCKENDEN.

WHEREAS, the Board of Commissioners held a public hearing on February 20, 2008, and thereupon approved the text amendment as described above; and

WHEREAS, the Planning Commission previously held public hearings on December 18, 2006, January 22, 2007, February 5, 2007, and March 5, 2007, and made a recommended decision to the Board of Commissioners as required by the county's comprehensive plan; and

WHEREAS, the Board of Commissioners received testimony and evidence from the Josephine County Planning Staff, the applicant and other land use participants, both for and against the request, and concluded that the applicant met his burden of proof, and that the Comprehensive Plan Text Amendment as requested complied with the requirements of Josephine County and State Law pertaining to such matters; and

WHEREAS, the Board of Commissioners, concurrent with this Ordinance, adopts written findings of fact in support of its decision to approve the comprehensive plan text amendment described herein, and those findings are contained in the land use hearing record at the planning office;

NOW, THEREFORE, based on the foregoing, the Board of Commissioners for Josephine County, Oregon, hereby ordains as follows:

SECTION 1: COMPREHENSIVE PLAN TEXT AMENDMENT

The Josephine County Comprehensive Plan at the Soils Inventory (Soil Survey for Josephine County, Oregon by the Natural Resource Conservation Service) is hereby amended to add two new mapping unit descriptions, tables data for the Schefflein and Tallowbox soils series for property identified as Assessor's Map: Township 35, Range 06, Section 08, Tax Lot 100. The soil descriptions and data are attached as Exhibit "A" to this Ordinance.

SECTION 2: AFFIRMATION

Except as otherwise provided herein, Josephine County Ordinances 81-11 and 85-1 are hereby affirmed as originally adopted and previously amended.

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SECTION 3: EFFECTIVE DATE

The first reading of this Ordinance by the Board of County Commissioners occurred this __ _____ day of _____, 2008.

The second reading and adoption of this Ordinance by the Board of County Commissioners occurred on this _____ day of _____, 2008, at least 13 days from the first reading. This Ordinance shall take effect ninety days from the date of this second reading.

JOSEPHINE COUNTY BOARD OF COUNTY COMMISSIONERS

_____
Dave Toler, Chair

_____
Dwight F Ellis, Vice Chair

_____
Jim Raffenburg, Commissioner

ATTEST:

_____
Recording Secretary

APPROVED AS TO FORM:

_____
Steven E. Rich, Legal Counsel

BEFORE THE BOARD OF COUNTY COMMISSIONERS FOR JOSEPHINE COUNTY STATE OF OREGON

ORDINANCE NO. 2008-003

AN ORDINANCE AMENDING THE COMPREHENSIVE PLAN MAP OF JOSEPHINE COUNTY (ORDINANCE 81-11, AS AMENDED), FROM FOREST AND AGRICULTURE TO RESIDENTIAL AND AMENDING THE ZONING MAP OF JOSEPHINE COUNTY (ORDINANCE 85-1, AS AMENDED), FROM WOODLOT RESOURCE (WR) AND FARM RESOURCE (FR) TO RURAL RESIDENTIAL 5 ACRE MINIMUM (RR-5). THE SUBJECT PROPERTY IS IDENTIFIED IN THE JOSEPHINE COUNTY ASSESSOR'S RECORDS AS MAP 35-06-08, TAX LOT 100. THE PROPERTY OWNER IS WARD OCKENDEN.

WHEREAS, the Board of Commissioners held public hearings on February 20, 2008, March 12, 2008, March 19, 2008, August 4, 2008, and October 6, 2008 to consider the request as described above; and

WHEREAS, the Planning Commission previously held public hearings on December 18, 2006, January 22, 2007, February 5, 2007, and March 5, 2007, and made a recommended decision to the Board of Commissioners as required by the county's comprehensive plan; and

WHEREAS, the Board of Commissioners received testimony and evidence from the planning staff, the applicant and other land use participants, both for and against the request, and concluded that the applicant met his burden of proof, and that the Comprehensive Plan Map and Zone Map Changes as requested comply with the requirements of Josephine County and State Law pertaining to such matters; and

WHEREAS, the Board of Commissioners, concurrent with this Ordinance, adopts written findings of fact in support of its decision to approve the comprehensive plan and zone map changes described herein, and those findings are contained in the land use hearing record at the planning office;

NOW, THEREFORE, based on the foregoing, the Board of Commissioners for Josephine County, Oregon, hereby ordains as follows:

SECTION 1: COMPREHENSIVE PLAN MAP AMENDMENT

The Josephine County Comprehensive Plan Map is hereby amended from Forest and Agriculture to Residential for the property identified as Assessor's Map: Township 35, Range 06, Section 08, Tax Lot 100.

SECTION 2: ZONE MAP AMENDMENT

The Josephine County Zoning Map is hereby amended from Woodlot Resource (WR) and Farm Resource (FR) to Rural Residential 5 Acre minimum (RR-5) for the property identified as Assessor's Map: Township 35, Range 06, Section 08, Tax Lot 100.

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///

SECTION 3: AFFIRMATION

Except as otherwise provided herein, Josephine County Ordinances 81-11 and 85-1 are hereby affirmed as originally adopted and previously amended.

SECTION 4: EFFECTIVE DATE

The first reading of this Ordinance by the Board of County Commissioners occurred this __ _____ day of _____, 2008.

The second reading and adoption of this Ordinance by the Board of County Commissioners occurred on this _____ day of _____, 2008, at least 13 days from the first reading. This Ordinance shall take effect ninety days from the date of this second reading.

JOSEPHINE COUNTY BOARD OF COUNTY COMMISSIONERS

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Dave Toler, Chair

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Dwight F Ellis, Vice Chair

_____
Jim Raffenburg, Commissioner

ATTEST:

_____
Recording Secretary

APPROVED AS TO FORM:

_____
Steven E. Rich, Legal Counsel

Josephine County, Oregon

Board of Commissioners: Dave Toler • Dwight F Ellis • Jim Raffenburg

PLANNING OFFICE

Michael Snider, Director

700 NW Dimmick Street, Suite C / Grants Pass, OR 97526

(541) 474-5421 / FAX (541) 474-5422

E-MAIL - planning@co.josephine.or.us

December 2, 2008

NOTICE OF LEGISLATIVE LAND USE DECISION

The Josephine County Board of Commissioners

Notice is hereby given that the Josephine County Board of Commissioners has approved certain changes to the county's comprehensive plan as described below. This decision may be appealed to the Oregon Land Use Board of Appeals (LUBA) by filing a *Notice of Intent to Appeal*. The rules for filing appeals to LUBA are governed by Oregon Administrative Rules, Chapter 661, Division 10. Forms for filing an appeal and information regarding the applicable time limits for doing so, may be obtained from LUBA. Information for contacting LUBA is provided below. All questions regarding LUBA appeal procedures and requirements must be directed to LUBA or to an attorney. A copy of the Board's Findings & Decision may be viewed at the planning office and copies may be purchased.

DECISION INFORMATION

DECISION:	The Board of Commissioners approved a request to amend the Josephine County Comprehensive Plan (Ordinance 81-11, as amended), by changing the designations from Forest and Agriculture to Residential and amending the Zoning Map of Josephine County (Ordinance 85-1, as amended), from Woodlot Resource (WR) and Farm Resource (FR) to Rural Residential - 5 Acre minimum (RR-5). The subject property is is located in the 3200 block of Hugo Road. Property Owner: Ward Ockenden.
DATE OF DECISION:	October 6, 2008
LEGAL DESCRIPTION:	35-06-08, TL 100
LUBA INFORMATION:	LUBA may be contacted at: Land Use Board of Appeals, 550 Capitol Street NE, Suite 235, Salem, Oregon 97301-2552, telephone number 503/ 373-1265, or the internet, at http://luba.state.or.us/.

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR JOSEPHINE COUNTY

Regarding	Comprehensive Plan Change from Agriculture to Residential and Forest to Residential and Zone Change from Farm Resource and Woodlot Resource to Rural Residential-5	**FINDINGS OF FACT**
Property Owner	Ward Ockenden	
Applicant	Ward Ockenden	
Representative	Bob Hart	

This request came before the Josephine County Board of Commissioners on February 20, 2008, and was continued to March 12, 2008, and then to March 19, 2008. On August 4, 2008, the Board considered a request that they initiate a special hearing to further consider the matter. A public hearing was held on October 6, 2008 for a decision on the request of Ward Ockenden, property owner, who requested a Comprehensive Plan Amendment from Agriculture to Residential, Forest to Residential and a Zone Change from Farm Resource and Woodlot Resource to Rural Residential 5- Acre. The property is located adjacent to Hugo Road southerly of Quartz Creek Road more precisely identified as Assessor's Map T35, R6, Section 8, Tax Lot 100.

There being no initial objection to the authority of the Board of Commissioners to hear the matter, and no one declaring conflicts of interest, the public hearing was opened. An oral decision was rendered on March 19, 2008. The applicants representative requested that the Board initiate a further hearing prior to the Finding of Fact being adopted. An objection to the authority of the Board to conduct the hearing on October 6, 2006 was raised by Holger Sommer, Mike Walker and Susan Liebenburg. The Board noted the objections and stated that the special hearing was initiated by the Board of Commissioners and authorized by Section 31.030 of the Rural Land Development Code.

I. CRITERIA FOR DECISION:

46.040 - PLAN AMENDMENT REVIEW CRITERIA

A. Amendments to a plan and zone map shall demonstrate compliance with all applicable statewide and county goals and policies.

B. Requests involving changes for lands from a resource designation to a non-resource designation shall either comply with statewide exception criteria contained in Oregon

Revised Statutes 197.732, and as implemented in Oregon Administrative Rules, Chapter 660, Division 4, or demonstrate the land is non-resource pursuant to the criteria contained in Section 46.050 below.

C. Requests involving changes to the plan and/or zone maps shall demonstrate the land has adequate carrying capacity to support the densities and types of uses allowed by the proposed plan and zone designations. The adequacy of carrying capacity, at a minimum, shall be evaluated using the criteria listed below. The criteria are to be considered together to determine whether the geography of the land is suited to support the kind of development associated with the proposed designations. With the exception of criterion [1] below, the application of any one criterion is not intended to be determinative of carrying capacity alone, unless the review body finds the importance of a specific benefit or detriment associated with the criterion overrides the consideration of other criteria. Nevertheless, in order to determine the adequacy of carrying capacity, the analysis must consider and address all of the listed criteria in relationship to one another. Sites may be altered to achieve adequate carrying capacity, but as alterations become more extensive, technical or difficult to perform or maintain, the greater the burden of proof shall be on the applicant to demonstrate compliance with the following criteria:

1. The proposed density and types of uses can be supported by the facility, service and other applicable development standards contained in this code or contained in other applicable federal, state and local rules and regulations governing such densities and types of uses.

2. Other physical characteristics of the land and surrounding area make the land suitable for the proposed density and types of uses, to include consideration of existing or potential hazards (flood, wildfire, erosion), the degree of slopes, the presence of wetlands, geologic formations, mineral deposits and any other similar natural or man-made conditions or circumstances;

3. The land in its natural state accommodates the proposed uses and densities, or special alterations or mitigation plans can make the land achieve the carrying capacity described under items [1] and [2] above;

4. Development pursuant to the proposed uses or densities will not significantly increase the risk from hazards to the residents of the development, the area or the general public;

5. Features of the development will not result in future maintenance costs to the public for the infrastructure needed to serve the development and the area that are atypically higher than expenses for other developments in the same plan and zone designations (examples of infrastructure include streets, bridges, storm drain facilities, erosion and sediment control facilities, and other similar public infrastructure facilities); and

6. Special circumstances exist at or near the site that justify increased risks, expensive or complex mitigation plans, or higher infrastructure costs to the public from the

development. This criterion can be used to consider specific community needs that have arisen within the area since the existing zoning was implemented at the site. Examples of circumstances which might support the application of this criterion are changes in demographics; the location or discovery of unique natural resources; changes in infrastructure that are intended to support and encourage the kinds of development associated with the request; the development of rural communities; and any other circumstance that establishes a special need or benefit to the community that justifies increased risks and costs. This criterion shall not be used to modify the requirements of criterion [1] above.

D. The density and types of uses authorized by the proposed plan and zoning designations are appropriate based on the requirements of subsection [1] or [2] below:

1. The change in designations at the location is consistent with the character of the surrounding area. Consistency shall be demonstrated by a detailed review of the relationship between the area covered by the proposed change in designations and the surrounding area, subject to the following rules.

   a. The detailed review shall describe the similarities or dissimilarities between the area of proposed change and the surrounding area based upon parcel size and ownership patterns,[1] zoning, existing or authorized land uses and structures, public facilities and services, and natural or man-made features.[2]

   b. The detailed review shall include a written statement explaining the rationale used to include or exclude areas from study, and be supported by zoning maps, aerial photographs, contour maps, and any other public or private records, statistics or other documents necessary or helpful to establish the character of the area and show how the change will be consistent.

2. Demonstrate how the introduction of inconsistent density or uses into an area is justified. This demonstration may be based upon changes in the area resulting from rezonings, new residential, commercial, industrial or resource development, the introduction or improvement of public facilities and services, changes in demographics, changes in plan inventories, and other similar circumstances. The

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[1] Evidence regarding changes in parcel size and ownership patterns shall, at a minimum, consider the circumstances of the parcelization and ownership patterns lawfully existing within the area of study. Review of parcelization patterns shall not only include the number and size of the parcels, but the relationship of the parcels to the total acreage within the study area, together with the potential for additional parcelization pursuant to existing zoning. In order for parcels to be counted in a parcelization analysis, the parcels must be authorized lots or parcels as defined by §11.030 of this code.

[2] Natural or man-made features may include watercourses, wetlands, watersheds, ridges, valleys, roads, rights-of-way, easements, political or service boundaries and other similar features. The study must identify and explain how these features operate to join or disjoin the area being changed from surrounding lands.

application shall show how the proposed change in designations, in the context of the foregoing circumstances, implements applicable state and/or county goals and policies. The more the change introduces inconsistent densities and uses into an area, the greater the burden on the applicant to justify the basis for the change.

E. Requests involving changes to the plan and/or zone maps within established exception areas shall demonstrate the change complies with the criteria contained in Oregon Administrative Rule 660-004-0018 governing plan and zone changes within exception areas.

46.050 - NON-RESOURCE LAND CRITERIA.

Authorized lots or parcels (but not portions thereof) which have been zoned Woodlot Resource or Farm Resource may be designated as non-resource when the application demonstrates compliance with the following criteria and rules:

A. The land within the lot or parcel is non-farm land because:

1. The predominant (greater than 50%) soil or soils are rated Class V or above in the *Soil Survey of Josephine County*, as adopted or amended in the plan data base (soils having both an irrigated and non-irrigated class ratings will be rated based on whether irrigation rights are or are not perfected at the time the application is filed); and

2. The land is otherwise unsuitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land-use patterns, technological and energy inputs required, or accepted farming practices; and

3. The land is not required to buffer urban growth areas from commercial agricultural operations; and

4. The land is not necessary to permit farm practices or forest operations to continue or occur on adjacent or nearby resource zoned lands, subject to the rules and procedures as set forth in subsection C below.

B. The land within the lot or parcel is non-forest land because:

1. It is not included within the following definition of forest land:

A lot or parcel is considered forest land when the predominant (more than 50%) soil or soils on the parcel have an internal rate of return of 3.50 or higher (if a single forest-rated soil is present), or composite internal rate of return of 3.50 or higher (if multiple forest-rated soils are present).

For the purpose of this criterion, any evaluation of the internal rates of return for forest soils shall be made pursuant to the document

entitled, *Using The Internal Rate Of Return To Rate Forest Soils For Applications In Land Use Planning (1985)*, by Lawrence F. Brown, as amended; or

2. If a determination cannot be made using the internal rate of return system as described in subsection B[1] above, the land is shown to be unsuitable for commercial forest uses based upon a combination of proofs, to include (but not limited to) the site index or cubic foot calculations, the testimony of expert witnesses, information contained in scientific studies or reports from public and private sources, historic market data for the relevant timber economy, and any other substantive testimony or evidence regarding the commercial productivity of the subject land, which taken together demonstrate the land is not protected by Statewide Goal 4; and

3. The land is not necessary to permit farm practices or forest operations to continue or occur on adjacent or nearby resource zoned lands, subject to the rules and procedures as set forth in subsection C below.[3]

C. Land is necessary to permit farm practices or forest operations on adjacent or nearby lands when the land within the lot or parcel provides a special land use benefit, the continuance of which is necessary for the adjacent or nearby practice or operation to continue or occur. The following rules shall apply when evaluating this criterion:

1. Land use benefits shall include access, water supplies, wind breaks, impact buffering, the minimization of land use conflicts, the preservation and protection of soil, air, water, watershed, and vegetation amenities; and the retention of normally accepted wildfire fighting strategies for adjacent or nearby commercial forest uses.

2. A land use benefit shall be considered necessary for normal farm practices and forest operations when loss of the benefit will interfere with accepted farm practices or forest operations by significantly impeding or significantly increasing the cost of the practices or operations.

3. The application shall include a review of the relationship between the lot or parcel under consideration and surrounding farm practices and forest operations. The review shall list and describe existing or potential farm practices and forest operations on

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[3] Only lands zoned in the Woodlot Resource zone may qualify as non-forest lands (see paragraph 3 above). Lands zoned in the Forest Commercial zone are not eligible for this option. The basis for this distinction lies in the county's ability to ascertain the commercial viability of forest lands based upon the Internal Rate of Return (IRR) system, as it has been applied within the acknowledged plan. The IRR system, in conjunction with the county's further ability to ascertain other locational factors, demonstrates that Woodlot Resource zoned lands have qualified commercial forest value and are generally situated in proximity to other non-commercial forest or non-resource lands. The county is able to make this finding based upon the GIS mapping and analysis contained in the report, *Locational Factors Affecting Woodlot Resource Lands*, by Michael Snider (March 22, 1999). This publication is made a part of the comprehensive plan by this reference.

adjacent or nearby lands, as well as the general geography and potential land uses on the subject property, and then provide an analysis of how the uses permitted by the proposed non-resource designations may or may not significantly impede or significantly increase the cost of accepted farm practices or forest operations. The review may be based upon data or information from some or all of the following sources: private organizations (commercial timber producers, forestry consultants, woodlot associations, etc.) public agencies that collect and interpret farm practice or forest operation data, such as county offices (Departments of Planning, Assessor and Forestry) state agencies (Departments of Forestry, Agriculture, Revenue and the Oregon State Extension Service), federal agencies (Department of Agriculture/Forest Service, the Bureau of Land Management, the Natural Resources Conservation Service and the Farm Service Agency), and other similar public entities.

4. In the event a farm or forest operator within the review area contends in the record that the map changes could significantly impede or increase the cost of specific practices or operations, and this contention is based upon records, data and other information in the operator's possession, but unavailable to participants in the hearing from public sources, the review body is authorized to require the operator to submit the supporting records, data and other information into the record for examination by the review body and other participants.

5. A lot or parcel shall not be considered necessary to permit farm practices or forest operations on adjacent or nearby lands if the necessary benefit can be preserved through the imposition of special restrictions or conditions on the use of the subject property which reasonably assure continuation of the benefit.

6. As a condition upon the approval of all plan and map changes from resource to non-resource designations, the property owner shall be required to execute and record in the county deed records a *Conflict Preference Covenant*, which recognizes the rights of adjacent and nearby resource land owners to conduct normal farm practices and forest operations. The covenant shall provide that all land use conflicts between non-resource uses on the subject property and adjacent or nearby resource operations will be resolved in favor of accepted farm and forest practices and operations.

D. The land is not other forested lands that maintain soil, air, water and fish and wildlife resources.

E. If the proposed plan designation is Rural Residential, the lot or parcel must be shown to be entirely outside of the critical habitat area (i.e., above 2500' or designated as impacted) on the official 1985 Deer Winter Range map, as adopted or amended.

F. When a request for a plan map amendment qualifies because the land is non-resource pursuant to the criteria contained in this policy, the zoning may be changed to one of the following zones only: Limited Development, Serpentine or Rural Residential with a minimum parcel size of 5 acres or larger. All such applications must also demonstrate

compliance with the map amendment procedures and criteria as set forth in Policies 1 and 2.

G For the purposes of implementing the provisions of the foregoing rules, the term "significant" shall mean the proposed change is likely to have considerable influence or effect upon the matter being considered, or that the effect or impacts arising from the change will result in important or weighty consequences or risks. The term is intended to guide the review body in evaluating the effects certain land use activities may have on other land use activities or on other land use considerations made applicable by these policies or other state or local goals, rules or laws. The review body shall judge the use of the term significant based on what a reasonable person would consider significant given the facts and circumstances being considered.

NOTE: The Code Sections cited above are the same as the requirements in Goal 11 Policy 5 of the Comprehensive Plan Goals and Policies.

II. EVIDENCE AND FACTS

The Board of Commissioners considered the following evidence and testimony:

A. Oral testimony of Michael Snider, Josephine County Planning Director, who discussed the salient aspects of the application noting the following; the written staff report, minutes and recommendation of the Planning Commission and the information submitted to address the relevant criteria.

B. Oral and written testimony of Bob Hart, Planning Consultant representing the applicant who provided the following remarks concerning the applicable criteria; The property is located adjacent to an existing exception area and was originally zoned SR-5 which was a residential designation. The property was rezoned during the adoption of state mandated zoning regulations. Previous Boards have approved the requested zone change and that the approvals were appealed and remanded back to the County on technical grounds. The property is non-resource based on evidence in the record that shown more than 50% of the parcel has soils that are not classified as class I-IV agricultural soils, that more than 50% of the parcel has soils that are rated less than 3.5 internal rate of return, the site in not in designated critical habitat area, the parcel is consistent with the character of the area, the property has adequate carrying capacity for the intended use. The property is not suitable for resource zoning based on additional factors as required to be addressed by the Rural Land Development Code, the non-resource provisions of the Development Code are in accordance with state law and have been acknowledged as in compliance with required goals and the request meets all other applicable criteria as demonstrated by evidence in the record, submitted studies and documents. Mr. Hart explained previous soil's reports and the conclusions were based on incomplete information and assumptions regarding precipitation amounts and slopes that were not fully evaluated. Mr. Hart also explained the present request before the Board is based on

the original soils designations and referred to the soil text amendment that the Board just heard to make a definite conclusion. Mr. Hart further testified that Hugo Road meets the County standards for Level of Service (LOS) which is the basis for approval in accordance with the requirements of the Master Transportation Plan. Mr. Hart also referenced the substantial written reports and documentation that address all applicable criteria

C. Oral testimony of Ward Ockenden, property owner who gave a history of the property issues and asked that the Board review the request based on the expert testimony provided. Mr. Ockenden assured the Board that there would be substantial and credible evidence that the property should be rezoned back to the original residential 5-acre zoning classification.

D. Oral and written testimony of Norm Foeller, Forester, stating that the property is not forest land. From his analysis he concludes that a majority of the property cannot support the growing and harvesting of trees for commercial forest harvests. His analysis is based on a review of the report from Mr. Johnson and a field verification of the facts in the report. Mr. Foeller explained the standard site index charts that are used in the forest industry and that the measured site index from timber growing on the site is below the lowest described site index in the standard charts.

E. Written testimony of Don Johnson, Forester, showing a low site index that is below the accepted standard for commercial forest management based on field studies of the site. He noted that a small portion of the site has merchantable trees but the majority of the site cannot support forest management.

F. Written testimony from Brian Genovese, Traffic Engineer with JRH Transportation Engineering, that provided evidence and testimony regarding existing traffic conditions and traffic impacts from the project with conclusion that the project meets the standards as established in the relevant criteria and Comprehensive Plan Documents.

G. Oral and Written testimony from Paul Sellke, Senior Engineer The Galli Group, Consulting Engineers that addressed the carrying capacity of the site to support the proposed use to include traffic issues, drainage, erosion and sediment control, wildfire, flood, and sewage disposal.

H. Oral and written testimony of Ed Busby, Consulting Geologist and Hydrologist of the Galli Group Consulting Engineers addressing the availability of water to serve the intended use. Evidence included Oregon Water Resources Department well logs and water quality test and analysis, geology maps of the area.

I. Oral and written testimony of Dennis Hutchison, Certified ARCPAC Soil Classifier, who testified regarding the soil conditions on the property, topography of the site, lack of suitability to support resource management, the similarities and differences between the soil types described in the Josephine County Soil Survey and the soils

described in the Oregon State Soil Scientists letter as appropriate for the site. Based on the site conditions and the additional evidence regarding average rainfall as monitored by BLM, it is the conclusion of Mr. Hutchison that the soils are as mapped in the Soil Survey with the primary soils being Holland and Siskiyou. There is not enough difference in the soils to warrant a change to Tallowbox and Shefflein soils. Mr. Hutchison also explained the methods and techniques used to evaluate the slope on site and how the information was more accurate than the aerial topographic mapping previously done.

J. Written testimony from Tom Guevara Development Review Planner for Oregon Department of Transportation stating that the proposed project meets the standards of the Oregon Department of Transportation. Initially the conclusion was that the project would not have any impact on ODOT traffic facilities. With the clarification of possible maximum development, the conclusion was that a condition of approval would be appropriate that would assure that adequate ODOT facilities are planned to serve the area.

K. Oral testimony of Charles DeJanvier, County Engineer, Josephine County Public Works Department stating that the road adjoining the project is designated as a Rural Minor Collector for Josephine County. He further stated that the road does not meet AASHTO standards but the standards change so often that a road built last year may not meet current standards. He stated that the sight distance for access onto the roadway was fine. Mr. DeJanvier further stated that there had not been any complaints from the school district about safety issues with the road. He also said that Hugo Road is not on any list of known problem roads that need fixing. Mr. DeJanvier stated there is some minor patch work that needs to be done and that he would have an inspector determine what work is needed as a part of routine maintenance.

L. Oral testimony from Ed Ownby, licensed septic installer, who described the suitability of the site for septic system locations. He also discussed the issue of locating septic systems on sloping ground and approval requirements. His conclusion was that the site is suitable for the installation and approval of additional septic systems based on his knowledge and evidence in the record concerning an approved site evaluation for septic system by the Department of Environmental Quality.

M. Oral testimony of Matt Zoehl, Traffic Engineer, who testified regarding the safety analysis of the traffic conditions surrounding the site, sight distance requirements and compliance with the AASHTO standards for access and safety.

N. Oral testimony of others supporting the proposal included Ron Glynn, Margaret Goodwin, Sandi Cassanelli, Lyle Woodcock, Barbara Gonzales, Paul Walter, Lorraine Walter, Trenor Scott, Jim Turner, Jack Brown, Michael Klein, Melanie Gonzales, and Jack Swift. This testimony was general in nature and spoke more to fairness of process, that the criteria have been addressed and that the request should be approved.

O. Written and oral testimony from Holger Sommer opposing the request stating that he represents a number of owners in the area. Mr. Sommer said that a substantial number of logs have been taken from the property and that the land is forest land and should remain under the forest designation. He also stated that the area is one that is dangerous for traffic because of the narrow winding roads. He is of the opinion that the applicant has not met the burden of proof for the request and that the roads do not meet AASHTO standards.

P. Oral testimony from Robert Rotesch, opposed to the request, who resides in the area testified about the timber harvested from the site and the traffic concerns for the area.

Q. Oral and written testimony from Michelle Baumgartner, opposed to the request, of the Josephine County Water and Soil Conservation District who stated that a portion of the Ockenden property could be reforested and managed for forest use. She stated that management was the key as evidenced by the BLM Seed Orchard that is located adjoining the subject property.

R. Oral testimony of Art Ramsey, opposed to the request, who testified that he drives a school bus in the area. He is of the opinion that the roads are dangerous and that added traffic will make the road problems intensify. He did not know about the soils and the effects on the request.

S. Written and oral testimony from Mike Walker, opposed to the request and asking for party status as an aggrieved person. Mr. Walker challenged, testimony of the soils reports and testimony presented by the applicant and the use of the adopted Josephine County Soil Survey stating that new information is available on the Natural Resources Conservation Service website that has different site index figures. His position is that until there is a complete revision of the Josephine County Soil Survey that there is no basis to use the document because the NRCS has revised their soils' information. He thinks that the applicant has not the burden of proof. He also opined that the property should have a yield below 20 cubic feet per acre per year to be non resource because that is the yield that is used by the federal government to define commercial forest land.

T. Oral and written testimony of Belinda Blauer who stated that she is not an expert but she feels that the carrying capacity is not good. She stated that the roads are not sufficient for additional traffic and that there are plenty of trees on the property so it should remain as forest land.

U. Oral and written testimony of Susan Liebenburg stating that the property has Quartz Creek traversing the property. She was of the opinion that drainage from the site would have an adverse impact on Coho salmon. She said that the property should remain as forest land to protect the critical fish habitat.

V. Oral testimony of Jim Sargent, opposed to the request, who stated that he owns land adjacent to the site and there are big trees along the common boarder. He thinks the subject property would grow trees if brush were removed.

W. Oral testimony of William Stein, opposed to the request. He said that the Planning Commission voted to deny the request and that the Board of Commissions should do likewise.

X. Oral testimony of Pat Sargent opposed to the request. She stated that the property has been logged in the past and that it is good forest land, that there is not sufficient water in the area and that there is not enough law enforcement for additional development.

Y. Oral testimony of Steve Liebenburg, opposed to the request. His concerns are increased fire danger, lack of fire protection and poor water supplies.

Z. Written and oral testimony of Hal Anthony, opposed to the request and requesting party status as aggrieved by the action. His concerns include unsafe road improvements, fire danger, rural character and water.

AA. Oral testimony of Chuck Petty, opposed to the request citing traffic concerns and that the applicant cannot mitigate.

BB. Oral testimony from Wayne McKy, opposed to the request. He is concerned about the dangerous traffic on Hugo Road.

CC. Rebuttal testimony from Bob Hart, regarding the difference between federal designation of commercial forest land and land protected by State Goal 4 that testimony was to the ability of the land to support commercial forest use on private land should be based on private usage and not on a federal program designation. Further rebuttal testimony addressed the significant difference of the subject property and the BLM seed orchard where there is irrigation provided to the trees for seed production that is not available to the subject property. He further addressed grading and erosion control requirements that would prevent adverse impacts to fishery habitat of Quartz Creek. Responses regarding traffic issues were given showing in the County Traffic Plan that the road meets county standards for level of service.

III. FINDINGS OF FACT:

The Board of Commissioners made the following Findings to support and provide a basis for the decision:

A. The property is split zoned with a portion in a Farm Resource zone and the majority of the property is a Woodlot Resource Zone. The property is adjacent to a residential zone that was acknowledged as built and committed to uses other than resource use.

B. The property was originally zoned residential and was changed at the direction of the Department of Land Conservation and Development.

C. The Board finds that the evidence presented by the applicant in the form of well logs, water quality report and septic evaluation for the subject property as well as testimony from experts in their fields, demonstrates that the property has the carrying capacity for the intended use. The evidence was substantial and convincing not withstanding the testimony of those in opposition that have not provided any significant expert testimony contrary to the evidence provided by the applicant.

D. The property has frontage on a county road. The road is a Rural minor collector, intended for the concentration and movement of traffic. The Board finds that the road is a maintained county road and has adequate capacity to accommodate the proposed project. The Board received testimony from the County Engineer in response to questions concerning the suitability of the road for the project raised by those in opposition. The Board finds that the roadway meets the Level of Service (LOS) standards established in the County Master Transportation Plan. The Board finds that the standard for approval is that the roadway and transportation system must be "adequate" for carrying capacity and the code uses AASHTO standards as a guide and not a requirement. The Board finds that Hugo Road and other nearby roads provide a traffic network in the area that meets or exceeds county standards for roads to serve the proposed density. Additional access through the extension of an onsite county road will provide adequate access to meet concerns regarding the carrying capacity of the land. The Board finds that the testimony from the County Engineer as well as statements from the Oregon Department of Transportation and the traffic impact studies (TIS) prepared by JRH Traffic Engineers and the sight distance calculations of The Galli Group are sufficient to conclude that the roadway system is safe and meets the criteria of the ordinance to show adequate carrying capacity for both onsite and offsite roads.

E. The Board finds that the soil report from a certified soil classifier is convincing evidence and that the objections by Mr. Walker and others are not sufficient to find that the report is substantially in error. The Board considered the objection that the soil report does not meet the burden of proof to determine the resource capability of the site. The Board has reviewed the Hutchison report and testimony and previous soil reports and letters in the record and the Josephine County Soil Survey which is the official document adopted in the Comprehensive Plan to evaluate soils and finds that Mr. Hutchison is an expert in the field of soil classification and taxonomy with the report and field work provides substantial and credible evidence to determine the soils and their capability. The Board considered the level of detail in the report and finds that slope, precipitation amounts, depth of top soil, rooting depth, and additional factors determine capability classification of soils. The Board finds that the soils on the property area Holland and Siskiyou. This finding is based on the original mapping of the soils, additional slope analysis and the additional evidence regarding average precipitation. The Board reviewed the testimony regarding the Tallow box and Shefflein soils and finds that the descriptions of the soils involved have some overlap for amount of precipitation, slope, soil depths and other factors. The Board concludes that precipitation is the deciding factor that the soils'

descriptions for the subject property and the soils shall remain as originally mapped as there is not sufficient evidence to show the designation in error. With the original descriptions reaffirmed, the original IRR ratings of the soils may be used in considering if the land is non-resource.

F. The Board also considered the evidence and testimony regarding soil depth, ability to hold water, evidence of rooting zone, indications of water levels. The Board also considered the testimony regarding past harvesting of timber on the site. The Board considered the Internal Rate of Return for the rated soils on the property. The Board further considered the expert testimony of two professional foresters. The Board places confidence in the adopted soil survey and the additional onsite high intensity review of soil conditions to base a conclusion regarding the soils on the property. The Board further places more confidence in the expert testimony regarding the ability of the entire property to be managed for commercial timber production rather than the incomplete testimony regarding past timber harvests from a limited portion of the entire property. Based on the soil report and the official maps of Josephine County and testimony provided to address the criteria, the Board finds that a vast majority of the site is non-resource in nature based on natural conditions inherent to the site. That while there may have been some limited logging of small portions of the site in the past, there are not conditions on the site to meet the standard for designating the site as forest land. The Board finds that in accordance with Section 46.050, the entire site must be evaluated and not portions of the site The Board finds that the request meets the criteria to determine that the property is non-resource based on rules of law and evidence provided to the Board.

G. In considering the practicality of the use of the land for farm use, the Board finds that the Soil Survey for Josephine County, in the description of soils that are found to be on the subject property, describes the amount of rainfall expected and that additional climatic data and irrigation requirement information submitted by the applicant into the record are shown to include temperature, precipitation and growing season and water requirements for crops. The Board finds that based on the adopted study and additional evidence from the applicant that the soils will not support farm operations using natural climatic conditions. Testimony was that irrigation that was not available to the property to make the land suitable for farm use. The Board further finds that without adequate irrigation that technological and energy inputs would not render the site suitable for farm use. Accepted farm practices in the area include normal animal husbandry, irrigated hay and pasture and non irrigated hay and pasture on those soils that are rated as class IV or better when non-irrigated. None of these normal farm practices can be applied to the subject property and the Board finds that the site does not meet the definition of farm use that is found in the Oregon Revised Statutes Chapter 215.203(2). The meaning of farm use is "... the current employment of land for the primary purpose of obtaining a profit in money..." Additionally written and oral testimony from Dennis Hutchison, Soil Scientist and Soil Classifier and written testimony from James Griffin, who establishes himself as a credible farm witness, presented compelling testimony that the property cannot reasonably

accommodate agriculture. The Board finds that the evidence presented is substantial and based on adopted studies that are a part of the Josephine County Comprehensive Plan, records from the Bureau of Land Management, and an expert in soil classification. The Board considered other testimony from those in opposition and finds that the objections are general in scope and do not directly apply to the subject property. The Board finds that more than 50% of the site has soils that are not class I-IV agricultural soils. The Board concludes the site is not farmland under the requirements of Goal 3 and meets the criteria for a non-resource determination under the applicable criteria.

G. Otherwise Unsuitable for Farm Use. The Board concludes the subject property is unsuitable for farm use under subsection 46.050.A.2. This subsection is designed to consider a combination of factors to see if there are special circumstances that offset or overcome the limitations described in the *Soil Survey*. These factors are intended to be considered together and not individually. Based on the evidence in this record, as it relates to the subject property, the Board finds that there are no overcoming favorable factors. The record shows:

1. Based upon the on site Soil Survey, the land is made up of soils that are predominantly Class V or worse agricultural soils;

2. Based upon data contained in the *Soil Survey* and from the BLM precipitation records, the land receives inadequate amounts of rainfall to make it suitable for raising crops;

4. Based upon data from the *Josephine County Soil Survey* and the on site soil survey from Dennis Hutchison soil classifier and expert testimony in the record regarding farm use, the land is unsuitable for grazing;

5. Based upon evidence established in the hearing, the existing land use pattern shows the subject property is not located in an area devoted to farm use, but is adjacent to significant areas of residential uses and that the character of the subject property is in keeping with the character of the surrounding area based on evidence submitted by the applicant in the form of an area study;

6. Based upon evidence from the *Soil Survey* and applicant's testimony, the conditions on the site do not benefit from special technology and energy inputs to the extent that the property could be put to a viable agricultural use;

7. Based upon evidence from the *Soil Survey* and testimony from the applicant, conditions on the site do not benefit from accepted farm practices that would offset the foregoing limitations.

H. The Board further finds that the forest rating of soils on the subject property was accomplished consistently with the adopted forest rating system in Josephine County and that more than 86% of the soils are rated less than 3.50 for forestry potential. The

Board takes note that the rating system used in Josephine County has been locally adopted and reviewed by state agencies and considered with regard to state goals and was acknowledged as meeting state goals. The Board finds that the system for forestry evaluation applied to the subject property is appropriate and in compliance with applicable local and state regulations. The Comprehensive Plan clarifies the application of the forestry rating system when an unrated soil is found on the property. The Board finds that less than 1% of the entire site contains an unrated soil. The Board finds that not withstanding the 3.39 CIRR rating of the parcel, that the expert testimony and evidence presented is sufficient and credible to the extent that the Board concludes that the land is non-resource under the combination of proofs criterial of the applicable code section as well as being below the standard of 3.50 CIRR that is a minimum rating for forest lands. Therefore the Board determines that the property is non-resource for forestry purposes. The Board finds that the determination of non-resource is in compliance with relevant sections of the Comprehensive Plan. The Board further finds that the background report to identify possible non-resource lands has identified the subject property as a non-resource parcel. The Board takes judicial notice of the documents, studies, testimony and legislative intent for the Internal Rate of Return System to identify forest lands in Josephine County as they apply to the subject property. The Board also considered the background documents on the adoption of the IRR rating system as well as the objections submitted to the adequacy of the system. Based on acknowledged provisions in the comprehensive plan, evidence submitted and testimony before the Board, it finds that the subject property is not forest land.

l. The Board finds that the subject property is not necessary to permit farm or forest practices on adjacent or nearby lands in accordance with the requirements of Section 46.050 C. The Board received testimony regarding access, water supplies, wind breaks, impact buffering minimizing land use conflicts, preservation and protection of soil, air, water, watershed and vegetation amenities and retention of normal wildfire fight strategies. The Board finds that farm use in the area is limited and to isolated farm parcels that are to the west and south west that have a majority of Class III soils and have irrigation rights. These parcels are either isolated from the subject property by Quartz Creek or have intervening residential lands between the subject property and the farm use. The farm uses are grazing and hay production. There are no factors existent on the subject property that are necessary for the farm use practices on the isolated farm parcels in the area considering the factors in the criteria. This finding is based on testimony and evidence in the record and inspection of aerial photographs. No testimony was introduced to establish the interrelationship that would require the subject property to remain as currently zoned in order for farming to continue. Additional testimony was introduced regarding forest lands in the area to evaluate the necessity of the subject property for continued forest use. The BLM lands to the north are not managed for timber production and are scheduled for fire fuels reduction. The seed orchard to the east is at a lower elevation and is intensely managed for tree seed production. No testimony was offered to establish a need for the subject property in order to continue the seed production. The Board

finds that the proposed change meets the applicable criteria based on the testimony offered by experts in farm and forest that describe the physical limitations that preclude resource management.

I. The Board finds that the proposed change is consistent with the current development pattern in the area and that public services and facilities are adequate for the intended use based on the standards of the Comprehensive Plan and the testimony in the record. This conclusion is based on the testimony of the applicant and those in favor of the request, studies of the area submitted by the applicants representative and a maps and aerial photography in evidence of the subject site and the surrounding vicinity. The Board considered the testimony of those in opposition but found that the property is adjacent to existing residentially zoned lands and that there is a pattern of residential development adjacent to Hugo Road and to the north and south along the valley.

J. The Board finds that any resource uses being conducted on lands in the surrounding area are at such a distance that the requested change would not adversely impact resource uses such as tree growth and harvest and farming activities. The Board bases this conclusion on the evidence submitted in the form of aerial photographs and discussion of resource uses in the area during the hearing process.

L. The Board finds that the evidence in the whole written record in the form of reports, maps, documents and analysis together with testimony on behalf of the applicant shows compliance with the criteria for a Comprehensive Plan Amendment and Zone Change. The Board considered the evidence and testimony from those in opposition and find that the applicant's testimony and evidence most compelling and addresses the criteria with credible and substantial evidence.

M. The Board finds that no exception is necessary to State Goals 3 or 4 and that the request will create rural development that is consistent with the adopted and acknowledged Comprehensive Plan. This is based on facts that the property is non-resource and does not fall within the scope of Goals 3 or 4 and therefore an exception is not required. In order to be regarded as farm land the site must have a majority of soils that are classified as I-IV or be necessary for the continuation of farm activity. In order to be regarded as forest land, the soils must have a rating for timber production or the site needs to be managed for other forest uses such as watershed protection or wildlife of fisheries habitat. This site is found to not have any of the above required characteristics.

N. The Board finds that there has been public involvement in all phases of this request from property owner notice to public hearings. Thus, the requirements of State Goal 1 have been adequately met.

O. The Board finds that based on studies submitted and testimony offered that the quality of air, water and land resources will be maintained by the approval of this request. The property in not located in a documented water quality problem area.

Testing has shown that the water supply to be safe as evidenced by a water lab testing report. The Board concludes that Goal 6 has been adequately addressed by the testimony provided.

P. The Board finds that the character of the area is residential in nature and that additional lands for development will assist in maintaining an adequate supply of buildable lands. The character of the area has been shown to be residential by maps in the record, testimony of the applicants representative and personal knowledge of the area.

Q. The Board finds that the matrix in the Comprehensive Plan provides a basis for determining if adequate rural levels of facilities and services are available. Testimony offered in the staff report, reports from county departments and the applicant show that the levels of services and facilities are appropriate for the proposed use.

R. The Board finds that the area has a limited potential for wildfire and the development of the property in accordance with fire mitigation plans contained in the applicable ordinance will reduce the fire potential to an acceptable level. No increase in risks from hazards will occur as a result of this development and in fact the risk of spread of a wildfire will likely decrease.

S. The Board finds that a portion of the property is located in a flood hazard area but that the design of the lots provides adequate areas for building outside of a flood hazard area.

T. The Board finds that no increased risks, expensive or complex mitigation plans, nor higher infrastructure costs will result from this request based upon the testimony given and objections raised during the hearings process. All issues have been fully discussed with opportunity to address any concerns regarding these issues.

U. The Board finds that the State Goal 12 regarding transportation has been met through the transportation plan and implementing ordinances that have been reviewed relative to this request. Testimony from JRH Transportation Engineers and the Public Works Department shows that traffic systems in the area are adequate for the proposed use.

V. The Board finds that the development of this site will be managed to conserve energy at required in State Goal 13 through the application of modern building techniques required of dwelling construction and the locational factors of the site being in close proximity to the Merlin Rural Community Boundary that will reduce the use of energy for transportation to and from this subject property.

W. The Board finds that no additional matters were raised by those in opposition so that their concerns were not taken into consideration during decision making on the subject request.

X. The Board finds that the opposition to the request stating that the site is suitable for farm or forest use is not based on facts presented into evidence that the Board finds

reliable. The Board considered testimony, letters and documents in the record at the request of opponents. The Board has examined the information submitted by the applicant to include the background documentation in the applicant's submitted request and finds that the studies for character of the area, impacts on the subject property, analysis of surrounding property, addressing all state and county goals. The Board finds testimony presented to address all the applicable criteria required by the Oregon Administrative Rules and local Comprehensive Plan are adequate and reliable enough to base a decision on these facts.

Y. The Board considered the objection to it's jurisdiction to conduct a hearing after the preliminary decision. The Board finds that the decision was not finalized as Findings of Fact were not adopted. The Board finds that the initial conditions of approval were discussed and considered without the opportunity for parties to comment on them. The Board finds that the Rural Land Development Code gives the Board wide discretion to initiate a hearing. The Board finds that all parties were given the opportunity to present additional evidence and testimony without prejudicing any parties rights and that full notice and disclosure regarding the scope of the hearing was provided. The Board further finds that the additional testimony and evidence were sufficient to address carrying capacity issues and compelled the Board to modify it's original preliminary decision.

IV. CONCLUSION:

Based upon the above evidence, findings, and applicable criteria for decision, the Board of County Commissioners concluded the Ockenden request for a Comprehensive Plan Amendment from Agriculture and Forest to Residential and a Zone Change from Farm Resource and Woodlot Resource to Rural Residential 5 for property located in the 3200 block of Hugo Road and southerly of Quartz Creek Road complies with the requirements of Josephine County and State law pertaining to such matters. The change is based on a conclusion from the evidence and testimony submitted that the property is non-resource and that such a change does not require an exception to State Goals 3 and 4 and that the codes provide for the change to Rural Residential 5 Acre.

V. DECISION:

Therefore, based on the staff report, evidence submitted into the record and testimony of witnesses, the Josephine County Board of Commissioners, upon a motion by Commissioner Ellis, seconded by Commissioner Raffenburg, and by a vote of 2-1 approved the request for a Comprehensive Plan Amendment from Forest and Farm to Residential and a Zone Change from Woodlot Resource to Rural Residential 5 Acre for property located in the 3200 block of Hugo Road southerly of Quartz Creek Road more precisely described as Assessors Map T35 R6 Section 8 Tax Lot 100.

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Adopted this 26th day of November, 2008, by the Josephine County Board of Commissioners.

JOSEPHINE COUNTY
BOARD OF COUNTY COMMISSIONERS

Dave Toler, Chair, Date

Dwight Ellis, Vice Chair, Date

Jim Raffenburg, Commissioner, Date

CERTIFICATE OF MAILING

I hereby certify that individual copies of the attached *Notice of Legislative Land Use Decision*, issued on behalf of the Josephine County Board of County Commissioners and dated **December 2, 2008**, were deposited in the United States mail on **December 2, 2008**, addressed to the following persons or organizations:

Attached Mailing List

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Grants Pass OR 97526

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BEFORE THE BOARD OF COMMISSIONERS
FOR JOSEPHINE COUNTY

Regarding	Text Amendment to add Soils to Josephine County Soil Survey Inventory	**FINDINGS OF FACT**
Applicant	Ward Ockenden	
Representative	Bob Hart	

This request came before the Josephine County Board of Commissioners February 20 at a public hearing at the request of Ward Ockenden, applicant, who proposes that the text of the Josephine County Comprehensive Plan be amended by adding Tallow box and Shefflein soils to the Soil Survey of Josephine County.

There being no objection to the authority of the Board of Commissioners to hear the matter, and no one declaring conflicts of interest, the public hearing was opened.

I. CRITERIA AND STANDARDS FOR DECISION:

CRITERIA

46.030 - PLAN AMENDMENT APPLICATION REQUIREMENTS

A. Applications to amend the text or maps of the comprehensive plan may be initiated by the Board, the Planning Commission, the Planning Director, interested agencies or individuals.

B. All applications shall be submitted on forms provided by the Planning Director and shall be accompanied by required application fees; however, requests initiated by the Board, the Planning Commission or the Planning Director shall not require fees.

C. At a minimum the application shall:

1. Identify the specific policy, inventory, map, plan or ordinance sought to be changed;

2. Explain why the change is being requested (change in circumstances, new or different information, revise incorrect or incomplete information contained in previous efforts, etc.);

3. Include the exact language required to accomplish the proposed change in the text; or, in the case of a map amendment, include a scaled zoning map precisely identifying the area and designations to be changed;

4. Include a list of all state and local goals, together with a written explanation stating why the goals do or do not apply, and if the applicant believes one or more of the goals apply, how the proposed application is consistent with the requirements of the applicable goal or goals. The Planning Director or review body may specify different state and county goals as applicable to the application.

5. In the event the proposed change relates to an inventory, data base, plan or ordinance, the application shall include the scientific and technical data, reports or other evidence prepared by an expert in that field necessary to support the change. It shall be the function of the review body to determine, based upon substantial evidence in the record, whether the particular training and experience of a witness qualifies the witness to testify as an expert. Specifically:

   a. More detailed soil data may be utilized to define classifications or characteristics of soils contained in the county's data base, provided the data is credible and attested by a certified soil scientist; and

   b. In the case of a change to a Goal 5 inventory, the application shall be accompanied by evidence demonstrating compliance with OAR 660-23, as amended, which may include one or more Economic, Social, Environmental and Energy (ESEE) analyses.

II. EVIDENCE AND FACTS

The Board of Commissioners considered the following evidence and testimony:

A. Oral testimony of Michael Snider, Josephine County Planning Director, who discussed the salient aspects of the application noting the following; the written staff report, the basis for the request and additional information regarding the effect of rainfall on soil designations.

B. Oral testimony of Bob Hart, Land Use Consultant for the applicant, who discussed a adding the soils to the inventory because of new information from the Soil Scientist for the State of Oregon and the National Resources Conservation Service, the effects of having better information in the adopted soil inventory and that the text of the soils descriptions are taken from the Jackson County Soil Survey that was completed at a later date than the Josephine County Survey.

C. Oral and written testimony of Dennis Hutchison, Certified Soil Classifier, who provided testimony on differences and similarities between the Holland and Siskiyou soils as compared to the Tallow box and Shefflein soils.

D. Oral and written testimony of Holger Sommer, testifying for himself and property owners in the Hugo area of Josephine County, who stated that he and the property owners were not opposed to the addition of the soils to the inventory as they provide better science on the

identification of soils and does not affect the Internal Rate of Return system as these soils are not being added to the IRR system that is a part of the Comprehensive Plan.

III. FINDINGS:

The Board of County Commissioners made the following Findings to justify the decision:

A. The record that was produced through the hearings before the Planning Commission and the County Commissioners provides substantial credible evidence addressing all the criteria that is applicable to this request.

B. The Board finds that the testimony of Mr. Hutchison is consistent with expert testimony he has provided in other cases and that the County considers Mr. Hutchison an expert in the soils. Mr. Hutchison is an ARCPAC certified soil classifier which further adds to his credentials as an expert in the field of soils classification.

C. The Board finds that the evidence in the record shows that there are similarities and differences between the soils in the existing soil survey and the new soils to be added. The Board finds that there is sufficient evidence to show that the Tallow box and Shefflein soils are separate soils as shown in the data presented from the Jackson County Soil Survey that was drafted and adopted after the Josephine County Soil Survey. The additional testimony from Mr. Hutchison and evidence in the record from the Oregon State Soil Scientist supports the recognition of the soils. The complete text that describes the subject soils in the Jackson County Soil Survey is found to be applicable in Josephine County as the climate, topography and soils taxonomy are similar between the two counties as evidenced in testimony before the Board.

D. The Board finds the addition of these two soils series will provide a more complete data base with the additional information that has been proposed. The new soil series were not available at the time the original documents were adopted.

IV. CONCLUSION:

Based upon the above evidence, findings, and applicable criteria for decision, the Board of Country Commissioners conclude the Ward Ockenden request to add Tallow box and Shefflein soils to the Josephine County Soil Survey which is part of the supporting data for the Josephine County Comprehensive Plan complies with the requirements of Josephine County and State law pertaining to such matters.

V. DECISION:

Therefore, based on the staff report, evidence submitted and testimony of witnesses, the Josephine County Board of Commissioners, upon a motion by Commissioner Ellis, seconded by Commissioner Raffenburg, and by a vote of 3-0 approve the addition to the Tallow box and Shefflein soils to the

database of the Josephine County Comprehensive Plan with the text as shown on attached Exhibit A.

JOSEPHINE COUNTY BOARD OF COMMISSIONERS

11/26/08
Dave Toler, Chair — Date

11/26/08
Dwight Ellis, Vice Chair — Date

11/26/08
Jim Raffenburg, Commissioner — Date

Exhibit A

Shefflein Series

The Shefflein series consists of deep, well drained soils on alluvial fans and hillslopes. These soils formed in alluvium, colluvium, and residuum derived from granitic rock. Slopes are 2 to 35 percent. The mean annual precipitation is about 32 inches, and the mean annual temperature is about 50 degrees F.

A—O to 4 inches; dark brown (7.5YR 3/2) loam, brown (1OYR 5/3) dry; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine irregular pores; moderately acid (pH 6.0); clear wavy boundary.

BA—4 to 10 inches; reddish brown (5YR 4/4) loam, light brown (7.5YR 6/4) dry; moderate fine subangular blocky structure; slightly hard, friable, sticky and slightly plastic; few medium and common very fine and fine roots; few very fine tubular pores; moderately acid (pH 6.0); clear wavy boundary.

Btl—1O to 19 inches; reddish brown (5YR 4/4) clay loam, reddish brown (5YR 5/4) dry; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine and fine and few medium roots; few very fine tubular pores; few distinct clay films on faces of peds and in pores; moderately acid (pH 6.0); clear wavy boundary.

Bt2—19 to 40 inches; reddish brown (5YR 4/4) clay loam, reddish brown (5YR 5/4) dry; strong medium and coarse subangular blocky structure; very hard, firm, sticky and plastic; common very fine and fine and few medium roots; common fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.

Bt3—40 to 56 inches; reddish brown (5YR 4/4) sandy clay loam, reddish brown (5YR 5/4) dry; moderate medium and coarse subangular blocky structure; very hard, firm, sticky and plastic; few fine roots; common fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent gravel; slightly acid (pH 6.3); diffuse wavy boundary.

Cr—56 inches; decomposed granitic rock.

The depth to bedrock is 40 to 60 inches. The particle-size control section contains 20 to 35 percent clay.
The A horizon has hue of 1OYR or 7.5YR; value of 3 or 4 moist, 5 or 6 dry; and chroma of 2 to 4 moist and dry. The Bt horizon has hue of 1OYR, 5YR, or 7.5YR; value of 3 to 5 moist, 5 to 7 dry; and chroma of 3 to 6 moist and dry. It is clay loam, loam, or sandy clay loam.

Tallowbox Series

The Tallowbox series consists of moderately deep, somewhat excessively drained soils on hillslopes and ridges. These soils formed in colluvium derived from granitic rock. Slopes are 20 to 70 percent. The mean annual precipitation is about 32 inches, and the mean annual temperature is about 50 degrees F.

Oi—1 inch to 0; leaves, needles, and twigs. A—O to 6 inches; dark brown (7.5YR 3/2) gravelly sandy loam, pale brown (1OYR 6/3) dry; strong fine granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; 15 percent gravel; slightly acid (pH 6.5); abrupt smooth boundary.

BA—6 to 12 inches; dark brown (7.5YR 3/4) sandy loam, light yellowish brown (1OYR 6/4) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium roots; common very fine and fine irregular pores; 10 percent gravel; slightly acid (pH 6.4); clear wavy boundary.

Bwl—12 to 17 inches; brown (7.5YR 4/4) gravelly sandy loam, light brown (7.5YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; 20 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

Bw2—17 to 23 inches; brown (7.5YR 4/4) gravelly sandy loam, light brown (7.5YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few roots; common very fine and fine tubular pores; 25 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

Cr—23 inches; decomposed granitic rock.

The depth to bedrock is 20 to 40 inches. The particle-size control section contains 8 to 12 percent clay and 0 to 35 percent rock fragments.

The A horizon has hue of 1OYR or 7.5YR; value of 3 or 4 moist, 4 to 6 dry; and chroma of 2 or 3 moist and dry. The Bw horizon has hue of 1OYR, 7.5YR, or 2.5Y; value of 4 or 5 moist, 5 or 6 dry; and chroma of 3 to 6 moist and dry. It is gravelly sandy loam, gravelly coarse sandy loam, or sandy loam.

Tallowbox-Shefflein

Moderately deep and deep, somewhat excessively drained and well drained soils that have a surface layer of gravelly sandy loam or loam and receive 25 to 40 inches of annual precipitation

This map unit is on hillslopes, ridges, and alluvial fans. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs. Slopes generally are 2 to 70 percent. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is about 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days.

This unit is about 55 percent Tallowbox soils and 30 percent Shefflein soils (fig. 2). The remaining 15 percent is Barron soils on alluvial fans, Clawson soils on concave slopes, and Rogue soils at elevations of more than 4,000 feet.

Tallowbox soils are moderately deep and somewhat excessively drained. The surface layer and subsoil are gravelly sandy loam.

Shefflein soils are deep and well drained. The surface layer is loam. The subsoil is clay loam and sandy clay loam.

This unit is used mainly for timber production or wildlife habitat. A few of the more gently sloping areas of the Shefflein soils are used for hay and pasture or for homesite development.

The main limitations affecting timber production are erosion, compaction, plant competition, and the slope. Seedling mortality also is a major management concern, particularly on south-facing slopes. Management that minimizes erosion is essential when timber is harvested. Site preparation is needed to ensure adequate reforestation. High-lead or other cable logging systems should be used on the steeper slopes.

Irrigation is needed in the areas used for hay and pasture. Sprinkler irrigation is the best method of applying water. This method helps to prevent excessive runoff and minimizes the risk of erosion.

The Shefflein soils are well suited to homesite development. The main limitation is moderately slow permeability.

164B—Shefflein loam, 2 to 7 percent slopes. This deep, well drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface layer is dark brown loam about 4 inches thick. The next layer is reddish brown loam about 6 inches thick. The upper 30 inches of the subsoil is reddish brown clay loam. The lower 16 inches is reddish brown sandy clay loam. Weathered bedrock is at a depth of about 56 inches. The depth to bedrock ranges from 40 to 60 inches. In some areas the surface layer is sandy loam or clay loam.

Included in this unit are small areas of Clawson and Kubli soils near drainageways and on concave slopes; Barron, Manita, and Ruch soils; and soils that are similar to the Shefflein soil but have bedrock at a depth of more than 60 inches. Also included are small areas of Shefflein soils that have slopes of more than 7 percent. Included areas make up about 20 percent of the total acreage.

Permeability is moderately slow in the Shefflein soil. Available water capacity is about 8 inches. The effective rooting depth is 40 to 60 inches. Runoff is slow, and the hazard of water erosion is moderate.

This unit is used mainly for hay and pasture, timber production, or wildlife habitat. It also is used for homesite development.

This unit is well suited to irrigated crops. It is limited mainly by the moderately slow permeability and the hazard of erosion. In summer, irrigation is needed for the maximum production of most crops. Sprinkler irrigation is the best method of applying water. This method permits an even, controlled application of water, helps to prevent excessive runoff, and minimizes the risk of erosion. Border and contour flood irrigation systems also are suitable. For the efficient application and removal of surface irrigation water, land leveling is needed. To prevent overirrigation and excessive erosion, applications of irrigation water should be adjusted to the available water capacity, the rate of water intake, and the needs of the crop. The use of pipe, ditch lining, or drop structures in irrigation ditches reduces water loss and the hazard of erosion.

Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Leaving crop residue on or near the surface helps to conserve moisture and control erosion.

A tillage pan forms easily if the soil is tilled when wet. Chiseling or subsoiling breaks up the pan. Surface crusting and compaction can be minimized by returning crop residue to the soil.

Proper stocking rates, pasture rotation, and restricted grazing during wet periods help to keep pastures in good condition and protect the soil from erosion. Grazing when the soil is wet results in compaction of the surface layer, poor tilth, and excessive runoff. Periodic mowing and clipping help to maintain uniform plant growth, discourage selective grazing, and reduce the extent of clumpy growth. Fertilizer is needed to ensure the optimum growth of grasses and legumes. Grasses respond to nitrogen, and legumes respond to sulfur and phosphorus.

This unit is well suited to homesite development. The main limitations are the moderately slow permeability and the shrink-swell potential. The moderately slow permeability can be overcome by increasing the size of the absorption field.

If buildings are constructed on this unit, properly designing foundations and footings, diverting runoff away from the buildings, and backfilling with material that has a low shrink-swell potential help to prevent the structural damage caused by shrinking and swelling. Properly designing buildings and roads helps to offset the limited ability of the soil to support a load.

Revegetating as soon as possible helps to control erosion in disturbed areas around construction sites. Topsoil can be stockpiled and used to reclaim areas disturbed during construction. Because of a low amount of rainfall in summer, irrigation is needed in areas that support lawn grasses, shrubs, vines, shade trees, or ornamental trees.

This unit is suited to the production of Douglas fir and ponderosa pine. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and western fescue.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 115. The yield at culmination of the mean annual increment is 5,280 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 56,780 board feet per acre (Scribner rule) at 110 years.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 105. The yield at culmination of the mean annual increment is 5,460 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 45,600 board feet per acre (Scribner rule) at 150 years. On the basis of a 50-year curve, the mean site index is 75.

The main limitations affecting timber production are compaction, seedling mortality, and plant competition. When timber is harvested, management that minimizes the risk of erosion is essential. Conventional methods of harvesting timber generally are suitable, but the soil may be compacted if it is moist when heavy equipment is used. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction. Ripping skid trails and landings when the soil is dry can improve the growth of plants.

Erosion can be controlled by carefully planning the construction and maintenance of logging roads, skid trails, and landings. Seeding, mulching, and benching areas that have been cut and filled also help to control erosion. Skid trails and unsurfaced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

A high temperature in the surface layer and an insufficient moisture supply in summer increase the seedling mortality rate. To compensate for the expected high mortality rate, the larger seedlings or a greater number of seedlings should be planted. When the timber is harvested, leaving some of the larger trees unharvested provides shade for seedlings. Reforestation can be accomplished by planting Douglas fir and ponderosa pine seedlings.

Undesirable plants limit natural or artificial reforestation unless intensive site preparation and maintenance measures are applied. Mulching around seedlings helps to maintain the moisture supply in summer and minimizes competition from undesirable plants.

Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Douglas Fir-Mixed Pine-Fescue Forest.

164D—Shefflein loam, 7 to 20 percent slopes. This deep, well drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic rock.

Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface layer is dark brown loam about4 inches thick. The next layer is reddish brown loam about 6 inches thick. The upper 30 inches of the subsoil is reddish brown clay loam. The lower 16 inches is reddish brown sandy clay loam. Weathered bedrock is at a depth of about 56 inches. The depth to bedrock ranges from 40 to 60 inches. In some areas the surface layer is sandy loam or clay loam or is stony.

Included in this unit are small areas of Clawson and Kubli soils near drainageways and on concave slopes; Tallowbox soils on the more sloping parts of the landscape; Barron, Manita, and Ruch soils; and soils that are similar to the Shefflein soil but have bedrock at a depth of less than 40 or more than 60 inches. Also included are small areas of Shefflein soils that have slopes of less than 7 or more than 20 percent. Included areas make up about 20 percent of the total acreage.

Permeability is moderately slow in the Shefflein soil. Available water capacity is about 8 inches. The effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is moderate or high.

This unit is used mainly for timber production or wildlife habitat. It also is used for hay and pasture and for homesite development.

This unit is suited to irrigated crops. It is limited mainly by the slope, the hazard of erosion, and the moderately slow permeability. In summer, irrigation is needed for the maximum production of most crops. Because of the slope, sprinkler irrigation is the best method of applying water. This method permits an even, controlled application of water, helps to prevent excessive runoff, and minimizes the risk of erosion. To prevent overirrigation and excessive erosion, applications of irrigation water should be adjusted to the available water capacity, the rate of water intake, and the needs of the crop.

Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Leaving crop residue on or near the surface helps to conserve moisture and control erosion.

A tillage pan forms easily if the soil is tilled when wet. Chiseling or subsoiling breaks up the pan. Surface crusting and compaction can be minimized by returning crop residue to the soil.

Seedbeds should be prepared on the contour or across the slope where practical. Proper stocking

rates, pasture rotation, and restricted grazing during wet

periods help to keep pastures in good condition and protect the soil from erosion. Grazing when the soil is wet results in compaction of the surface layer, poor tilth, and excessive runoff. Periodic mowing and clipping help to maintain uniform plant growth, discourage selective grazing, and reduce the extent of clumpy growth. Fertilizer is needed to ensure the optimum growth of grasses and legumes. Grasses respond to nitrogen, and legumes respond to sulfur and phosphorus.

The main limitations affecting homesite development are the moderately slow permeability, the shrink-swell potential, and the slope. The moderately slow permeability can be overcome by increasing the size of the absorption field.

If buildings are constructed on this unit, properly designing foundations and footings, diverting runoff away from the buildings, and backfilling with material that has a low shrink-swell potential help to prevent the structural damage caused by shrinking and swelling. Properly designing buildings and roads helps to offset the limited ability of the soil to support a load.

Erosion is a hazard on the steeper slopes. Only the part of the site that is used for construction should be disturbed. Revegetating as soon as possible helps to control erosion in disturbed areas around construction sites. Topsoil can be stockpiled and used to reclaim areas disturbed during construction. Because of a low amount of rainfall in summer, irrigation is needed in areas that support lawn grasses, shrubs, vines, shade trees, or ornamental trees.

This unit is suited to the production of Douglas fir and ponderosa pine. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and western fescue.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 115. The yield at culmination of the mean annual increment is 5,280 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 56,780 board feet per acre (Scribner rule) at 110 years.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 105. The yield at culmination of the mean annual increment is 5,460 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 45,600 board feet per acre (Scribner rule) at 150 years. On the basis of a 50-year curve, the mean site index is 75.

The main limitations affecting timber production are erosion, compaction, seedling mortality, and plant competition. When timber is harvested, management that minimizes the risk of erosion is essential. Conventional methods of harvesting timber generally are suitable, but the soil may be compacted if it is moist when heavy equipment is used. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction.

Ripping skid trails and landings when the soil is dry can improve the growth of plants.

Erosion can be controlled by carefully planning the construction and maintenance of logging roads, skid trails, and landings. Seeding, mulching, and benching areas that have been cut and filled also help to control erosion. Skid trails and unsurfaced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

A high temperature in the surface layer and an insufficient moisture supply in summer increase the seedling mortality rate. To compensate for the expected high mortality rate, the larger seedlings or a greater number of seedlings should be planted. When the timber is harvested, leaving some of the larger trees unharvested provides shade for seedlings. Reforestation can be accomplished by planting Douglas fir and ponderosa pine seedlings.

Undesirable plants limit natural or artificial reforestation unless intensive site preparation and maintenance measures are applied. Mulching around seedlings helps to maintain the moisture supply in summer and minimizes competition from undesirable plants.

Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Douglas Fir-Mixed Pine-Fescue Forest.

165E—Shefflein loam, 20 to 35 percent north slopes. This deep, well drained soil is on hillslopes. It formed in colluvium and residuum derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface layer is dark brown loam about 4 inches thick. The next layer is reddish brown loam about 6 inches thick. The upper 30 inches of the subsoil is reddish brown clay loam. The lower 16 inches is reddish brown sandy clay loam. Weathered bedrock is at a depth of about 56 inches. The depth to bedrock ranges from 40 to 60 inches. In some areas the surface layer is sandy loam or clay loam.

Included in this unit are small areas of Ruch, Vannoy, and Voorhies soils; Tallowbox soils on the more sloping parts of the landscape and on convex slopes; poorly drained soils near drainageways and on concave slopes; and soils that are similar to the Shefflein soil but have bedrock at a depth of more than 60 inches. Also included are small areas of Shefflein soils that have slopes of less than 20 or more than 35 percent. Included areas make up about 20 percent of the total acreage.

Permeability is moderately slow in the Shefflein soil. Available water capacity is about 8 inches. The effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is high.

This unit is used for timber production and wildlife habitat. It is suited to the production of Douglas fir and ponderosa pine. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and western fescue.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 110. The yield at culmination of the mean annual increment is 5,880 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 48,300 board feet per acre (Scribner rule) at 140 years. On the basis of a 50-year curve, the mean site index is 80.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 115. The yield at culmination of the mean annual increment is 5,280 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 56,780 board feet per acre (Scribner rule) at 110 years.

The main limitations affecting timber production are erosion, compaction, plant competition, and seedling mortality. When timber is harvested, management that minimizes the risk of erosion is essential. Wheeled and tracked logging equipment can be used in the less sloping areas, but cable yarding generally is safer in the more sloping areas and results in less surface disturbance. Using standard wheeled and tracked equipment when the soil is moist causes rutting and compaction. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less

damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction. Ripping skid trails and landings when the soil is dry can improve the growth of plants.

Properly designed road drainage systems that include carefully located culverts help to control erosion. Areas that have been cut and filled are easily eroded unless they are treated (fig. 11). Seeding, mulching, and benching these areas help to control erosion. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are protected by a plant cover or adequate water bars, or both. Cutbanks occasionally slump when the soil is saturated.

This unit is subject to slumping, especially in areas adjacent to drainageways. Road failure and landslides are likely to occur after road construction and clearcutting. Skid trails and unsurfaced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

Undesirable plants limit natural or artificial reforestation unless intensive site preparation and maintenance measures are applied. Reforestation can be accomplished by planting Douglas fir and ponderosa pine seedlings. Mulching around seedlings helps to maintain the moisture supply in summer and minimizes competition from undesirable plants.

A high temperature in the surface layer and an insufficient moisture supply in summer increase the seedling mortality rate. To compensate for the expected high mortality rate, the larger seedlings or a greater number of seedlings should be planted. When the timber is harvested, leaving some of the larger trees unharvested provides shade for seedlings.
Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Douglas Fir-Mixed Pine-Fescue Forest.

166E—Shefflein loam, 20 to 35 percent south slopes. This deep, well drained soil is on hillslopes. It formed in colluvium and residuum derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface layer is dark brown loam about 4 inches thick. The next layer is reddish brown loam about 6 inches thick. The upper 30 inches of the subsoil is reddish brown clay loam. The lower 16 inches is reddish brown sandy clay loam. Weathered bedrock is at a depth of about 56 inches. The depth to bedrock ranges from 40 to 60 inches. In some areas the surface layer is sandy loam or clay loam or is stony.

Included in this unit are small areas of Ruch, Vannoy, and Voorhies soils; Tallowbox soils on the more sloping parts of the landscape and on convex slopes; and soils that are similar to the Shefflein soil but have bedrock at a depth of less than 40 or more than 60 inches. Also included are small areas of poorly drained soils near drainageways and on concave slopes and Shefflein soils that have slopes of less than 20 or more than 35 percent. Included areas make up about 20 percent of the total acreage.

Permeability is moderately slow in the Shefflein soil. Available water capacity is about 8 inches. The effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is high.

This unit is used for timber production and wildlife habitat. It is suited to the production of ponderosa pine and Douglas fir. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and Idaho fescue.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 100. The yield at culmination of the mean annual increment is 4,080 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 44,640 board feet per acre (Scribner rule) at 120 years.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 100. The yield at culmination of the mean annual increment is 5,040 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 39,750 board feet per acre (Scribner rule) at 150

years. On the basis of a 50-year curve, the mean site index is 70.

The main limitations affecting timber production are erosion, compaction, seedling mortality, and plant competition. When timber is harvested, management that minimizes the risk of erosion is essential. Wheeled and tracked logging equipment can be used in the less sloping areas, but cable yarding generally is safer in the more sloping areas and results in less surface disturbance. Using standard wheeled and tracked equipment when the soil is moist causes rutting and

compaction. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction. Ripping skid trails and landings when the soil is dry can improve the growth of plants.

Properly designed road drainage systems that include carefully located culverts help to control erosion. Areas that have been cut and filled are easily eroded unless they are treated. Seeding, mulching, and benching these areas help to control erosion. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are protected by a plant cover or adequate water bars, or both. Cutbanks occasionally slump when the soil is saturated.

This unit is subject to slumping, especially in areas adjacent to drainageways. Road failure and landslides are likely to occur after road construction and clearcutting. Skid trails and unsurfaced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

A high temperature in the surface layer and an insufficient moisture supply in summer increase the seedling mortality rate. To compensate for the expected high mortality rate, the larger seedlings or a greater number of seedlings should be planted. When the timber is harvested, leaving some of the larger trees unharvested provides shade for seedlings. The seedling mortality rate also can be reduced by providing artificial shade for seedlings. Reforestation can be accomplished by planting Douglas fir and ponderosa pine seedlings.

Undesirable plants limit natural or artificial reforestation unless intensive site preparation and maintenance measures are applied (fig. 12). Mulching around seedlings helps to maintain the moisture supply in summer and minimizes competition from undesirable plants.

Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Mixed Pine-Douglas Fir-Fescue Forest, Granitic.

188E—Tallowbox gravelly sandy loam, 20 to 35 percent north slopes. This moderately deep, somewhat excessively drained soil is on hillslopes and ridges. It formed in colluvium derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface is covered with a layer of needles, leaves, and twigs about 1 inch thick. The surface layer is dark brown gravelly sandy loam about 6 inches thick. The upper 6 inches of the subsoil is dark brown sandy loam. The lower 11 inches is brown gravelly sandy loam. Weathered bedrock is at a depth of about 23 inches. The depth to bedrock ranges from 20 to 40 inches.

Included in the unit are small areas of Offenbacher, Shefflein, and Vannoy soils; Cans and Voorhies soils on the more sloping parts of the landscape; Ruch soils on toe slopes; poorly drained soils near drainageways and on concave slopes; and soils that are similar to the Tallowbox soil but have bedrock at a depth of less than 20 or more than 40 inches. Also included are small areas of Tallowbox soils that have slopes of less than 20 or more than 35 percent. Included areas make up about 15 percent of the total acreage.

Permeability is moderately rapid in the Tallowbox soil. Available water capacity is about 3 inches. The effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is high.

This unit is used for timber production and wildlife habitat. It is suited to the production of Douglas fir and ponderosa pine. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes creambush oceanspray, common snowberry, and tall Oregon grape.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 100. The yield at culmination of the mean annual increment is 5,040 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 39,750 board feet per acre (Scribner rule) at 150 years. On the basis of a 50-year curve, the mean site index is 70.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 100. The yield at culmination of the mean annual increment is 4,080 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 44,640 board feet per acre (Scribner rule) at 120 years.

The main limitations affecting timber production are erosion, compaction, plant competition, and seedling mortality. Also, the bedrock restricts root growth. As a result, windthrow is a hazard.

When timber is harvested, management that minimizes the risk of erosion is essential. Wheeled and tracked logging equipment can be used in the less sloping areas, but cable yarding generally

is safer in the more sloping areas and results in less surface disturbance. Using standard wheeled and tracked equipment when the soil is moist causes rutting and compaction. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction. Ripping skid trails and landings when the soil is dry can improve the growth of plants.

Properly designed road drainage systems that include carefully located culverts help to control erosion. Areas that have been cut and filled are easily eroded unless they are treated. Seeding, mulching, and benching these areas help to control erosion. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are protected by a plant cover or adequate water bars, or both. Cutbanks occasionally slump when the soil is saturated.

This unit is subject to slumping, especially in areas adjacent to drainageways. Road failure and landslides are likely to occur after road construction and clearcutting. Skid trails and unsurfaced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

Undesirable plants limit natural or artificial reforestation unless intensive site preparation and maintenance measures are applied. Reforestation can be accomplished by planting Douglas fir and ponderosa pine seedlings. Mulching around seedlings helps to maintain the moisture supply in summer and minimizes competition from undesirable plants.

A high temperature in the surface layer during summer and the low available water capacity increase the seedling mortality rate. To compensate for the expected high mortality rate, the larger seedlings or a greater number of seedlings should be planted. When the timber is harvested, leaving some of the larger trees unharvested provides shade for seedlings.

Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Douglas Fir Forest.

189E—Tallowbox gravelly sandy loam, 20 to 35 percent south slopes. This moderately deep, somewhat excessively drained soil is on hillslopes and ridges. It formed in colluvium derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface is covered with a layer of needles, leaves, and twigs about 1 inch thick. The surface layer is dark brown gravelly sandy loam about 6 inches thick. The upper 6 inches of the subsoil is dark brown sandy loam. The lower 11 inches is brown gravelly sandy loam. Weathered bedrock is at a depth of about 23 inches. The depth to bedrock ranges from 20 to 40 inches.

Included in the unit are small areas Offenbacher and Vannoy soils, soils that are similar to the Tallowbox soil but have bedrock at a depth of less than 20 or more than 40 inches, Cans and Voorhies soils on the more sloping parts of the landscape, Ruch soils on toe slopes, and poorly drained soils near drainageways and on concave slopes. Also included are small areas of Tallowbox soils that have slopes of less than 20 or more than 35 percent. Included areas make up about 15 percent of the total acreage.

Permeability is moderately rapid in the Tallowbox soil. Available water capacity is about 3 inches. The effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is high.

This unit is used for timber production and wildlife habitat. It is suited to the production of ponderosa pine and Douglas fir. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and Idaho fescue.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 90. The yield at culmination of the mean annual increment is 3,400 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 37,960 board feet per acre (Scnibner rule) at 130 years.

On the basis of a 100-year site curve, the mean site index for Douglas fir is 90. The yield at culmination of the mean annual increment is 4,200 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 31,840 board feet per acre (Scribner rule) at 160 years. On the basis of a 50-year curve, the mean site index is 60.

The main limitations affecting timber production are erosion, compaction, seedling mortality, and plant competition. Also, the bedrock restricts root growth. As a result, windthrow is a hazard.

When timber is harvested, management that minimizes the risk of erosion is essential. Wheeled and tracked logging equipment can be used in the less sloping areas, but cable yarding generally

is safer in the more sloping areas and results in less surface disturbance. Using standard wheeled and tracked equipment when the soil is moist causes rutting and compaction. Puddling can occur when the soil is wet. Using low-pressure ground equipment causes less damage to the soil and helps to maintain productivity. Compaction can be minimized by using suitable methods of harvesting, laying out skid trails in advance, and harvesting timber when the soil is least susceptible to compaction. Ripping skid trails and landings when the soil is dry can improve the growth of plants.

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Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Mixed Pine-Douglas Fir-Fescue Forest, Granitic.

189G—Tallowbox gravelly sandy loam, 35 to 60 percent south slopes. This moderately deep, somewhat excessively drained soil is on hillslopes. It formed in colluvium derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

Typically, the surface is covered with a layer of needles, leaves, and twigs about 1 inch thick. The surface layer is dark brown gravelly sandy loam about 6 inches thick. The upper 6 inches of the subsoil is dark brown sandy loam. The lower 11 inches is brown gravelly sandy loam. Weathered bedrock is at a depth of about 23 inches. The depth to bedrock ranges from 20 to 40 inches.

Included in this unit are small areas of Cans, Offenbacher, Vannoy, and Voorhies soils on concave slopes or on the less sloping parts of the landscape; soils that are similar to the Tallowbox soil but have bedrock at a depth of less than 20 or more than 40 inches; and Tallowbox soils that have slopes of less than 35 or more than 70 percent. Included areas make up about 15 percent of the total acreage.

Permeability is moderately rapid in the Tallowbox soil. Available water capacity is about 3 inches. The effective rooting depth is 20 to 40 inches. Runoff is rapid, and the hazard of water erosion is high.

This unit is used for timber production and wildlife habitat. It is suited to the production of ponderosa pine and Douglas fir. Other species that grow on this unit include incense cedar, sugar pine, and Pacific madrone. The understory vegetation includes deerbrush, tall Oregon grape, and Idaho fescue.

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The main limitations affecting timber production are the slope, erosion, compaction, seedling mortality, and plant competition. Also, the bedrock restricts root growth. As a result, windthrow is a hazard.

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This unit is subject to slumping, especially in areas adjacent to drainageways. Road failure and landslides are likely to occur after road construction and clearcutting.

Constructing logging roads on the steeper slopes can result in a high risk of erosion. Building the roads at midslope requires extensive cutting and filling and removes land from production. Material that is discarded when the roads are built can damage vegetation and is a potential source of sedimentation. If the material becomes saturated, avalanches of debris can occur. End hauling of the waste material minimizes damage to the vegetation downslope and reduces the risk of sedimentation. Skid trails and unsurf aced roads may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use.

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The vegetative site is Mixed Pine-Douglas Fir-Fescue Forest, Granitic.

188G—Tallowbox gravelly sandy loam, 35 to 70 percent north slopes. This moderately deep, somewhat excessively drained soil is on hillslopes. It formed in colluvium derived from granitic rock. Elevation is 1,000 to 4,000 feet. The mean annual precipitation is 25 to 40 inches, the mean annual temperature is 46 to 54 degrees F, and the average frost-free period is 100 to 160 days. The native vegetation is mainly conifers and hardwoods and an understory of grasses, shrubs, and forbs.

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On the basis of a 100-year site curve, the mean site index for Douglas fir is 100. The yield at culmination of the mean annual increment is 5,040 cubic feet per acre in a fully stocked, even-aged stand of trees at 60 years and 39,750 board feet per acre (Scribner rule) at 150 years. On the basis of a 50-year curve, the mean site index is 70.

On the basis of a 100-year site curve, the mean site index for ponderosa pine is 100. The yield at culmination of the mean annual increment is 4,080 cubic feet per acre in a fully stocked, even-aged stand of trees at 40 years and 44,640 board feet per acre (Scribner rule) at 120 years. The main limitations affecting timber production are the slope, erosion, compaction, plant competition, and seedling mortality. Also, the bedrock restricts root growth. As a result, windthrow is a hazard.

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Increased erosion, loss of plant nutrients, and water repellency are likely to result from fires of moderate intensity.

The vegetative site is Douglas Fir Forest.

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability		Pears		Winter wheat		Corn silage		Barley		Pasture		Grass-legume hay	
	N	I	N	I	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	Tons	Tons	Bu	Bu	AUM*	AUM*	Tons	Tons
164B---------- Shefflein	IVe	IIe	---	14	---	45	---	---	---	35	2	13	2.0	5
164D---------- Shefflein	IVe	IVe	---	14	---	---	---	---	---	---	2	10	2.0	4.0
165E, 166E------ Shefflein	VIe	---	---	---	---	---	---	---	---	---	2	---	---	---
188E---------- Tallowbox	VIe	---	---	---	---	---	---	---	---	---	---	---	---	---
188G---------- Tallowbox	VIIe	---	---	---	---	---	---	---	---	---	---	---	---	---
189E---------- Tallowbox	VIe	---	---	---	---	---	---	---	---	---	---	---	---	---
189G---------- Tallowbox	VIIe	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 6.--CHARACTERISTIC PLANT COMMUNITIES--Continued

Soil name and map symbol	Vegetative site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight*		
			Lb/acre		Pct
164B, 164D, 165E--- Shefflein	Douglas Fir-Mixed Pine-Fescue Forest.	Favorable	---	Common snowberry----------	10
		Normal	---	Douglas fir----------	5
		Unfavorable	---	Sugar pine----------	5
				California black oak----------	5
				Tall Oregon grape----------	5
				Western fescue----------	5
				Mountain brome----------	5
				Baldhip rose----------	5
166E----------	Mixed Pine-Douglas Fir-Fescue Forest, Granitic.	Favorable	---	Idaho fescue----------	20
Shefflein		Normal	---	Deerbrush----------	10
		Unfavorable	---	Douglas fir----------	5
				Whiteleaf manzanita----------	5
				California fescue----------	5
188E, 188G----------	Douglas Fir Forest----------	Favorable	---	Creambush oceanspray----------	15
Tallowbox		Normal	---	Common snowberry----------	10
		Unfavorable	---	Douglas fir----------	5
				California black oak----------	5
				Tall Oregon grape----------	5
				Poison oak----------	5
				Western fescue----------	5
				California brome----------	5
				Baldhip rose----------	5
189E, 189G----------	Mixed Pine-Douglas Fir-Fescue Forest, Granitic.	Favorable	---	Idaho fescue----------	20
Tallowbox		Normal	---	Deerbrush----------	10
		Unfavorable	---	Douglas fir----------	5
				Whiteleaf manzanita----------	5
				California fescue----------	5

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Management concerns				Potential productivity			Trees to plant
	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index*	Productivity class**	
164B, 164D--Shefflein	Slight	Moderate	Slight	Moderate	Ponderosa pine	115	9	Ponderosa pine, Douglas fir.
					Douglas fir	75	6	
					Pacific madrone	---	---	
					California black oak	---	---	
165E--Shefflein	Moderate	Moderate	Slight	Moderate	Douglas fir	80	7	Douglas fir, ponderosa pine.
					Ponderosa pine	115	9	
					Sugar pine	---	---	
					Pacific madrone	---	---	
166E--Shefflein	Moderate	Severe	Slight	Moderate	Ponderosa pine	100	7	Ponderosa pine, Douglas fir.
					Douglas fir	70	6	
					Pacific madrone	---	---	
					California black oak	---	---	
188E--Tallowbox	Moderate	Moderate	Moderate	Moderate	Douglas fir	70	6	Douglas fir, ponderosa pine.
					Ponderosa pine	100	7	
					Pacific madrone	---	---	
					Sugar pine	---	---	
188G--Tallowbox	Severe	Moderate	Moderate	Moderate	Douglas fir	70	6	Douglas fir, ponderosa pine.
					Ponderosa pine	100	7	
					Pacific madrone	---	---	
					Sugar pine	---	---	
189E--Tallowbox	Moderate	Severe	Moderate	Moderate	Ponderosa pine	90	6	Ponderosa pine, Douglas fir.
					Douglas fir	60	3	
					Pacific madrone	---	---	
					California black oak	---	---	
189G--Tallowbox	Severe	Severe	Moderate	Moderate	Ponderosa pine	90	6	Ponderosa pine, Douglas fir.
					Douglas fir	60	3	
					Pacific madrone	---	---	
					California black oak	---	---	

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
164D---------- Shefflein	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight----------	Moderate: slope.
165E, 166E---------- Shefflein	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
164B---------- Shefflein	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones, percs slowly.	Slight----------	Slight.
188E, 188G, 189E, 189G---------- Tallowbox	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.

TABLE 9.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
164B---------- Shafflein	Slight---------	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: low strength, shrink-swell.	Slight.
164D---------- Shafflein	Moderate: slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Moderate: low strength, slope, shrink-swell.	Moderate: slope.
165E, 166E-------- Shafflein	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
188E, 188G, 189E, 189G---------- Tallowbox	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

TABLE 10.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
164B---------- Shefflein	Severe: perms slowly.	Moderate: depth to rock, slope.	Severe: depth to rock.	Moderate: depth to rock.	Fair: depth to rock, too clayey.
164D---------- Shefflein	Severe: perms slowly.	Severe: slope.	Severe: depth to rock.	Moderate: depth to rock, slope.	Fair: depth to rock, too clayey, slope.
165E, 166E---------- Shefflein	Severe: perms slowly, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: slope.
188E, 188G, 189E, 189G---------- Tallowbox	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: depth to rock, small stones, slope.

TABLE 11.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
164B---------- Shefflein	Fair: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
164D---------- Shefflein	Fair: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, slope.
165E, 166E---------- Shefflein	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
188E, 188G, 189E, 189G---------- Tallowbox	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.

TABLE 12.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
164B---------- Shefflein	Moderate: depth to rock, slope.	Moderate: thin layer.	Deep to water	Slope----------	Favorable-------	Favorable.
164D, 165E, 166E-- Shefflein	Severe: slope.	Moderate: thin layer.	Deep to water	Slope----------	Slope----------	Slope.
188E, 188G, 189E, 189G---------- Tallowbox	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty.	Slope, depth to rock.	Slope, droughty, depth to r

TABLE 12.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
164B---------- Shefflain	Moderate: depth to rock, slope.	Moderate: thin layer.	Deep to water	Slope----------	Favorable------	Favorable.
164D, 165E, 166E-- Shefflain	Severe: slope.	Moderate: thin layer.	Deep to water	Slope----------	Slope----------	Slope.
188E, 188G, 189E, 189G---------- Tallowbox	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty.	Slope, depth to rock.	Slope, droughty, depth to r

TABLE 12.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
164B---------- Shefflein	Moderate: depth to rock, slope.	Moderate: thin layer.	Deep to water	Slope----------	Favorable------	Favorable.
164D, 165E, 166E-- Shefflein	Severe: slope.	Moderate: thin layer.	Deep to water	Slope----------	Slope----------	Slope.
188E, 188G, 189E, 189G---------- Talloubox	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty.	Slope, depth to rock.	Slope, droughty, depth to r

TABLE 13.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
164B, 164D, 165E, 166E---------- Shefflein	0-10	Loam----------	ML, CL-ML, CL	A-4	0	90-100	80-100	65-80	50-65	15-25	NP-10
	10-56	Loam, clay loam, sandy clay loam.	CL, SC	A-6	0	90-100	80-100	75-95	40-70	30-35	15-20
	56	Weathered bedrock	---	---	---	---	---	---	---	---	
188E, 188G, 189E, 189G---------- Tallowbox	0-6	Gravelly sandy loam.	SM	A-2, A-1	0	85-100	60-75	35-55	15-30	---	NP
	6-23	Gravelly sandy loam, sandy loam, gravelly coarse sandy loam.	SM	A-2, A-1	0-15	75-100	60-85	35-65	15-35	---	NP
	23	Weathered bedrock	---	---	---	---	---	---	---	---	--

TABLE 14.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	g/cc	In/hr	In/in	pH				Pct
164B, 164D, 165E, 166E	0-10	8-15	1.20-1.30	2.0-6.0	0.14-0.17	5.6-6.5	Low	0.15	3	2-4
Shefflein	10-56	20-35	1.30-1.50	0.2-0.6	0.14-0.17	5.6-6.5	Moderate	0.24		
	56	---	---	---	---	---	---	---		
188E, 188G, 189E, 189G	0-6	8-12	1.40-1.60	2.0-6.0	0.07-0.12	5.6-6.5	Low	0.15	2	1-3
Tallowbox	6-23	8-12	1.40-1.60	2.0-6.0	0.07-0.09	5.1-6.5	Low	0.28		
	23	---	---	---	---	---	---	---		

TABLE 15.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
164B, 164D, 165E, 166E-- Sheffield	B	None	---	---	>6.0	---	---
188E, 188G, 189E, 189G-- Tallowbox	C	None	---	---	>6.0	---	---

TABLE 16.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness		Uncoated steel	Concrete
	In		In				
164B, 164D, 165E, 166E--Shefflein	40-60	Soft	---	---	---	Moderate	Moderate.
188E, 188G, 189E, 189G--Tellowbox	20-40	Soft	---	---	---	Moderate	Moderate.

CERTIFICATE OF MAILING

I hereby certify that individual copies of the attached *Notice of Legislative Land Use Decision*, issued on behalf of the Josephine County Board of County Commissioners and dated **December 2, 2008**, were deposited in the United States mail on **December 2, 2008**, addressed to the following persons or organizations:

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Plan Amendment Specialist
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Attached Mailing List

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Josephine County, Oregon

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TO: Mara Ulloa	DATE: December 2, 2008	# of Pgs ▶ 36*
DEPT: DLCD/Plan Amendments	FROM: ANNE INGALLS	
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* Number of pages includes this fax cover

COMMENT:

Re: An amendment to the Josephine County Comprehensive Plan at the Soils Inventory (Soil Survey for Josephine County, Oregon by the Natural Resource Conservation Service) by adding new mapping unit descriptions, tables data for the Schefflein and Tallowbox Soils Series and an amendment to the Josephine County Comprehensive Plan (Ordinance 81-11, as amended) by changing the designations from Forest and Agriculture to Residential and amending the Zoning Map of Josephine County (Ordinance 85-1, as amended) from Woodlot Resource (WR) and Farm Resource (FR) to Rural Residential - 5 Acre minimum (RR-5) for 157.93 acres located in the 3200 block of Hugo Road. Property Owner: Ward Ockenden.

Mara:
Attached are the following documents for the above noted matter:

1. *Notice of Legislative Land Use Decisions/Certificate of Mailings dated 12/2/08;*
2. *Mailing list;*
3. *Ordinances 2008-002 and 2008-003, unsigned; and*
4. *DLCD Notice of Adoption dated 12/2/08.*

I have not included the copy of *Exhibit A* for the Findings for the soils as it is quite lengthy, but that is included in the mail. Should you have any questions, please do not hesitate to call. Thank you.

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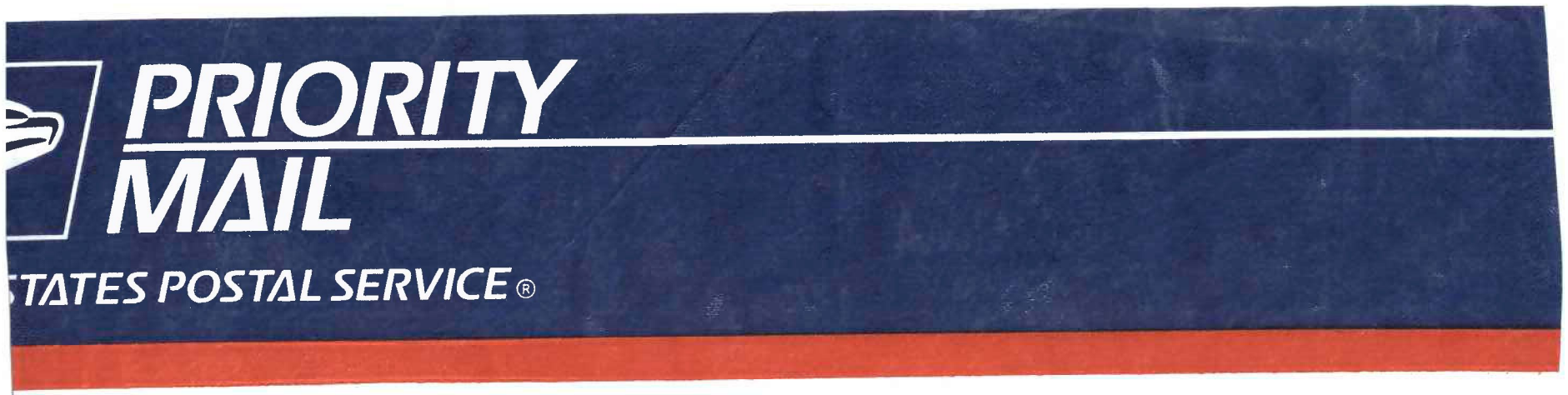

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