MEMORANDUM

DATE: June 26, 2019

TO: Deschutes County Planning Commission

FROM: Nick Lelack, Director
Peter Gutowsky, Planning Manager
Zechariah Heck, Associate Planner

RE: Staff Response to Issues Raised at Public Hearings

The purpose of this memorandum is to respond to two issues raised at the Planning Commission’s June 13, 2019 public hearing on the proposed Nonprime Resource (NPR) Lands Comprehensive Plan amendments regarding the proposed NPR-20 designation.

1. Reasons for the proposed amendments:

   a. Deschutes County’s Comprehensive Plan Policy 2.2.4: Develop policies to provide clarity on when and how EFU parcels can be converted to other designations.

   b. In 2013, during the Department of State Lands (DSL) process to re-designate 340 acres of agricultural land to non-resource land in Section 11, the Department of Land Conservation and Development (DLCD) requested Deschutes County develop and adopt non-resource lands policies to provide a regulatory framework to guide future resource land re-designation quasi-judicial decisions.

   c. The Land Conservation and Development Commission (LCDC) has not adopted Oregon Administrative Rules for non-resource lands designations that do not utilize the process in ORS 215.788-794 (Big Look).¹

LCDC’s 2017-19 Policy Agenda, Ongoing Projects from the 2015-2017 Biennium,

Non-Resource/Other Resource Lands:
“Consider development of a non-resource/other resource lands policy that is integrated with resource lands protection strategies, including consideration of carrying capacity, environmental and habitat protection, infrastructure requirements and availability, and other factors. There are currently no standards to guide counties in identifying and zoning lands which do not meet the definition of agricultural or forest resource lands. To date, several stakeholder conversations have helped further define the issue. State agencies, in particular, are identifying issues of mutual interest.” Highlights added.

In 2015, Deschutes County submitted a letter to DLCD Director Jim Rue requesting the agency initiate rulemaking to establish such standards to provide guidance to Deschutes County. In a June 3, 2019 DLCD meeting with County

¹ LCDC has also not adopted OARs to implement ORS 215.788-794.
staff, DLCD invited the County to resubmit the 2015 letter as LCDC is now preparing its 2019-2021 biennium work plan.

Deschutes County’s current proposal aims to fill the void of state rules, a recognized deficiency, to provide guidance to future Deschutes County applicants, decision makers, and interested parties.

d. The County has received nine (9) applications to re-designate resource lands to non-resource lands over the past 15 years. Six (6) have been approved (two and the largest by the State of Oregon’s DSL), one (1) denied, two (2) are pending on appeal, and one (1) was denied by a Hearings Officer and not considered by the Board of County Commissioners. In addition, staff frequently receives inquiries from property owners, such as the statements made to the Planning Commission on June 13, 2019, regarding a process and standards to guide the application and decision making process to re-designate resource lands to non-resource lands.

The County’s current proposal aims to provide clarity on the process and standards to applicants, decision makers, and interested parties. The County has sought such clarity from the State for at least the past decade as demonstrated in the record. If the Legislature and/or LCDC adopts non-resource lands statutes, policies, and/or rules, the County will update its Comprehensive Plan and code to ensure consistency.

2. Central Oregon LandWatch (COLW) stated in written and oral testimony the County’s intent is to re-designate resource lands to nonprime resource lands (beyond the six residually committed areas) and/or to increase the eligibility of resource lands to qualify for nonprime resource land designations, utilizing the NPR-20 zone. Based on this claim, COLW has provided extensive testimony regarding the procedural errors and statutes that must be addressed to achieve this outcome.

This is not the County’s proposal or intent. COLW has provided no basis for these claims. The reasons for the current proposal are summarized above and in the draft findings. Therefore, staff will not respond to the rest of COLW’s testimony.

---

2 This does not include Goal 3 Exception applications to re-designate resource to non-resource lands.
TO: MR. Zecharia Heck  
ASSOC. PLANNER  
COUNTY PLANNING  
541-385-3202  

FROM: RICHARD SPRINGER  
(530) 809-0271  

SUBJECT: WRITTEN TESTIMONY  
FOR PLANNING COMMISSION HEARING  
WED. 6/26/2009. "NON-PRIME RESOURCE LAND"  

# OF PAGES, INCLUDING COVER: 29  

URGENT FOR IMMEDIATE PICK-UP. THANKS!!
June 22, 2019

Deschutes County Planning Commission
Mr. Peter Gutowsky, AICP, Planning Manager
Mr. Zackariah Heck, Associate Planner

Dear Sirs/Madams:

This letter is a formal request for consideration to be added to the six areas that had been partially planned before the county designated farmland in the "70ies. The basis for this request also is because our property itself has very poor soil and is too rocky to farm and too small for major, profitable grazing. And, to my knowledge, was purchased on or before the six properties under consideration. In fact, these properties are split zoned, 3 acres in the City and 27 in the County. In fact, our deeds reference the lots of Skyview Terrace in their verbiage which was the subdivision which my late father was planning on building out when he purchased these properties in 1971.

In 2004, Mr. Damian Symak, Bend City Planning, advised us not to spend money to correct the split zoning issue because our properties, 24285 Dove Lane, Bend, OR 97702, would be brought into the City's next UGB expansion in 2008. From 2004 until 2008, we spent thousands of dollars for initial preparation for the properties to be developed. This included installing power/electricity and water through Avion along the entire eastern boundary of the properties. Attached are the plot/site maps performed by Tye Engineering in 2005 and 2007.

In 2008, these properties were identified to be brought into the Urban Growth Boundary. And, they were! However, they were dropped out in the remand process. I was at the majority of the planning meetings and witnessed Bend City Planning's response to LCDC during the last meeting which, I feel, is the primary reason that the original plan was denied. Attached are County maps depicting our properties status with the inclusion into the UGB in 2008 and the exclusion/retraction in 2016. These maps highlight our frustrations because they exemplify the out right manipulation taken to exclude our properties from going
into the UGB. The most notable is establishing the new border of the UAR portion along our northern property line! We have now become an island with Harold Marken directly to the east of us, between/among the City/UGB and County five acre parcels. The exception, however, are the two houses and forty-acre parcel owned by Central Oregon Irrigation District.

My late father, Albert R. Springer, purchased these 30 acres in 1971 which were originally part of the Skyview Terrace subdivision, and had plans to build out that subdivision. Subsequently, the City of Bend established new criteria, later modified by the State's SB 100, which changed the true nature of the intended use of the 21285 Dove Lane properties, Bend, OR., based upon 10 or fewer acres by the City, and 10 or more acres as determined by SB100 (State). This also begs our original concern in 1971 as well as with this proposed zoning change, "What about 30 acres, in our case split zoned, which is ABSOLUTELY ABHORRENT AG LAND, rocky terrain, poor soil and too small for profitable pursuits!

These properties are barren. rock bound. They are anything but farmland. I know because I have tried to utilize the current EFU criteria for the last 19 years in order to maintain the deferred tax base so that we do not lose the properties due to excessive taxes! On average, we lose $8-10,000 per year attempting mandated, agricultural activities needed to show our $3,000 income and in order to protect our existing water rights. The projected, net profit for the last two years was estimated to be a negative $35,000, in cash outlay! This is due to my last attempt for redemption through these arcane, discriminating laws, was to grow grass hay on most of the acreage covered by the water rights.

In this new project, we did not consider just how rocky and bad the soil is to farm. After spending $25,000 plus for a PIVOT irrigation system, the person seeding the project, Dr. Brian Laport, Ph. D. in Ag (soils expert), told me unconditionally that that the land was not only too rocky with limited prime top soil, but that he wouldn't even recommend it for grazing because 30 acres will not support that activity. The individual who thought he could make a little profit also told me that he will not attempt the grass hay after this year because the terrain is too rocky and tearing up his equipment.

These properties were initially identified and partially built-out as the Skyview Terrace subdivision. To that effect, we have been holding on as best possible!
Dad died in 1994 and Mom in 1999. We all have (had) been exasperated and frustrated. The late, Mr. Bill Tye, a personal friend, with whom I attended Bend Sr. High, tried to farm these properties in the late ’70ies. He gave up because of the rocky, soil conditions as well. He also advised us and drew our plot maps for development in the early 2000’s.

In conclusion, Bratton Appraisal Group, LLC, estimated the Dove Lane properties’ value if in the UGB to be $145,000 to $195,000 per acre. That was in 2004! Property within the UGB, 625 hundred feet southwest of us, sold recently, 2017, for $1,375,000 for 9.3 acres. They developed and sold over 40 homes in less than a year and a half.

So, one can appreciate our concerns about being included in your new designation. At age 75, our health is waning, and our monetary extravagances on a seemingly endless project is waning at best. The family has dealt with this for 48 years.

I have included various documents to substantiate my letter and highlight the information addressed. I shall be happy to address/answer questions accordingly. Our hiatus over the last 10 years in pursuing remedies to our situation has been greatly affected by death, illness and concomitating issues, therein.

Thank you for your time and consideration. And, special thanks to Mr. Gutowsky for his enduring patience over the years in trying to alleviate these travesties for the betterment of our communities.

Sincerely,

Richard L. & Georgia A. Springer

Springer Family Trust
For no consideration, RICHARD L. SPRINGER and GEORGIA A. SPRINGER, husband and wife, with right of survivorship, convey and warrant to RICHARD L. SPRINGER and GEORGIA A. SPRINGER, as Trustees of the Springer Family Trust dated May 14, 2007, all of Grantors’ interest in all that real property situated in Deschutes County, State of Oregon, described as follows:

PARCEL 1: The Southeast Quarter of the Northwest Quarter (SE¼NW¼) of Section Two (2), Township Eighteen (18) South, Range Twelve (12) E.W.M., Deschutes County, Oregon, EXCEPTING THEREFROM a tract described as follows: A portion of the SE¼NW¼ of Section 2, Township 18 South, Range 12 E.W.M., described as follows: Beginning at the Northwest corner of the SE¼NW¼ of Section 2, Township 18 South, Range 12; thence South 89 degrees 34' 20" East 219.75 feet to a point; thence South 70 degrees 26' 30" West 267.33 feet to a point; thence North 0 degrees 15' 10" East 153.06 feet to the point of beginning.

PARCEL 2: That portion of the Southwest Quarter of the Northwest Quarter (SW¼NW¼) of Section Two (2), Township Eighteen (18) South, Range Twelve (12) E.W.M., Deschutes County, Oregon, lying Easterly from the Easterly boundary of the Plat of Skyview Terrace. ALSO Lots Two (2), Three (3), Four (4), Five (5), Six (6), Seven (7), Eight (8), Nine (9), Ten (10) and Eleven (11) of Block One (1); Lots Two (2), Three (3), Four (4), Five (5), Six (6), Nine (9), Ten (10) and Eleven (11), Twelve (12), Thirteen (13), and Fourteen (14) in Block Two (2); Lots One (1), Two (2), Three (3), Four (4), Five (5), Six (6) and Seven (7) in Block Three (3); and Lots One (1), Two (2), Three (3), Four (4), Five (5), Six (6) and Seven (7) in Block Four (4).
(3), Four (4), Five (5) and Six (6) in Block Four (4), all in SKYVIEW TERRACE, Deschutes County, Oregon.

PARCEL 3: The Southeast Quarter of the Northwest Quarter (SE1/4NW1/4) of Section Two (2), Township Eighteen (18) South, Range Twelve (12), East of the Willamette Meridian, Deschutes County, Oregon, excepting therefrom a tract described as follows:

A portion of the SE1/4NW1/4 of Section 2, Township 18 South, Range 12, East of the Willamette Meridian, described as follows:

Beginning at the Northwest corner of the SE1/4NW1/4 of Section 2, Township 18 South, Range 12, East of the Willamette Meridian; thence South 89°34'20" East 219.75 feet to a point; thence South 70°26'30" West 267.33 feet to a point; thence North 0°15'10" East 153.06 feet to the point of beginning, also except therefrom the South 410 feet.

Together with that portion of the Southwest Quarter of the Northwest Quarter (SW1/4NW1/4) of Section Two (2), Township Eighteen (18) South, Range Twelve (12), East of the Willamette Meridian, Deschutes County, Oregon, lying Easterly from the Easterly boundary of the Plat of Skyview Terrace, except therefrom the South 410 feet.

It is Grantors' intent to transfer any and all interest of the Grantors in the property described above to the Springer Family Trust.

Executed on May 18, 2007, at Chico, California.
STATE OF CALIFORNIA

COUNTY OF BUTTE

On May 14, 2007, before me, Sara J. Ellis, Notary Public, personally appeared RICHARD L. SPRINGER and GEORGIA A. SPRINGER, personally-known-to-me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument they executed the instrument.

WITNESS my hand and official seal.

Sara J. Ellis
NOTARY PUBLIC
TO: MR. Zecharia Heek
Assoc. Planner
County Planning
541-385-3202

FROM: RICHARD SPRINGER
(530) 809-0271

SUBJECT: WRITTEN TESTIMONY
for Planning Commission Hearing
Wed. 6/26/2009 - "Homestead Resource Land"

# of Pages, including Cover: 9-16

URGENT FOR IMMEDIATE PICK-UP. THANKS!!
Opportunity Areas
1 - Bend Central District
2 - East Downtown
3 - Inner Hwy 20 / Greenwood
4 - Central West Side / Century Drive
5 - KorPine
6 - Juniper Ridge
7 - SE 15th Street
8 - COID Property
9 - River Rim

Expansion Areas
10 - Northeast
11 - East Hwy 20
12 - DSL Property
13 - The Elbow
14 - The Thumb
15 - Southwest
16 - West
17 - Shevlin
18 - OB Riley
19 - North Triangle

Legend
- Expansion Areas
- Opportunity Areas
- Urban Growth Boundary

0 0.5 1 Miles
NORTH
Bend UGB
2016

Opportunity Areas
1 - Bend Central District
2 - East Downtown
4 - Inner Hwy 20 / Greenwood
4 - Central West Side / Century Drive
5 - KorPine
6 - Juniper Ridge
7 - SE 15th Street
8 - COID Property
9 - River Rim

Expansion Areas
10 - Northeast
11 - East Hwy 20
12 - DSL Property
13 - The Elbow
14 - The Thumb
15 - Southwest
16 - West
17 - Shevlin
18 - OB Riley
19 - North Triangle

Legend
Expansion Areas
Opportunity Areas
Urban Growth Boundary

0 0.5 1 Miles
NORTH
Deschutes County Property Information - Dial

Road Map

Map and Taxlot: 1812020001003

Deschutes County GIS

Deschutes County Property Information Report, page 8 (For Report Disclaimer see page 1)
REMEMBER 2016

ORIGINAL 2008 UGB PROPOSAL

Deschutes County GIS.
Zechariah Heck

From: Tim Berg
Sent: Tuesday, June 25, 2019 10:47 AM
To: Zechariah Heck
Cc: cdd-webmaster
Subject: RE: Form submission from: Contact Deschutes County

Zech,

This was submitted via the form on the website. Can you respond to Richard and assist him with submitting his testimony for the Planning Commission regarding Non-prime Resource Lands?

Thanks,

Tim

-----Original Message-----
From: Deschutes County Oregon <donotreply@deschutes.org>
Sent: Tuesday, June 25, 2019 10:23 AM
To: cdd-webmaster <cdd-webmaster@co.deschutes.or.us>
Subject: Form submission from: Contact Deschutes County

****AUTOMATED EMAIL - PLEASE DO NOT REPLY****

You have an incoming Comment or Question from the County's Website (Deschutes.org).
Submitted on: Tuesday, June 25, 2019 - 10:23am

The following was submitted:

Department to Contact: Community Development
Subject: Non prime resource lands
Your Message: I have put together a packet for the Planning Commissioners review. Because you no longer has a fax machine, I am having difficulty getting the packet to you before the deadline tomorrow evening. We live in Chico, CA, and don't receive timely communications since our heavy involvement in the 2008 UGB hearings. Specifically, we own 29 plus acres which are currently split zoned, 3 in the City and 27 in the County. Our total properties were brought into the City in the 2008 UGB plan, but totally removed in the 2016 Remand. My father purchased these properties in 1971 and we have dealt with the City, County and State, in their inappropriate and unfair zoning. This is due to the fact that the land is barren and too rocky to farm for profit. We have appreciated that we can defer taxes as EFU zoned, but that does not alleviate the consistent, annual loss incurred. We are 75 years old and cannot sustain these efforts. We inherited the properties in 2000 and have
persona
ll spent 19 years dealing with the arcane, mean spirited manor which Bend City Planning has dealt us. It is easily apparent when one examines Section 2: Growth Area Yield & Benefits (City of Bend), we were purposely excluded when we could have easily been included. These, almost 50 years of hardship and frustration, cannot be endured much longer! In fact, having spent almost $40,000 out of pocket over the last 2 years, and finding from an expert in soils analysis that I wasted the money due to the barren, rocky soil composition, is TOTALLY disheartening. Therefore, I am trying to get this packet to you in hopes of our case being evaluated AGAIN in a more positive and appropriate manner. Your assistance in resolving this matter is not only greatly appreciated, but more so than you can imagine!
Name: Richard L Springer
Email Address: raspringer@sbcglobal.net
Phone Number: 5302490315

****AUTOMATED EMAIL - PLEASE DO NOT REPLY****
June 24, 2019

Sent via email: Zechariah.Heck@deschutes.org

Deschutes County Planning Commission
Attn: Zechariah Heck, Associate Planner
117 NW Lafayette Avenue
Bend, OR 97708

Re: Nonprime Resource Lands

Dear Chair Crawford and Commissioners,

1000 Friends of Oregon submits this letter in opposition to the proposed amendments that would create the new Nonprime Resource-10 and Nonprime Resource-20 plan designations. We urge you to recommend denial of the proposed amendments.

The proposed amendments fail to apply the definition of agricultural land, found at OAR 660-033-0020(1), to both the proposed NPR-10 and NPR-20 zones. Without a showing that the redesignations envisioned by both proposals will comply with the definition of agricultural land, the proposed amendments are inconsistent with Goal 3.

Similarly, the proposed amendments fail to apply the definition and procedures for identifying forest land, found at OAR 660-006-0010, to both the proposed NPR-10 and NPR-20 zones, and are inconsistent with Goal 4.

It appears that the County intends to redesignate lands in the proposed NPR-10 zone that clearly meet these definitions of agricultural and forest lands. The County also intends to facilitate the redesignation of thousands of other resource acres throughout the County via the proposed NPR-20 zone.

Without ensuring compliance with Goal 3 and Goal 4 for the many redesignations of agricultural and forest land that would ensue upon adoption, the proposed amendments fail to meet the standard at ORS 197.175(2)(a) that all post-acknowledgement plan amendments comply with the goals.

Instead of the proposed amendments’ unlawful process to redesignate lands currently protected by Goal 3 and Goal 4, the County should follow the process set out in ORS 215.788. The legislature intended the statutory framework at ORS 215.788 et. seq. to be the sole process by which a County can legislatively amend its comprehensive plan to redesignate resource lands.
The proposed amendments are inconsistent with core principles of Oregon land use law, and would erode the much-treasured rural character of Deschutes County. For these reasons, we urge you to recommend denial of the proposed amendments.

Sincerely,

Mary Kyle McCurdy
Deputy Director
Dear Commissioners Crawford, Kirby, Swisher, Beeger, Palcic, Kieras and Hudson, and Deschutes County Planners:

Generally, I am opposed to the nonprime resource lands amendments because of increased traffic congestion, further wildlife habitat impacts, and further loss of open space. Deschutes County is already too crowded, with the exception of Millican and Hampton. I urge you not to further urbanize the county. You will destroy what attracts people here.

It is important that the County's agricultural lands are correctly identified and designated, and we should not allow individual landowners the opportunity to "spot-zone" away from their current EFU zoning to allow residential development.

Robin Vora
1679 NE Daphne Ct.
Bend, OR 97701
One follow-up. For the three areas that are not subject to a Goal 5 inventory, there wouldn’t be the ability to recommend wildlife protection measures because the County doesn’t have an acknowledged Goal 5 inventory that provides the legal basis for them.

Today, residential development in Haner Park, Skyliner and Skyliner First addition are subject to conditional use permits. Deschutes County’s CUP criteria do not trigger general compatibility requirements for conditional uses permitting individual single family dwellings. See DCC 18.128.015.

Jon and Joy,

Three of the six committed residential areas are within significant Goal 5 habitat:

- Section 36 (Deer Migration Corridor)
- Squaw Creek Canyon Recreational Estates 1st Addition (Winter Deer Range)
- Meadow Crest Acres Subdivision (Deer Migration)

Residential uses in these three areas as you know are allowed subject to a conditional use permit. The non-farm dwelling and template dwelling standards trigger the Wildlife Area Combining Zone, similar to Rural Residential Exception Areas.

In Rural Residential Exception Areas, Deschutes County’s Wildlife Area Combining Zone, DCC 18.88.030 recognizes that uses that are permitted outright shall also be permitted outright in the combining zone. Single family homes therefore really only have to abide by the County’s fencing standards (DCC 18.88.070). The one exception is if they’re not within 300’ feet of a road.
The County’s Goal 5 protection program as it pertains to these six residential areas really focuses on limiting new land divisions. The WA Combining Zone requires cluster development with much larger minimum parcel sizes. See DCC 18.88.050.

As discussed at the hearings, to the extent the County is able to establish a NPR-10 zone for these six residential areas, no new lots will be possible. There’s no new conflicting use.

The take home message is the WA standards that apply to residential development, whether it’s subject to a conditional use permit or it’s permitted outright will remain the same.

Hope this helps.
Dr Veronica Newton Hudson - testimony on behalf of the friends of the Tumalo Wildlife Corridor

The tiny Himalayan jumping spider *Euophrys omnisuperstes* (he who stands over all) lives among the rocky peaks around Mt. Everest at about 20,000ft. There isn’t much to eat up there but this little spider, which is about \( \frac{1}{4} \)" across, feeds on springtails which are equally tiny primitive insects that in turn feed on insect and plant debris that drifts over the Himalayas carried by the strong wind currents.

Emperor penguins tramp miles over snow and ice in the Antarctic in the autumn where they breed and raise their young chicks during the Antarctic winter.

Humans would define these creatures as living in non-prime resource lands but to the jumping spider and the Emperor penguin these places are home and they have evolved to thrive in these habitats.

There are many other examples of creatures living in such seemingly ‘non prime’ resource lands closer to home such as those living in many of the ecosystems in Deschutes County. These include the pygmy horned lizard, pika, jack rabbits, porcupine etc.

So what exactly does non-prime resource land mean?
To creatures living in these proposed ‘non prime’ resource lands these places are not non prime, they are essential to their very survival.
How exactly is ‘non prime’ defined? If we equate ‘non prime’ to lands that don’t have rich enough soils to produce a certain quota of a crop then we risk releasing lands for development that are prime habitat for much of our wildlife. They may not necessarily be the iconic species such as mule deer and elk but these larger mammals cannot survive without the ecosystems created and sustained by the smaller and often less considered species of all kinds. Also, allowing construction on parcels of land with ‘poor’ soils that may be adjacent to so-called ‘better’ soils will result in greater fragmentation of remaining wildlife habitats where corridors are essential for maintenance of ecosystems and habitats.

Deschutes County was mainly rural until relatively recently and the new growth is challenging in many ways. It is tempting to just embrace this growth and make as much (economic gain) out of it as possible. That would be a very short-term view and if we do that the features that make Deschutes County so attractive will be lost forever.

We are asking that the Planning Department / Commissioners consider very carefully the implications of decisions they take when it comes to releasing more land for potential ‘development’. More is not necessarily better.

It is hoped that advice and input from the Oregon Department of Fish and Wildlife will continue to be a key part of the decision making process.
Euophrys omnisuperstes
‘he who stands over all’
This map is for information purposes only as requested by Deschutes County Planning Commission. For more information see June 13, 2019 staff memo.

Taxlots: 2,774
Acres: 23,663

*These potentially eligible taxlots were selected based on the following criteria:

1) EFU Zoned Property
2) Contain soils that produce less than 20 cubic feet per acre per year
3) Within fire district
4) Outside of Goal 5 Wildlife Resource
5) Lands outside of federal ownership

6/12/2019
Notes:
- County Elk Range Inventory: 52,063 acres / ODFW Updated Inventory: 1,122,467 acres.
- County Deer Winter Range: 288,480 acres / ODFW Updated Inventory: 650,494 acres.
- ODFW is not proposing updates to Sage Grouse or Antelope habitat.
- See separate Spotted Frog critical habitat map for update.
Critical Habitat for Oregon Spotted Frog (Rana pretiosa)
Unit 8B: Upper Deschutes River (Above Wickiup Dam), Oregon (Deschutes/Klamath County)

22031 Acres / 8916 Hectares

No warranty is made by the U.S. Fish and Wildlife Service as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notice.

Final Critical Habitat for the Oregon Spotted Frog 2016
U.S. Fish and Wildlife Service
Critical Habitat for Oregon Spotted Frog (*Rana pretiosa*)
Unit 8A: Upper Deschutes River (Below Wickiup Dam), Oregon (Deschutes County)

2001 Acres / 810 Hectares

No warranty is made by the U.S. Fish and Wildlife Service as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notice.

Final Critical Habitat for the Oregon Spotted Frog 2018
U.S. Fish and Wildlife Service
No warranty is made by the U.S. Fish and Wildlife Service as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notice.
AGENDA

DESCHUTES COUNTY PLANNING COMMISSION
JUNE 13, 2019, 5:30 PM
BARNES SAWYER ROOMS
DESCHUTES SERVICES CENTER
1300 NW WALL STREET BEND, OR, 97703

I. Call to Order

II. Approval of May 23, 2019 Minutes

III. Public Comments

IV. Nonprime Resource Lands Amendments / Continuation of Public Hearing
  1. Nonprime Resource Lands Public Hearing - Zechariah Heck, Associate Planner

V. Planning Commission and Staff Comments

These can be any items not included on the agenda that the Commissioners wish to discuss as part of the meeting, pursuant to ORS 192.640.

___________________________

At any time during the meeting, an executive session could be called to address issues relating to ORS 192.660(2)(e), real property negotiations; ORS 192.660(2)(h), litigation; ORS 192.660(2)(d), labor negotiations; ORS 192.660(2)(b), personnel issues; or other executive session categories.

Executive sessions are closed to the public; however, with few exceptions and under specific guidelines, are open to the media.

VI. Adjourn
Nonprime Resource Lands Public Hearing

The Deschutes County Planning Commission will hold a second public hearing on June 13, 2019 to consider a Comprehensive Plan amendment that establishes criteria for Nonprime Resource Lands. The attached memo provides information requested by the Planning Commission during the first public hearing on May 23 as well as testimony received after the first public hearing.
MEMORANDUM

TO: Deschutes County Planning Commission

FROM: Peter Gutowsky, AICP, Planning Manager
       Zechariah Heck, Associate Planner

DATE: June 6, 2019

SUBJECT: Nonprime Resource Lands – Second Public Hearing

The Deschutes County Planning Commission will hold a second public hearing to consider Comprehensive Plan amendments that establish criteria for Nonprime Resource Lands on June 13, 2019 at 5:30 p.m. in the Barnes and Sawyer rooms of the Deschutes Services Center, 1300 Wall Street.

I. BACKGROUND

On May 23, 2019, the Planning Commission held the first of two public hearings on the proposed Nonprime Resource (NPR) Lands amendments (File No. 247-19-000265-PA). The public hearing followed three open houses in La Pine, Bend, and Sisters.

There are two components to the amendments.

1. Comprehensive Plan policies identify opportunities to redesignate six areas committed to residential uses that were platted or conveyed prior to State enabling planning legislation taking effect in Deschutes County,¹ and

2. Comprehensive Plan policies establish eligibility criteria for redesignating Exclusive Farm Use (EFU) or Forest Use zoned properties to NPR Lands.

If the NPR Lands policies are acknowledged, Deschutes County would propose a new Comprehensive Plan designation and NPR-10 zone solely to the six areas committed to residential uses. This new zone would allow residential uses outright. The County would also adopt into Deschutes County Code, Title 18 – Zoning, a NPR-20 zone. This zone would be required for all future “Non-Resource” lands quasi-judicial Comprehensive Plan / Zone Change applications.²

¹ The six residentially committed areas are: Haner Park, Section 36, Skyline Subdivision and 1st Addition, Squaw Creek Canyon Recreational Estates 1st Addition and Meadow Crest Acres Subdivision.

² Upon adoption, eligible properties would no longer be able to utilize a Multiple Use Agricultural 10 zone.
II. TESTIMONY

A. Testimony Entered on May 23

Tim Murphy, DLCD Farm and Forest Lands Specialist, submitted a letter on May 15, expressing legal concerns with Deschutes County’s ability to redesignate the six committed residential areas (Attachment 1). The following excerpt is from Page 2.

State rule does not provide an opportunity to designate lands as nonresource if the land meets the agricultural capability class or forest productivity thresholds in the state’s “agricultural lands” and “forest lands” definitions.

The six residential areas contain suitable soils for farm and forest use based on Natural Resource Conservation Service and U.S. Forest Service data. However, as mentioned above, they are committed to residential uses with relatively small average lot size and have no history of ever being commercially farmed or forested.

Jon Jinings, DLCD Community Service Specialist, testified in person on May 23. He reiterated Mr. Murphy’s letter, and stated these six areas are not eligible for an exception to Goals 3 (Agricultural Lands) and 4 (Forest Lands). Mr. Jinings stated DLCD recommends a “hard stop” to the current process because state law does not enable Deschutes County to correct these inaccurate Comprehensive Plan and zoning designations.

Eight other parties provided oral and/or written testimony:

- Rory Isbell, Central Oregon Landwatch
- Chuck Humphreys
- Nunzie Gould
- Tom Bishop
- Jack Godard

- Paul Lipscomb, Oregon Land and Water Alliance
- Donna Lipscomb
- Jim Powell (former Planning Commissioner)

All of the aforementioned parties recommended denial, with the exception of Mr. Powell who offered historic perspectives of agricultural land designations in the county.

B. Written Testimony Entered for June 23

Since the May 23 hearing, the following individuals submitted written testimony (Attachment 2):

- Joy Vaughan, ODFW
- John Fischer
- Jim Powell
- Ham Corter

- Joann & Don Jacobs
- Mike Lyons
- Donna Harris
- Jack Godard

III. REQUEST FOR ADDITIONAL INFORMATION

During the public hearing, two commissioners requested additional information. Commissioner Palcic expressed an interest in understanding the County’s resource zoning process upon passage of Senate Bill (SB) 100. To understand the scope of the NPR Lands amendments, Commissioner Hudson also
requested a spatial analysis depicting rural lands based on the eligibility criteria. Additionally, Commissioner Hudson asked staff to coordinate with the Oregon Department of Fish and Wildlife (ODFW) and map, for informational purposes, updated wildlife inventories.

A. Resource Zoning Process

The following documents related to resource zoning are attached with the memorandum.

1. Conversation with former CDD Director John Anderson (Attachment 3)

Summary: Deschutes County’s “sagebrush subdivisions,” created in the 1960s and early 1970s, were cited to the Legislature as part of the reason to approve SB 100 and the State enabling planning legislation. Many residents in Deschutes County felt the land was too marginal for farming and advocated for greater flexibility to allow development. There was tremendous political turmoil during the Comprehensive Plan’s development. Despite all of the hostility, staff worked diligently to prepare reasonable recommendations based upon factual data. The County designated agricultural land by utilizing soil and irrigation data. Pre-platted subdivisions, lacking development, utilities, or infrastructure were deemed to be vacant and therefore suitable for agriculture uses, based on direction from the State. The County was also required to protect the land for wildlife and open space values, as well as to direct development into areas that could be more efficiently served, thereby reducing required taxation.

Deschutes County had to demonstrate land was committed to rural residential uses to designate as exception lands, i.e., not resource land. There were extensive property owner negotiations. Many property owners wanted maximum flexibility to preserve their investment for retirement. Staff examined the level of development, utilities, roads, and infrastructure to make the determination. They examined every property, lot by lot in the county. If they could demonstrate the land was committed, even if it was not necessarily completely built-out, it was designated rural residential.

2. 2010 Memo from Kevin Harrison, Principal Planner, Recapping History of Agricultural Zoning (Attachment 4)

Summary: The document explains SB 100, the adoption of the first comprehensive plan in the County, and the adoption of subsequent ordinances pertaining to subdivisions, zoning, and partitions. The Year 2000 Comprehensive Plan was adopted in 1979 and utilized soil maps, assessor records and irrigated lands to map agricultural lands. Irrigation was determined to be a controlling variable in defining commercial farms. The current EFU subzones were established in 1992 during periodic review. Minimum lot sizes for farm parcels represent local conditions, not the statewide minimum of 80 acres.

---

3 See Exhibit D, Section 3.11, Nonprime Resource Lands, Draft Policy 3.11.3.
4 With the exception of updated Sage Grouse inventories adopted into the Comprehensive Plan in 2015, Deschutes County’s existing wildlife inventories were acknowledged in the mid-1990s. They include antelope habitat, deer migration corridor, deer winter range, elk habitat, fish habitat, riparian habitat, sensitive bird habitat, Townsend bats and wetlands.
5 John Andersen worked for Deschutes County from 1978 to 1985. Part of his responsibilities were to prepare the County’s first Comprehensive Plan.
3. **Year 200 Comprehensive Plan Findings Excerpts (Attachment 5)**

Summary: On November 7, 1979 Deschutes County submitted to the Land Conservation and Development Commission (LCDC) the Deschutes County Year 2000 Comprehensive Plan. LCDC determined that Deschutes County's inventories, policies and ordinances pertaining to Agricultural Lands (Goal 3), Forest Lands (Goal 4) and Open Spaces, Scenic and Historic Areas, and Natural Resources (Goal 5) required improvements.

The following summarizes the revisions to receive State acknowledgement that are relevant to NPR Lands:

- Incorporate State criteria for non-farm dwellings.
- Amend Comprehensive Plan Maps for all exception areas in order to ensure that zone changes from EFU to MUA-10 require a plan change and exception to Goal 3.
- Change zoning maps to reflect an EFU-80 zone and existing lot sizes.
- Amend the Exceptions Statement and Zoning Map to recognize new subdivisions.
- Recognize forest-related dwellings to be part of a site and forest management plan.
- Delete the State Board of Forestry requirement from the Forest Use Zones.


Summary: Staff presented a PowerPoint of agricultural lands in Deschutes County to the Planning Commission in February 2017.

5. **Historical Records Shared by former Planning Commissioner Jim Powell (Attachment 7)**

Summary: The documents below offer further insight on how decisions were made for designating lands in the late 1970s. The bullet points highlight some of the key statements.

- Recreational subdivisions were acknowledged, but such areas had insufficient development to label them as committed residential uses, and thus, were included in a resource land designation.
- Deschutes County had a history of “aggressively” allowing subdivisions and a resistance to “state control.”
- The Resource Element of the Comp Plan acknowledged soil data was general and not at a scale appropriate for individual properties, except where more detailed studies had been performed. It also stated while soil information was not sufficient for making land use decisions, it did provide an indication of the physical capacity of an area.
- Detailed soils maps of the entire County were acknowledged as a necessity so that data could be made available to optimize development decisions.
• Rapid change and growth led to large amounts of land being divided for residential, commercial and industrial uses. This led to discussions for additional regulations to maintain the rural character of the county.

• Parcelization of land into lots smaller than 10 acres were the most costly to serve.

• Public services were stretched thin when historically “recreational subdivisions” turned into primary residences.

• The predominant rural land uses in the county were open space, pasture, limited crop production, livestock production, natural resource utilization and wildlife cover.

• Agriculture continued to be important, but its economic influence waned by 1979.

• There was conflict between property owners that did not wish to protect land they saw as marginal farm land and others that saw agricultural land as a non-renewable resource that must be preserved.

• Scattered development across forest lands was recognized as a problem.

B. NPR Lands / Informational Maps

Staff applied the following criteria to identify potential areas that might be eligible for a NPR Lands designation:

• Agricultural lands with Class 7 and 8 soils

• Forest lands with a soil suitability rating below 20 cubic feet per acre per year

• Agricultural and forest lands noted above must be within a fire protection district

• Agricultural and forest lands noted above must be outside an inventoried Goal 5, wildlife resource

• Lands outside of federal ownership

Disclaimer: The maps listed below are not intended to identify specific areas that qualify for redesignation. Instead they show where the proposed eligibility criteria could apply.

• Agricultural Soils (Attachment 8) – This map identifies Class 7 and 8 soils located on property currently zoned EFU based on the criteria above.

• Updated ODFW Wildlife Inventory (Attachment 9) – This map illustrates ODFW updated habitat/range information relating to Goal 5 wildlife resources.

• Existing Goal 5 Wildlife Inventory (Attachment 10) – This map illustrates Deschutes County existing Goal 5 wildlife inventories.

• Forest Soils (Forthcoming) - At the public hearing, staff will provide a map that depicts soils which produce less than 20 cubic feet per acre per year located on property zoned Forest Use, utilizing the criteria noted above.
IV. PLANNING COMMISSION NEXT STEPS

At the conclusion of the public hearing, the Planning Commission can:

1. Continue the hearing to a date certain;
2. Close the hearing and leave the written record open to a date certain; or
3. Close the hearing, and commence deliberations.

Attachments

1. Tim Murphy, DLCD, letter
2. Testimony received between May 23 and June 6
3. John Anderson Conversation Notes
4. Kevin Harrison Memo
5. Year 2000 Comprehensive Plan Findings
6. Agricultural Lands in Deschutes County (Power Point presentation)
7. Historical Records Shared by former Planning Commissioner Jim Powell
8. Potential NPR Lands Map (Agriculture)
9. ODFW Wildlife Habitat/Range Map
10. Deschutes County Goal 5 Inventory Map
May 15, 2019

Peter Gutowsky, AICP, Planning Manager
Deschutes County Community Development
117 NW Lafayette Avenue
Bend, OR 97703

RE: Comprehensive plan amendments for nonprime resource lands
County # 247-19-000265-PA, DLCD # 003-19

Dear Peter:

Thank you for the opportunity to review the proposed amendments to the Deschutes County Comprehensive Plan. The proposal would allow for lands currently designated as agricultural or forest lands to be redesignated as nonprime resource lands, provided they do not meet the definitions of “agricultural lands” or “forest lands” in the Statewide Planning Goals and Oregon Administrative Rules (OAR). We understand this proposal will be followed by future amendments to the county’s zoning code.

The Department of Land Conservation and Development (DLCD or the department) recognizes the thoughtful approach the county took when developing these amendments and the county’s efforts to promote public participation. The majority of the amendments appear to be consistent with the requirements in state rules. However, there are a few issues of concern to the department, as follows:

1. **Policy 3.11.3.**

Agricultural lands
The “agricultural lands” definition in OAR 660-033-0020(1) provides additional suitability considerations (e.g. climactic conditions, technological and energy inputs required, accepted farming practices) that are not addressed in the proposed amendments. Also for consistency with state rule, Policy 3.11.3.a.ii.4. should address land that is adjacent to or intermingled with Class I-VI soils within a farm unit.

Forest lands
The proposed amendments do not address how forest productivity should be evaluated. We assume this will be addressed in future amendments. OAR 660-006-0010 provides a methodology for evaluating forest productivity and nonprime resource designations should be evaluated in accordance with that rule. DLCD has data available that may be helpful.

The “forest lands” definition in OAR 660-006-0005(7) includes lands that are suitable for commercial forest uses, including adjacent or nearby lands which are necessary to permit forest operations or practices. Whether or not land is necessary for conducting forest operations or practices should be considered before it is designated nonprime resource.
OAR 660-006-0005(7) also includes “Other forested lands that maintain soil, air, water and fish and wildlife resources.” It appears the county has opted to address this portion of the definition by requiring that land is only eligible for nonprime resource designation if it does not contain Goal 5 resources. The county may want to consider additional data sources (e.g. ODFW data) where Goal 5 inventories have not been recently updated. DLCD is more than willing to facilitate the acquisition of data from state agencies upon request.

2. Policies 3.11.13 and 14. State rule does not provide an opportunity to designate lands as nonresource if the land meets the agricultural capability class or forest productivity thresholds in the state’s “agricultural lands” and “forest lands” definitions. A Goal 3 or 4 exception, rather than nonprime resource land designation, appears to be required to designate these lands for low intensity rural development. Dwelling opportunities allowed under current zoning (e.g. nonfarm dwellings, template dwellings) may also be an option. DLCD is available to assist the county in exploring options.

Conclusion
We request that the county consider the comments above and amend the proposal accordingly for consistency with the Statewide Planning Goals and rules. Please enter this letter into the record of these proceedings and provide DLCD with a copy of any further amendments and the decision.

Thank you again for the opportunity to comment. We do apologize for not providing these comments sooner. Please let us know if you have any questions.

Respectfully,

Tim Murphy, Farm and Forest Lands Specialist
503-934-0048 / timothy.murphy@state.or.us

Cc: Zechariah Heck, Associate Planner
Scott Edelman
Jon Jinings
Zechariah Heck

From: Peter Gutowsky
Sent: Sunday, May 26, 2019 12:36 PM
To: Zechariah Heck
Subject: FW: THE OREGON LAND TRUST

FYI

From: David Doyle <David.Doyle@deschutes.org>
Sent: Sunday, May 26, 2019 10:33 AM
To: Nick Lelack <Nick.Lelack@deschutes.org>; Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Subject: FW: THE OREGON LAND TRUST

DAVID DOYLE
Deschutes County Legal Counsel
1300 NW Wall Street, Suite 205
Bend, OR 97703
Telephone: (541) 388-6625
Facsimile: (541) 617-4748
Email: David.Doyle@deschutes.org

The information in this email, including any attachment, is for the sole use of the intended recipient and contains information belonging to Deschutes County, which is confidential and/or legally privileged. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or taking of any action in reliance on the contents of this email information is strictly prohibited. If you have received this email in error, please immediately notify the sender by reply email and destroy all copies of the original message.

From: CIRCLE BAR RANCHES LLC BEND. OR <RIAFF@CENTURYLINK.NET>
Sent: Friday, May 24, 2019 7:23 AM
To: Board <board@deschutes.org>
Subject: THE OREGON LAND TRUST
A QUESTION?

WHY IN THE HELL ARE YOU PEOPLE BENT ON DESTROYING THE LAND CONSERVATION TRUST, PEOPLE MOVE TO DESCHUTES FOR THE OPEN LAND AND LACK OF NO TRESPASSING SIGNS AND A QUALITY OF LIFE, WHY IN THE HELL WOULD YOU THREE AND YOUR PLANNING COMMISSION OF EDUCATED MORONS WITH NO COMMON SENSE BE BENT ON CREATING ANOTHER CALIF. OREGON STATE AND COUNTIES CAN'T EVEN POLICE WHAT EXIST NOW. THE CITY OF BEND IS BUILDING HOUSING COMPLEXES IN EXISTING NEIGHBORHOODS LOWERING PROPERTY VALUES OF EXISTING SINGLE FAMILY HOMES AND SOON TO BECOME GETTO'S IN TIME. THAT'S HISTORY. AND A POLICING NIGHTMARE. APPARENTLY, YOU THE BOARD WANT TO FOLLOW THE DOWNWARD SPIRAL OF BEND,

I MOVED HERE FROM THE BAY AREA AND IF YOU PEOPLE GET OUT MORE YOU WILL DISCOVER THOUSANDS OF DESCHUTES COUNTY RESIDENTS MOVED HERE FOR THE REASONS ABOVE AND HOPEFULLY WILL TAKE A DIM VIEW OF THE BOARDS STAND ON DEVELOPMENT, THEIR PROBABLY ALREADY SICK OF THE PLANNING COMMISSION. 
YOU THREE RAN AS REPUBLICANS BUT ARE VOTING DEMOCRATIC

THANK CHRIST FOR THE OREGON DEPT, OF LAND CONSERVATION. WHICH WAS PROBABLY ORIGINALLY CREATED TO SAVE QUALITY OF LIFE FOR FUTURE GENERATIONS.

THANKS
MIKE LYONS
KEEP UP THE GOOD JOB????????????

FREE Animations for your email - by IncrediMail

Click Here!
Zechariah Heck

From: Jim Powell <jhp@bendbroadband.com>
Sent: Saturday, May 25, 2019 11:38 AM
To: Zechariah Heck
Subject: "Documentation" of 1979 Comp Plan decisions

[EXTERNAL EMAIL]

Zechariah

Since two of the commissioners wanted more tangible information about how decisions were made for land use designations for parcels and policy now being reviewed, I would submit the attached in the hopes it will help. The “cover letter” offers a roadmap for the segments in the other documents.

SEE ATTACHMENT X, Y, Z FOR MORE INFORMATION
May 29, 2019

To: Mr. Nick Lelack  
    Mr. Peter Gutowsky  
    Mr. Zechariah Heck

From: Jack Godard

RE: Nonprime Resources Land – Planning Commission Hearing May 23, 2018

Gentlemen, thank you for your patience with my involvement in the non-prime resource discussion that Deschutes County is facilitating. I hope my enthusiasm in trying to ensure that the right decision is made is not misinterpreted.

Realizing that the proper protocol at our last public hearing was to submit copies of one’s oral testimony, I have attached mine for your inclusion in to the record.

I look forward to seeing the results of the “conceptual mapping” that was suggested at last week’s meeting. I do realize, as Mr. Gutowsky stated, it is not the intent of the County to map property as part of this planning effort.

If the mapping results, no matter how fluid, are available prior to the next hearing on June 13th, I would be interested in seeing these ahead of the hearing. I personally, do not have any interest in the historical search of the “six committed areas.”

Again, thanks for your patience and insights, look forward to seeing you in a couple of weeks.

Sincerely,

Jack

Jack Godard  
69710 Lake Drive  
Sisters, Oregon

whychus@gmail.com
May 23, 2019

To: Deschutes County Planning Commission
   Deschutes County Department of Community Development

From: Jack Godard

RE: Godard presentation @ Nonprime Resource Lands Planning Commission Hearing

Good evening, Chairman Crawford & members of the commission, my name is Jack Godard.

Thank you for inviting me to speak tonight. Also thank you for your service on the Planning Commission.

I have met and spoke with members of this commission and staff on a couple of occasions. I am here tonight to continue this dialogue.

The purpose of my testimony is to request that if Deschutes County, and this Planning Commission is committed to protecting agricultural and forest lands, that you forward a recommendation to the Board of County Commissioners not to proceed with this project. A project to amended the Deschutes County Comprehensive Plan, to establishes criteria for “Non-Resource” lands within agricultural and forest lands of Unincorporated Deschutes County.

There are five (5) components to my request that I would like for you to consideration:

• The outcome of this process “at the citizen level”, has \(\text{seems to have}\) been predetermined.

• There has not been a good faith effort to communicate the true implications of this project to the citizens of Deschutes County.

• A framework does not exist for identifying and analyzing the internal and external factors that can have an impact on the viability or legality of this project.

• There are deficient criteria for proposed future application of NPR 20.

• Misguided prioritization of resources to accomplish this project.

\(\text{Cui bono, ...who’s to benefit?}\)
1. We became aware of this effort by reading a small article in the newspaper, announcing an open house in Sisters to discuss the county’s proposed fix to an error in land use designation. After coffee, tea, cookies…. we soon found out that this was not a workshop, or charrette, or attempt to solicit suggestions or improvements, it was a defensive presentation, that check the box as public involvement. It appears that this effort is trying to take cover behind innocent folk’s subject to a “misfortunate error”, while loosening the protection of farm & forest lands. You pick the idiom, mine is “A wolf in sheep's clothing”.

I started my quest to find out what going on. Yes, I am late to this party, and I am no land use expert…. this has been going on for over 5 years, and there is lots for me to learn....

- There is the Southern Oregon County Pilot project, I ask, is there any discussion or findings as to how this project might relate to your efforts?
- In 2018 Douglas County amended its comprehensive plan. Proposing some 3500 acres or more as non-resource. In December 2018 (?) Deschutes County sent a letter supporting Douglas County’s efforts, indicating their intent to implement a similar amendment.
- Is this Citizen Involvement (Goal 1), or has this cake has been baked, frosted & just waiting to light the candles?

2. What are the implications of this project? At the meeting on April 25th, I asked specific question about:

- If NPR-10 & 20 are approved, what’s the zoning going to look like?
- Where will the NPR-20 land uses be applied? Have you identified candidate lands?
- The response I received, “that’s the next step”, the next box to check. Is this a divide and conquer strategy?
  a. Even the outlaw Douglas County, had the wherewithal to prepare exhibits showing within the Comprehensive Plan suggested application & zoning standards. *(Attached mapping exhibit from Douglas County Comp Plan.)*
  b. What is being communicated is “we are just trying to fix a misfortunate error” .... But put an exhibit like this *(the Douglas County map)* in to the Bulletin, Source, Nugget, Central Oregon News daily, Channel 21, .... see what kind of public input you will receive!
3. Before you embarked on this project, was a framework identifying and analyzing the internal and external factors that can have an impact on the project’s viability prepared?
   a. Does this exist? So, what are the strengths, weaknesses, threats... how much time & money, and county resources will this effort take? Has this been quantified? If so, can we see a copy?
   b. Douglas County Comp Plan amendment has a LCDC hearing is on June 18th, what can we learn there? Is there a decision point in the process to re-evaluate?

4. I am not a rural land use expert; but my read of the proposed criteria to permit or deny future NPR land uses in the Forest lands, appears to ignore the benefits large parcel Forest land provides.
   a. I also don’t see the documentation or provisions that provide adequate:
      i. Ag Land protection
      ii. Forest Land Protection
      iii. Goal 5 resource protection
      iv. Wildfire Protection
   b. At our April 25th “open house”, there were promises and assurances that:
      i. Four walls would be built
      ii. Not a hair of the camel would enter the tent
   c. I don’t see it.....If this was true, wouldn’t we see some form of mechanism that not only protects agricultural and forest lands, but go a step further and enhances it. You are familiar with wetlands mitigation banking? You know how it might go, you remove an acre, you create 2 acres.... If I saw such an approach in the document, I might be a believer? I’m sorry, I don’t see it.... I really don’t see any creative approach for protection that has been promised.

5. Misguided prioritization of resources to accomplish this project. **Cui bono,** ....Why?
   a. The State farm & forest experts have completed the **2016-17 Oregon Farm & Forest Report**
   b. Page 3 of the Analysis, “**Oregon’s statewide land use planning program continues to be effective.**”
   c. The report continues to say, there are concerns...” **concerns about the cumulative impact of dwellings and other uses on the working farm & forest lands.”**
   d. On page 3 of the Farm & Forest Report there is a finding. “**A Portland State University study found that less than half of all buyers of farmland between**
2010 and 2016 had a clear connection to agriculture with many buyers focused on estate/property development, investing, or manufacturing.” What does this mean to you, ask yourself, will your action further this degradation of Farm & Forest Land you are promising to protect?

e. In the past, Deschutes County screwed up, you are calling it a mapping error. There are 237 lots impacted by this error, some impacted more than others. I would probably estimate that there are 10% legacy owners, folks who owned the land prior to “the error”. If you are so inclined to compensate these folks for their loss value, so be it....you can do the math, it’s probably less than 15% of CDC’s annual budget?

f. Is this project Enhancing the Lives of Citizens? Is this creating Safe Communities, Healthy People, and promoting Environmental Stewardship. No:
   i. NPR does nothing to solve the affordable housing challenges, it ignores it,
   ii. NPR does nothing to solve transportation issues, it contributes to it.
   iii. NPR does nothing to solve the disparity between the have’s and have’s not, it expands it.
   iv. NPR does nothing to bring local food from farm to table, it isolates it
   v. NPR does nothing to solve the impact of wild fires, it flames it

In conclusion, I would like to restate:

If this Planning Commission is truly committed to protecting agricultural and forest lands of Deschutes County, you must forward a recommendation to the Board of County Commissioners not to proceed with this project.

I started my involvement in this process to believing in the need to warn of the “unintended consequences”, now I believe the warning may be of the “intended consequences”!!

Thank you.
"Candidate Non-Resource Lands" are privately-owned lands that:

- Are outside of urbanized areas and
- Are currently resource designated (TP, PG, FF, and PA zones); and
- Are not used for growing permanent crops (per OAR 259); and
- Predominantly contain either closed-10 soils and
- Predominantly contain soils with a rooted productivity of less than
15 cm within Douglas Fir and
- Are within 1 mile of an Urban
Growth Boundary; Urban/Unincorporated Area, Rural Community or Rural Service Center.

Lands meeting the above criteria are potentially eligible for a ranch of 150, 200 or 40 acres, respectively.

96,097 Acres of Non-Resource Lands have been identified within a 1 mile buffer of all community boundaries.

10,875 Acres of Non-Resource Lands have been identified with a 3 mile buffer of all community boundaries.
Zechariah Heck

From: Ashley Williams
Sent: Friday, May 31, 2019 7:18 AM
To: Zechariah Heck
Subject: FW: I oppose residential/ commercial development in rural Deschutes Co.

Ashley Williams | Administrative Assistant DESCHUTES COUNTY COMMUNITY DEVELOPMENT
117 NW Lafayette Avenue | Bend, Oregon
Mail: PO Box 6005 | Bend, Oregon 97708
Tel: (541) 617-4707 | www.deschutes.org/cd

Disclaimer: Please note that the information in this email is an informal statement made in accordance with DCC 22.20.005 and shall not be deemed to constitute final County action effecting a change in the status of a person's property or conferring any rights, including any reliance rights, on any person.

-----Original Message-----
From: Kermit Williams <kermit.donna@gmail.com>
Sent: Thursday, May 30, 2019 10:29 PM
To: Planning Commission <PlanningCommission@deschutes.org>
Cc: Kermit and Donna <kermit.donna@gmail.com>
Subject: I oppose residential/ commercial development in rural Deschutes Co.

To the Deschutes Co. Planning Commission:

As a resident of Deschutes Co., I strongly oppose the Planning Commission's leaning towards allowing commercial and residential development of agricultural land. Since moving to Deschutes Co. I have seen the "death by a thousand cuts" of the laws that were set to prevent rampant development and sprawl in the county. There seems to be only the goal of the Planning Dept. to weaken rules protecting strict zoning of land for exclusive farm use. Agricultural land obviously has been set aside for the use of farming and ranching, but developers have used their clout to create undue pressure on established laws to ignore or weaken them in the name of money.

In the 2006-07 era, there was the push of developers to create destination resorts in every corner of the county making rampant development plans appear like a malignant cancer. They tried to circumvent state laws governing Destination Resorts, making these "resorts" to be no more than expansion of suburbs, all the while so not to have to pay the SDC's required for a suburban development. The resorts also tried to build on agricultural land, esp. in the Powell Butte area. Friends of mine who owned ranch land there fought this and were able to change the destination resort mapping for Crook Co. through a ballot measure. Destination resorts also were flatly ignoring the law requiring them to build a certain number of lodging rooms for rent based on the number of homes to be built. Many got away with not meeting this requirement for years.

My other top complaint and opposition to expansion into EFU zones, is that EFU land provides valuable wildlife habitat. As a member of multiple conservation groups which advocate for wildlife and preservation of their habitat and connectivity, I cannot stress enough how much the Planning Dept. And Deschutes Co. Commissioners have ignored this threat to wildlife. There were laws that were ripped apart that protected winter range habitat for deer. Certain types of development were not allowed within deer winter range, including churches. The ignoring of this rule led to the allowing of a church to conduct wedding venues within protected winter deer range. There are only three designated
winter deer ranges in Deschutes Co. and with mule deer at only 50% of their sustainability (you can verify this figure with ODFW wildlife biologists), any weakening of protections can be a severe threat to their survival. Another example of changing the rules to the benefit of developers involved the allowing of illegally permitted water ski lakes that were excavated without permits, in addition to giving the go-ahead for the development of high end homes surrounding these "lakes" within the Tumalo winter deer range, again destroying important life-saving habitat. People often say that they move to Deschutes Co. not only to be close to outdoor recreation but also to be able to view and enjoy wildlife close-up. What will you say to these people when you have taken away all the habitat for wildlife to thrive, leaving residents with only a view of more homes, and more commercial buildings? I think the negative risks of a breakdown of protections for EFU zoning far outweigh any of the "positive" gains that only developers can see through their greedy eyes.

Sincerely,
Donna Harris

Sent from my iPad
Zechariah Heck

From: Joann Jacobs <joann@cascadeviewranch.com>
Sent: Thursday, May 30, 2019 2:40 PM
To: Zechariah Heck
Subject: Re: Non Prime Resource Land zoning

Zechariah,
Thank you for taking the time to give us a call.

We have always considered us a 'Nonprime Resource Land' because we have never made any profit from farming and found our soils to be non-productive, even though we could make our fields turn green.

We find the new zoning NPR 10 & NPR 20 to be prohibitive and perhaps suggest a 3rd zone for EFU homeowners located within a particular distance from City development or UGB. That is homeowners, not farmers, that have been using water from Arnold Irrigation along with our RR10/MUA10 neighbors to keep our property green.

Don is in the process of sending you a formal letter to add to your comments. We understand time will be of the essence.

Thank you again for your response and taking the time to listen to our plea. We are one of many on Tekampe Road/Sholes Road that feel this way.

Sincerely,
Don & Joann Jacobs

On May 30, 2019, at 12:51 PM, Zechariah Heck <Zechariah.Heck@deschutes.org> wrote:

Don and Joann,

Thank you for providing your comments on the Nonprime Resource Lands amendments. I hope I was able to answer your questions during our phone call.
To: Zechariah Heck <Zechariah.Heck@deschutes.org>
Subject: Non Prime Resource Land zoning

Zechariah,

We attended your meeting on May 23rd. We also heard the comments from organizations & citizens not wanting to address any changes to the zoning… We feel differently.

We are 4 home owners, not farmers, on EFU zoned land. We are all in our 80’s. We all need to downsize our work load on these properties. We have lived here many years and Do Not want to leave our home where we have lived in a long time and we, specifically, the last 26 years.

We see the zoning of our adjacent neighbors (RR10/MUA10) and would like to change our zone. We would like the ability to sell a portion of our land. This would alleviate some of our ‘work load’ and provide us with income that we may need for our future.

We are so close to the City of Bend and the UGB. All of these lots are with in 1 mile of the UGB.

Is there any plan or action that the City of Bend, County of Deschutes, or the State of Oregon could initiate that would allow us to change our zone?

We are not contributing to the economy of Deschutes County by farming… We only contribute by paying our taxes.

Please help us change our zone and allow us to sell off some of this work.

I have attached maps that show adjacent RR10/MUA10 zoning around our lots and another map that shows the proximity to our properties and the City of Bend and the UGB.

Sincerely,
Don & Joann Jacobs
541-419-4438
To: Zechariah Heck, Associate Planner  
Deschutes County Community Development

From: Don & Joann Jacobs

We applaud Deschutes County for addressing the archaic State Land Use Planning Goals regarding Agricultural Lands, Section 2.2. These laws were created to protect farm lands and the economic benefits of agriculture.

Proposal 1: Approve

Proposal 2: Too restrictive.

Does not address property owners who wish to downsize and have the ability to sell a portion of their land.

We propose:

Proposal 3. SOME EFUTRB is Non-Prime Resource Land.

Just because a EFUTRB has water or it has been farmed does not make it a Resource land. We think the county needs to address the smaller acreage Non-Economic EFUTRB PARCELS of 20 acres or less. These EFU parcels are mostly homeowners of what appears as larger RR10 or MUA10 land.

The county needs to understand small acreage farms in Deschutes County are mostly Non-Resource lands because even if you did not consider the Cost of the Land, Cost of the Equipment, Cost of Water, Cost of Electric Power to Irrigate, Cost of Fertilizer, Cost of Labor you can not have a economically sustainable farm. Farming small acreage does not make a profit or contribute to the economy of Deschutes County or the State of Oregon.

Most of the landowners surrounding our EFU land near the area of Tekampe Rd & Knott RD, are RR10 & MUA10. Like us, they are using water from Arnold Irrigation to keep their fields green and keep their water rights.

Oregon Rural Residential land is attractive. We would like the county to address the ability to re-designate the zoning on these lands to Rural Residential. Designating these smaller EFU parcels into smaller Rural Residential parcels will benefit both the County and the State with added tax revenue and still provide Oregon rural lifestyle.
Zechariah Heck

From: Peter Gutowsky
Sent: Tuesday, June 04, 2019 2:43 PM
To: Zechariah Heck
Subject: FW: N.E Bend EFU "Farmland" is actually a rock pile with a bit of sand- did you know?

Please enter into the record.

From: Ham Corter <hamcorter@gmail.com>
Sent: Tuesday, June 4, 2019 2:38 PM
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Subject: N.E Bend EFU "Farmland" is actually a rock pile with a bit of sand- did you know?

Mr. Gutowsky,

Thanks for serving, it may make my land value plummet or rise- I do not know, but it will help the homeless problem when more housing is allowed.

Please check with Jim Clinton, former Mayor, as he told me (a better source can hardly be imagined) that Crater Lake (Mt. Mazama) blew up 7,760 years ago, dropping 18 inches of ash on Central Oregon. If not for this 18 inches of sand, N.E. of Bend, much of Central Oregon, would look like the lava-scape near Lava Butte BECAUSE Lava Butte blew up AFTER Crater lake blew up.

I sincerely believe basic facts of geology are entirely missed by State officials- and there is apparently no one locally to promote the good result of preserving farmland while not choking Bend into bloated land, utility, service, protecting sandy rock piles that are perfect for single family homes with an acre or few.

To avoid destabilizing land values, respectfully recommend EFU lots each get one CUP for one more single family dwelling. This is fair, keeps many dynamics stable (roads, electricity, well water) and spreads the growth somewhat evenly. It must be added proximity to power, roads, cities, are necessary dynamics to this recommendation.

There are two other dynamics I would like to respectfully offer for your examination and confirmation....

1) The water table is roughly 600-700 feet down- leach fields, so demonized, EVAPORATE upwards. Therefore, drain fields are uniquely suited to the low spots that 18 inches of Crater Lake ash blew into. As the lava rock piles stick up, there are wondrous sandy-ash in the nearby depressions almost everywhere. One cannot imagine better sites for leach fields, drain fields.
2) If Deschutes County allows 2 to 7 acre lots, on sandy, EFU, rock piles such as N.E. Bend, it MAY NOT lower or slow land price bloat, but it WILL bring investment by persons that are not poor, near bankrupt. This fortifies the Deschutes County tax base- the opposite of creating homelessness by falsely creating a lack of homes to save sandy rock piles as if farmland were a real option in these parts. The farm-able zones are very easy to spot- they have irrigation, are green, grow something, do not have rock piles sticking up every hundred or so feet.

I watch neighbors illegally place families and housing on 4 acre lots recently, I spent 20 years paying property taxes and not renting out illegal homes. I would not be in debt if breaking the law as is now openly done. I pay about 4,000 dollars a year for a wonderful, sandy, rock pile zoned EFU I can hardly do anything with- neighbors will force me to pave a mile long road I have maintained and improved (10-20,000 spent) for about 20 years now. I am not rich, not middle class, just planned way, way, ahead.

My days openly fighting for intelligent growth in Central Oregon are over- found out how mean things get if not embracing the status quo. You may, however, use this message to explain how much opportunity there is, like a bow pulled way, way, back, for the arrow of truth to pierce the poverty guilt trips that disable Central Oregon.

Notice the guilt-games caused Bend UGB to sit out an entire Boom-Bust cycle- 2005 to 2016? Deschutes County can accommodate the lack of available housing by letting EFU zoned sandy rock piles near towns, lacking irrigation and soil, get a CUP for a second single family dwelling.

Ham
Hello Commissioners Crawford, Kirby, Swisher, Beeger, Palcic, Kieras and Hudson,

I am strongly opposed to the nonprime resource lands amendments. I run a local Engineering company who helps consult with building planning and development. We pay close attention to the costs and effects of sprawl and are convinced that weakening protections for agricultural lands will enable the wrong type of development for Central Oregon. You don't have to look far into other jurisdictions to see how pro-sprawl-development has changed the livability and quality of life for those areas (not to mention increase costs/strain on infrastructure resources.)

Thank you,

John Fischer, PE

Ashley & Vance Engineering
Civil • Structural
33 NW Franklin Avenue, Suite 110 | Bend, OR 97703
o. (541) 647-1445 x155  |  c. (541) 647-0609

www.ashleyvance.com
Hello

Thanks again for your interest in evaluating some additional data regarding Goal 5 resources for the Nonprime Resource Lands proposal and the hearing set for June 13. ODFW is hopeful that this can initiate a broader conversation about using the best available data in the county’s land use decisions to evaluate conflicting uses to wildlife resources of the state. As I mentioned, we are working internally to compare the current Goal 5 overlays with our best available data, including highlighting some data gaps and opportunities for additional considerations, but this analysis is not complete. For example, we coordinate with our federal partners for the migratory bird datasets and there are some golden and bald eagle nest sites, as well as some documented bat roosting sites, that do not seem to be covered in the county’s current Sensitive Bird and Mammal Habitat Combining Zone. Our GIS Conservation Coordinator, Arthur Rodriguez, is evaluating these datasets, and he’s included on this email. Please let us know if you have questions or need further clarification as you prepare your analysis/maps.

Below are the links to the some of the available data sets to consider, however, it is important to note that this list is not inclusive of all Goal 5 categories. For example, we did not include an updated data layer for wetlands, or other aquatic resources (e.g., fish distribution), and many of the existing natural resource datasets are a result of collaborating with multiple partners. ODFW is not recommending that any of the existing Goal 5 overlay protections be removed, or that these datasets take priority over existing Goal 5 protections. With that said, we do recommend the county coordinate with ODFW and other partners to integrate these datasets into county land use decisions and update the inventories in a collaborative process.

Big Game Habitat:
Eastern Oregon Big Game Habitat is comprised of two datasets: Eastern Oregon Deer Winter Range and Eastern Oregon Elk Winter Range. Winter range is a subset of the habitat needs for big game. Deer Winter Range includes a single set of polygons which encompass the general outline of deer winter range for eastern Oregon, east of the crest of the Cascades. ODFW considers Winter Range to be that area normally occupied by deer from December through April. Utilizing the most recent big game data would help support the life history needs for big game and avoid or minimize conflicts with increased development densities. Please see the map rationale link in the link below, as well as the GIS dataset:
https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=885.xml

Sage-Grouse Habitat: Here is the dataset for Core Habitat:
https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=944.xml
This following two additional links are useful when evaluating projects within Sage-Grouse Habitat. The Sage-Grouse Data Viewer provides information about the current vegetative condition, existing development, restoration potential, development potential, and other data within sage-grouse habitat. :
https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=sage_grouse_dev_siting is a useful tool for applicant’s to consider siting projects to avoid and/or minimize impacts to sage-grouse.
**Conservation Opportunity Areas (COA):** These areas were identified during the 2016 Oregon Conservation Strategy revision, as places where broad fish and wildlife conservation goals would best be met in the state. COAs are generally either areas of high biodiversity, areas with unique habitat values, or areas with known restoration needs. Deschutes County has several COAs, with some mix of public and private ownership. For example, you can read more about the Little Deschutes COA here, which does have some scattering of private parcels: [http://oregonconservationstrategy.org/conservation-opportunity-area/little-deschutes-river/](http://oregonconservationstrategy.org/conservation-opportunity-area/little-deschutes-river/)

Here is a link to all the available GIS data for COAs: [https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=897.xml](https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=897.xml)

Here is a link that will highlight just those COAs that fall within Deschutes County (and the link to take you to the COA profiles): [http://compass.dfw.state.or.us/visualize/#x=120.83&y=43.94&z=9&logo=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=549&dls%5B%5D=true&dls%5B%5D=0.94&dls%5B%5D=570&dls%5B%5D=true&dls%5B%5D=546&dls%5B%5D=true&dls%5B%5D=0.99&dls%5B%5D=627&basemap=ESRI+Satellite&themes%5B%5D=33&themes%5B%5D=39&tab=active&print=false](http://compass.dfw.state.or.us/visualize/#x=120.83&y=43.94&z=9&logo=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=549&dls%5B%5D=true&dls%5B%5D=0.94&dls%5B%5D=570&dls%5B%5D=true&dls%5B%5D=546&dls%5B%5D=true&dls%5B%5D=0.99&dls%5B%5D=627&basemap=ESRI+Satellite&themes%5B%5D=33&themes%5B%5D=39&tab=active&print=false)

**Strategy Habitat and Strategy Species:** The 2016 Oregon Conservation Strategy identifies 11 Strategy Habitats which focus on native habitats of conservation concern that are essential to many Strategy Species within the state. Strategy Species identifies 294 species of greatest conservation need and are defined as having small or declining populations, are at-risk, and/or are of management concern. For each Strategy Habitat and Strategy Species, information is provided in the Strategy that includes a conservation overview, data gaps, limiting factors to the species or habitat, recommended conservation actions, and available resources. To support the 10 year Oregon Conservation Strategy revision in 2016, the Institute for Natural Resources (INR) Oregon Biodiversity Information Center (ORBIC) at Portland State University was contracted to use best available data and analyses to update the mapped extent and distribution of the Oregon Conservation Strategy Habitats. The objective was to comb existing data sources and use the most up-to-date and highest resolution maps available in Oregon for each Strategy Habitat, within their associated ecoregion. The results of this effort are presented in this Strategy Habitat dataset as a 30m pixel raster grid. Strategy Habitats are useful tools to identify where potential rural resource lands may have conflicting uses with habitat that support sensitive fish and wildlife habitat (e.g., Strategy Species), and can be a useful dataset to supplement and inform the species/habitat to protect for the Sensitive Bird and Mammal Habitat Combining Zone. Here is the link: [https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=892.xml](https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=892.xml)

**OR Spotted Frog Critical Habitat:** Given that critical habitat has been identified in Deschutes County, here is a link to that dataset: [https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02A](https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02A)

You likely have seen this, but I also wanted to highlight the recent DLCD Rural Resource Lands report. ODFW coordinated with DLCD for recommendations related to fish and wildlife habitat, so this may be a helpful overview as well: [https://www.oregon.gov/lcd/Commission/Documents/2019-05_Item_6_Attch_A_Report.pdf](https://www.oregon.gov/lcd/Commission/Documents/2019-05_Item_6_Attch_A_Report.pdf)

Thanks again for your consideration and we look forward to continuing to work with the county on the Nonprime Resource Lands proposal, and hopefully on the opportunity to update to Goal 5. We understand the short timeframe prior to June 13 hearing, but please let us know if you would like to discuss anything further or if you have any questions.

Joy Vaughan | Land Use and Waterway Alterations Coordinator  
ODFW Wildlife Division  
503-947-6089 office | 503-949-3796 cell  
joy.r.vaughan@state.or.us  
[www.dfw.state.or.us](http://www.dfw.state.or.us)
Check out the Oregon Conservation Strategy! [http://www.oregonconservationstrategy.org/]

From: Joy R Vaughan
Sent: Monday, June 03, 2019 8:32 AM
To: 'Zechariah Heck' <Zechariah.Heck@deschutes.org>
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Morning, Zechariah,

Thanks for your email. We are working internally on compiling some of our data and evaluating some of the priority areas that we could highlight for the county to consider. However, due to the timing, we likely won’t have this analysis ready by Tuesday. With that said, I will be sending you the links to our available data for you (or Tim) to overlay later today.

Thanks and I’ll be in touch soon,

Joy

From: Zechariah Heck <Zechariah.Heck@deschutes.org>
Sent: Friday, May 31, 2019 12:20 PM
To: 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Hi Joy,

I want to check in regarding the maps/spatial data. Do you think that you can provide us with the info by Monday? If we are going to provide the data to the Planning Commission, we will need the info by Tuesday, EOD, at the latest.

Please be in touch if you have any questions.

Zachariah Heck | Associate Planner
DECHUTES COUNTY COMMUNITY DEVELOPMENT
117 NW Lafayette Avenue | Bend, Oregon 97703
PO Box 6005 | Bend, Oregon 97708
Tel: (541) 385-1704 | www.deschutes.org/cd

Disclaimer: Please note that the information in this email is an informal statement made in accordance with DCC 22.20.005 and shall not be deemed to constitute final County action effecting a change in the status of a person's property or conferring any rights, including any reliance rights, on any person.

From: Joy R Vaughan <Joy.R.Vaughan@state.or.us>
Sent: Tuesday, May 28, 2019 9:31 AM
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>; 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us>; Zechariah Heck <Zechariah.Heck@deschutes.org>; Tim Berg <Tim.Berg@deschutes.org>
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Thanks for your email, Peter. We greatly appreciate the interest for additional discussion related to Goal 5 from the Planning Commission. I will follow up with our District staff this week, and we will be in touch soon on the next steps for providing the county with updated data.
Best,
Joy

From: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Sent: Friday, May 24, 2019 12:36 PM
To: 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us>; Zechariah Heck <Zechariah.Heck@deschutes.org>; Tim Berg <Tim.Berg@deschutes.org>
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Joy,

I just left you a voice message. The Planning Commission appreciated your letter last night. They respectfully requested updated wildlife habitat inventories from ODFW for rural Deschutes County. Is it possible to send those inventories as spatial shape files? If so, please send them to Tim Berg, who is cc’d with this email. Staff will overlay the updated inventories in relationship to our Wildlife Area, Sage Grouse, and Sensitive Bird and Mammal Combining Zones for the Planning Commission’s June 13 public hearing.

Peter Gutowsky, AICP | Planning Manager
DESHUTES COUNTY COMMUNITY DEVELOPMENT
117 NW Lafayette Avenue | Bend, Oregon 97703
Tel: (541) 385-1709

Enhancing the lives of citizens by delivering quality services in a cost-effective manner.

From: Joy R Vaughan <Joy.R.Vaughan@state.or.us>
Sent: Thursday, May 23, 2019 3:04 PM
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us>; Zechariah Heck <Zechariah.Heck@deschutes.org>
Subject: Deschutes County Nonprime Resource Lands Proposal

Good Afternoon,

Thank you for taking the time yesterday to discuss Deschutes County’s Nonprime Resource Lands proposal. As we discussed, ODFW invites additional coordination with the County to better understand the proposal, especially for the Committed Residential Use Policies. We would appreciate further discussion to explore opportunities to find collaborative solutions to address conflicting uses to fish, wildlife and their habitats.

I sincerely apologize for the late submittal of the attached comments. Please enter them into the record for the hearing tonight. Thank you for the consideration of these comments.

Joy Vaughan | Land Use and Waterway Alterations Coordinator
ODFW Wildlife Division
503-947-6089 office | 503-949-3796 cell
John Andersen worked for Deschutes County from 1978 to 1985. He started as a Senior Long-Range Planner, and then progressed to Planning Director and Community Development Director. His responsibilities as a Senior Planner were to prepare a Comprehensive Plan for Deschutes County.

SB 100 / Referendum

When Senate Bill (SB) 100 was adopted in 1973, Deschutes County prepared a Comprehensive Plan, relying on the Bureau of Government and Research from the University of Oregon. It was sent to the voters of the county either by referendum or referral by the County Commissioners, and was rejected. Out of the thirty-six counties, Deschutes County was the only one to have its Comprehensive Plan repealed by voters.

Developing the Comprehensive Plan

Negotiations between the State of Oregon and County subsequently took place to develop a Comprehensive Plan that could comply with State law. The State directed Deschutes County to protect resource land consistent with the State Land Use Goals. Many people in Deschutes County felt the land was too marginal for farming and advocated for greater flexibility to allow development. Deschutes County’s “sagebrush subdivisions,” created in the 1960s and early 1970s were cited to the Legislature as part of the reason to approve SB 100 and the State enabling planning legislation.

There was tremendous political turmoil during the Comprehensive Plan’s development. Staff hosted numerous public meetings with hundreds in attendance, with meetings often lasting well into the early hours of the next day. There was violence and threats aimed at the staff. There was also an unsuccessful recall effort aimed at the two Commissioners who supported the newly drafted Comprehensive Plan. Despite all of the hostility and general turmoil the staff worked diligently to prepare reasonable recommendations based upon factual data.

Agricultural Land Designations

*How did Deschutes County designate agricultural land?*

As outlined in the Resource Element, Staff relied on soil maps and irrigation data provided by the irrigation districts. Staff also examined topography, recognizing that elevation could affect land productivity (example: Lower Bridge area). Soil and irrigation were the two primary factors for determining agricultural land. The one exception was the eastern section of the county which was recognized as rangeland (Brothers, Millican, and Hampton).
There are two rural subdivisions, one near Sisters (Squaw Creek Canyon Recreational Estates 1st Addition), the other north of La Pine (Meadow Crest Acres) interspersed with Exclusive Farm Use and Rural Residential zoning. Any idea how this might have happened?

Too many years have passed for me to remember specific subdivisions, however, in general, pre-platted subdivisions, lacking development, utilities, or infrastructure were deemed to be vacant and therefore suitable for agriculture uses, based on direction from the State. The County was also required to protect the land for wildlife and open space values, as well as to direct development into areas that could be more efficiently served, thereby reducing required taxation.

**Forest Land Designations**

*How did Deschutes County designate forest land?*

Staff relied on soil maps and information provided by the Oregon Department of Forestry.

There are four rural subdivisions, one near Sisters (Squaw Creek Canyon Recreational Estates 1st Addition), one west of Bend (Skyline Subdivision) and two near La Pine (Haner Park - - along the Upper Deschutes River, Section 36 - - West of La Pine) interspersed with Forest Use (F2) and Rural Residential zoning. Any idea how this might have happened?

Please refer to my previous answer. Pre-platted subdivisions, lacking development, utilities, or infrastructure were deemed to be vacant and therefore suitable for forest uses, based on direction from the State. The County was also required to protect the land for wildlife and open space values.

**Rural Residential Land Designations**

*How did Deschutes County designate Rural Residential Land (Rural Residential - 10, Multiple Use Agricultural - 10)?*

Deschutes County had to demonstrate that the land was committed to rural residential uses. There were extensive property owner negotiations. Many property owners wanted maximum flexibility to preserve their investment for retirement. Staff examined the level of development, utilities, roads, and infrastructure to make the determination. They examined every property, lot by lot in the county. If they could demonstrate the land was committed, even if it was not necessarily completely built-out, it was designated rural residential.

Upon the adoption of the Comprehensive Plan, property owners had the ability over a period of one year to initiate an exception to their resource land designation. No one took advantage of it because the methodology and information relied upon by Staff was the best available.
MEMORANDUM

February 16, 2010

To: Nick Lelack, Planning Director

From: Kevin Harrison, Principal Planner

Subject: History of Agricultural Zoning in Deschutes County

You have asked for an outline of the key moments and concepts in agricultural zoning in Deschutes County. The following is the history as I know it.

I. Senate Bill 100 and Oregon’s Land Use Planning Program
   A. Adopted in 1973
   B. Goal 3 defines agricultural lands and requires counties to identify and apply Exclusive Farm Use (EFU) zones to such lands.
   C. Goal 3, codified in ORS 215, prescribes land division standards, approval standards for new house and permissible uses in the zone.

II. Planning and Zoning in Deschutes County
   A. The County adopts its first comprehensive plan and plan map in 1970. Agricultural areas are described in the plan and on the map but no zoning ordinance was adopted to implement the plan. The plan did not establish a minimum lot size for subdivisions in agricultural zones.
   B. The County adopts PL-2, the first subdivision ordinance in 1970. PL-2 authorized creation of “rural subdivisions” on land designated agriculture on the plan map and established a minimum lot size of 5 acres for lots in such subdivisions in the absence of a zoning ordinance.
   C. The County adopts PL-5, the first zoning ordinance, in 1972. PL-5 created two agricultural zones (A-1 and A-2) with 5-acre and 10-acres minimum lot sizes, respectively. Note that PL-5 was adopted pre-SB 100 and, thus, was not consistent with the statewide planning program.
   D. The County adopts PL-7, the first partition ordinance, in 1977. At this time all land divisions in the county are regulated, except subdivisions creating lots larger than 10 acres in size.
E. The County adopts PL-14, the combined subdivision/partition ordinance, in 1979. At this time all land divisions in the county are regulated.

F. The County adopts PL-20, the Year 2000 Comprehensive Plan, and PL-15, the accompanying zoning ordinance, in 1979. The Plan and ordinance are acknowledged by LCDC as being consistent with the statewide planning goals in 1981.
   1. PL-15 creates the first EFU zones, with minimum lot sizes of 20, 40, 80 and 320 acres, depending on the geographic location of the property.
   2. EFU zones distinguish between farm-related dwellings and nonfarm dwellings.
   3. Mapping of agricultural lands relied on soils maps, assessor records and maps of irrigated lands. A Citizen Advisory Committee used those data, along with their local knowledge, to define distinct geographic areas where the characteristics of farming were similar and to set minimum lot sizes based on the characteristics in those geographic areas.
   4. PL-15 also created the MUA-10 zone, consisting of marginal, developed farmland, which carried a minimum lot size of 10 acres and allowed a new dwelling as a matter of right. The MUA-10 zone allowed uses not described in ORS 215 and, thus, was not a qualifying EFU and was removed from the agricultural section of the plan during periodic review.

G. During periodic review, the County was required by DLCD to review and update its comprehensive plan and implementing ordinances for agricultural lands to assure continuing compliance with Statewide Planning Goal 3.
   1. The Board of County Commissioners contracted with OSU Extension Service in 1992 to provide assistance in documentation of the standards for the EFU zones. The principal investigator in the process was Dr. James R. Pease. Four principal steps are involved in the documentation process.
      a. Identify the types and sizes of farm operations comprising the county’s commercial agricultural enterprise.
      b. Determine whether there are areas or subareas of the county with a distinct agricultural enterprise.
      c. Determine the farm unit size(s) appropriate to maintain each area’s commercial agricultural enterprise.
      d. Balance the relevant information to determine parcel size appropriate to maintain the area’s commercial agricultural enterprise as a whole.
   2. To accomplish these tasks the Commissioners also appointed a 24-member advisory committee to assist in the documentation of standards for the EFU zones.
      a. The County contracted with the Bureau of the Census for a special tabulation of the 1987 Census of Agriculture.
      b. The County also contracted with Western Attitudes to conduct two original surveys.

3. A key finding in the research was that irrigation was a controlling variable in defining commercial farms. Thus, irrigated acres were used to set minimum lot sizes. The use of irrigated acres in setting minimum lot sizes may be unique in the state.

4. The adopted standards, as shown in Ordinance Nos. 92-062, 92-063 and 92-064, completed the Goal 3 portion of the County’s periodic review process. The ordinances provided the documentation for land division standards in 6 subzones, new houses, and permissible uses. The contained unique procedures for dwelling approvals (i.e., locally determined income tests and provisions for farm management plans), minimum lot sizes based on local farm characteristics and flexibility to recognize specialty farms on smaller parcels.

5. The County’s adopted ordinances were heavily contested by 1000 Friends of Oregon, who appealed the County’s ordinances up to the Oregon Supreme Court, where the County prevailed when the Court refused to hear the case.

6. Subsequently, the Oregon Legislature adopted some milestone changes to the EFU zones through HB 3661 and HB 3326, which resulted in statewide income standards for farm dwellings and statewide minimum lot sizes for land divisions. As a result, much of the County’s program had to be modified to come into compliance with state law. (See, for example, Ordinance Nos. 94-026, 95-007 and 2002-016.) The current version of the EFU zone is a whittled down version of what was adopted in 1992, but it still, at least in terms of minimum lots sizes for farm parcels, represents local conditions, not the statewide minimum of 80 acres.
EXHIBIT A

FINDINGS AND RECOMMENDATIONS
DESCHUTES COUNTY YEAR 2000 COMPREHENSIVE
PLAN AMENDMENTS

On November 7, 1979 Deschutes County submitted to the Oregon Land Conservation and Development Commission (LCDC) the Deschutes County Year 2000 Comprehensive Plan and requested that the Plan be granted acknowledgement as a plan in conformance with the state land use planning goals. At LCDC's April 10th meeting, the Commission determined that improvements to inventories, policies and ordinance requirements regarding agricultural lands (Goal 3), forest lands (Goal 4) and open spaces - scenic and historic area - and natural resources (Goal 5) would have to be made before acknowledgement could be granted. The County was offered an extension of time, subsequently accepted, in order to prepare the necessary amendments. Attached are the amendments which are proposed to meet the LCDC's requirements.

This introduction is provided to explain the findings which determined the content of the amendments proposed, as well as a discussion of the alternatives considered.

GOAL 3 AGRICULTURAL LANDS

FINDINGS:
1. The Department of Land Conservation and Development (LCDC) Staff Report, adopted by LCDC as the requirements to be met by the County, states on page 37:

   "In order to comply, Deschutes County must revise its EFU zones to:
   a. apply the review standards in ORS 215.213(3) to "each" proposed nonfarm dwelling and not allow planned developments in any of the three EFU zones;
   b. apply the review standard in ORS 215.213(3)(d) to nonfarm dwellings in the EFU-20 zone."

   1 --
2. The wording of Section 4.010(4) of PL-15 meets the LCDC requirements for compatibility with ORS 215.213(3).

3. The wording of Section 4.030(5)(c) needs to be added to meet local concerns regarding compatibility.

4. The Exceptions Maps reflect the amount of intermingling of Exclusive Farm Use areas and non-farm areas which occur in Deschutes County.

5. Section 4.010(3)(E) of PL-15 requires each non-farm dwelling to meet the non-farm standards in ORS 215.213(3) and County limitations.

ALTERNATIVES:

No alternatives to the recommended action are available since the requirement is specific as to what must be done.

RECOMMENDATIONS:

The wording of Section 4.010(4) shall be substituted for Section 4.030(4) and 4.040(4).

The wording of Section 4.030(5)(c) shall be added to all EFU zones.

The wording of Section 4.010(3)(E) shall be used in all EFU zones for non-farm dwellings, and reference to partitions, subdivisions and planned developments shall be dropped. Plan policies shall be altered to reflect the restrictions on non-farm dwellings and uses in EFU areas.

FINDINGS:

1. The LCDC requires that the County:

"Amend the Plan Map for all Exception areas zoned MUA-10 from "Agriculture" to a more appropriate designation (i.e. "Rural Residential") in order to ensure that zone changes from EFU to MUA-10 require a plan change and Exception to Goal 3."
2. See **RECOMMENDATION**.

**ALTERNATIVES:**

1. Identify all non-agricultural development on the Plan Map.
2. Amend the Plan text to require changes from EFU zones to require a Plan Amendment and change the Plan Map to refer people to the Exceptions Maps, which are part of the Plan, and the Plan text.

**RECOMMENDATION:**

1. Because the first alternative is physically impossible, due to the scale of the map and the extent of Exceptioned Areas, the second alternative should be used.

**FINDINGS:**

1. LCDC requires the County:

   "Review the 40 acre and 20 acre minimum lot sizes and where appropriate establish minimum lots sizes or a method of review which ensures that the lot sizes or farm use land divisions are "appropriate for the continuation of the existing commercial agricultural enterprise" in Deschutes County. There are also several methods that combine the use of a minimum lot size with review criteria which can also comply with Goal 3. The Department will assist Deschutes County in developing a method which best suits their particular situation."

2. An inventory of existing farm and lot sizes reveals that: High desert sagebrush and juniper land east of Horse Ridge is characterized by lot sizes of several hundred to several thousand acres; Riparian Meadows have predominant lot sizes of 40 and 80 acres and a mean size of 109 acres; Irrigated commercial cropland is predominantly 80 acres; Irrigated marginally commercial cropland is predominantly 40 acres; Dry rangeland is predominantly
40 acres; Marginal farmland - undeveloped is predominantly 40 acres, but the extent of smaller farms results in a smaller mean and median lot size; and Marginal farmland - developed is predominantly less than 20 acres.

3. EFU lot sizes near Bend, West Terrebonne, Redmond, east and west Horse Ridge and in most of Tumalo are consistent with existing farm lot sizes (farm and lot sizes are usually the same).

4. EFU lot sizes in Lower Bridge, East Terrebonne, Cloverdale, Alfalfa, Odin Falls, LaPine, and other areas with farm characteristics similar to these areas, have lot sizes less than are typical presently.

5. EFU zoning protects land from urbanization while conserving the land for open space, wildlife and agricultural uses.

6. See Recommendation.

ALTERNATIVES:

1. Change the zoning maps and adopt an EFU-80 zone to reflect existing lot sizes.

2. Argue that the existing small lot sizes are reasonable given the marginal agricultural character of the County.

3. Set 40 acres as the minimum EFU lot size in all zones, except for EFU-320, since the Resource Element indicates this is the minimum commercial agricultural lot size.

RECOMMENDATION:

Change the zoning maps and adopt an EFU-80 zone to reflect existing lot sizes.

Alternative 2 was argued during the Interim Agricultural Ordinance, and during the initial submission to LCDC, and was rejected.

Alternative 3 does not reflect the individual characteristics of the different agricultural land types or differing areas.

-- 4 --
FINDING:

1. Policy 19, on page 53, of the County Comprehensive Plan states that pre-existing status shall be granted subdivisions with preliminary approval at the time of plan adoption.

2. Seven subdivisions totaling 1,711 acres, were approved in EP areas before Plan adoption but were never added to the maps.

3. The Plan allows approved subdivisions to be excepted from Goal 3.

ALTERNATIVES:

None

RECOMMENDATION:

Amend the Exceptions Statement and zoning maps to reflect the new subdivisions.

GOAL 4, FOREST LANDS:

FINDINGS:

1. LCDC states:

   "In order to comply with this Goal, Deschutes County must:
   1. Amend the FU-2 and FU-3 zones to limit residential development (mobile homes and dwellings in conjunction with forest use) and thereby retain forest uses. If minimum lot size is used as a primary factor in allowing residential development, then a discussion of the impacts on forest use of development at that density and a demonstration of how forest uses will be retained must be adopted as part of the plan."

2. Discussion with LCDC staff indicates that forest-related uses in forest areas should have forest management plans.

3. Representatives of the Department of Forestry and U.S. Forest Service have indicated 40 acre and 20 acre minimums are consistent with forest uses in Central Oregon.
ALTERNATIVES:

1. Make all residential development conditional uses.
2. Require forest-related dwellings to be part of a site and forest management plan.

RECOMMENDATION:

Require forest-related dwellings to be part of a site and forest management plan.

Alternative 1 would be an excessive burden and the LCDC has indicated an interest in the forest management plan alternative.

FINDING:

1. LCDC requires the County to:
   "Delete the State Board of Forestry requirement from the FU-1, FU-2 and FU-3 zones."

ALTERNATIVES:

None.

RECOMMENDATION:

Delete Sections 4.080(9)(B) and 4.085(9)(B).

GOAL 5, OPEN SPACES, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES:

FINDINGS:

1. LCDC requires the County to:
   "Adopt a policy to protect existing historic sites and structures, and the Historic Preservation Ordinance."

ALTERNATIVES:

1. Adopt an interim policy to protect historic sites and structures, while continuing work on the Historic Preservation Ordinance.
2. Adopt the Historic Preservation Ordinance now.

RECOMMENDATION:

Alternative 2 should be used since it is simpler.
FINDINGS:

1. LCDC requires the County to:
   "Adopt policies and implementing measures to protect the approved Oregon Recreation Trails, particularly the Transamerica Bikeway where its route is along County roads."
2. Only ½ mile of the Transamerica Bikeway lies outside state or federal ownership.

ALTERNATIVES:

None.

RECOMMENDATION:

Add to the Transportation Chapter a policy to protect the Transamerica Bikeway and amend PL-15 to implement that policy.

FINDING:

1. Although not an LCDC requirement, the Department of Environmental Quality has stated a preference for a statement that the County shall coordinate, rather than should coordinate, with them.

RECOMMENDATION:

Change policy 10 of the Open Spaces, Areas of Special Concern and Environmental Quality Chapter from should to shall.

FINDINGS:

1. LCDC states that for surface mining resources the County must:
   "Include in the Resource Element the latest available data on the quantity, quality and location of mineral and aggregate resources."

ALTERNATIVES:

None.

RECOMMENDATION:

Amend the Resource Element and Policy Document to include available information on known mineral resources and anticipated needs.

-- 7 --
FINDINGS:

1. LCDC requires the County to:
   "Provide a more detailed analysis on the nature and extent of conflicts between resource sites and existing and proposed development. Where substantial conflicts exist, site specific information must be provided in order to justify the County's eventual designations. Exceptions are not required."

2. The inventory indicates 43,425,000 cubic yards of aggregate is known and projections indicate up to 41,489,677 cubic yards may be needed.

3. Amend the Resource Element and Policy document to include available information on known mineral resources and anticipated needs.

ALTERNATIVES:

1. Adopt conflict criteria, use a lower needs projection and do not allow mining of high conflict sites.

2. Adopt conflict criteria, use a higher needs projection and identify all mining resources for mining, but increase County regulations to assure compatibility.

RECOMMENDATION:

Use Alternative 2 since 1 could make the community vulnerable to a severe shortage of aggregate materials.

Adopt criteria for measuring the level of conflict for each known mining site.

Identify the three known controversial sites for Surface Mining Reserve, but establish stringent requirements for the mining of the materials.

Continue to improve the County mining resource inventory and establish a citizens committee to assist this process.

Establish criteria for identifying new sites based upon new

--- 8 ---
inventory information.

Maintain publicly owned resource sites for future possible needs.

FINDINGS:

1. LCDC states the County must:

   "Adopt clear, nondiscretionary standards for the change of an inactive SMR site to an active SM site."

ALTERNATIVES:

None

RECOMMENDATION:

Recognizing local population growth, construction industry fluctuations and needs indifferent areas of the county establish criteria for new surface mining, which provide an objective guide for zone changes from SMR to SM. The criteria should require a demonstration that the material is needed because of local growth and exhaustion of existing sites and that it is needed in the place proposed. The criteria should also distinguish between aggregate sites, which are in short supply, and pumice/cinders sites, which are in large supply and are an exported material.

FINDINGS:

1. LCDC requires the County to:

   "Adopt standards to protect existing (SM) and proposed (SMR) mineral sites from proposed adjacent development. These standards must apply to the proposed development and not the mine operations."

ALTERNATIVES:

1. Place all the burden on adjoining uses.
2. Place all the burden on the mining use.
3. Develop policies for material accommodation.

RECOMMENDATION:

Use Alternative 3, since 1 and 2 are unequitable.
Continue the SMR zone to serve as an identification device for new development and amend the zoning (PL-15) and subdivision (PL-14) ordinances to permit increased requirements for development near SM and SMR zones. Establish a more stringent County mining enforcement program to assure SM sites are compatible with adjoining uses, which includes a Mining Committee with representatives from both miners and adjoining property-owners.

FINDINGS:

1. LCDC requires the County to:
   "Resolve any conflicts or technical errors between the County's SM zone and DOGAMI's statutory responsibilities."

2. See RECOMMENDATION.

3. During public hearings, dissatisfaction was expressed regarding existing regulation of surface mines.

ALTERNATIVES:

1. Continue a shared enforcement responsibility between the County and the State.

2. Have the County assume all enforcement responsibility for reclamation and site plans.

RECOMMENDATIONS:

Because of public dissatisfaction with the State's enforcement program, the County should adopt Alternative 2 in order that the miners be allowed to continue to operate while the neighbors have some greater assurance of effective control on mining operations.

-- 10 --
FINDING:

1. LCDC recommends the County:

"Correct the zoning ordinances to note that the official federal endangered species list is maintained by the Fish and Wildlife Service and not the EPA."

ALTERNATIVES:

None.

RECOMMENDATION:

Change the reference as suggested.
Agricultural Lands in Deschutes County
1968-2017
Agenda

1. EFU Tour
2. Pre-Statewide Planning
3. Compliance with Statewide Planning Goal 3 Agriculture (1979)
5. Commercial Farm Study (1992)
8. Big Look Bill, Pilot Project, Agricultural Lands Public Outreach
9. EFU Benefits & Challenges
Exclusive Farm Use Zone (EFU)
Exclusive Farm Use Zone (EFU)
Exclusive Farm Use Zone (EFU)
8,371 Parcels

224,000 Privately Owned Acres
477,000 Publicly Owned Acres
701,000 Total Acres

36% of All County is Zoned EFU
59% of Privately Owned County is Zoned EFU
Agricultural Land Use History

1965
Deschutes County adopts first zoning ordinance

1968
Zoning ordinance repealed by voters

1970
Deschutes County adopts first Comp Plan

1971
Deschutes County adopts a zoning ordinance, creating two agricultural zones

1973
SB 100 signed into law, establishes Statewide Land Use Planning

1979
Deschutes County updates its Comp Plan to comply with State planning regulations. County also adopts EFU zoning for first time. County provides one-year window for property owners to rezone from EFU to MUA

1990
State imposes an enforcement order on Deschutes County for non-compliance

1992
Deschutes County, as a result of Periodic Review, completes a commercial farm study and adopts 7 new agricultural subzones.

2004
Oregon voters approve Measure 37

2007
Oregon voters approve Measure 49.

2008
Deschutes County participates in the Big Look Task Force

2009-11
Deschutes County testifies in favor of HB 2229 and HB 3615
FARM MANAGEMENT

TRANSITION FROM COMMERCIAL TO PART-TIME FARMING AND RURAL RESIDENCES

The irrigated portions of Deschutes County within a radius of about five miles from both Bend and Redmond are now mostly composed of rural residences and part-time farms. This type of land use has also increased in all parts of the irrigated farming areas of the county intermixed with commercial farms.

The committee considers that the Arnold and Deschutes Reclamation and Irrigation Company (Swally), most of the Tumalo district, and the parts of the Central Oregon Irrigation District between Bend and Redmond and adjacent to Redmond are, with the exception of Grade A dairies and possibly a few specialized poultry farms, going to develop within the next 10 years into almost exclusive areas of rural residences and small part-time farms. Areas expected to remain in predominantly commercial agriculture include the Squaw Creek Irrigation District, the community northeast of Redmond, much of the Terrebonne community, and the Alfalfa community.

AGRICULTURAL PROBLEMS OF PART-TIME FARMS

WATER MANAGEMENT

As irrigated farms are broken up into tracts of five acres or less, distribution of irrigation water becomes difficult without incurring proportionately high costs. The committee suggests that subdividers developing tracts of this type install pipeline systems for delivery of irrigation water from a central reservoir. When this type of installation is not made, formation of water-user groups among the tract owners to enable installation of irrigation-water distribution systems should be undertaken.

PEST CONTROL

Development of part-time farms and small agricultural tracts has compounded the control of noxious weeds and such rodent pests as ground squirrels and gophers. The tracts of which no productive use is being made produce weeds that not only spread to other tracts and farms in the area but become eyesores. Little knowledge of pest controls exists among owners of these lands, and most do not have the equipment necessary for weed-control measures.
ATTACHMENT 6

Zoning Map 1972

DESHUTES COUNTY ZONING

- A1 EXCLUSIVE AGRICULTURAL
- PD PLANNED DEVELOPMENT
- AREA FOR SPECIAL ZONING CONSIDERATION
- AR-1 EXCL. AGR. WITH UBC
- RR-1 RURAL RECREATION RESIDENTIAL

4.1.a
Planning Goes Statewide 1974

Statewide Land Use Goals Established

- Goal 1 - Citizen Involvement
- Goal 2 - Land Use Planning
- Goal 3 - Agricultural Lands
- Goal 4 - Forest Lands
- Goal 5 - Natural Resources, Scenic and Historic Areas, and Open Spaces
- Goal 6 - Air, Water and Land Resources Quality
- Goal 7 - Areas Subject to Natural Hazards
- Goal 8 - Recreational Needs
- Goal 9 - Economic Development
- Goal 10 - Housing
- Goal 11 - Public Facilities and Services
- Goal 12 - Transportation
- Goal 13 - Energy Conservation
- Goal 14 - Urbanization

(Goals 15-19 later added addressing the Willamette River and coastal resources)
Land Use Revisited

1979

“Year 2000” Comprehensive Plan Adopted

- Includes agricultural lands designation
  - Goal: To preserve agricultural land in Deschutes County for the production of farm and forestry products, as well as the public need for open space.
  - Hampered by limited availability of soil maps and information
  - Established more elaborate definition of agricultural lands than statewide goal
Goal 3 Compliance 1979

“Year 2000” Comprehensive Plan
1979 Land Use Revisited

1979
Deschutes County Zoning Ordinance PL-15 Adopted

- Includes first Exclusive Farm Use (EFU) Zones
  - EFU-320
  - EFU-80
  - EFU-40
  - EFU-20

- Provided 1 year window to rezone from EFU to MUA if:
  - < 320 acres
  - Contain poor soils
  - Insufficient water rights
  - Will not interfere with existing agricultural uses
Compliance Challenge 1992

Enforcement Order

- County was not applying non-farm dwelling standards appropriately
- Required **ALL** dwellings in EFU zone be reviewed by Hearings Officer **AND** BOCC
- Ended after 1-year with compliance

A News Release from...

Oregon’s Department of Land Conservation and Development (DLCD)
1175 Court Street NE, Salem OR 97310
For more information, call Mitch Rohse, Communications Manager, at 373-0

June 15, 1992 — For Immediate Release

Successful negotiation halts enforcement action in Deschutes County

Salem -- In a telephone conference call today, Oregon’s Land Conservation Development Commission (LCDC) withdrew a motion to enter into enforcement proceedings against Deschutes County. LCDC’s decision came as a result of successful negotiations between county officials and the Alliance for Responsible Land Use in Deschutes County (ARLUDeCo).

In May 1992, ARLUDeCo petitioned LCDC to adopt an enforcement order against Deschutes County. ARLUDeCo argued that county officials had been violating land use laws in approving permits for new houses on farmland.
Concluded that irrigation & irrigation districts are key factors

Recommended 7 new agricultural subzones established to protect commercial agriculture lands while providing flexibility

Smallest EFU lot sizes in Oregon

<table>
<thead>
<tr>
<th>Subzone Name</th>
<th>Minimum Irrigated Acres</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Bridge</td>
<td>130</td>
<td>Irrigated field crops, hay and pasture</td>
</tr>
<tr>
<td>Sisters/Cloverdale</td>
<td>63</td>
<td>Irrigated alfalfa, hay and pasture, wooded grazing and field crops</td>
</tr>
<tr>
<td>Terrebonne</td>
<td>35</td>
<td>Irrigated hay and pasture</td>
</tr>
<tr>
<td>Tumalo/Redmond/Bend</td>
<td>23</td>
<td>Irrigated pasture and some hay</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>36</td>
<td>Irrigated hay and pasture</td>
</tr>
<tr>
<td>La Pine</td>
<td>37</td>
<td>Riparian meadows, grazing and meadow hay</td>
</tr>
<tr>
<td>Horse Ridge East</td>
<td>320 (dry)</td>
<td>Rangeland grazing</td>
</tr>
</tbody>
</table>

*Except Horse Ridge. Horse Ridge is based on dry acreage.
Source: Deschutes County 1992 Farm Study
EFU Subzones

4.1.a

Exclusive Farm Use Zone
- EFUAL - Alfalfa Subzone
- EFUHR - Horse Ridge Subzone
- EFULA - La Pine Subzone
- EFULB - Lower Bridge Subzone
- EFUSC - Sisters/Cloverdale Subzone
- EFUTE - Terrebonne Subzone
- EFUTRB - Tumalo/Redmond/Bend Subzone
Current Zoning Map
Current Comprehensive Plan Map

Deschutes County Comprehensive Plan

- City Limit
- Urban Design Boundary
- Urban Reserve Area
- Fabric Land Conservation
- Comprehensive Plan Designations
  - Agricultural
  - Forest
  - Open Space & Conservation
  - Rural Commercial
  - Rural Industrial
  - Rural Residential Development Areas
  - Rural Community
  - Rural Commercial

Legend:
- City Limit
- Urban Design Boundary
- Urban Reserve Area
- Fabric Land Conservation
- Comprehensive Plan Designations
  - Agricultural
  - Forest
  - Open Space & Conservation
  - Rural Commercial
  - Rural Industrial
  - Rural Residential Development Areas
  - Rural Community
  - Rural Commercial

Packet Pg. 76
Measure 37 & 49 – Mostly EFU 2005-11

Measure 37

• 170 Claims
• 6,300 Acres
• 1,780 Lots
• $500 million claimed losses

Measure 49

• 135 dwellings
• 96 new parcels
1. The *Comprehensive Plan Update* (2011) recaps the contentious history of agricultural land designations in Deschutes County and recognizes they remain controversial.

2. Public expressed differences of opinion over which lands should be designated farm lands and what uses should be allowed.
3. The Comprehensive Plan Update recognizes:

- Agriculture is part of the ongoing local economy
- Secondary benefits of agricultural lands: scenic open spaces, rural character, and contributions to tourism economy
- Difficult to predict future agricultural opportunities
- Preserving farm lands benefits the wider public at expense of landowners
- Farm land is marginal without irrigation
- Agricultural zoning applied to land with no history of farming
- Potential adverse impacts to farming community from agricultural land conversion
4. **Comprehensive Plan Agricultural Lands Goals and Policies:**

- Provide basis for evaluating the future of agriculture over next 20 years
- Encourage flexibility, within state guidelines, to the farming community
- Support preserving farm lands by ensuring a variety of alternative paths to profitability
Goal 1  
Preserve and maintain agricultural lands and the agricultural industry.

Policy 2.2.3  
Allow comprehensive plan and zoning map amendments for individual EFU parcels as allowed by State Statute, Oregon Administrative Rules and this Comprehensive Plan.

Policy 2.2.4  
Develop comprehensive policy criteria and code to provide clarity on when and how EFU parcels can be converted to other designations.

Goal 2  
Promote a diverse, sustainable, revenue-generating agricultural sector.

Policy 2.2.12  
Review County Code and revise as needed to permit alternative and supplemental farm activities that are compatible with farming, such as agri-tourism or commercial renewable energy projects. When a preferred alternative or supplemental use identified through a public process is not permitted by State regulations work with the State to review and revise their regulations.
Goal 3  Ensure Exclusive Farm Use policies, classifications and codes are consistent with local and emerging agricultural conditions and markets.

Policy 2.2.13  Identify and retain accurately designated agricultural lands.

Policy 2.2.14  Explore new methods of identifying and classifying agricultural lands.
   a. Apply for grants to review and, if needed, update farmland designations.
   b. Study County agricultural designations considering elements such as water availability, farm viability and economics, climatic conditions, land use patterns, accepted farm practices, and impacts on public services.
   c. Lobby for changes to State statute regarding agricultural definitions specific to Deschutes County that would allow some reclassification of agricultural lands.
Goal 3  Ensure Exclusive Farm Use policies, classifications and codes are consistent with local and emerging agricultural conditions and markets.

Policy 2.2.13  Identify and retain accurately designated agricultural lands.

Policy 2.2.14  Explore new methods of identifying and classifying agricultural lands.
   a. Apply for grants to review and, if needed, update farmland designations.
   b. Study County agricultural designations considering elements such as water availability, farm viability and economics, climatic conditions, land use patterns, accepted farm practices, and impacts on public services.
   c. Lobby for changes to State statute regarding agricultural definitions specific to Deschutes County that would allow some reclassification of agricultural lands.
2009-12 Supported HB 2229, Big Look Bill, to allow counties to correct mapping errors that occurred when lands first designated; implementation requires State approval; County indicated interest & provided draft documents to DLCD

2012 DLCD allocated resources to assist Deschutes County to implement HB 2229

2011-12 Served on committees & actively supported bills (i.e., HB 3615) to establish pilot project to allow regional definitions of farm and forest lands — and inclusion of Deschutes County

2012 Governor signed EO-12-07 — Southern Oregon Regional Pilot Program; DLCD limited resources reallocated to SORPP
2012-16 Monitored pilot project closely

2012-16 Processed 6 privately initiated Plan Amendments / Zone Changes from Agricultural / EFU Designations to Non-Resource (MUA-10) Designations

2014-16 Conducted community conversations of what’s working & what’s not with agricultural lands; Planning Commission & BOCC direction to:

1. Initiate minor amendments to Forest (reduced setbacks in Haner Park) & EFU (medical hardships)

2. Coordinate with DLCD to correct mapping errors in platted subdivisions
2009-12  Supported Big Look Bill to allow counties to correct mapping errors that occurred when resource (farm & forest) lands first designated

Implementation requires LCDC approval; County indicated interest; DLCD allocated resources to assist

2011-12  Served on committees & actively supported bills to establish pilot project to allow regional definitions of farm and forest lands, including Deschutes County

2012  Governor approved Southern Oregon Regional Pilot Program (SORPP)

DLCD limited resources reallocated to SORPP
Agricultural Lands Public Outreach: 2014

- Introduction
- Active Exercises
- Questionnaire
- Passive Exercises
<table>
<thead>
<tr>
<th>Yes, it is working because...</th>
<th>No, it's not working because...</th>
<th>It depends because...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities for restoring land, making agricultural to be productive.</td>
<td>Destination resorts are a threat.</td>
<td>Neighborhood pressure for lifestyle change.</td>
</tr>
<tr>
<td>Technological opportunities are occurring in the region like greenhouse technology.</td>
<td>Difficult to make a profit &amp; recoup your costs for farming.</td>
<td>County rules are needed; ours are restricted.</td>
</tr>
<tr>
<td>Recovery agricultural lands - Must change - Opportunity.</td>
<td>Second, NUIs are needed; ours are restricted.</td>
<td>County is susceptible to proposals that change land use for the purpose.</td>
</tr>
<tr>
<td>Farming methodology is working.</td>
<td>Farms tourism.</td>
<td>It's properties that may lose some status, require the 10 yr. reductive tax benefits.</td>
</tr>
<tr>
<td>Sod in Tumalo some risk, needs management proactive; rent pressures will make the land more valuable.</td>
<td>Farm deferral makes EFO more affordable.</td>
<td>Farming on these lands doesn't allow small parcels to be returned to EFO.</td>
</tr>
<tr>
<td>Farm deferral makes EFO more affordable.</td>
<td>Farm deferral makes EFO more affordable.</td>
<td>Large properties not allowed farm occupancy.</td>
</tr>
<tr>
<td>Certified organic farming is emerging opportunity.</td>
<td>Agri- tourism values added, seasonal tourist trade.</td>
<td>Activities impact farming. How do you rectify this?</td>
</tr>
<tr>
<td>50 different crops - Meats (Poultry, Pork, Beef) - Small milling.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>What happens to farm critical when land use changes?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large farms can be threatened as some land is seized; county conflicts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the future, the program could be used for micro-grading. The county doesn't have the money to process the application and send more land for processing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplemental activities that support agricultural should be expanded.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Be careful with unintended consequences.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incompatible uses could threaten existing farms.</td>
</tr>
</tbody>
</table>
What are the advantages of EFU zoning?

Limits Sprawl

 Seems to work as is. Selfishly, I would keep it as is. Maintain wildlife corridors. Children can't afford to live apart.
Agricultural Lands Discussion – Spring 2014
Questions

What do you value about EFU Lands?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Agricultural Lands Analysis Survey

Thank you for your time completing this survey. Public involvement is critical to Deschutes County’s land use planning program.

Agricultural lands contribute to the County in a number of ways. Agriculture is part of the ongoing local economy. These lands also offer secondary benefits like providing scenic open spaces that help promote tourism. Farm lands also contribute to the rural character that is often mentioned as important to residents.

The Deschutes County Community Development Department is interested in your opinion about County farm designations and related land use regulations. Your responses will help the County assess the status of the agricultural lands program and assist in determining if changes should be made at the local and/or state level.

1. Which best describes your connection to Exclusive Farm Use (EFU) lands?
   - EFU Property Owner
   - Rural Property Owner (not zoned EFU)
   - Interested Citizen
   - Visitor

   In what region of the county is your property located (e.g., closest city/community)?
   [ ]

2. What aspects of EFU lands do you value? Please indicate how strongly you agree or disagree with each of the following.

   Strongly Disagree | Neutral | Strongly Agree
   [ ] [ ] [ ]
Theme 1 - Retain:
The program is working as intended and no changes are needed.

Theme 2 - Revise:
The program warrants refinement that is reflective of local conditions.

Theme 3 - Redo:
The program is ineffective and overreaching with unintended consequences.
Big Look Implementation

• Changed circumstances do not warrant remapping under HB 2229 (not in error)

• County requested LCDC to initiate rulemaking to implement Big Look law and/or to define non-resource lands

January 8, 2015

Deschutes County Planning Commission
 c/o Nick Leck
Community Development Director
117 NW Lafayette Avenue
Bend, Oregon 97701

RE: HB 2229 question regarding scope of review

Deschutes County planning staff has requested the opinion of the Department of Land Conservation and Development (the department) on whether HB 2229 requires all or most farm- or forest-zoned lands in a county to be considered whether smaller, non-contiguous tracts could be considered non-resource lands.

May 6, 2015

Mr. Jim Rue, Director
Deschutes County Planning Commission
635 Capitol St. NE, Suite 150
Salem, OR 97301

Re: HB 2229 / LCDC Rulemaking

Dear Mr. Rue:

Thank you for visiting Deschutes County on April 17, 2013 to discuss among other items the issues of non-resource lands and the challenges with implementing House Bill (HB) 2229. The Board of County Commissioners, following a recommendation from the Planning Commission respectfully request the Land Conversation and Development Commission (LCDC) initiate rulemaking to implement the legislation and clarify processes for:

- Changed circumstances do not warrant remapping under HB 2229
EFU “Benefits”

- Supports existing farms, provides for new agricultural opportunities such as wineries and marijuana
- Smallest EFU lot sizes in State, provides more opportunities for small farms & uses/development as allowed by EFU zone
  - Approved the most non-farm dwellings in Oregon (20 out of 85 in 2015; 19 issued in 2016)
  - County allows all statutory EFU uses – destination resorts, weddings (ag tourism), solar farms, guest ranches, distillery, etc.
- Protects natural resources – i.e., helping prevent federal listing of sage grouse
- Protects views, landscapes, recreation areas
- Provides a path for future urbanization around cities
EFU “Challenges”

- Rocky landscape & poor soil quality, depth
- Lack of water availability – low rainfall, limited water rights, increased demands
- Climate – fewest frost free days, short growing season
- Distance to markets
- Land use pattern & mixed zoning - large number, small size & locations of farm & rural residential parcels
- Negative average annual farm income
You have, or should have, documentation of the discussions back in 2014-15, which include the notes about the CDD staffs’ conversation with John Andersen, the Senior Planner responsible for the 1979 Comprehensive Plan.

What follows is the best I can do to provide from documents that I still have “documentation” of how decisions were made for defining and designation lands for zoning back in 1978-79. My involvement was as a volunteer on the “Overall CAC”. The CDD has a copy of the 1979 Comprehensive Plan but I do not know if they have a copy of the Resource Element, which includes commentary, methodology, the few maps and a list of references.

Unfortunately, creating a synthesis of this information will require work on your part. Selected sections, some only to give a flavor of the county and issues then, are in the accompanying PDF’s. A partial roadmap is listed below – for easier navigation, page numbers refer to the PDF page number, not the page number of the document itself.

Resource Element
- Soils: The plan’s association of soil type with land use designations is under “Using Soils Information” [pg. 8]
- Forest Lands: Informational
- Agricultural Lands: Some of the controversy on the use of “soils” as the determining measure (surrogate) of agricultural land is un “Soil” [pg. 26]
- Areas of Special Interest - Open Spaces Then as now, the so-called “resource lands” were an essential part of open space and livability precepts [pg. 34]. The vigorous insistence on preservation were sources of conflict with some owners of those resource lands.
- Population: Informational
- Urbanization: Informational
- Rural Development: Beginning on [pg. 48] is the background on the rapid partitioning and development spread into rural land. The only color map of the element and plan shows “existing uses” on [pg. 58].

Comprehensive Plan
- First 18 pages are background information about the character of the County in the late 1970’s
- Rural Development: The introduction reflects concerns that are the same as those expressed today [pg. 19] Policy 7 never gained any traction [pg. 20]
- Agricultural Lands The introduction [pg. 26] outlines some of the issues in defining agricultural land for the purposes of the Plan [pg. 27]. The latter’s evolution is covered in the preamble to Policies [pg. 29]. Some of the economic, water and conversion considerations are present under Zoning [pg. 31] You may wish to note Policy 16 [pg. 32]
- Forest Lands Scattered development [pg. 33] was recognized as a problem. And is implied in policy 8 [pg. 34] and in the Introduction under a subsequent section Exceptions [pg. 53]
Open Space  Much of what was important then [pg. 35] is important today. As discussed in the Resource document, most of us then as well as today perceive private “resource” lands as part of our expected “open space”.

Exceptions: [pg. 53] This section includes the acknowledgement of platted subdivisions, sometimes referred to as “recreational subdivisions”, without sufficient development to label them as “committed” to other uses but enclosed in the “resource” land umbrella.

As Mr. Tim Murphy pointed out the “surrogates” for farm and forest lands now have a few more parameters than just soil types and a 1947 soil type inventory with a partial county update in 1973. They are included below for reference. With a new program (state-wide land use planning), a county which had aggressively allowed subdividing and resistance to “state control” in a number of sectors, there was little flexibility in the exceptions route for Deschutes in 1979.

**660-033-0020**

Definitions

For purposes of this division, the definitions in ORS 197.015, the Statewide Planning Goals, and OAR chapter 660 shall apply. In addition, the following definitions shall apply:

(1)(a) "Agricultural Land" as defined in Goal 3 includes:

(A) Lands classified by the U.S. Natural Resources Conservation Service (NRCS) as predominantly Class I-IV soils in Western Oregon and I-VI soils in Eastern Oregon;

(B) Land in other soil classes that is suitable for farm use as defined in ORS 215.203(2)(a), 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; and accepted farming practices; and

(C) Land that is necessary to permit farm practices to be undertaken on adjacent or nearby agricultural lands.

(b) Land in capability classes other than I-IV/I-VI that is adjacent to or intermingled with lands in capability classes I-IV/I-VI within a farm unit, shall be inventoried as agricultural lands even though this land may not be cropped or grazed;

(c) "Agricultural Land" does not include land within acknowledged urban growth boundaries or land within acknowledged exception areas for Goal 3 or 4

**660-006-0005**

Definitions

7) “Forest lands” as defined in Goal 4 are those lands acknowledged as forest lands, or, in the case of a plan amendment, forest lands shall include:

(a) Lands that are suitable for commercial forest uses, including adjacent or nearby lands which are necessary to permit forest operations or practices; and

(b) Other forested lands that maintain soil, air, water and fish and wildlife resources.
ATTACHMENT 7

DESCHUTES COUNTY

COMPREHENSIVE PLAN

Resource Element

Prepared and Presented

By

The Deschutes County Planning Department

In Cooperation With

The Citizens of Deschutes County

William G. Monroe

Planning Director

Long-Range Planning Section

John E. Andersen Carole Wells Brian Christensen
Senior Planner Associate Planner Assistant Planner

Merlyn Paine
Assistant Planner

Current Planning Section

Richard Knowles Craig Smith Barbara Taylor
Associate Planner Associate Planner Assistant Planner

George Cress Philip Paschke
Assistant Planner Assistant Planner

Clerical Section

Nancy Smith Carol Olson Judie Martin
Senior Office Associate Office Associate Office Associate

1979
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td><strong>Natural Resources</strong></td>
<td></td>
</tr>
<tr>
<td>Geology</td>
<td>2</td>
</tr>
<tr>
<td>Soils</td>
<td>13</td>
</tr>
<tr>
<td>Geomorphology</td>
<td>22</td>
</tr>
<tr>
<td>Climate &amp; Air Quality</td>
<td>38</td>
</tr>
<tr>
<td>Water Resources</td>
<td>45</td>
</tr>
<tr>
<td>Fish &amp; Wildlife</td>
<td>59</td>
</tr>
<tr>
<td>Forest Lands</td>
<td>80</td>
</tr>
<tr>
<td>Agricultural Lands</td>
<td>89</td>
</tr>
<tr>
<td>Areas of Special Interest</td>
<td>102</td>
</tr>
<tr>
<td><strong>Human Resources</strong></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>110</td>
</tr>
<tr>
<td>Historic &amp; Cultural</td>
<td>122</td>
</tr>
<tr>
<td>Population</td>
<td>132</td>
</tr>
<tr>
<td>Economy</td>
<td>140</td>
</tr>
<tr>
<td>Housing</td>
<td>160</td>
</tr>
<tr>
<td>Energy</td>
<td>174</td>
</tr>
<tr>
<td>Transportation</td>
<td>182</td>
</tr>
<tr>
<td>Public Facilities &amp; Services</td>
<td>196</td>
</tr>
<tr>
<td>Recreation</td>
<td>214</td>
</tr>
<tr>
<td>Urbanization</td>
<td>232</td>
</tr>
<tr>
<td>Rural Development</td>
<td>236</td>
</tr>
<tr>
<td><strong>Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>248</td>
</tr>
<tr>
<td>Glossary</td>
<td>256</td>
</tr>
</tbody>
</table>
SOILS

Recent years have witnessed a growing interest in using the natural capabilities of the land to determine appropriate uses, due to a recognition that various areas are able to cope with or support activities differently, depending upon the inherent characteristics of the site. Problems with housing foundations, septic tanks, campgrounds and roads often relate to inadequate soils information. Also, the need to protect scarce agricultural or forestry land, as well as other resources important to the personal and economic future of the area's residents, can be greatly aided by useful soil studies.

Deschutes County is fortunate to have had a general soil study completed in 1973 by the U.S.D.A. Soil Conservation Service and Oregon Agricultural Experiment Station, with funding assisted by the County. Unfortunately, detailed soils mapping has been done only for that portion of the County north of Bend to near Sisters and Terrebonne, roughly following U.S. Highways 20 and 97. While this significantly limits the overall usefulness of the soils data we are still able to carry on with the general information where the more detailed data is not forthcoming.

Our purpose here is to explain the characteristics of each of the twelve soils associations present in the County, breaking this down into more detail about specific soils when appropriate, and providing some discussion concerning the significance and usefulness of the information that is available. Hopefully, the reader will then be able to use this information in their deliberations about the local resources and our common future.

DESCHUTES COUNTY SOILS

There are nearly a hundred thousand kinds of soil in the United States, of which 35 are found in Deschutes County. Even these soils can be, and are, categorized further by slope since this can alter the soils capabilities. An example is Deschutes sandy loam which is placed in four categories 0 to 3 percent, 3 to 7 percent, 7 to 12 percent, and 12 to 20 percent. Although the soil arises from a common parent material (basalt), grows the same plant community (juniper, bitterbrush, Idaho fescue, and forbs), and has other similar characteristics, the difference in slope between the first two and the final two means the erosion hazard changes from slight to moderate, thereby requiring different land management and/or building techniques.
Generally, soils are developed when the parent material (such as basalt, sandstone, or other base rock) is acted upon by the climate and biota (all living things) over time in various ways, and depending on topography, creating soil material. These soils are usually divided into four major categories; sand (grains 1 to .05 millimeters in size), silt (.05 to .005), clay (.005 and smaller), and loams (a combination of all three). Depending upon each soil's character some combination of terms may be used in its description (i.e. clayey sand = a predominantly sandy soil with more than 10% clay). These various combinations then determine the characteristics and capabilities of the individual soils.

In Deschutes County, the soils are typical of a semi-arid region being composed principally of entisols and spodosols* in the western and southern portions of the County and aridisols** in the drier eastern areas. These soils are formed from a number of parent materials. The western and southern portion of the County has seen its soils developed from pumice, ash and glacial till which range from a few

*Entisols and Spodosols = Soils formed on coarse pumice are mostly light-colored, coarse-textured, and moderately to slightly acid. Strongly acid Spodosols with subsoils of iron accumulation have formed at higher elevations. Poorly-drained soils occur in depressions.

**Aridisols = most of these soils are on lava plains. They are shallow, stony and light-colored with clayey or loamy subsoils.
inches to several feet thick. Pumice deposits are generally deeper and coarser textured in the south. To the north, the pumice becomes finer textured, thinner and mixed with materials developed from andesite and basalt. The eastern area developed from a mix of wind and deposited sands and gravel over basalt bedrock.

To briefly explain the different soils and where they may be found locally, the following short descriptions are provided from the Deschutes County General Soil Map:

**Areas Dominated By Cold, Well-Drained, Gently Sloping Soils On Tablelands**

1. Floke-Olson association: Shallow soils with a very stony surface layer, clay subsoil over hardpan and 0 to 8 percent slopes; and shallow soils with a loam surface layer, clay loam subsoil over hardpan and 0 to 2 percent slopes. Found mostly east of Horse Ridge.

**Areas Dominated By Warm, Well To Somewhat Excessively Drained, Gently Sloping To Steep Soils On Tablelands And Escarpments**

2. Deschutes-Deskamp association: Moderately deep sandy loam soils over basalt bedrock and 0 to 20 percent slopes; and moderately deep loamy sand soils over basalt bedrock and 0 to 12 percent slopes. Containing the best of the agricultural soils, they are scattered north and east of Bend to the County line.

3. Gosney-Deschutes association: Shallow, very stony loamy sand soils over basalt bedrock and 0 to 12 percent slopes; and moderately deep sandy loam soils over basalt bedrock and 0 to 20 percent slopes. The association is found outside the National Forest between Plainview and Horse Ridge and the northern County line, and is the major soil group in these areas.

4. Simas-Searles association: Deep soils with a clay loam surface layer, clay subsoil over tuff and 10 to 35 percent slopes; and moderately deep soils with stony or very stony loam surface layer, very gravelly clay loam subsoil over bedrock and 0 to 65 percent slopes. Found only north of the Crooked River in Deschutes County.

**Areas Dominated By Cold, Somewhat Excessively To Somewhat Poorly Drained Ashy Soils On Nearly Level To Moderately Steep Plateaus And Cinder Cones**

5. Kotzman association: Moderately deep soils with very gravelly loamy coarse sand surface layer, loam subsoil over basalt bedrock and 0 to 15 percent slopes. Found southeast of Pine Mountain, primarily outside the National Forest boundaries.
6. **Klawhop-Shanahan association**: Deep soils with loamy sand surface layer, loamy coarse sand subsoil over very cobbly loam and 0 to 15 percent slopes; and very deep soils with loamy sand surface layer over loam subsoil and 0 to 15 percent slopes. The major soil group in the southern part of the County, outside the mountainous and alluvial plain areas.

7. **Sister-Wanoga association**: Very deep soils with a loamy sand surface layer and subsoil over gravelly loamy sand, 0 to 15 percent slopes; and moderately deep soils with loamy fine sand surface layer, sandy loam subsoil over hardpan and 0 to 15 percent slopes. Found mostly inside the National Forest to the west and northwest of Bend.

8. **Shanohan association**: Very deep soils with loamy sand surface layer over loam subsoil and 0 to 15 percent slopes. Mainly in the alluvial plain area from north of Sunriver south to the County line.

   Areas Dominated By Cold Excessively Drained Ashy Soils On Nearly Level, Moderately Steep And Steep Uplands

9. **Cultus-Shukash association**: Very deep soils with sandy loam surface layer, loamy sand subsoil over very gravelly sandy loam and 0 to 65 percent slopes; and very deep soils with loamy sand surface layer and subsoil over very gravelly loam and 0 to 65 percent slopes. Found all along the lower slopes of the Cascades and Mt. Newberry.

10. **LaPine association**: Very deep cindery soils with very gravelly loamy sand texture and 5 to 35 percent slopes. Lying in a band due east of Mt. Newberry, this soil is an obvious result of Newberry's volcanic action.

11. **Winopee-Moolack association**: Moderately deep soils with loamy sand surface layer, gravelly coarse sand subsoil over very cobbly glacial till and 0 to 65 percent slopes; and very deep soils with sandy loam surface layer over gravelly coarse sand subsoil and 0 to 15 percent slopes. Basically, this constitutes the top of Mt. Newberry and the lower reaches of the Cascades.

12. **Rock Outcrop-Winopee association**: Escarpment areas of rock outcrop, talus, rock slides; and moderately deep soils with loamy sand surface layer, gravelly coarse sand subsoil over very cobbly glacial till and 0 to 65 percent slopes. Found in the higher levels of the Cascades.
SOIL ASSOCIATIONS

- Floke-Olson
- Deschutes-Deskamp
- Gosney-Deschutes
- Simmons-Searles
- Kotzman
- Klawhopper-Shanahan
- Sisters-Wanoga
- Shanahan
- Cultus-Shukash
- Lapine
- Winoopee-Moolack
- Rock Outcrop Winoopee

Soil Conservation Service data, 1973
USING SOILS INFORMATION

The preceeding identifies the various soil associations and their general locations, but to most people, the important part of soils information is how it will help them make development decisions. While it must be cautioned that the data presently available is relatively general and therefore not at a scale appropriate for individual properties, except for that portion of the County where more detailed studies have been done, it does provide sufficient information for some general planning decisions.

The Deschutes-Deskamp association soils have been identified as having "fair" potential* as agricultural land. Since the conservation and protection of agricultural lands are an important element of all rural comprehensive plans, this identification gives reason for consideration of these lands as appropriate for protection as agricultural lands. Of course, other pertinent data such as available water and climate will have to be considered, but the soils do provide a starting point. Also, alluvial areas in the County may prove to have good agricultural potential.

The Klawhop-Shanahan and Shanahan associations both provide generally good soils for septic tanks, and while other criteria may inhibit the use of septic tanks, soils would normally allow for septic tank development. This means the southern portions of the County now receiving such intense recreational home-site development may be able to physically cope with the septic tank effluent for the immediate future, as long as densities do not become too great or other issues such as pockets of poorer soil or high water table (as we have seen occur)** do not interfere. On the other hand, the rest of the County generally has severe limitations for septic tank fields. This does not mean areas suitable for septic tanks are not available, but that generally they will be more isolated and difficult to find than in the southern portion of the County.

Table One is a listing of the various soils associations in the County, along with their suitability or limitations for a variety of uses. By itself, soils information is not sufficient for making land-use decisions, but it does provide significant indications of the physical capacity of an area to support different activities. Using this information does permit some initial decisions about the appropriateness of certain uses. These decisions can then be further refined by the addition of information of a more detailed nature or by setting criteria such as transportation access or environmental sensitivity.

*Fair = Slopes less than 12%, rooting depth of 20 to 40 inches, and the soils are warm.

**50% of recent septic tank applications have been refused by DEQ due to a high water table.
Perhaps even more significantly, when detailed soils information is available, decisions about uses on specific sites are possible. Hazards may be avoided or otherwise unknown opportunities may be identified when adequate data is available. A detailed soils mapping should be undertaken for Deschutes County within the immediate future so that this data can be made available to optimize our development decisions, such as in LaPine where too much development could create serious health problems.

In addition, soils data would assist in dealing with the effects of frost heaving, the heavy loss of water in agriculture due to high soil porosity, as well as help with planning to reduce soil erosion, such as occurs because of wind and/or water action. The Deschutes County Soil Conservation Service office estimates local cultivated fields can lose as much as 22 tons of soils per acre each year if conservation practices are not followed. To protect our people and our resources more in-depth information is needed.

CONCLUSION

Soils data provides valuable information for people involved with the making of development decisions. Presently, Deschutes County has sufficient information to generally identify appropriate areas for certain developments, and definitely adequate data to set standards and identify criteria for what constitutes reasonable development. While soils data must be combined with other information for the making of final decisions, it does permit initial decisions about various land uses and point the way toward final determinations.
<table>
<thead>
<tr>
<th>Soils Association</th>
<th>Area (Acres)</th>
<th>Soil Suitability for *</th>
<th>Soil Limitations for *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irrigation</td>
<td>Topsoil</td>
<td>Dwellings Without Basements</td>
</tr>
<tr>
<td>1. FLOKE-OLSON ASSOCIATION</td>
<td>371,000</td>
<td>VERY POOR 50%</td>
<td>POOR 65%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POOR 50%</td>
<td>FAIR 35%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VERY POOR 2%</td>
<td></td>
</tr>
</tbody>
</table>

| 2. DESCHUTES-DESKAMP ASSOCIATION  | 78,000       | FAIR 89%              | GOOD 50% | POOR 76% | MODERATE 78% | SEVERE 85% | SEVERE 85% |
|                                  |              | GOOD 6%               | POOR 38% | UNSUITED 24% | SEVERE 12% | MODERATE 9% | MODERATE 86% |
|                                  |              | POOR 3%               | FAIR 12% |            | SLIGHT 10% |            | SLIGHT 2% |
|                                  |              | VERY POOR 2%          |            |            |            |            | SEVERE 2% |

| 3. GOSNEY-DESCHUTES ASSOCIATION  | 294,000       | VERY POOR 48%          | POOR 58% | POOR 86% | SEVERE 50% | SEVERE 92% | SEVERE 50% |
|                                  |              | FAIR 44%              | GOOD 32% | UNSUITED 12% | MODERATE 38% |            | MODERATE 6% |
|                                  |              | GOOD 4%               | FAIR 10% | Good 2% |            |            | MODERATE 38% |
|                                  |              | POOR 4%               |            |            |            |            | SLIGHT 2% |
|                                  |              | VERY POOR 2%          |            |            |            |            | SLIGHT 12% |

| 4. SIMAS-SPEARLES ASSOCIATION  | 2,400       | VERY POOR 57%          | POOR 92% | UNSUITED 86% | SEVERE 100% | SEVERE 92% | SEVERE 92% |
|                                 |              | POOR 35%               | GOOD 8%  | Poor 8% | MODERATE 8% |            |            |
|                                 |              | GOOD 8%                |          | Good 6% |            |            |            |

| 5. KOTZMAN ASSOCIATION  | 40,000       | POOR 85%              | POOR 96% | POOR 88% | MODERATE 86% | SEVERE 88% | MODERATE 88% |
|                       |              | VERY POOR 15%          | FAIR 4%  | UNSUITED 8% | SLIGHT 10% | SLIGHT 8% | SLIGHT 8% |
|                       |              | FAIR 4%               |          | FAIR 4% | SEVERE 4% | MODERATE 4% | SEVERE 4% |

| KLAWSHOP-SHANAHAN ASSOCIATION  | 334,000       | VERY POOR 94%          | POOR 96% | POOR 85% | SLIGHT 68% | SLIGHT 66% | SLIGHT 66% |
|                               |              | POOR 6%               | FAIR 4%  | GOOD 6% | SEVERE 18% | SEVERE 24% | SEVERE 24% |
|                               |              | GOOD 6%               |          | FAIR 6% | MODERATE 14% | MODERATE 10% | MODERATE 6% |

Attachment: 06.13.19_NPR Lands PC Meeting Packet (2692: Nonprime Resource Lands Public Hearing)
### Table 1 - Soils Showing Soil Groups, and Suitability and Limitations for Some Uses

<table>
<thead>
<tr>
<th>Soils Association</th>
<th>Area</th>
<th>Irrigation</th>
<th>Topsoil</th>
<th>Sand and Gravel</th>
<th>Dwellings Without Basements</th>
<th>Septic Tank Absorption Fields</th>
<th>Local Roads and Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. SISTERS-WANOCA ASSOCIATION</td>
<td>156,000</td>
<td>VERY POOR 95%</td>
<td>POOR 74%</td>
<td>POOR 85%</td>
<td>SLIGHT 56%</td>
<td>SEVERE 60%</td>
<td>MODERATE 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 5%</td>
<td>FAIR 20%</td>
<td>UNSUITED 9%</td>
<td>SEVERE 34%</td>
<td>SLIGHT 40%</td>
<td>SEVERE 28%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GOOD 6%</td>
<td>GOOD 6%</td>
<td>MODERATE 10%</td>
<td></td>
<td>SLIGHT 6%</td>
</tr>
<tr>
<td>8. SHANAHAN ASSOCIATION</td>
<td>156,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td></td>
<td>SLIGHT 75%</td>
<td>SLIGHT 70%</td>
<td>MODERATE 15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNSUITED 10%</td>
<td>MODERATE 15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GOOD 10%</td>
<td>SEVERE 15%</td>
<td>MODERATE 15%</td>
<td></td>
</tr>
<tr>
<td>9. CULTUS-SHUASH ASSOCIATION</td>
<td>212,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>POOR 74%</td>
<td>SEVERE 70%</td>
<td>SEVERE 72%</td>
<td>MODERATE 62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAIR 20%</td>
<td>MODERATE 15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GOOD 4%</td>
<td>SLIGHT 15%</td>
<td>MODERATE 3%</td>
<td></td>
</tr>
<tr>
<td>10. LAPINE ASSOCIATION</td>
<td>60,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>FAIR 80%</td>
<td>SEVERE 62%</td>
<td>SEVERE 62%</td>
<td>SEVERE 62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>POOR 20%</td>
<td>SLIGHT 34%</td>
<td>SLIGHT 34%</td>
<td>MODERATE 4%</td>
</tr>
<tr>
<td>11. WINOPEE-MOOLACK ASSOCIATION</td>
<td>215,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>POOR 90%</td>
<td>SEVERE 81%</td>
<td>SEVERE 80%</td>
<td>SEVERE 77%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAIR 10%</td>
<td>MODERATE 13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. ROCK OUTCROP-WINOPEE ASSOCIATION</td>
<td>40,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>UNSUITED 45%</td>
<td>SEVERE 80%</td>
<td>SEVERE 80%</td>
<td>SEVERE 80%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>POOR 45%</td>
<td>MODERATE 15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAIR 10%</td>
<td>SLIGHT 5%</td>
<td>MODERATE 15%</td>
<td></td>
</tr>
</tbody>
</table>

Attachment: 06.13.19_NPR Lands PC Meeting Packet (2692: Nonprime Resource Lands Public Hearing)
FOREST LANDS

Forest lands and the products derived therefrom are an important part of Deschutes County's economic, natural and social environments. Because this is true generally throughout the state the Oregon Land Conservation and Development Commission has defined forest lands as:

"... (1) lands composed of existing and potential forest lands which are suitable for commercial forest uses; (2) other forested lands needed for watershed protection, wildlife and fisheries habitat and recreation; (3) lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use; and (4) other forested lands in urban and agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors, and recreational use."

and required that lands which meet this definition are to be conserved for forest uses. Given this state mandate, and the obvious local need to protect this valuable resource, Deschutes County established and supported the work of a special citizens advisory committee composed of interested persons and technical people with extensive expertise in forestry in order to obtain adequate information to meet this goal. In addition, the Oregon State Forestry Department provided significant assistance.
A 1971 study entitled The Forest Resources of Deschutes County, Oregon written by P.H. Authier of the Oregon State Forestry Department provides some basic background on local forestry resources. Unfortunately the data is at least ten years old and changes undoubtedly have occurred, however the information does provide some understanding of local conditions and relationships. Significantly, of the 6,223 million board feet (Scribner) of sawtimber in Deschutes County at that time, over 95 percent was under public ownership. This left about 514 million board feet of sawtimber in private lands (mostly under ownership by Brooks-Scanlon and Gilchrist Lumber), which by comparison does not seem large, but is still a significant amount of timber particularly since it is intermixed with the public timberland.

Table 1 shows how the sawtimber breaks down as far as species. Obviously, Ponderosa Pine is the most important, followed closely by Lodgepole (Jack) Pine. The large volume of Mountain Hemlock is not considered commercial timber.

**TABLE 1**

Volume of Sawtimber (million board feet - Scribner)

<table>
<thead>
<tr>
<th>Species</th>
<th>Million Board Feet</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>3,503</td>
<td>56%</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>89</td>
<td>1%</td>
</tr>
<tr>
<td>Western White Pine</td>
<td>68</td>
<td>1%</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>859</td>
<td>14%</td>
</tr>
<tr>
<td>Whitebark Pine</td>
<td>22</td>
<td>a/</td>
</tr>
<tr>
<td>Engelmann Spruce</td>
<td>35</td>
<td>a/</td>
</tr>
<tr>
<td>Noble Fir</td>
<td>46</td>
<td>1%</td>
</tr>
<tr>
<td>Mountain Hemlock</td>
<td>1,038</td>
<td>17%</td>
</tr>
<tr>
<td>True Firs</td>
<td>556</td>
<td>10%</td>
</tr>
<tr>
<td>Hardwood</td>
<td>1</td>
<td>a/</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,223</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

---

*a/ Less than 1%

Interestingly, consideration of the annual growth indicates that Lodgepole Pine produces almost as much wood as is grown by all other softwoods, excluding Ponderosa Pine.

**TABLE 2**

Annual Growth (thousand board feet - Scribner)

<table>
<thead>
<tr>
<th>Species</th>
<th>Thousand Board Feet</th>
<th>a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>37,921</td>
<td></td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>- 43</td>
<td>a/</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>18,665</td>
<td></td>
</tr>
<tr>
<td>Other softwoods</td>
<td>18,911</td>
<td></td>
</tr>
</tbody>
</table>

---

*a/ Mortality exceeds growth
When annual growth is considered in light of forest type the predominance of Ponderosa Pine remains but Lodgepole appears even more significant.

TABLE 3
Annual Growth (thousand board feet - Scribner) of Sawtimber, By Forest Type

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>38,515</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>- 74 a/</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>20,617</td>
</tr>
<tr>
<td>True Firs</td>
<td>8,909</td>
</tr>
<tr>
<td>Other softwoods</td>
<td>7,403</td>
</tr>
<tr>
<td>Non-stocked</td>
<td>84</td>
</tr>
<tr>
<td>All Types</td>
<td>75,454</td>
</tr>
</tbody>
</table>

a/ Mortality exceeds growth

Of course, while there is growth there is also mortality. Table 4 indicates the species losses annually (this was already deducted from the figures in the preceeding tables, so that actual growth would be the combination of Table 4 with species data in the appropriate table).

TABLE 4
Annual Mortality (thousand board feet - Scribner) of Sawtimber, By Species

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>7,844</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>721</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>3,133</td>
</tr>
<tr>
<td>Other softwoods</td>
<td>5,765</td>
</tr>
<tr>
<td>Total</td>
<td>17,463</td>
</tr>
</tbody>
</table>

Bureau of Land Management timberlands amount to 21,685 acres. The LaPine Forest Management Area alone contains 19,125 M.B.F. (Scribner) of B.L.M. timber, while the Central Oregon F.M.A. has an additional 17,160 M.B.F. In addition, B.L.M. administers over 96,000 acres of juniper lands, which may eventually become a commercial wood source. All of the preceeding is 1978 data obtained from the Prineville Office of the Bureau of Land Management.

Private timberland accounts for 92,915 acres of sawtimber, which can be broken down as follows:
TABLE 5
Private Land Volumes By Species
(trees 16" D.B.H. and larger)

<table>
<thead>
<tr>
<th>Species</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>307,764 M.B.F.</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>6,457</td>
</tr>
<tr>
<td>Western Larch</td>
<td>38</td>
</tr>
<tr>
<td>White Fir</td>
<td>10,193</td>
</tr>
<tr>
<td>Sugar Pine</td>
<td>301</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>1,025</td>
</tr>
<tr>
<td>Western White Pine</td>
<td>350</td>
</tr>
<tr>
<td>Mountain Hemlock</td>
<td>79</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>326,207 M.B.F.</strong></td>
</tr>
</tbody>
</table>

While a number of hardwood species exist locally (Aspen, Black Cottonwood, Golden Chinkapen, Oregon White Oak, and Red Alder) they have not been in sufficient quantities, nor have identifiable markets appeared, to warrant their consideration as commercial timber. Perhaps this may change in the future, but no such trend is presently apparent locally.

**ECONOMIC IMPORTANCE**

Since the turn of the century, when two major sawmills were constructed in Bend, the forests have been a major factor in the local economy. Still today timber plays a decisive role in the area’s prosperity, not only because of lumber but also due to the ever-burgeoning recreational industry associated with the local timberlands and related areas.

The manufacture of lumber and wood products directly employed 2,726 workers in Deschutes County during 1978, of which 2,074 were in Bend. This is up from 2,700 employees in 1977 when they constituted 69 percent of the total local manufacturing workforce, and 14 percent of the total workforce.

Much of the lumber and wood products employment has become even more dependent on the public forest lands for timber. The annual allowable cut on the Deschutes National Forest is 189 million board feet, while local sawmills are capable of cutting about 615 M.B.F. with three shifts. Continued debate over the allowable cut and the balancing of short-term employment versus long-term timber productivity can be anticipated. Obviously, when the supply of the resource is considerably less than the manufacturing capacity inefficiencies will develop, probably resulting in lower employment in local sawmills. Two trends are presently occurring: first, local sawmills are developing their ability to handle smaller logs, such as Lodgepole Pine; second, the mills are consolidated and improving their equipment to maintain their productivity as much as possible (i.e. Brooks-Scanlon's recent closure of the Redmond sawmill in favor of the Bend facility).
The increasing competition for log sales will undoubtedly continue to rise since private timber is in short supply (private reforested lands are largely many decades from harvest) and public timberlands are restricted to their allowable cut. As timber supplies grow shorter west of the Cascades greater competition from mills in Western Oregon for timber sales locally may be expected. Hopefully more expenditure for reforestation on both private and public lands will be forthcoming soon.

One beneficial result of the increasing prices received for timber would be greater amounts of timber revenues provided to local school and county government. Deschutes County received $3.6 million in 1978 from timber sales in the area. Overall however, this hardly balances the potential economic changes that may occur.

Significantly the rising importance of the recreational/tourism industry may counterbalance the wood products employment difficulties. In fact, the importance of this employment sector is a strong argument in favor of the maintenance of local forests, not only for long-term productivity and economic stability but also for short-term employment. Development decisions need to consider their effect on forest lands, particularly as the County seeks to maintain a stable economy while accommodating a burgeoning population.

FIRE HAZARD AREAS

A factor often overlooked until too late is the potential for wildfire created by developments occurring in forested areas. Usually planned developments and destination resorts (i.e. Sunriver and Black Butte Ranch) have anticipated fire hazards and taken steps to ameliorate potential problems. However, many subdivisions and partitions give little or no thought to fire, not only as far as protection of structures but also the possibility of timber losses in nearby forest lands. Particularly, developments outside of rural fire protection districts, as well as those in areas where considerable fuel (brush, high weeds, slash, etc.) exists or on steep slopes where fire spreads more rapidly, are subjecting future residents to a greater risk of fire damage and loss of life. Adequate provision for exit routes, fuel control, fire protection, and proper building materials in rural subdivisions should be required.

FOREST LANDS IDENTIFICATION

LCDC Goal 4 states: "In the process of designating forest lands, comprehensive plans shall include the determination and mapping of forest site classes according to the United States Forest Service manual - Field Instructions for Integrated Forest Survey and Timber Management Inventories - Oregon, Washington and California, 1974."
To assist local planning departments in the identification of lands with commercial timber productivity potential the Oregon Department of Forestry has prepared a document entitled: A Technique for Mapping Forest Land By Site Productivity Using Soil Survey Information. The West Central Oregon District of D.O.F. was able to furnish staff to assist county staff in the preparation of a forest lands productivity map for use in our planning efforts. In addition, further refinements were made after discussion with U.S.F.S. and private foresters.

The resulting inventory indicates productivity classes ranging from four to seven (classes four through six are lands with commercial productivity potential), with much of the drier northeastern and eastern areas without any forest lands potential. Most of the area outside the national forest are classes seven, or non-productive, which are the non-commercial lands. The only private lands (other than timber company ownership) with significant forest potential lies in the LaPine area, which has seen substantial recreational/residential development in recent years.
TIMBER PRODUCTIVITY
By Soil Association

- High (Relatively)
- Moderately High
- Moderate
- Low
- Unmapped
- Rocky or Alluvial Soils

Data from Oregon Department of Forestry, 1978
Because of the general nature of the soil maps used it is probable that some areas are not properly classified by the forest productivity map. More detailed soils mapping and further field study will reduce these errors in the future. During the interim period the empirical nature of the data will allow a case-by-case review and determination consistent with state and local policies.

**Categories of Forest Land**

The categories of forest land as suggested by the forest lands committee for Deschutes County are restricted, commercial and other.

These categories of forest land were based upon the four part definition of forest lands as stated in the LCDC Goals and Guidelines for Forest Lands. The basis for establishing these categories of forest land is stated below.

<table>
<thead>
<tr>
<th>Category</th>
<th>LCDC Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1 Restricted Forest Land</td>
<td>&quot;2. ...forested lands needed for watershed protection, wildlife and fisheries habitat and recreation.&quot;</td>
</tr>
<tr>
<td>F-2 Commercial Forest Land</td>
<td>&quot;1. Lands composed of existing and potential forest lands which are suitable for commercial use.&quot;</td>
</tr>
<tr>
<td>F-3 Other Forest Land</td>
<td>&quot;3. Lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use.&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;4. ...forested lands in urban and agriculture areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors recreational use.&quot;</td>
</tr>
</tbody>
</table>

The priority for protection of forest land from conversion to other uses is as follows:

a. **Priority 1**: F-1, Restricted Forest Lands, should not be converted to other uses, since protection of these unique forest lands is a prime land use planning objective.
b. **Priority 2:** F-2, Commercial Forest Lands may be converted to F-1, Restricted Forest Lands. The land should not be converted to other uses, since the production of timber is an essential land use planning objective.

c. **Priority 3:** F-3, Other Forest Lands (such as juniper lands), may be converted to F-1 or F-2. The land should not be converted to other non-forest uses, unless a higher and better use can be adequately demonstrated.

**CONCLUSION**

Forests are an important local resource. The preservation of the present high quality of life and economic prosperity requires the protection of local timber lands. Conversion of these lands to recreational and residential development should occur only after less productive areas have been considered and careful consideration has been given to the costs and benefits that will accrue to the public.
AGRICULTURAL LANDS

The importance of agriculture to the economic, social and environmental well-being of Oregon and the United States is without question. The large number of programs and legislation oriented to protecting and preserving agriculture gives strong testimony to the prominent place this activity enjoys in our society. A variety of reasons are given for protecting agricultural land:

1. Maintaining the land resource for the production of agricultural products, particularly important now because of the ever-growing world population;

2. Promoting and preserving the local and state economies;

3. Stabilizing farmland taxes to allow existing farmers to remain in business;

4. Curtailing conflicts between agricultural and residential/urban land uses;

5. Bettering control of the public costs created by leap-frog, strip, or other kinds of uncontrolled developments;

6. Protecting the local social fabric by preserving the family farms.

Certainly, these reasons lie behind Oregon's Agricultural Lands Goal.

Of course, it is one thing to identify a goal, and another to then apply that goal. Particularly when the goal is as all encompassing as Oregon's. The mandate that, "Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space," requires considerable and in-depth study of local agricultural conditions and useful estimates as to what is required in the future, so that adequate protection of the resource can be achieved. The following section contains information that should help in understanding conditions in Deschutes County, as well as point towards appropriate goals and policies.

INVENTORY

Historically, range agriculture was the major farming activity in Deschutes County. Although some dryland growing of grain, seed and hay did occur north of the County, it was not until the development of irrigation projects between 1901 and 1905 in the upper Deschutes Valley that growing of grains and alfalfa began in Deschutes County. Commercial potato growing began after the coming of the railroad in 1911, which provided the necessary access to outside markets. Starting in 1926, the production of alsike
clover seed provided a major cash crop for the area. In addition, turkey raising and dairying also became important farming activities in the County. Recent years have witnessed the loss of both the clover and turkey operations, and a considerable lessening in the importance of dairying. However, growing of other crops has developed and an interesting diversification in livestock is occurring.

The 1974 Census of Agriculture identifies 120,934 acres in Deschutes County farms. This is down from 163,340 acres in 1969, a loss of 42,406 acres. During the same period, crop-land declined from 68,249 acres to 36,683 acres, a loss of 31,566 acres. Of course, it is impossible to say how much of this lost land was actually productive farm land. Interestingly, the County Assessor's Office indicates 162,008 acres of land under Farm Tax Deferral in 1977, however this larger figure is probably largely due to definitional differences and undoubtedly includes a number of acres not actually producing any significant amount of agricultural products. The following table provides some information about Deschutes County Farm Tax Deferrals, as well as farm sizes locally.

| TABLE 1 |
| DESCHUTES COUNTY FARM TAX DEFERRAL STATISTICS |

<table>
<thead>
<tr>
<th>Acres</th>
<th>No. of Tax Lots</th>
<th>% of Total Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1976</td>
<td>1977</td>
</tr>
<tr>
<td>1. 0-5</td>
<td>236</td>
<td>276</td>
</tr>
<tr>
<td>2. 6-20</td>
<td>325</td>
<td>390</td>
</tr>
<tr>
<td>3. 21-40</td>
<td>408</td>
<td>429</td>
</tr>
<tr>
<td>4. 41-80</td>
<td>244</td>
<td>260</td>
</tr>
<tr>
<td>5. 81-160</td>
<td>170</td>
<td>177</td>
</tr>
<tr>
<td>6. 161-320</td>
<td>85</td>
<td>89</td>
</tr>
<tr>
<td>7. 321-640</td>
<td>40</td>
<td>37</td>
</tr>
<tr>
<td>8. 641-1,300</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>9. 1,301-3,000</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>10. 3,001-6,000</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL LOTS</td>
<td>1,540</td>
<td>1,698</td>
</tr>
<tr>
<td>TOTAL ACRES</td>
<td>161,008</td>
<td>162,007</td>
</tr>
</tbody>
</table>

Source: Deschutes County Assessor's Office

While employment has been rapidly growing in the County, the agricultural labor force has been declining. Between 1968 and 1971, the number of workers employed in agricultural activities declined from 740 to 720, a loss of 2.7 percent. Farm operators between 1969 and 1974 declined from 503 to 438, a loss of almost 13 percent, as compared to a statewide
loss of eight percent; and commercial farms* went from 277 to 239, almost a 14 percent loss, while statewide commercial farm numbers remained relatively stable.

Deschutes County farms tend to be owned by full-owners more than is true statewide (74.9% versus 70.4%). Combined with the fact that 60.8% of local individual or family operation farmers work more than 100 days each year off the farm, as compared with 43.9% statewide, it seems to reflect the predominance of part-time farming locally.

Indicative of the predominance of relatively small farms in Deschutes County, as compared with the state, is the following table.

**TABLE 2**
**SIZE OF FARMS (ACRES)**

<table>
<thead>
<tr>
<th></th>
<th>DESCHUTES COUNTY</th>
<th>OREGON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
</tr>
<tr>
<td>1-49</td>
<td>196</td>
<td>10,813</td>
</tr>
<tr>
<td>50-499</td>
<td>211</td>
<td>11,611</td>
</tr>
<tr>
<td>500-999</td>
<td>12</td>
<td>1,568</td>
</tr>
<tr>
<td>1,000 &amp; over</td>
<td>19</td>
<td>2,761</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

Equally significant is **TABLE 3**, which reflects the number of farms by value of agricultural products sold. Again, indicating the smaller farm unit orientation of farming in Deschutes County.

**TABLE 3**
**NUMBER OF FARMS BY VALUE OF AGRICULTURAL PRODUCTS**

<table>
<thead>
<tr>
<th></th>
<th>DESCHUTES COUNTY</th>
<th>OREGON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
</tr>
<tr>
<td>Under $2,500</td>
<td>210</td>
<td>10,196</td>
</tr>
<tr>
<td>2,500-9,999</td>
<td>110</td>
<td>6,034</td>
</tr>
<tr>
<td>10,000-39,999</td>
<td>78</td>
<td>5,216</td>
</tr>
<tr>
<td>40,000-99,000</td>
<td>28</td>
<td>3,838</td>
</tr>
<tr>
<td>100,000 &amp; Over</td>
<td>12</td>
<td>2,414</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

*Commercial farms are defined by the U.S. Census as farms with sales of $2,500 or more.
While most areas are noting the increasing average age of farm operators, Deschutes County's commercial farmers average age remained stable at 52.5 between 1969 and 1974, and of all farmers, it actually declined from 52.4 to 51.7. This lower figure reflects a small increase in the 35 to 44 year category and a significant loss of farmers 55 years and older.

Agricultural products can, and often do, vary considerably within local areas. Deschutes County is probably typical in this regard in that farm products have varied somewhat over the years while certain items have continued to play a significant role in the local economy. Figure 1 illustrates the relative importance of the County's agricultural outputs.

![Diagram showing agricultural outputs for 1969, 1974, and 1977]


Apparently, cattle and calves continue to play an important role, while other field crops (mint, grass seed, and potatoes), hay, and dairy products are becoming relatively even more important. This greater significance is due largely to the stability of these crops in a time of an overall decline in agricultural income. The growing importance of horse and llama raising to the local economy is seen in the miscellaneous livestock category, while the shrinkage of the other category reflects a growing farm specialization taking place here.
The following table depicting agricultural income shows an increasing income from 1970 to 1973, then followed by a decline, and a recent increase, in which inflation undoubtedly played a part. Most of the fluctuation through the years is likely due to changing market prices, since the Extension Service reports that production remained very stable throughout the entire period even though the amount of farmland declined.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$4,974,000</td>
<td>$9,833,000</td>
<td>$6,470,000</td>
<td>9,210,000</td>
<td>$8,381,000</td>
<td>8,387,000</td>
<td>$11,414,000</td>
<td>8,630,000</td>
<td>$10,316,000</td>
</tr>
</tbody>
</table>

Related to production and income, as well as a variety of other variables such as land development occurring locally, is farm value. In Deschutes County the total value has risen from $43,657,000 in 1969 to $55,728,000 in 1974, and the average per farm jumped from $86,792 to $127,233. Interestingly, the percentage increase of per farm value was 46.6 percent, which is less than the 73.2 percent evident statewide. Perhaps even more significant was the 72.2 percent increase in value of land resulting from development locally.
AGRICULTURAL DETERMINANTS

Critical to an understanding of County agriculture is a review of the four major determinants of farming -- soils, water, climate, and economics.

Soils in Deschutes County are derived from volcanic ash and igneous basalt, under conditions of low rainfall and good drainage. The better farming soils are largely limited to the northern portion of the County.

---

SOIL

A study of land capability for farming prepared by the Oregon Agricultural Experimental Station and U.S. Soil Conservation Service, in 1947, for the better farm areas (except Lower Bridge) in northern Deschutes County indicated approximately 3,000 acres of class I soils, 31,000 acres of class II soils, 39,000 acres of class III soils, and 6,000 acres of IV soils. A 1973 study by the Oregon Student Public Interest Research Group estimated about 61,000 acres of class I through III soils in Deschutes County. A 1978 review of county soils by the Agricultural Citizens Advisory Committee emphasizing climatic limitations, as recommended by the state office of the U.S. Soil Conservation Service and the Land Conservation and Development Commission, resulted in the committees reclassification of available soils to show no class I or class II soils, and 500 acres of class III soils (without irrigation). Under irrigated conditions, the County was estimated to have; approximately 17,000 acres rated "good" as to soils capability and about
200,000 rated "fair" as to soil suitability for irrigation. An estimate of over 900,000 acres of class VI soils was also obtained (class VI soils are not generally suited to crop cultivation).

Some question has been raised by knowledgeable soils experts as to the appropriateness of the study due to the exclusive use of climate as a determinant in the 1978 study, rather than a combination of the various factors as required for a reclassification. However, the review certainly serves to point-out the limitations that climate may place on local agricultural activities.

An obvious conclusion from all these studies is that the better agricultural soils are severely limited in Deschutes County. Therefore, emphasis on livestock-raising and protection of the limited amount of the better agricultural soils may be appropriate locally.

Of the total privately-owned lands, 425,123 acres, the irrigated croplands total 51,428 acres and the dry croplands total 7,675 acres.

Fortunately, most of the better soils are clustered in the northern half of the County, in and around Terrebonne, Lower Bridge, Redmond, Cloverdale, Plainview, Tumalo, Alfalfa and areas between these communities. This clustering will make the establishment of Farm Use Districts considerably easier.
WATER

Water is also an issue of critical importance in a semi-arid area such as Central Oregon. Without adequate water, there is no possibility of producing commercially competitive cultivated crops. Even grazing, which can exist on the poorer soils and in colder areas, requires some access to water. Because of this need for adequate water, several irrigation districts have been created. The oldest district is Deschutes Reclamation and Irrigation Company (Swalley), totaling 4,500 acres. Arnold Irrigation District has rights for 4,400 acres, while the largest, Central Oregon Irrigation District, has 30,300 acres in Deschutes County. Deschutes County Municipal Improvement District (Tumalo District) has 7,200 irrigation acres. Snow Creek Irrigation District has rights to 560 acres. Squaw Creek Irrigation District has rights to 7,400 irrigation acres. This is a total of 54,360 acres (the difference between this figure and the preceding irrigated levels figure is because some irrigation water is not used for cropland each year and because the 51,428 acres figure is only a U.S. Census of Agriculture estimate). In addition to irrigation districts, a number of farms irrigate from their own wells, (6,407 acres - 3,588 acres of primary and 2,819 acres of supplemental rights). The difficulty in purchasing water rights, (the Deschutes River was closed to future water rights in 1916), and the high cost of clearing land make the development of new farm land difficult and of limited potential.

CLIMATE

Another important factor in farming is climate. Deschutes County's location east of the Cascades and proximity to the mountains creates special conditions that if not unique are certainly more predominant here than in any other county in the state. The climate determines the small rainfall necessitating irrigation water, but even more importantly it sets the growing season. Without an adequate growing season, agricultural production is largely limited to grazing, pasture, and some marginal raising of cultivated crops.

Growing Season, frost free 32° days*, is the period of time between the last frost in Spring and the first frost in Fall. In Redmond, the last frost in Spring has occurred as late as June 30 and the first frost in Fall as early as July 2. In Bend the last frost of Spring has occurred as late as June 30 and the first frost in Fall as early as July 1. Because some crops do exist below 32°, a 28° growing

*While some crops can exist below 32°, there is no useful growth occurring, although maturing may continue.
season is also often considered in agricultural production. Table 5 reflects both seasons.

**TABLE 5**
**GROWING SEASON**

<table>
<thead>
<tr>
<th></th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redmond</td>
<td>94</td>
<td>84</td>
</tr>
<tr>
<td>Bend</td>
<td>72</td>
<td>44</td>
</tr>
</tbody>
</table>

The average frost free growing season for Redmond is 84 days, and the average frost free growing season for Bend is 44 days. For comparison, The Dalles is 205 days, Klamath Falls is 131 days, and Umatilla is 190 days.

The lack of climatological information for Deschutes County has necessitated questioning individuals familiar with the County to help determine our soil capabilities. It has been found that in the northern portion of the County, at lower elevations, the growing season is long enough, in many instances, to produce competitive yields with some crop diversification. The area East of the Deschutes River in Terrebonne does not seem to enjoy the same climate as Lower Bridge, but is very close.
IRRIGATED LAND/RIVER PASTURE

☐ Irrigation Districts

Compiled from NASA infrared photography dated August 2, 1978
ECONOMICS

Related to the long-term ability of an area to support agriculture is the issue of economics. Not only must the County be sure the physical resources exist, but also if farmers are to be expected to remain in farming, there must be at least a minimally adequate economic situation. Of course, there are two different views of economics that can be taken, short-term and long-term. The results obtained from these two viewpoints can be quite different.

Short-term economics is concerned with the day-to-day and/or yearly operation of a farm, as well as the results of such actions within a few years. A breakdown of the farms with various levels of expense, by percentage, is as follows, and reflects the predominance of small farms locally:

<table>
<thead>
<tr>
<th>TABLE 6</th>
<th>1974 FARM PRODUCTION EXPENSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deschutes County</td>
<td>Oregon</td>
</tr>
<tr>
<td>$1-999</td>
<td>13.5%</td>
</tr>
<tr>
<td>1,000-4,999</td>
<td>37.2</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>20.0</td>
</tr>
<tr>
<td>10,000-19,999</td>
<td>14.7</td>
</tr>
<tr>
<td>20,000-59,999</td>
<td>10.6</td>
</tr>
<tr>
<td>60,000 &amp; over</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

This data reflects the smaller scale of agriculture in the County. Referring once more to TABLE 4, and including a 48.5 percent factor for inflation during this period, it appears agricultural income in the area has remained stable. However, when provision is made for the rapidly increasing cost of operating a farm, it seems apparent that an actual decline has taken place.

The profitability of various crops depends upon a variety of factors, but a check of information prepared under the auspices of the O.S.U. Extension Service provides the following information about some local farm crops.

<table>
<thead>
<tr>
<th>TABLE 7</th>
<th>ALFALFA HAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td></td>
</tr>
<tr>
<td>Cost per ton at 3 ton yield/acre</td>
<td>$110.47</td>
</tr>
<tr>
<td>Cost per ton at 4 ton yield/acre</td>
<td>82.86</td>
</tr>
<tr>
<td>Cost per ton at 5 ton yield/acre</td>
<td>66.28</td>
</tr>
<tr>
<td>Cost per ton at 6 ton yield/acre</td>
<td>55.24</td>
</tr>
</tbody>
</table>
There are approximately 23,000 acres of harvested cropland in Deschutes County. Approximately 21,500 acres are devoted to hay (approximately 93%). The average yield for farms with sales of $2,500 and over was 2.65 ton/acre in 1974. The average yield for hay in 1977 was 3.3 ton/acre.

What the TABLE 7 figures reflect are the break-even points for various crop yields. Testimony form local farmers indicates that due to low yields, they must often face the higher costs, thereby making competition with other areas difficult.

Local cattle operations have suffered in recent years because of nationwide cattle market conditions. Recent indicators are that this situation is improving. Horse production in the County is becoming increasingly popular and successful, although most of the operations are part-time.

The preceeding information also does not reflect the problem local farmers have with transporting their products to distant markets. Local inability to compete economically with areas having better market access is a severe problem, although some of the local produce is consumed locally.

While farmers face years where they do not make a profit, many rely on the increasing value of their land to make them an overall profit in the long-run. To operate each year, they must obtain operating loans.

A check of local banks indicates the following characterizes farm loans; 1) Loans are based on the farmer's ability to produce (primarily land capability and farming experience); 2) The final security for the loan is the land; 3) Loans are not based on the farmer's ability to subdivide, however, there may be an indirect impact since the overall ability to subdivide may be considered when the bank assesses an individual's financial soundness, which may decide whether a loan is granted in cases where there is some concern over the applicant's farming abilities; and 4) The Federal Land Bank bases its loans on farms smaller than 40 acres in size on outside income rather than productivity, due to the inability of these small farms to produce crops in commercial quantities.

Taxes are another great concern to farmers since property taxes can be a major expense to someone whose basic capital expense is land. Of course, it is the intent of exclusive farm use zoning to reduce this burden and thereby compensate the farmer for the loss of some of the development rights that might otherwise exist. At the time this report is written, the County does not have EFU zoning, but nearly the same result is obtained by Farm Tax Deferral, except that the tax is only deferred and must be paid when the land is sold for non-farm use.
While most of the preceding concerns short-term economic effects, there are also long-term impacts. The loss of agricultural land would undoubtedly have negative impacts on the County. While the loss of farm products income might be off-set by residential development it is doubtful this result would last over the long-run. Also, the loss of the esthetic values found in farm land, as well as the costs and hazards created by development, could effect the overall local economy, which depends so greatly on the area's natural beauty. Therefore, this is an issue of County-wide importance.

THE FUTURE

Agricultural production in Deschutes County will probably continue to be based largely on hay, specialty crops, and livestock. The improving nature of beef prices, general stability of sheep prices, and increasing diversity in types of livestock (horses, goats, llamas, etc.) should assure the predominance and strength of livestock production locally, particularly since the soils and climate are more conducive to such products. In addition, the growing local market for agricultural products may lead to greater production for local consumption. However to protect the agricultural resource the land must be preserved from residential development, in sizes allowing commercially competitive farm operations. Obviously not an easy task in any area with so many relatively small and marginal operations, but a task important to the long-term prosperity of Deschutes County.
For the purposes of this plan Areas of Special Interest shall be defined as Open Spaces (areas to be left open and undeveloped for the overall benefit of the public) and Areas of Special Concern (sites, areas, or identifiable entities with unusual or unique attributes making their identification and protection important).

Central Oregon is blessed with a variety and large quantity of natural beauty. Deschutes County is fortunate to have received much of this incredible resource. This wealth varies from grand views of mountains, forests and plains covering huge expanses, to individual plant or animal species found in only small areas. Undoubtedly many of the new residents of this area have located here in order to enjoy this natural bounty. It's protection is important not only to the preservation of the existing high quality of life, but also for the continued prosperity of the region.

In addition to the maintenance of the open and scenic areas (such as are found in agricultural, forested or recreational lands) there is also the important job of protecting the physical manifestations of man's past involvement in the area's development. Historic sites play a significant role in providing that link with the past that helps us understand ourselves and guide our way in the future.

How well we deal with the challenge of preserving and maintaining these natural and man-made resources will determine not only our immediate future, but that of our children and their children as well.

OPEN SPACES

Much of the open space found in any area is usually not simply being left open and unused. Some other purpose exists for the owner to be able to maintain this land in an open and aesthetically-pleasing manner, while the public receives not only the benefit of the owner's use but also the protection of the open space. An obvious example of this is agricultural land. Not only does agricultural land produce important food, fiber, and other products, but it plays an important role in open space. By keeping the countryside relatively close to it's natural state; by maintaining a green and relatively diverse area, visually pleasing and educationally productive to the public; by maintaining areas for wildlife; by protecting large areas from undesirable developments; and by serving as recharge areas for air and water, as well as for people seeking relief from urban pressures and landscapes,
agricultural land plays an important role in any community's open space planning.

Similar to agricultural land is the role assumed by forested land. While an important source of building and industrial materials is highly important to our local prosperity, the timber lands also serve as a significant open area as well. Once again, these areas recharge the air and water resources, as well as the human spirit. Although it is common to encounter some skepticism about the value of these areas to the less quantifiable aspects of maintaining people's equilibrium and/or sanity, it is obvious that the millions of visitor-days spent in local national forests each year occur because people recognize the need to experience the views, tastes, sounds, smells and experiences which come with a visit to these open spaces.

Perhaps not so well recognized as the areas previously discussed, but also important open space areas, are mineral and aggregate sites. To assure an adequate supply of these resources the sites where they are located must be protected from incompatible development. Before the mining begins the area is usually productive as open space, sometimes with access permitted and other times only available to the eye. During mining operations the site is normally not available as open space, but once digging, etc. ceases the land can be (and often is) reclaimed and made available once again.
POPLATION

Knowledge of an area's population characteristics and probable changes is important to the development of a plan that meets the needs of that populace. The purpose of this element is to provide that description of the present population, as well as to speculate on the likely make-up of the County residents in the future.

PAST AND PRESENT

Deschutes County is a relatively young county. Formed by vote on December 13, 1916 the population of the county was fairly small (9,622 in 1920), and predominately in the Bend area. By 1930 the number of people in the county had grown by 53.3 percent to 14,749. Table 1 reflects the growth of Deschutes County from 1920 to the present. The steady increase in population is significant, but not as much as the fluctuation in percent increase, which is now on the rise again after a low period during the 1950's.

TABLE 1
POPULATION GROWTH

<table>
<thead>
<tr>
<th>Year</th>
<th>DESCHUTES COUNTY Number</th>
<th>Percent Increase</th>
<th>BEND Number</th>
<th>REDMOND Number</th>
<th>SISTERS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>9,622</td>
<td>----</td>
<td>5,415</td>
<td>585</td>
<td>---</td>
</tr>
<tr>
<td>1930</td>
<td>14,749</td>
<td>53.3</td>
<td>8,848</td>
<td>944</td>
<td>---</td>
</tr>
<tr>
<td>1940</td>
<td>18,631</td>
<td>26.3</td>
<td>10,021</td>
<td>1,876</td>
<td>---</td>
</tr>
<tr>
<td>1950</td>
<td>21,812</td>
<td>17.1</td>
<td>11,409</td>
<td>2,956</td>
<td>723</td>
</tr>
<tr>
<td>1960</td>
<td>23,100</td>
<td>5.9</td>
<td>11,936</td>
<td>3,340</td>
<td>602</td>
</tr>
<tr>
<td>1970</td>
<td>30,442</td>
<td>31.8</td>
<td>13,710</td>
<td>3,721</td>
<td>516</td>
</tr>
<tr>
<td>1978</td>
<td>49,700*</td>
<td>63.26*</td>
<td>17,100</td>
<td>6,450*</td>
<td>810</td>
</tr>
</tbody>
</table>

*Not a 10 year period.

Sources: U.S. Census and Center for Population Research and Census.

Combined with this growing population is a shift away from a concentration inside the City of Bend. Of course, much of this new population growth is taking place around Bend, but outside the incorporated limits of the City. It is estimated 33,000 people live in and around Bend, which is about 66 percent of the total County population. This figure is close to the historic percentage of population in the Bend area. The low City of Bend figure undoubtedly is partially due to the rapid growth occurring on the undeveloped land around the city and the slowness of these areas in annexing to the city.

As witnessed by Table 2 it is also apparent that Redmond is not only rapidly gaining in population but is additionally
increasing it's share of the County's population.* Further, the unincorporated areas are seeing a great inflow of people. Areas like Sunriver, LaPine, Terrebonne, and Tumalo are growing. On the other hand Sisters has reversed its declining population trend but is still loosing as a percentage of the County.

**TABLE 2**

PERCENTAGE OF COUNTY POPULATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bend</td>
<td>53.79</td>
<td>52.31</td>
<td>51.67</td>
<td>45.04</td>
<td>34.41</td>
</tr>
<tr>
<td>Sisters</td>
<td>-----</td>
<td>3.31</td>
<td>2.61</td>
<td>1.70</td>
<td>1.63</td>
</tr>
<tr>
<td>Incorporated Area</td>
<td>63.86</td>
<td>69.17</td>
<td>68.74</td>
<td>58.95</td>
<td>49.01</td>
</tr>
<tr>
<td>Unincorporated Area</td>
<td>36.14</td>
<td>30.83</td>
<td>31.26</td>
<td>41.06</td>
<td>50.99</td>
</tr>
</tbody>
</table>

Sources: U.S. Census and Center for Population Research and Census.

Of special significance is the burgeoning population growth south of Sunriver. As of November, 1977 Mid-State Electric Cooperative had 2,540 customers in this area, of which 1,610 are full-time residents, 110 residential connections and 110 commercial connections exist in LaPine, while the majority are widely scattered to the north (over 80 percent of the platted lots are north of Burgess Road). Comparison of electrical connections and occupied lots permit an estimate of between 4,670 and 4,850 permanent residents (estimating 2.9 persons per household). These figures are probably somewhat high due to the high number of retirees in the area, since these families usually average less than 2.0. The U.S. Post Office in LaPine estimates the local population may climb as high as 10,000 during the summer months.

A look at the differences between the State and Deschutes County, as far as age and gender, is possible with Graph 2. The two 1970 population pyramids overlain in this graph demonstrate a number of things. First, while the number of children 0-4 is about the same, those 5 through 14 exceed the state, and the percentage of people 15-29 is less than the state percentage. When viewed in combination with the second major difference, the larger County percentage of people 15-29 is less than the state percentage. When viewed in combination with the second major difference, the larger County percentage in 30-44 age group, it appears that the area is experiencing an influx of established families (most likely professional, skilled laborers, and businessmen) who bring a number of children with them. These children leave to find jobs and/or

*Redmond's recent population growth is partially due to a number of annexations incident to sewer construction programs.
GRAPH 1
Population Growth

SOURCE: U.S. Census, 1978
educational opportunities upon graduation from high school. The third interesting factor is the number of retirees indicated in the pyramids. Two groups can then be anticipated to demand local services; the families requiring school, health and recreational facilities; and the retirees seeking health, recreational, and other social services. In addition, the overall growth will continue to require ever greater expenditures for all types of public and private services.

GRAPH 2

YEARS
75+
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4

PERCENT OF POPULATION

OREGON

DESCHTES COUNTY

SOURCE: U.S. Census, 1970
Racially the county is 97.83 (1970 Census) percent Caucasian, 1.45 percent persons of a Spanish Language heritage (441 persons), 0.34 percent other (103 persons - primarily Oriental), 0.31 percent American Indian (93 persons) and 0.08 percent Black (24 persons). The American Indian population probably results from people connected either to the Warm Springs Reservation in Jefferson and Wasco Counties, or the former Klamath Reservation to the south.

MIGRATION

The most dramatic element to local growth is migration. While natural growth accounts for a portion of the local increase, it is undoubtedly the rapid influx of people that is creating the heavy demands on local facilities and resources. This expanding population, attracted largely by the favorable recreational climate and dramatic beauty of the area, has made Deschutes County the fastest growing County in the State.

This trend is consistent with state and national trends which indicate people are seeking retirement communities and/or rural areas where a higher quality of life (as they see it) can be obtained. It appears the local trend will continue for some time, although there are bound to be fluctuations due to changes in economic conditions, as well as changes to the quality of life which originally attracted the new residents. It is therefore predictable that continued population growth will occur in Deschutes County, at least for the near future, even though the exact percentage change is somewhat speculative.

PROJECTIONS

No population element is complete without a projection as to the future number of residents. When an area has a history of stability and little new development is anticipated the projection can be completed relatively easily, but when an area has experienced great fluctuations and is presently undergoing a massive increase in population (with more anticipated) the process of estimating the future population must fall within the province of an educated guess. The County's Economic Citizen Advisory Committee has completed a study of a variety of projections which range between 58,844 and 97,632 people by 1990, as well as high and low estimates of the 2000 population by the Center for Population Research and Census of 174,843 and 65,700. After due consideration the committee determined that an intermediate projection was the most appropriate and would serve as an adequate guage for anticipating growth and change. The projection chosen is shown in Table 3, and reflects a 4.5 percent annual increase.
Percentage of County
Deschutes County

Source: U.S. Census
TABLE 3  
DESHUTES COUNTY  
POPULATION PROJECTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>46,800</td>
</tr>
<tr>
<td>1980</td>
<td>53,400</td>
</tr>
<tr>
<td>1985</td>
<td>66,600</td>
</tr>
<tr>
<td>1990</td>
<td>82,900</td>
</tr>
<tr>
<td>1995</td>
<td>103,400</td>
</tr>
<tr>
<td>2000</td>
<td>128,200</td>
</tr>
</tbody>
</table>

While a 4.5 percent annual increase is probably appropriate for the County as a whole it is also likely that the emphasis on development occurring in urban areas will cause a somewhat higher growth rate in urban areas. Redmond for instance, has determined that their overall growth until the year 2000 will approximate 5 percent annually (resulting in a year 2000 population of 23,093). Given present trends in Sisters it is likely they will enjoy a similar increase (averaging about 4.5 percent). Bend also should obtain a great increase because of the urban growth boundary and the expansion of municipal utilities and services. The City of Bend is presently anticipating 62,500 people in the Bend Area by the year 2000, up from 33,000 presently. It seems likely however that with an emphasis on urban, rather than rural development, that the actual figure may be over 84,000, depending on how well counter urbanization policies are implemented.

Much of the rest of the population growth not located in urban areas will probably be in the LaPine area. Although recreational and retirement related development will continue to bring people to the LaPine area it is probable that the overall increase in this area will be somewhat slower than farther north. However, continued in-migration could result in at least a 50 percent increase over the existing population (4,670 - 4,850) during the period to the year 2000.

CONCLUSION

Population is a significant determinant for all land use plans, but it is important to remember that all populations are made up of a diverse group of individuals. For that reason their actions and needs are not always easily predictable. However, this projection and description should assist in making important decisions. Perhaps of even greater consequence is that this element can serve as a measuring device. By comparing actual population changes with the predictions it is possible to gain some partial understanding of how well the overall plan is reflecting the needs of the public and serve as one indicator of whether or not changes are needed in the plan.

As prepared this element does provide some understanding of trends occurring locally. The incredibly rapid growth of the County is demonstrated, as is the increasing importance of retirement age people as well as the growing numbers of young to middle-age families moving to the area. Many of these
people are seeking the recreational activities and quieter rural lifestyle available locally. The question is whether in their seeking of this better life they will not eliminate it's existence here. That is the real challenge of this plan.
URBANIZATION

Deschutes County is presently the fastest growing County in the state. Much of this growth is taking place in and around the incorporated communities of Bend, Redmond, and Sisters.

Because the development has been so rapid, much of this new population is locating in the unincorporated areas around the cities, lying within the County's jurisdiction. The percentage of the County residents in the unincorporated areas has increased from 36.14 percent in 1940 to 49.13 percent in 1977. While annexation will eventually bring most of this urban area population within city limits, the pace of new development will continue to allocate construction to suburban areas in the County, even with a greater emphasis on regulations encouraging or requiring "in-filling" (use of undeveloped lands already in areas of existing housing) and high densities. Because of this situation, state land use regulations and accepted urban planning theory calls for the establishment of urban growth boundaries to serve as the planning and service areas for existing communities, as well as to contain development in a more efficient manner and protect important rural resources and values. However, to make this process function requires considerable coordination and cooperation between city, county, and special district governing bodies as well as the public as a whole.

Present county policy is to work with the incorporated cities in the preparation of urban area plans, then to jointly adopt and administer those plans. In that way, the Bend, Redmond and Sisters Plans are also the plans governing county actions within the adopted urban areas. This type of mutual effort and cooperation will ultimately work to everyone's advantage.

The purpose of this element of the plan is not to provide a recitation of all the facts and figures or policies that the County should use in administering and coordinating with Bend, Redmond, and Sisters, rather it is only to briefly describe existing and anticipated problems and point toward some necessary actions by all parties concerned. Policies will be addressed in the goals and policies section of this plan, as well as within the comprehensive plans being, or already, prepared for the three cities and their urbanizing areas by each community. These urban area plans will also contain the many facts and figures used and necessary for the writing of the goals and policies that will govern subsequent development decisions.
BEND

The Bend Urban Area alone is estimated to have over 31,000 residents, constituting 66 percent of the County's population. While always the major city in Deschutes County, recent years have seen growth and change transform the community into a major commercial and service center. Coming years will undoubtedly continue to see on-going efforts to bring urban services, streets, etc. up to appropriate levels that lag somewhat behind the development. However, more planning and better coordination should improve this situation dramatically. Also, Bend's growth may lead it in new directions, such that continued updating and consideration of major changes (as for example - industrial diversification) will be required to assure the most efficient and equitable goals and policies. This will not be an easy task, and will make necessary on-going educational and informational programs combined with strong citizen involvement and cooperation if the final result is to be the best possible.

REDMOND

Redmond also is receiving a great influx of population, which is expected to continue and possibly increase. The reservation of a large acreage of suitable land for industrial development would seem to indicate considerable potential for growth as new industry is attracted to Deschutes County. Accompanying industrial construction is sure to be commercial and residential growth, which also must be accommodated.
Concern also has been expressed over the possibility of continued development along U.S. Hwy. 97 eventually resulting in a strip of commercial uses stretching from Redmond to Bend thereby eliminating the scenic vistas and open spaces so important to the local economic, cultural, and environmental characteristics of Deschutes County.

And the proximity of Redmond to some of the better agricultural lands, particularly to the West, has pointed to the need for a plan which intrudes as little as necessary on these agricultural lands, and may eventually change the community's growth from its westward drift to a greater utilization of lands to the East. Of course, a change such as that will require many years and numerous changes before it even appears to be a reality.

Here again, close cooperation between the City and the County will be required if such controversial issues as the preservation of the dry canyon, lying west of the City, for open space and recreational purposes is to be achieved. Tensions, misunderstandings and "red tape" may be encountered but the overall long-term efficiency of the process should mean important benefits for most everyone involved.
SISTERS

Sisters is certainly a special case. Dependent largely on tourism and recreational visitors, the City has in recent years seen a revitalization due to its downtown redevelopment. A declining population trend has changed to an increasing population such that the census is the highest in 30 years. While still declining as a percentage of the population, this reversal is nevertheless an important step in the resurgence of this colorful and important community.

Sisters, because of its dependence on tourism, must cooperate with the County to ensure the maintenance of the kind of environment that continues to attract and hold visitors. Special concern for scenic vistas and a high environmental quality have practical, as well as philosophical importance to this City and the lands under county jurisdiction within that area.

CONCLUSION

Each segment of the preceding review has discussed and emphasized the need for coordination and cooperation. Coordination to assure that all involved agencies and individuals are aware of and communicating their concerns and desires; and cooperation because it is not enough to talk together, some reasonable compromise between conflicting desires, and rational decision as to the best alternative, must be determined.

No one can expect that this program will be an easy one. Debate, sometimes heated, will characterize much of the process. But, the stakes are too high for everyone involved to allow this cooperative process to fail. A burgeoning population, all expecting adequate services, while we (the people of Deschutes County) seek to preserve and wisely utilize our natural and human resources, must obviously create tremendous pressures and burdens on the people, and the agencies which serve those people. And it must be remembered that while city limit lines may change legal authority, there is no question that the needs of the people are not stopped by legal boundaries. Planning must occur for the whole area, not be simply limited because of differing jurisdictions. It is a challenge that we must face together, working to obtain the best long-term result for all. Success will depend on the commitment and sacrifice of all. Every society depends upon the mutual commitment of its members to the maintenance of the social and environmental basis upon which it is supported. Certainly, we are no different. The Deschutes County citizens will succeed because to do otherwise would be to suffer negative social and ecological consequences that would contradict the reasons for which people stay and move to our County. Our urban areas will offer many challenges, but properly planned and justly administered, they will serve the needs of the people well.
RURAL DEVELOPMENT

Deschutes County has witnessed rapid change and growth in recent years, which is naturally reflected in a large amount of land being divided for residential, commercial, and industrial uses. In addition, the scenic beauty and climate of the area has attracted large numbers of people interested in recreational opportunities. This has resulted in a number of recreational subdivisions and destination resorts (i.e. Black Butte and Sunriver) being established locally. The overall result was, and is, large amounts of land being taken from resource and open space uses to either part time or permanent residential use.

One example of this conversion process is the estimated loss, during the first half of 1978, of 660 acres of "good" farm land and 747 acres of more marginal agricultural land to residential development (Deschutes County Planning Department estimate). In addition another 3,793 acres of land within urbanizing and scabland areas also was subdivided.

During the period 1963-1977, 25,507 lots were created in Deschutes County. Assuming a potential for 2.67 persons per household (present average household size) this creates sufficient single-family lots for 68,103 people, or enough to satisfy permanent population estimates until about 1986. Of course, this illustration does not account for lots purchased for retirement, multi-family housing, recreational uses, changes in household size, and a number of other factors. However, it does point to the speed at which land is being divided and causes concern over whether this process is not proceeding at too rapid a pace; particularly when consideration is given as to where some of this subdivision is occurring (i.e. natural resource and potential hazard areas) and the problems that may be created such as higher public costs, because of inappropriate location of the development.

Related to rural subdivision growth are the changes taking place in the rural service centers. Unincorporated communities such as LaPine, Tumalo and Terrebonne have seen varying degrees of change and development as the land in and around them has changed from rural to residential and commercial uses. This growth has often meant increased demands for facilities and services previously not required because of the rural character of the area. Even places like Alfalfa, Brothers, Hampton and Millican which have seen little change are anticipating development as the County's population continues to increase.

Another interesting phenomenon of rural development in Deschutes County has been the construction of such major destination resorts as Black Butte Ranch and Sunriver. Catering to the more wealthy seeker of recreational opportunities (both seasonally and as permanent residents) these facilities have provided well-planned, esthetically pleasing communities.
The combination of all this development has changed Deschutes County from a quiet rural area to one of a more metropolitan character. Concern now has been expressed that if adequate controls are not established the attractive rural character will be permanently changed and the quality of life locally will be seriously hurt. Already problems with providing adequate and healthy water, disposing of sewage, loss of scenic vistas, skyrocketing land costs, and obtaining sufficient and reasonably priced public services have been identified. Common restraints such as lack of water, little or no police and fire protection, and inadequate roads have not stopped development as people have been willing to sacrifice these services to obtain a rural parcel of land. To deal with these problems we must first understand the situation and then move to control the circumstances for the public's benefit. The following sections provide information about the various types of rural development occurring in the County and generally point to some actions necessary to best serve the general welfare of the county's populace.

RURAL DEVELOPMENT

In order to more fully understand the magnitude of subdivision occurring in the county the following figures on platted subdivision lots in various parts of Deschutes County, as of August 24, 1977, have been prepared:
Black Butte Ranch..........................1,250
Cloverdale/Redmond-Sisters Highway.........205
Tumalo/Deschutes Junction..................2,602
East to Alfalfa................................591
East beyond Millican..........................1,535
Terrebonne Area................................930
Sunriver.........................................1,399
South of Sunriver to the County line.....10,251
Other Rural Areas..................2,753
Total Lots 29,060

In addition to lots with final approval there also existed an additional 813 lots in the La Pine Area and another 384 lots in the La Pine Area and another 384 lots outside the Bend Urban Area, all of which had preliminary approval. This combination of final and preliminary approved lots totaled 22,713. Another 8,931 lots existed or had preliminary approval in urban areas, for a total of 31,644. Interestingly this indicates only 28 percent of the lots in Deschutes County are in urban areas, while the rest lie in the supposedly rural hinterland. It should be noted that the numbers presented here give no indication of the acreages in each lot, which can vary dramatically. Nor does it account for land partitions (creation of only two or three lots) or unrecorded subdivisions. Subdivision activity in the County has proceeded at a rapid pace in recent years! As can be seen in Graph I the approval of new lots has been somewhat political, often following major economic fluctuations such as the recession during the early 1970's. What is as interesting as the many fluctuations is the cumulative effect of all these years of development activity. From 1963 through 1977 there were platted in Deschutes County 25,507 lots, which would seem to indicate that during this period the amount of available lots increased by about 400 percent. A figure considerably in excess of the new population.

Recent figures from the County Assessor's Office indicate of the 32,300 (1978) lots in the County almost 46 percent are designed rural recreation, of which 80 percent are undeveloped (11,760 lots, approximately). These recreational lots are supposedly being purchased for speculation, recreation, and retirement. However, many are providing a relatively inexpensive way for people to obtain a year-round home. Unfortunately as increasing numbers of people move into these lots (largely located south of Sunriver), as they retire or just to move to a rural area, they bring demands for more public services. These services are expensive and since the recreational subdivisions do not pay sufficient taxes to support the demanded services they must be subsidized by other taxpayers elsewhere. In addition, these subdivisions located in rural areas often create fire hazards (or are susceptible to wildfire hazard), are wasteful of energy, produce transportation problems, and negatively affect natural and cultural resources (i.e. wildlife, timber, water, scenic areas, and historic sites).
The Oregon State Extension Service released a report in November, 1977 which studied, "The Impact of Recreational and Rural Residential Subdivisions in Klamath County, Oregon." The isolated recreational subdivisions studied are very similar to those in Deschutes County, and in fact, were located just south of the Deschutes-Klamath County line, across the line from the major recreational subdivision area in Deschutes County. Because of the direct comparibility of this study to local county conditions the following information is presented as representative of both Klamath and Deschutes Counties.

TABLE 1
(1976)
IMPACT OF RECREATIONAL DEVELOPMENT

| REVENUES | |  |
|----------|----------|
| County   | School District |
| General Fund... | $700 | State Aids | $4,140 |
| Road Fund..... | 369 | Property Tax | 2,462 |
| TOTAL     | $1,069 | County School Fund | 33 |

| EXPENDITURES | |  |
|--------------|----------|
| County....... | $2,131 |
| Difference   | $1,062 |
| School District... | $10,731 |

- $ 4,096

Apparently these subdivisions are costing the County, mostly in road costs, and the school district more than the additional revenues being generated. Given recent demands in the LaPine area for new roads, additional schoolrooms, more police protection, etc., it seems likely that this revenue/expenditure situation is true for Deschutes County as well, if not worse.

In addition, a study of recreational subdivision in Deschutes County was conducted during 1970-71 by the Oregon State University Extension Service. The findings also confirm the Klamath County study. The following table is taken from the report and indicates the likely net impact of various levels of development occurring in the recreational subdivision studied:
TABLE 2
NET IMPACT OF LEVELS OF DEVELOPMENT
ON LOCAL PUBLIC FINANCE

<table>
<thead>
<tr>
<th>Revenues By Level of Development</th>
<th>4%</th>
<th>50%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Government</td>
<td>$1,466</td>
<td>-$14,286</td>
<td>-$29,171</td>
</tr>
<tr>
<td>Public Schools</td>
<td>52,377</td>
<td>-71,118</td>
<td>-209,708</td>
</tr>
<tr>
<td>Community College</td>
<td>3,197</td>
<td>-7,427</td>
<td>-54,869</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$57,040</td>
<td>$92,831</td>
<td>$293,748</td>
</tr>
</tbody>
</table>

Obviously as build-out continues to take place the subdivision's net effect is to cost more and more.

While the recreational subdivisions may have been a boon initially they presently, and will continue to, cause severe financial problems for local government. Better land use control will have to be exercised to improve or at least mitigate some of the excesses of this predicament.

The LaPine Area presently has about 11,000 lots, of which 50 percent (the greatest probable amount) are unbuildable under Department of Environmental Quality regulations. Given that in 1977 there were 2,540 full-time and seasonal electrical users in the vicinity of LaPine, and that area is growing at about two percent each year, it appears there are sufficient existing subdivided lots to serve that area's needs until the year 2017.

Elsewhere in the county subdivision is often more oriented to people seeking a relatively small parcel of land (5 to 20 acres) upon which they can raise a few animals, participate in some very small scale farming, and simply enjoy the quieter life possible in rural homesites. Much of this activity has occurred in the Bend-Tumalo-Redmond Area, and to some lesser extent in the Plainview and Terrebonne Areas. Sisters also has some of this activity although most of the subdivision activity there is more oriented to seasonal and full-time recreational use. Unfortunately these locations often occur on some of the better agricultural land. As was mentioned previously, during the first half of 1978 over 1,400 acres of agricultural land was lost to non-farm uses, thereby reducing further the feasibility of maintaining the County's agricultural resource, as well as associated economic and environmental benefits.

Ever greater conflicts between subdivisions and the basic resources of the area may be anticipated in the future. Agriculture, forestry, sand and aggregate, fish and wildlife, as well as other elements of local natural resources will increasingly be restrained or lost to development unless appropriate action is taken now.
RURAL SERVICE CENTERS

Fortunately much of the rural development is occurring in or near rural service centers which can service as loci for the development of the necessary commercial and governmental services. LaPine, Tumalo, and Terrebonne are good examples of unincorporated communities which have grown to accommodate the increasing demand for services. Others, such as Alfaifa, Brothers, and Cloverdale have maintained their relatively quiet rural nature.

LAPINE

Relatively major commercial expansion has taken place as new stores, service stations, banks, and offices have opened to serve the growing local population. This situation is particularly evident in summer when great influxes of seasonal residents may swell the population by as much as a hundred percent. While recent losses such as the destruction of the shakemill by fire have set-back the community's growth, continued interest in industrial expansion by local citizens has been indicated. Although restrained by a lack of public facilities (i.e. sewer and water), appropriate new commercial and industrial development combined with an increasing residential density must occur in the core area if LaPine is to become a viable incorporated city serving the needs of a large portion of the county's residents. To assist this process Deschutes County is presently negotiating with the Bureau of Land Management to obtain land east of LaPine for possible use as an industrial park.
TUMALO

Small acreage, non-commercial farms in the vicinity and new residential development inside Tumalo have resulted in the construction of a new water system and, combined with tourist-attraction, new commercial development. While the community is concerned that their quiet and pleasing environment be maintained, they also recognize the need to accommodate increasing development as the nearby Bend Urban Area continues to expand. Particularly a problem in Tumalo is the need to accommodate local surface mining operations while providing adequate growth area. Timing of regulations is important to dealing with these issues since mining resources need to be protected until the resource is exhausted.

TERREBONNE

Because of the rapid pace of change and increase in the Redmond area the nearby community of Terrebonne has also obtained significant growth. Problems with septic tanks and environmental protection have been identified. The maintenance of the rural agricultural character of the area seems to be important to local residents, and they recognize the need for some land use restrictions if they are to protect their community from undesirable development.
DESCHUTES JUNCTION

While only recently receiving development interest this area north of Bend has shown recent changes as commercial and mobile home developments have occurred in addition to an expanding industrial area. Without careful regulation development along Highway 97 could lead to a large commercial strip development reaching from Bend to Terrebonne.

OTHER

Other centers such as Alfalfa, Brothers, Cloverdale, Hampton, and Millican have not yet had significant development take place. Most interests in these areas would prefer to see this remain the case, with some flexibility to allow for needed service facilities located in the core areas and the maintenance of the rural character around the center; while recognizing the individual characteristics and needs of the local residents.

DESTINATION RESORTS

Two major destination resorts exist in Deschutes County - Black Butte Ranch and Sunriver. In addition some others, such as part of Crooked River Ranch, are also factors in the local situation. To a large extent these facilities are characterized by good planning, effective management, and concern for the welfare of their guests and residents. In order to provide needed services, like fire protection, they have undertaken to form special districts or provide in advance the necessary services. The larger developments
cater to the more wealthy and therefore can afford to make necessary expensive improvements. Undoubtedly, the major destination resorts are overall a beneficial addition to the County. Of course, care must be taken to assure they remain so, since they too require services and could expect more in the future.

LAND USE

As Deschutes County develops the pattern of land use is modified. Areas in LaPine formerly used for agricultural and forestry purposes have now been converted to recreational subdivisions. The rural service centers have seen an expansion of commercial uses. Industrial uses have grown, usually within urban growth areas, but occasionally in rural areas. Sometimes these industrial uses have been compatible with the rural character of the area, such as Bend Research outside of Tumalo, while others have been of questionable value. Rural tracts (larger parcels of land located in rural areas, often established to meet the demand for small ranchettes) have sprawled-out across the northern part of the county from Bend to Sisters and Terrebonne. And residential subdivisions have proliferated around the urban centers.

Inside the urban areas development has been a complex picture of public and private uses, as well as residential, commercial, and industrial uses mixing together. Description of these areas may be found in each of the cities comprehensive plans.

Public ownership is a major point of interest to local citizens because so much of the county is publicly owned. A study by the Deschutes County Planning Department reveals that of the 1,533,277 acres (78.30%) are publicly owned. This ownership pattern has a major effect on development and land use planning for this area. In addition to reducing the available tax base (federal in-lieu monies replace some of the lost property tax revenue) this pattern requires that there be close cooperation between governmental units if either's plans are to be successful.

Deschutes County has been successful in a number of land trades to obtain lands from other public agencies that then can be put to useful private or County purposes, for the community's benefit. Presently the County is involved with a trade with the Bureau of Land Management for lands east of LaPine, north of the Redmond Airport and near the new county shops on Arnold Market Road. These lands will be put to use in productive local projects while the traded County lands (scattered throughout the county) will be used to consolidate or augment BLM property.
TABLE 3
LAND OWNERSHIP IN DESCHUTES COUNTY

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Acres</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Forest Service</td>
<td>979,317.0</td>
<td>50.01</td>
</tr>
<tr>
<td>Bureau of Land Management</td>
<td>500,218.0</td>
<td>25.54</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>1,413.3</td>
<td>0.07</td>
</tr>
<tr>
<td>Deschutes County</td>
<td>21,542.0</td>
<td>1.10</td>
</tr>
<tr>
<td>State of Oregon</td>
<td>29,539.9</td>
<td>1.51</td>
</tr>
<tr>
<td>Misc.</td>
<td>161.0</td>
<td>0.01</td>
</tr>
<tr>
<td>City of Bend</td>
<td>771.6</td>
<td>0.04</td>
</tr>
<tr>
<td>City of Redmond</td>
<td>304.0</td>
<td>0.02</td>
</tr>
<tr>
<td>City of Sisters</td>
<td>10.2</td>
<td>---</td>
</tr>
<tr>
<td>Public Lands</td>
<td>1,533,276.9</td>
<td>78.30</td>
</tr>
<tr>
<td>Private Lands</td>
<td>425,123.1</td>
<td>21.71</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,958,400.0</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Obviously, a major reason for this plan is to assure that the future land use pattern be more efficient and productive for the overall needs of the County's populace, than has been the case in the past.

CONCLUSION

Development of the rural areas in Deschutes County has proceeded at a rapid pace. For some the speed of change has been too fast, for others not fast enough, and for still others in the wrong places. Obviously there are serious problems and great concern exists locally that improvements be made. Protection of scenic and natural resources is an important part of any plan, but particularly so in a county such as this one where the basic economy is so closely tied to these assets.

Special concern over the loss of agricultural land, strip development along U.S. Highway 97, and detrimental recreational subdivision in the La Pine Area has been identified. As Deschutes continues to change from a rural recreational area to the metropolitan center of Central Oregon (the Bend Urban Area has almost half of all the people in Crook, Deschutes, and Jefferson Counties) the existing pressures will grow even greater. Strong, effective and equitable planning will be required to meet these challenges.
SOIL ASSOCIATIONS

- Floke - Olson
- Deschutes - Deskamp
- Gosney - Deschutes
- Simas - Searles
- Kotzman
- Klawhop - Shanahan
- Sisters - Wanoga
- Shanahan
- Cultus - Shukash
- Lapine
- Winoopee - Moolack
- Rock Outcrop Winoopee

Soil Conservation Service data, 1973
FINAL

DESHUTES COUNTY

YEAR 2000

COMPREHENSIVE PLAN

NOVEMBER 1979
DESHUTES COUNTY
COMPREHENSIVE PLAN
YEAR 2000
Prepared and Presented
By
The Deschutes County Planning Department
In Cooperation With
The Citizens of Deschutes County

Acknowledgments:
The Deschutes County Board of Commissioners
Clay Shepard 1979
Abe Young, Chairman 1980
Robert Paulson, Jr.

The Deschutes County Planning Commission
Folmer Bodtker, Chairman
Ted Smith, Vice Chairman
Don Halligan
Sharon McClaughry
Rick Quackenbush
Kay Nelson
Robert Appleby
Gorden Detzel
Harold Baughman

1979
The Deschutes County Planning Staff

William G. Monroe
Planning Director

Long-Range Planning Section

John E. Andersen
Senior Planner

Carole Wells
Assistant Planner
Local Coordinator
(1977-79)

Brian Christensen
Assistant Planner

Merlyn Paine
Assistant Planner

Elizabeth Shay
Associate Planner
Local Coordinator

Current Planning Section

Richard Knoll
Associate Planner

Craig Smith
Associate Planner

Philip Paschke
Assistant Planner

Bruce Knowlton
Associate Planner

George Cress
Associate Planner

Margaret Hayden
Code Coordinator

Clerical Section

Nancy Smith
Senior Office Associate

Jill Reed
Office Associate

Elizabeth Pallone
Office Associate
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>DEFINITIONS</td>
<td>4</td>
</tr>
<tr>
<td>EXISTING CONDITIONS</td>
<td>14</td>
</tr>
<tr>
<td>PLANNING ORGANIZATION</td>
<td>20</td>
</tr>
<tr>
<td>ALTERNATIVES</td>
<td>25</td>
</tr>
<tr>
<td>GOALS AND POLICIES</td>
<td>30</td>
</tr>
<tr>
<td>GROWTH MANAGEMENT</td>
<td>33</td>
</tr>
<tr>
<td>Rural Development</td>
<td>34</td>
</tr>
<tr>
<td>Urbanization</td>
<td>62</td>
</tr>
<tr>
<td>Economy</td>
<td>69</td>
</tr>
<tr>
<td>Housing</td>
<td>75</td>
</tr>
<tr>
<td>Transportation</td>
<td>78</td>
</tr>
<tr>
<td>Public Facilities and Services</td>
<td>91</td>
</tr>
<tr>
<td>Recreation</td>
<td>99</td>
</tr>
<tr>
<td>Energy</td>
<td>105</td>
</tr>
<tr>
<td>Natural Hazards</td>
<td>110</td>
</tr>
<tr>
<td>RESOURCE MANAGEMENT</td>
<td>113</td>
</tr>
<tr>
<td>Agriculture</td>
<td>114</td>
</tr>
<tr>
<td>Forest Lands</td>
<td>120</td>
</tr>
<tr>
<td>Open Spaces</td>
<td>123</td>
</tr>
<tr>
<td>Surface Mining</td>
<td>127</td>
</tr>
<tr>
<td>Fish and Wildlife</td>
<td>134</td>
</tr>
<tr>
<td>Historic and Cultural</td>
<td>136</td>
</tr>
<tr>
<td>Water</td>
<td>138</td>
</tr>
<tr>
<td>CITIZEN INVOLVEMENT</td>
<td>141</td>
</tr>
<tr>
<td>PLAN FLEXIBILITY AND UPDATING</td>
<td>144</td>
</tr>
<tr>
<td>THINGS YET TO BE DONE</td>
<td>146</td>
</tr>
<tr>
<td>IMPLEMENTATION</td>
<td>148</td>
</tr>
<tr>
<td>CONCLUDING REMARKS</td>
<td>158</td>
</tr>
</tbody>
</table>
EXISTING CONDITIONS AND CONCERNS

Before a plan can be prepared for a community, there must be an understanding of the physical structure, general attitudes and existing trends which identify that community as the unique society that it constitutes. Further, it is important that there exist some understanding of the problems and issues facing the local community. The purpose of this portion of the plan is to briefly review the status of some of the elements which make up Deschutes County in 1979 and discuss the apparent direction which the County seems to be taking into the future. More detailed information on local conditions and trends may be found in the Resource Element which is part of this plan.

POPULATION:

Probably one of the most dramatic indicators of local conditions is population. Certainly the rapidly expanding growth in Deschutes County is having dramatic effects throughout the community. Increasing at a rate of 6.3 per cent annually (average from 1970-77), the County is known as the fastest growing county in Oregon. The 1978 population estimates by the Center for Population Research and Census indicated the local population is 49,700, an increase of 63.26 per cent from the 30,442 of 1970. Present indications are that the rapid rate of growth is expected to continue for the immediate future and slow some time in the late 1980s. Overall, it is anticipated that the growth rate between now and the year 2000 will average approximately 4.5 per cent annually, resulting in an overall increase of 158 per cent to a population 123,200. Much of this growth is expected to take place in and around the two major existing population centers, Bend and Redmond. Somewhat slower growth is expected elsewhere, except in La Pine.

La Pine is an exceptional situation. Original appraisals of two per cent annual growth have been questioned and estimates as high as 12 to 15 per cent have been suggested. Certainly the higher growth rate would help to explain the growing problems the community has had with poor water quality, loss of forest and agricultural lands, increasing strip development and logging public facilities and services.

As important as the number of people is some knowledge of the age distribution of people moving here. A comparison of the estimated populations for the County and the State made in Socio-Economic Indicators – 1978 revealed that Deschutes County has a higher percentage of people 17 years and younger and 65 years and older than is characteristic State-wide. Apparently, the area is attracting numerous retirees, as well as young families with children. Characteristically, these groups make demands on a variety of services, particularly schools and health care. Young families tend to seek single family residences, while retirees seem to find a variety of housing styles acceptable (depending on Page 14 - Deschutes County Comprehensive Plan
income) but are usually attracted by lower maintenance facilities such as apartments and mobile home parks. Apparently, both of these groups are being attracted by what is seen as the higher quality of life, whether for raising children or for retirement activities, which may be found locally.

ECONOMY:

Equally important in understanding the local area is the economic base of the community. Presently the timber and wood products sector is the major manufacturing employer locally, with 2,720 employees as of March 1978. However, major changes may be expected during the 20-year planning period and the overall result is difficult to assess. It does appear that conversion to processing smaller trees and maintenance of the allowable cut will permit some growth in employment but overall timber and wood products will probably play a proportionally smaller role in the County's future economy. In fact, total manufacturing is presently decreasing in importance locally. How much decrease this ultimately will amount to is difficult to predict. Regionally and nationally the economy is shifting to a more service- and trade-oriented status. Given the emphasis on promoting manufacturing in Redmond and to a lesser extent in La Pine and the growing local labor pool, it seems probable that some gains in industrial employment may be expected although as a proportion of the economy some small decline may occur.

One of the strongest segments of the local economy is construction which grew 187.5 per cent between 1970 and 1978. Related to construction is the growth in finance, insurance and real estate employment, up 95.8 per cent during the same period. These industries are directly related to the large in-migration of people occurring in the County.

Tourism is also a significant factor locally, as is reflected in the strong growth (up 107.3 per cent) taking place in the services sector of the economy. Some of this growth is likely to be related to population growth and a national trend to more services. Unfortunately, service jobs tend to be somewhat lower paying and more seasonal than some other types of employment. However, the City of Sisters has chosen to base its economy almost solely on tourism. And tourism locally is a less seasonable economy which seems to provide many jobs for the young and second incomes for families.

Wholesale and retail trade has also witnessed rapid growth, up 96.9 per cent, and is probably tied to a burgeoning population and a growing importance for Bend as a regional shopping center.

Agriculture, once a major factor in the local economy, has continued to decline. Only livestock areas and some of the better cropland areas, which have remained largely undivided, have continued to produce significant amounts of agricultural products. Many small farms exist in the County, but their agricultural

Page 15 - Deschutes County Comprehensive Plan
production is largely subsidized by off-farm employment. The definition of marginal farm land and how much is marginal is a major issue in this area.

It appears Deschutes County is shifting from a rural economy to one more characteristic of a growing urban area. Growth in trade and services seems likely to continue with a growing interest in manufacturing employment, presently not evident, probable once an adequate pool of labor exists.

Unemployment has consistently been higher in Deschutes County for many years. To some extent, this situation is related to the seasonable fluctuations of such industries as tourism, logging and agriculture. Most recently, the major reason is probably the rapid influx of new residents. Many of these people are young skilled individuals who have moved here for the higher quality of life available locally and are willing to accept jobs for which they are over-qualified or to create their own employment. Given the rapid influx of people, which likely hides a large out-migration of people unable to find adequate employment (in-migration is still faster than the out-migration so the population increases), it is perhaps surprising the economy has accommodated so many.

HOUSING:

Nineteen seventy-seven housing data indicates Deschutes County residents build more single family units (62.5 per cent of all new dwelling unit permits versus a State average of 55.32 per cent), buy more mobile homes (20.4 per cent versus 15.92 per cent), and construct fewer multiple family units (17.1 per cent versus 28.75 per cent) than is characteristic Statewide. These findings appear to be consistent with the earlier population information. The low vacancy rates found locally, for single family dwellings and multiple family units, are indicative of the rapid growth locally. One aspect of the local housing situation that is difficult to determine is the effect of seasonable housing on local housing demand. Surveys indicate about 10 per cent of the local housing stock is used as seasonable housing and is, therefore, generally unavailable to meet the need of local residents. This is a factor which must be remembered when assessing how much land needs to be set aside for housing construction.

LAND USE:

One of the most obvious results of growing County population has been the sprawling residential development that has spread rapidly over much of western Deschutes County. This has caused the loss of valuable agricultural and forest land and accentuated the need for expensive public services. Recreational and rural tract lots in the County in 1979 accounted for 58 per cent of the total lots. Interestingly, of these lots, 17,377 were found to be undeveloped.
It appears the County presently has enough available empty lots to more than serve the needs of the anticipated new rural residents.

In the La Pine area, recreational subdivisions once seen as a boon to the County taxpayer have slowly been changing to more permanent occupancies that demand schools, buses, sheriff and fire patrol, as well as a variety of other expensive services that must be delivered over a large area.

Historic structures and sites, so important to the preservation of the County's history and the education of the community, have been lost to the dictates of unregulated change.

Strip commercial development has continued to stretch out from the urban areas along the highways, often obliterating scenic views and natural lands while promoting inefficient energy consumption and traffic patterns.

Rural Service Centers have not been used as originally intended. Often the land uses constructed have little or nothing to do with the servicing of the rural population, but instead are just further examples of the spread of commercial uses along the highways or the use of loopholes to avoid planned development (i.e., Deschutes Junction).

PUBLIC FACILITIES:

As has been mentioned previously, the sprawling pattern of development which has been characteristic locally has resulted in extensions of increasingly expensive public services. Further, growth has been so rapid that even in urban areas services have lagged behind the population growth, although not so seriously as in La Pine. Occasionally, the lack of services has even created the potential for serious problems, such as the lack of sheriff's protection in La Pine and the use of irrigation water for drinking in the Bend-Tumalo areas.

Many people have expressed concern over rising tax rates and the possibility that they are subsidizing those areas of the County they would like to see left open and unchanged.

TRANSPORTATION:

In Deschutes County, as is typical of rural areas, the primary mode of transportation is the private automobile. In fact, this area's love of outdoor activities and sprawled development seems to have resulted in a higher rate of vehicular ownership than is characteristic Statewide. Certainly these attitudes and conditions are much of the reason mass transit has been so unsuccessful locally.

Page 17 - Deschutes County Comprehensive Plan
Concern has been expressed over the loss of wildlife habitat, such as the subdivision of deer winter ranges and the blockage of deer migration corridors in the La Pine area. The Oregon Fish and Wildlife Department has been outspoken in its concern and has, upon occasion, sued to protect the dwindling habitat.

Problems with water quality have been found to exist in La Pine and septic tanks have failed in Terrebonne. Increasingly the major environmental damage has been the loss of scenic vistas and sensitive environment areas along highways, rivers and other areas where development has occurred. Often the resources lost have been irreplaceable locally.

Fortunately, Deschutes County still has many scenic and natural resources available. Public ownership constitutes over 78 per cent of the land in the County. Proper management of both public and private lands can assure the area's primary resource--its natural beauty and diversity--is maintained for future residents.

OTHER:

Energy usage has been growing dramatically in Deschutes County, not only because of the population growth but also due to the low density sprawled-out pattern, construction of energy consumptive commercial uses and a general unconcern about energy by many citizens. Interestingly, the heavy use of wood heat locally does seem to have saved a significant amount of electrical energy. Problems with coordinating activities and regulations between the various Federal, State and local agencies have often created unnecessary delays and expenses. Often this has been expressed in comments about excessive government regulation, at the same time complaints about lax enforcement of local ordinances are being received. While improvement has been noted, much more will be necessary for the coordinated and productive management of public resources and services locally, particularly if growth and change continue to occur at a pace as rapid as it is now.

This brief summary of conditions, trends and local issues is not meant to be all-encompassing, but it does include the major characteristics and trends of concern in the preparation of this plan. Deschutes County has available tremendous environmental and human resources but it also suffers from many of the problems common to areas with rapid rates of growth. The scenic and environmental qualities that first attracted people will be needed in the future as well.

However, not all of the results of growth are bad. Increasing population has brought new businesses and services to the area. Educational and cultural opportunities have improved significantly. Employment alternatives have increased, as have wages. And, a lot of new people have been able to improve their quality of life. Growth and change is a mixed blessing. The purpose of this plan is to address the issues and provide the best available development alternative for this County's people. Given
the complexity of local issues and the importance of the task, it is not surprising that the preparation of this plan has been a controversial and lengthy process.
The program began with a well-publicized educational meeting at the local college to acquaint Deschutes County residents with citizen involvement in land use planning and the upcoming opportunities for participation. One hundred and fifty persons attended to view a slide show on the goals, hear an explanation of the program, fill out an attitude survey (later compiled by college students) and receive several handouts. For a month thereafter, people volunteered for advisory committee membership and were accepted without restriction.

The Board of County Commissioners, acting as the committee to evaluate the citizen involvement program, appointed 17 technical and area advisory committees and an Overall Citizens Advisory Committee with a total of 326 officially appointed members. Up to 300 additional persons also were indirectly involved.

The technical committees functioned as a panel of experts (often including Federal, State, local and district agency personnel) and interested citizens. These committees covered the following topics: minerals and aggregates, agriculture, forest lands, fish and wildlife, historic and cultural, economy, transportation, public facilities and services, recreation, housing and energy. Each committee was given a general work program to collect information, identify needs and problems and prepare justified recommendations. Committees met two to four times per month and ten to twenty times totally. Each group prepared a detailed and factual preliminary report which was then submitted to the Overall Citizens Advisory Committee (OCAC) for comment. Revisions to each report were made and submitted as a final report to the OCAC and Planning staff. The initially weak data base as well as the demanding time schedule for plan completion were handicaps the committee had to overcome. Their detailed reports were often used word for word in the preparation of the resource element and preliminary plan.

The area committees involved interested citizens from the three major rural service center areas, La Pine, Terrebonne and Tumalo. An attempt was also made to form a Sunriver committee but little interest was expressed by residents of that area. The committees addressed each of the LCDC goals and developed a list of programs, needs and directions for future community growth. Their reports were reviewed by the OCAC in the same manner as the technical reports and eventually used in the preparation of the preliminary plan.

There were also three urban area advisory committees appointed to work with each city's planning staffs in order to prepare urban area plans for each city and its surrounding urbanizing area. While the Bend Urban Area Plan was largely completed by the time the OCAC was formed, the Redmond and Sisters planner periodically reported to the Overall Citizens Advisory Committee to assure communication and coordination.
The Overall Citizens Advisory Committee was the largest committee and the one most broadly representative of the various interests and areas of the County. Their primary function was to resolve conflicts between the recommendations of the various committees. In addition, they also reviewed the recommendations to assure they met the State's goals and guidelines. The OCAC also initiated many of the recommendations regarding development in urbanizing and rural areas of the County, thereby tying together the various elements of the plan. It was their direction to the staff which served as the basis for the preliminary plan.

In this period the County Planning staff also wrote several reports to provide information to the OCAC. These papers covered geology, geomorphology, soils, areas of special interest, climate, hydrology, history and population. The OCAC also considered this information in their deliberations.

During this citizens' committee stage of the process, over 200 meetings were held and in excess of over 10,000 hours of time were spent by volunteers working on the plan. More than 5,000 newsletters were mailed to interested citizens and thousands of letters, mailings, posters and flyers were also distributed. Radio, television and newspaper coverage was extensive. The largest local newspaper printed an explanatory article on each of the committees' and staff's reports. This was to insure that everyone, whether involved directly in the process or not, was kept up to date as to where the plan was heading.

Once in the preliminary plan stage, the document was brought to the County Planning Commission for review. A newspaper supplement describing the major elements of the plan was placed in the major newspaper in Deschutes County and the local news media were very cooperative in disseminating information about the plan. The Planning staff also spoke to various groups in the community. Copies of the plan were placed in local libraries and made available to everyone interested. The Planning Commission held a number of hearings on the preliminary plan and then provided a series of recommendations to the Board of County Commissioners.

The County Commissioners also held hearings on the plan. These hearings seemed to be emotion-packed events which generated large turnouts and spirited testimony. Using the public testimony (both written and verbal) and the recommendations of the Planning Commission and staff, the Board compiled a working draft of the Comprehensive Plan. This working draft was then sent out to outside legal and planning consultants for review and comment. Earlier, the preliminary plan had been given to an outside reviewer to determine the adequacy of the energy elements of the plan. All these reports were then delivered to the Board of County Commissioners. Their determination was that the Planning staff should take some additional time to use these studies to improve the plan where necessary. This new draft was then taken to the Overall Citizens Advisory Committee and Planning Commission for comment, before the Board took any final action. The Board,

Page 23 - Deschutes County Comprehensive Plan
also determined that an additional public hearing would be held to hear testimony on planned exceptions to be taken to the agricultural and forest land goals of the State Land Conservation and Development Commission. The use of such an extensive citizen involvement program, as well as the utilization of specific professional assistance, was a complex but extremely useful combination. The preparation of the plan was not only speeded but the quality of the overall document was significantly improved. It is expected that this will produce a document that will effectively serve as a basis upon which to build a bright future for the people of Deschutes County.
GOALS AND POLICIES

INTRODUCTION:

The alternative chosen for growth in Deschutes County was one which emphasized accommodating the anticipated growth of the area primarily in the urban areas, with some rural development taking place in the Rural Service Centers and in existing subdivisions. This new pattern would then provide much greater efficiency in the provision of public services and foster savings in energy, particularly in transportation. The development pattern would also protect scarce resources, while permitting compatible improvements.

Rural Development is the chapter that serves as the basis for the rest of the plan. Basic guidelines to do away with the former inefficient development pattern and to accommodate the anticipated 7,050 new rural residents are contained in this section. Emphasis is placed on maintaining the existing rural character of the County, while acknowledging that Deschutes County is becoming more urban, by concentrating new rural development in the Rural Service Centers. In that way people desiring a rural lifestyle may do so without unduly increasing the costs to others or utilizing resource lands. The only exception to this rural pattern is in the La Pine area where emphasis is laid on the incorporation of the community and improvements in local services provided. The La Pine rural area is also likely to receive many of the over 3,000 new rural homes which will be built, because so many lots already exist in that area.

Urbanization links this plan to those of the three incorporated communities. This chapter provides parameters for the establishment and expansion of the urban boundaries and provides common guidelines to the cities to help them accommodate the 71,450 new residents that will live in the urban areas by the year 2000. These new County residents will need over 35,600 homes and 29,000, perhaps as high as 35,000, new jobs. Sufficient land must be allocated and managed to serve these new local citizens.

The Economy chapter discusses the need to protect our existing timber, agriculture, mining and scenic resources for our future prosperity. It also provides policies to help Deschutes County in its metamorphosis from a rural resource economy to a more commercial/industrial orientation as an urban center, perhaps providing between 7,700 and 16,000 new manufacturing jobs and 27,000 to 32,000 new non-manufacturing positions.

Housing emphasizes the need for flexibility in housing styles and costs so as to provide adequate homes for all segments of the community. Also fostered are programs to help rehabilitate existing homes and to accommodate low and moderate-income families through government programs and efforts to reduce development costs.

Page 30 - Deschutes County Comprehensive Plan
The Transportation chapter seeks to aid movement to and between the communities and to improve the ability of the communities to efficiently deal with the new residential, commercial and industrial uses which are anticipated. Greater public safety is promoted, as is preparation of a shift from automobile dependence to public transit and other transportation alternatives.

To accommodate existing and anticipated populations and land uses the Public Facilities and Services chapter provides basic guidelines for the construction of new facilities, while again fostering urban rather than rural development.

Recreation seeks to accommodate both the growing local population and the tourist industry. New facilities and cooperative plans are identified and, while the County seeks to provide primarily a facilitator function, there is made a greater commitment to recreation and associated activities.

The Energy chapter emphasizes more local independence in providing energy, protection of future energy resources and better coordination with energy providers. Information and education about energy and local opportunities are stressed. As the population continues to grow and because of the importance of tourism, energy will play an ever more dominate role in local planning efforts. These policies seek to emphasize the need for greater efficiency in development patterns and construction, while surveying our available future options.

The Natural Hazards chapter seeks to guide development away from identified hazards, such as wildfire, while making use of areas that need to be protected from development for other useful purposes. The protection of the 100-year flood plain is an example of an area where development shall be prohibited but wildlife and recreation opportunities will be fostered.

One of the more controversial resource chapters has been Agriculture. The policies in this plan seek to protect identified agricultural areas, while recognizing that marginal agrcultural conditions are present in some areas. Some hobby farming is permitted in the more marginal areas so as to increase agricultural productivity, while a program to research local marginal lands and to determine how they may be utilized while agricultural production is preserved, is mandated for future updates of the plan.

Forest Lands seeks to protect existing areas with timber capability, while permitting compatible development on non-productive lands that will foster other aspects of the local economy. The loss of much of La Pine to development is recognized (see Exceptions Statement) but in those areas where larger lots exist, small woodlot management is encouraged and commercial timber is protected where it remains feasible (primarily the national forest and on timber company ownerships).

Page 31 - Deschutes County Comprehensive Plan
The local economy and environment is very dependent on the protection of this County's scenic and natural areas. Because of that the Open Spaces chapter identifies the policies required to protect those resources for the area's tourism, recreation and quality of life needs, while recognizing the appropriateness of flexibility when dealing with individual property owners.

The Surface Mining chapter seeks to preserve known mining resource sites for ultimate mining activity and to permit mining as it is needed in the County. There is also recognition of the County's responsibility to protect adjoining residents (safety and health hazards) and the general public (excessive construction costs and hazards created by a shortage of building materials as well as loss of scenic qualities and pollution).

Fish and Wildlife seeks to balance the wildlife needs of the area against the requirements of a growing population. The important economic and lifestyle qualities are recognized and irreplaceable wildlife areas protected, while precautions that permit limited development are identified.

One of the most non-controversial chapters is Historic and Cultural, which seeks to protect the ever dwindling supply of historic and cultural sites, protection that will have important economic and social benefits for a community growing as is Deschutes County presently.

Water is the resource without which there will be no future growth in Deschutes County. Preservation of existing water quality and greater efficiency in delivering available water supplies is being sought. The new and existing residents will need all that is presently identified. Agriculture, new employment opportunities and maintenance of the tourism/recreation industry all require water. This plan seeks to improve coordination and planning for that water's use.

The final chapter is Citizen Involvement. Planning is a dynamic process and one that does not stop with the adoption of a plan. More study to keep the plan functional and up-to-date will be required. The County's efforts will continue to be aimed at involving the public, in meaningful ways, with the preparation of future plans and studies. There is also an emphasis on explaining planning, its purposes and techniques, so that it will be better understood and more usable by County residents.

The plan policies must be read as a whole, as the County will grow as a single unit, not sixteen separate pieces or aspects. Taken together these policies point the direction for the County's future, a future full of change but one full of promise as well.
GROWTH MANAGEMENT

Rural Development

Urbanization

Economy

Housing

Transportation

Public Facilities & Services

Recreation

Energy

Natural Hazards
RURAL DEVELOPMENT

The primary duty of this comprehensive plan is to guide growth and development in the rural areas of Deschutes County. The Urbanization chapter discusses urban area growth but the primary plans for the County's major communities are the three urban area plans. The Deschutes County Year 2000 Comprehensive Plan is focused upon the changes that will be taking place outside the urban growth boundaries. This chapter is meant to tie together the various more specific chapters which deal with resource and growth management so that an integrated plan for the development of the County may be obtained.

Being the fastest growing County in Oregon has meant many changes for Deschutes County. Some of the changes, such as improved social, cultural and economic opportunities, are seen as beneficial. Others, such as traffic congestion, loss of scenic views, and rising taxes to pay for public services, are changes most people would like to do without.

Recent years have witnessed County-wide growth occurring at about 6.3 per cent annually. The present population of Deschutes County is estimated at 49,700. Growth is expected to continue at a slower rate (4.5 per cent annually) to the year 2000. By that time, the County will likely have about 128,200 residents. Of that number, 84,000 will be in the Bend Urban Area; another 23,093 will be in and around Redmond; 2,135 are expected for Sisters; and La Pine will have incorporated and reached an urban area population of 3,620. This leaves a rural population of 15,350 people, up from an estimated 8,300 presently.

To accommodate the new rural population will require 3,039 lots (assumes 2.32 persons per household). There were available in Deschutes County, as of January 1, 1979, 17,377 undeveloped rural tract and recreational lots. It appears that County-wide there is in excess of 14,000 lots beyond the public's housing needs until the year 2000. That does not preclude the possibility of certain areas needing new lots, since the vast majority of those existing lots are in the La Pine area, but it does indicate the County must give serious review before approving any further rural development.

Much of the development which has occurred locally has been the standard parcelization of land into small (less than 10 acres) lots. This dispersed pattern is often the most costly to serve; the most wasteful of energy, land and resources; the least esthetic; and the most destructive to rural character. Planned Developments, such as Indian Ford Planned Development, often provide a more efficient and beneficial manner in which to serve the public demand for a rural recreational or residential experience. Destination resorts, such as Black Butte Ranch and dude ranches, have been found locally to be economically and socially desirable land uses, when located and developed.

Page 34 - Deschutes County Comprehensive Plan
consistent with the capabilities of the land and the abilities of various public and private agencies to serve that area.

Recreational subdivision was originally seen as a benefit to the County as the non-resident landowners would be contributing to the County tax base. This probably resulted in areas like La Pine subsidizing other portions of the County. Now the recreation subdivisions are filling up with retirees and younger people seeking less expensive building lots. The result is a call for more services in areas far from existing service facilities and in subdivisions where roads and other improvements were meant only for seasonable and limited use. As demand continues to grow, to provide adequate service levels it will be necessary for other areas to subsidize the recreational areas for many years. Studies by Oregon State University indicate that Deschutes County is likely faced with such a situation presently.

The County has witnessed losses of agricultural, forest and other resource lands, as well as the expense and esthetic losses created by urban sprawl. Studies such as The Costs of Sprawl have emphasized the greater efficiencies that can be obtained by a more condensed and planned development pattern. When these factors were combined with State requirements to contain development in urban areas there was no question to the Overall CAC that the updated comprehensive plan would have to address the issue of containing urban sprawl and protecting the rural character of the County.

The predominant rural land uses in the County are open spaces, pasture and limited crop production, livestock production, natural resource utilization and wildlife cover. There is also residential use and some commercial and industrial activity in the rural service centers. Unfortunately, the unrestricted zoning permitted in the rural service centers has allowed incompatible adjacent land uses and not resulted in providing the needed services for the surrounding rural areas. In the case of Deschutes Junction this result is combined with another factor in that Bend's urban sprawl is augmented by development at the junction.

Interestingly, the residents of the rural service centers, except for La Pine, have expressed concern that higher levels of development in their locales would be incompatible with the existing rural nature of the area. They agree that there is a need for limited and controlled growth, but that the rural character of the community must be maintained.

To guide development into appropriate patterns the following goals have been prepared:
GOALS:

1. To preserve and enhance the open spaces, rural character, scenic values and natural resources of the County.

2. To guide the location and design of rural development so as to minimize the public costs of facilities and services, to avoid unnecessary expansion of service boundaries, and to preserve and enhance the safety and viability of rural land uses.

3. To provide for the possible long term expansion of urban areas while protecting the distinction between urban (urbanizing) lands and rural lands.

POLICIES:

The policies needed to accomplish the identified goals were largely developed by the Overall CAC during its deliberations on the preliminary plan. It was obvious that some policies were needed to pull the various resource and management chapters together and to fill in some gaps so that an integrated and cohesive plan was available.

Rural Development policies are meant to pertain to all non-urban areas (areas outside urban growth boundaries) and are the basic policies to be followed in guiding rural growth. Specific resource or management policies from other chapters shall augment these policies so that the plan must be viewed as an integrated whole rather than a series of individual chapters.

Residential/Recreational Development

1. Because 91 per cent of the new County population will live inside an urban area, with only 3,039 new rural lots required, and in light of the 17,377 undeveloped rural tracts and lots as well as the energy, environmental and public service costs, all future rural development will be stringently reviewed for public need before approval. As a guideline for review if a study of existing lots within 3 miles of the proposed development indicates approximately 50 per cent or more of those lots have not had structures constructed thereon, then the developer shall submit adequate testimony justifying additional lots in that area. This will permit development in areas where such is needed (other policies considering energy, public facilities, safety and other development aspects shall also be considered) while restricting future division in areas where many undeveloped lots already exist.

2. To further restrict subdivision outside urban areas the minimum parcel size shall be 10 acres, except where other
policies supercede this minimum (see Rural Service Centers, Agriculture and Forest Lands).

3. Cluster or planned development offers significant savings to the developer because of reduced roadway, utility and construction costs. Public costs to serve cluster developments are also usually lower. Therefore, to encourage development and planned developments, rather than parcelization, the County shall permit an increase in density up to 33 per cent above the density permitted in the zone for cluster and planned developments.

4. Cluster and planned developments shall maintain a minimum of 65 per cent of the land in open space, timber or agricultural uses compatible with the surrounding area and the development area. The open space of the development may be platted as a separate parcel or in common ownership of some or all of the clustered units; however, the open area shall not be subject to development unless the whole development is brought inside an urban growth boundary. Also, service connections shall be the minimum length necessary and underground where feasible. Roads shall meet County standards, be dedicated to the public and may be accepted in the County Road System by the County for maintenance.

5. Destination resorts and dude ranches are important elements of the local economy. Densities will be determined upon the merits of the proposal. These developments shall not be permitted in exclusive farm use districts and only under certain conditions in forest districts (see Forest Lands Chapter). They may be allowed in other rural areas if compatible with the environmental capabilities of the site, near existing transportation and utility facilities, consistent with the rural character of the area, and unlikely to create undue public service burdens.

6. Other than as outlined in Policy 5, no further recreational (seasonal) subdivision will be approved in rural areas.

7. Parcels legally existing at the time of this plan's adoption shall continue to function as legal lots and will not be unduly affected by the new lot size. The County will develop mechanisms to encourage the replatting of existing rural subdivisions to cluster the dwellings in a more efficient manner; this shall apply primarily in the La Pine and Sisters areas.

Commercial and Industrial Development

8. Within one mile of acknowledged urban growth boundaries, use of the planned or cluster development concepts shall permit to an increase of 100 per cent in density for developments in Multiple Use Agriculture or Rural Residential zones (not
under a combining zone which would prevent such) resulting in a density of one unit per five acres.

9. Temporary on-site processing and storage of either mineral and aggregate materials or agricultural products shall be permitted as appropriate, in order to support the continued productivity of the County's natural resources.

10. Certain industrial uses, such as research and development facilities (requiring quiet and open surroundings) and manufacturers of hazardous materials (requiring long distances between the plant and neighbors) are more suitably located in rural areas. The County shall consider making provision for such uses as the need is found to exist (see Tumalo).

11. Certain industrial uses, such as research and development facilities (requiring quiet and open surroundings), wrecking or salvage yards and manufacturers of hazardous materials (requiring long distances between the plant and neighbors) are more suitably located in rural areas. The County shall consider making provision for such uses as the need is found to exist (see Tumalo).

12. Because large scale recreation facilities cannot normally be accommodated in urban areas, uses such as motorcross tracks, rodeo grounds and livestock arenas shall be conditional uses which may be approved in rural areas adjacent to existing highways and other public facilities.

Rural Service Centers

13. Because there is a need to accommodate some rural residential development and to provide necessary commercial services to existing rural residents, the County shall designate the following rural service centers in order to provide a more efficient pattern of development and energy use, as well as provision of public services: Alfalfa, Brothers, Hampton, La Pine, Millican, Terrebonne, Tumalo, Whistlestop, Wickiup Junction, Deschutes Junction and Wild Hunt. In addition other sites, such as in the Fall River/Spring River area, may be approved in the future as dictated by need of existing rural residents.

14. Each Rural Service Center shall have a compact commercial area to serve the convenience-commercial, agricultural and repair service needs of the surrounding rural lands. In addition, larger Rural Service Centers along major highways, where public facilities such as schools already exist, shall have a residential area designated (see individual RSC maps and policies). The size and uses of rural service centers shall be such as to maintain the rural character of the area.
Other

15. Construction on open lands shall be in a manner least intrusive to the esthetic and natural character of those lands and neighboring lands (fences and access roads shall not be considered structures).

16. Because there have been problems in obtaining community centers in some areas, centers approved on the original subdivision plat or development plan shall be permitted uses in rural residential zones.

17. Due to the more dispersed pattern of dwellings in rural areas the notice requirement area for public hearings on quasi-judicial land use actions shall be larger than in urban areas.

18. More effective dog control programs should be considered by the County to counter existing problems.

19. Pre-existing status shall be granted to subdivisions and partitions with at least preliminary approval and buildings with at least an issued building permit at the time of plan adoption by the Board of County Commissioners.
RESOURCE MANAGEMENT

Agriculture
Forest Lands
Open Spaces
Surface Mining
Fish & Wildlife
Historic and Cultural
Water
AGRICULTURAL LANDS

Agriculture played an important role in the growth and development of Deschutes County. While agriculture continues to be important, its early dominance of the economy is gone. Production has remained relatively stable (see Oregon Extension Service crop and livestock reports) but the total income from agricultural products has been declining in recent years.

The State of Oregon, like many other states, has identified the protection of agricultural land as an important objective. For that reason State Land Use Planning Goal 3 is of major importance. In Deschutes County, where some lands have severe limitations for the commercial production of agricultural products, this has resulted in considerable debate and occasional hostility. The County has found itself between angry landowners who do not wish to protect what they see as marginal agricultural land, other County residents who are adamant that agricultural land is a non-renewable resource that must be preserved and a State law mandating specific actions that must be taken to protect the land defined as agricultural land. The issue is further complicated by a lack of detailed soils data for most of the County.

The proximity to the Cascades, higher altitudes and semi-arid climate have resulted in a short growing season and a need for irrigation water locally. Without irrigation, little soil may be classified better than SCS Agricultural Capability Class VI. Combined with a shallow rooting zone in some areas and a long distance to many of the markets for local produce, the result is an often discouraging and frustrating experience for many farmers, although some farmers do seem to manage to be successful.

Another problem is the growing demand for farmland by many people seeking a rural home. The result has been an increase in land prices which often makes it difficult for people to enter into or stay in full-time farming. On the other hand, smaller part-time operations appear to be somewhat successful in maintaining some agricultural production due to a heavy committment of nonfarm income. Smaller farms have also resulted in smaller losses in some areas, since a $100 per acre loss is more easily born by a 10-acre owner than a 100-acre owner.

The possibility of additional farm land in the County appears to be small, except for the development of wells (as in Lower Bridge and Cloverdale) or if the lining of irrigation canals should become more economically feasible, because no additional adjudicated water may be expected from the Deschutes River.

However, the grazing of livestock is, and will likely continue to be, an important farm product in all portions of the County. And, much of the crop land production locally is tied to the production of hay for local and Willamette Valley livestock. Particularly in the area of and east of Horse Ridge livestock production is a highly viable agricultural endeavor. Much of Deschutes County's
future agricultural production may be associated with the great
diversity of livestock presently grown in the County.

Certainly agriculture is an important economic element in the
County, directly contributing an estimated $10,316,000.00 in 1978,
which resulted in a $25,800,000.00 direct and indirect
contribution to the local economy. Also important are such
secondary benefits as the open space and scenic appearance
agriculture lends to the County, benefits which may also pay
economic returns in the form of tourist dollars.

Because of the controversial nature of agriculture land protection
and the marginal character of some farm land a certain amount of
flexibility in zoning regulations and programs designed to foster
local family farms may be required. The use of incentives,
rather than negative regulations, may in the long run be more
effective in preserving agricultural lands.

Since detailed soils mapping exists for only a portion of the
County, it was necessary to develop a more elaborate definition
than that found in the State Goal. The definition finally agreed
to by the County uses the available information on agricultural
land and lays a foundation for future additions or deletions as
better soils information becomes available.

Agricultural Lands Definition

Agricultural lands are those lands which are identified as
possessing Soil Conservation Service Agricultural Capability class
I-VI soils (S.C.S. Land Capabilities Classification Map) or where
detailed soils information is not available, agricultural land
shall be identified by showing that it has been listed as on Farm
Tax Deferral within the five years preceding the adoption of this
plan (as indicated on the Existing Land Use Map complied from
County Assessor's records) and/or by the fact that the land is
indicated on the County Planning Department's Irrigated Lands Map.

Having a definition was only the first step, as then it was
necessary to differentiate between the various types of
agriculture to be found locally and to identify the various areas
they characterized. The following types of agriculture and their
characteristic areas were identified by members of the Planning
Staff, the Agricultural CAC and the Overall CAC.

Types of Agricultural Land:

A. High Desert Sagebrush and Juniper Land: This is dry land with
generally inferior soils (somewhat alkaline in places) with
rather severe climatic conditions. It is suitable only for
grazing of livestock and an occasional planting of dryland
rye. Predominant farm ownership size, outside rural service
centers, is several hundred to several thousand acres. There
are few non-agricultural dwellings. Lands in the vicinity of
and east of Horse Ridge are characteristic of this agricultural type.

B. Riparian Meadows: These meadows (mostly natural) border waterways and are sub-surface irrigated. In spite of a rather severe climate they are suited for the grazing of livestock and the harvesting of a limited tonnage of meadow hay. Lot sizes vary, but the most frequently occurring are 40 and 80 acre lots with 80 acres the median and the average of the parcels equaling 109 acres. Ownerships often combine lots to create areas several hundred to several thousand acres in size. Due to the groundwater and frequent flooding, there are few residences. Typical lands are along the Upper Deschutes river, the Little Deschutes river and in the Sisters area.

C. Irrigated Commercial Crop Land: This land, because of more favorable soil characteristics, climate and topography, is suitable for raising diversified row crops, grain, etc., with a yield sufficiently high to make farm operation generally self-sustaining and profitable. The predominant lot size is 80 acres with some large ownerships, causing the average to be 170 acres. The pattern is a mixture of larger and smaller. Few non-farm dwellings exist in this area. Lower Bridge is characteristic of this description.

D. Irrigated Marginally Commercial Land: This type of land, because of less favorable soil and climatic conditions, is not able to raise as wide a variety of crops as Type C above, nor is the potential yield as high. However, it can produce occasional row crops, grain, hay and pasture, as well as livestock, on a generally self-sustaining basis, although somewhat marginal at times. A mixture of lot sizes can be found throughout these areas and while there are some large farm ownerships the predominant ownership and tax lot size is 40 acres. Lands around Alfalfa, Cloverdale, and Terrebonne are characteristic of this agricultural type.

E. Dry Rangeland: This land has little water and is without irrigation. Suited only for livestock production presently, it often lies in areas where the introduction of irrigation water would make marginal crop production possible, and therefore is a resource for the future. Predominant ownership and tax lot size appears to be 40 acres. Lands characteristic of the type are found near Odin Falls.

F. Marginal Farm Land - Undeveloped: This land will support agricultural production only if subsidized to some extent. The lands are suitable for hay and pasture and, more particularly, the raising of livestock, particularly if access to public grazing land is available. Ownership sizes cover a broad range but the most frequently occurring tax lot size is 40 acres; however, the mixture of sizes results in mean and
median lot sizes of 20 acres or only slightly larger. These areas are particularly susceptible to increasing non-farm development. Areas characteristic of this type of land are some parts of Arnold (east of Bend), Redmond, Sisters and Tumalo.

G. Marginal Farm Land - Developed: This land is much the same as Type F, but existing residential development and hobby farming activities have reduced the predominant ownership and tax lot size to less than 20 acres. The land is suitable for raising and grazing livestock on a small scale. Because people are able to subsidize the farm operation, productivity is believed to be higher than might otherwise be the case. Lands typical of these characteristics generally lie close in to urban areas, such as Bend, Plainview, Swalley and to some extent Tumalo.

Recognizing the importance of protecting agricultural land the following was chosen to meet State requirements and local needs:

GOAL:

To preserve agricultural land in Deschutes County for the production of farm and forestry products, as well as the public need for open space.

POLICIES:

It has been the policies which have generated the greatest debate. Controversial even before the process began, the identification of appropriate mechanisms to protect local agricultural lands has been characterized by heated discussion, polarization of attitudes and occasionally open hostility.

Much of the early debate focused on the Interim Agriculture Ordinance meant to protect agricultural lands until the final plan was prepared. The Agricultural CAC split into two factions with the predominant group (8 of the 15) agreeing upon an ordinance calling for 40-acre minimums in Lower Bridge and east of Horse Ridge, while the rest of the county was 10 acres. This plan was accepted by the County but rejected by the State Land Conservation and Development Commission. LCDC then placed an enforcement order on the County mandating all lands with Farm Tax Deferral status should be protected as agricultural land until a final plan was prepared.

In preparation of this plan the Agricultural CAC again proposed a 40-acre minimum for the northern and eastern portions of the County with the rest 10 acres. The Overall CAC, recognizing LCDC's reasoning and the testimony of other farmers and County residents, accepted most of the Agricultural CAC's recommendations.
but rejected the proposed agricultural definitions and zoning because of:

1. Conflicts with other committees' recommendations for rural areas (particularly energy, transportation and public facilities);

2. Failure to adequately address rangelands and large farm ownerships; and,

3. Conflicts between the proposal and the intent of LCDC Goal 3.

The Overall CAC, with the assistance of a member of the Agricultural CAC, then prepared a new set of policies for definitions and zoning. These policies are basically those contained in this plan, although they have been modified to bring them even more into line with the requirements of the State Land Conservation and Development Commission because of review by the County's Planning Commission, Planning Staff, Board of County Commissioners and a team of consultants hired to check for such issues.

**ZONING**

1. All lands meeting the definition of agricultural lands shall be zoned Exclusive Farm use, unless an exception to State Goal 3 is obtained so that the zoning may be Multiple Use Agriculture.

2. No more than 25 percent of a given agricultural district shall be composed of lands not of the same agricultural type. Any agricultural lands not zoned EFU agriculture shall be identified in the County Exception Statement. Zoning districts shall be at least 40 acres in size.

3. A change from an EFU zone to a non-EFU zone (except SM or SMR) shall require a plan amendment (See Exceptions Maps).

4. Zones and lot minimums shall be established to assure the preservation of the existing agricultural character of the area:

<table>
<thead>
<tr>
<th>Agricultural Land Type</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - High Desert</td>
<td>EFU-320 acres</td>
</tr>
<tr>
<td>B - Riparian Meadows</td>
<td>EFU-80 acres</td>
</tr>
<tr>
<td>C - Irrigated Commercial Crop Land</td>
<td>EFU-80 acres</td>
</tr>
<tr>
<td>D - Irrigated Marginally Com. Crop Land</td>
<td>EFU-40 acres</td>
</tr>
<tr>
<td>E - Dry Rangeland</td>
<td>EFU-40 acres</td>
</tr>
<tr>
<td>F - Marginal Farmland, Undeveloped</td>
<td>EFU-20 acres</td>
</tr>
<tr>
<td>G - Marginal Farmland, Developed</td>
<td>MUA-10 acres</td>
</tr>
</tbody>
</table>
5. In order to provide some flexibility in the zoning and to assist farmers who may need to sell an isolated unproductive piece of land in order to assure continued operation of the farm, individual isolated partitions (creation of one or two new lots) establishing lots less than the EFU minimum lot size in EFU areas shall be permitted consistent with ORS 215.213. The remaining farm parcel must be at least the minimum established by the EFU zone. This shall not be interpreted to permit the creation of non-agricultural subdivisions in EFU areas.

6. So that a farmer who has lived on his land for 10 years or more may retire and sell his property while retaining the use of his existing home, a homestead exception may be permitted which allows the homesteader to retain a life estate lease on the home and some of the surrounding land. The lease will end with the death(s) of the homesteader and spouse. This exception shall not permit the creation of another residence on the property in question.

7. Public lands meeting the criteria for EFU zoning shall be so zoned unless some other resource (i.e., forest) or public use exists on the land.

8. Lands not meeting the agricultural lands definition but having potential for irrigation according to the Bureau of Reclamation Special Report – Deschutes Project, Central Division, Oregon, although presently without water, shall receive zoning consistent with Agricultural Type E.

9. The Multiple Use Agricultural Zone shall allow planned developments, destination resorts, planned communities and cluster development as conditional uses where it can be shown these uses would be consistent with or beneficial to the maintenance of agricultural uses in that area. Except for Destination Resorts no overall densities in excess of the underlying minimum lot sizes will be permitted.

10. Conversion of agricultural land to non-agricultural uses shall be based on the following:

(a) Acceptable environmental, energy, social and economic consequences;

(b) Demonstrated need consistent with Land Conservation and Development Commission goals and ORS 215.213.

11. Parcel size exceptions may be granted because of survey errors when original section lines were established, so that standard section divisions may be achieved (i.e., 160, 80, 40, 20, etc., acres). Man-made barriers such as roads or canals, over
which the applicant has no control, may serve as adequate justification for granting a parcel (lot) size variance.

12. Normal agricultural practices (i.e., aerial pesticide applications, machinery dust and noise, etc.) should not be restricted by non-agricultural interests in agricultural districts. The County shall consider requiring noise, dust, fly, etc., easements to be granted to adjoining farmers where non-agricultural uses are permitted.

13. Coordination between public and private landowners to encourage farm use shall be encouraged. And projects to increase productivity and to bring new land into agricultural production shall be fostered.

14. Control of noxious weeds through educational programs should be continued.

15. Farm and non-farm uses in rural areas shall be consistent with the conservation of soil and water.

16. The County Planning Department shall initiate an on-going study of marginal farm lands to develop information on how and when these lands should be converted to other uses, and to consider alternative methods of compensating landowners for loss of development potential.

17. The County Planning Department shall seek detailed soils information for all areas of the County through cooperation with the Soil Conservation Service, U. S. Forest Service, Bureau of Land Management, and Mid-State Soil and Water Conservation District.

18. Because of the possible adverse effects of EFU zoning to local taxing districts, the Board of County Commissioners shall take such action as is necessary to mitigate undue impacts after one year of experience with EFU zoning or upon sufficient and specific information on the effects of the zoning.

FOREST LANDS

Much of the beauty, and the employment, in Deschutes County is directly related to its large expanse of forest land. For these reasons, this resource is of particular importance to the County's two major industries, timber/wood products and tourism. The great majority of the timber harvested in Ponderosa and Lodgepole pine from the Deschutes National Forest and other nearby public lands. It is anticipated that growing demand combined with a stable or perhaps small decline in available timber supply will result in growing competition for log sales, and trend which is already evident. One positive aspect of such competition is an increasing
amount of revenue obtained by the County as its share of the monies received by the U. S. Forest Service.

It is hoped that increasing tourism and recreation revenues will offset possible employment and income losses resulting from decreasing timber production. Tourism is discussed further in the chapter on Economy.

One growing problem is the increasing threat to local timber supplies created by scattered developments occurring in forested areas. This is particularly true if the residents or activities are outside destination resorts or fire districts where fire protection is available.

In order to meet the State Land Conservation and Development Commission's requirement for an adequate inventory of forest site capability the County Planning Department worked with the State Department of Forestry. The resulting capabilities map may be found in the plan's resource element. Except in the La Pine area, where an exceptions statement will be necessary because of the existing development, most of the land with high (Site Class 4) through moderate (Site Class 6) capabilities lies in the Deschutes National Forest.

The U. S. Forest Service has recently approved a Land Management Plan for the Deschutes National Forest and the other major Federal land manager, the Bureau of Land Management, is presently evaluating its land for a variety of public purposes which will ultimately become a management plan. The decisions and actions of these agencies have, and will continue to have, major effects on the economic, social and natural environment of Deschutes County.

After discussion with several local forestry officials, it was determined that a 40-acre minimum would sufficiently restrict residential development in forest areas, and that in certain relatively small areas on the edges of the forest, a 20-acre minimum would be adequate to protect the land for forest uses.

Lot sizes in the F-3 Forest Use Area are predominantly 10 acres. The median lot size is 10 acres and the mean is 39 acres (private ownership mean is 20 acres).

Because of the importance of local forest lands the following goal has been set:

GOAL:

To conserve forest lands for forest uses.
POLICIES:

1. In order that a reasonable forest zoning pattern may be established, all forest land shall be assigned to one of three classes:

   F-1, Restricted Forest Land: Lands needed for watershed protection, wildlife and fisheries habitat and unusual or unique recreational opportunities (i.e., wilderness areas).

   F-2, Commercial Forest Land: Lands composed of existing and potential forest lands which are suitable for commercial forest use.

   F-3, Other Forest Land: Lands where extreme conditions of climate, soil or topography require the maintenance of vegetative cover, irrespective of use, and forested lands in urban, rural and agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors, recreational use, or marginal commercial timber uses.

2. Restricted Forest Land (F-1) and Commercial Forest Land (F-2) shall be protected for forest uses.

3. Other Forest Land (F-3) zones shall be established upon uncommitted land with moderate or better forest land capability in the La Pine area, in order to protect and manage forest and wildlife resources. The F-3 zone shall not be used to protect the larger commercial forest land parcels which shall be zoned F-2, but is to be used to encourage small woodlot management and will permit a single residence for the woodlot manager. Minimum existing parcel size for being zoned F-3 shall be 10 acres. Because 20 acres is a more reasonable woodlot size, in order to protect the wildlife and timber resources from too much scattered development and so as to make public facilities delivery more efficient (in light of existing problems), the minimum new parcel size for F-3 areas shall be 20 acres.

4. Destination resorts shall be permitted as conditional uses in F-2 and F-3 areas upon showing that the land where the resort is to be established has no significant commercial timber potential and that the resort activities are sufficiently buffered so that they will not adversely effect timber harvesting on adjacent or nearby lands.

5. Except as identified in this plan non-forest uses shall be discouraged in existing forested areas.

6. Forest management in Deschutes County shall be governed by the Oregon State Forest Practices Act, so as to assure continued timber productivity.
7. Better coordination and cooperation between the U. S. Forest Service and Deschutes County shall be fostered, particularly as it relates to restrictive use of such Forest Service lands as Mt. Bachelor Ski Area and the Bend Watershed. As a basis for mutual cooperation and coordination, the Land Management Plan for the Deschutes National forest shall be used.

8. Deschutes County shall file for an exception to State Land Use Planning Goal 4 on such lands meeting the exceptions criteria. All other forest lands shall be protected for forest uses.

9. To assure "forest-related" dwellings are compatible with forest uses and to encourage good forest management, a forest management plan prepared in a manner consistent with Department of Forestry guidelines shall be required by the County before the dwelling's building permit is issued. A site plan indicating that structures to be constructed are located on the less productive land and compatible with forest uses shall also be required.

OPEN SPACES, AREAS OF SPECIAL CONCERN, AND ENVIRONMENTAL QUALITY

A major factor in the local economy and a basic reason for much of the present population growth are the desirable scenic and natural environmental qualities of the County. Seasonal and many permanent residents, as well as the many tourists, repeatedly explain that their reasons for coming to Deschutes County are the high natural beauty, the numerous and diverse areas of scenic, geologic, archeological and biological significance, and the high quality of the air and water. Also, many of the resource industries, such as timber and agriculture, are also dependent on, as well as contributors to, that same environment.

Open spaces include not only parks, but also agricultural, forested, natural areas, mining sites and historical areas, as well as scenic waterways and other locations of unique scenic, environmental, social or cultural character. Often the protection of the scenic views from roads, trails and waterways is as important as the travelways themselves.

Segments of Fall, Deschutes, Little Deschutes and Crooked Rivers in Deschutes County have been identified as potential State Scenic Waterways.

Presently, no major air quality problems exist within the County; however, surface inversions, topographic conditions, certain activities (i.e., slash and field burning), wind-carried soils and increasing population can create significant potential for air quality degradation unless properly managed.
Some water pollution problems have been identified. The La Pine core area has been shown to have significant problems and septic tanks have failed in the Terrebonne area. The two major urban areas are presently developing sanitary sewer systems and treatment facilities.

The Oregon Department of Environmental Quality and Environmental Protection Agency have existing standards and programs affecting air and water quality as well as noise levels. DEQ presently maintains an air and water quality sampling program in Deschutes County which is important to knowledge about existing and changing conditions.

Private land suitable for open space designation are eligible for special property tax consideration (ORS 308.740-790), because they provide public benefits as regards maintaining scenic environmental quality.

Because open spaces, areas of special interest and environmental quality are so important to the local economy, environment and social well being of Deschutes County, the following goals have been chosen:

GOALS:

1. To conserve open spaces and areas of historic, natural or scenic resources.

2. To maintain and improve the quality of the air, water and land resources of Deschutes County.

However, despite general consensus that the environmental quality and amenities are important to this area's people, as well as to people statewide, there is also concern that regulations and policies to protect that environment could become too restrictive. The following policies have been developed with the intent of reaching the identified goals but in ways that restrict only as is necessary and with consideration of the individuals who may be affected by the needs of the public.

POLICIES:

1. Because a major concern is the protection of existing scenic views and environmental quality two related policies are created. The first was originally proposed by several citizen committees and, although modified, has been retained. The second policy was recommended by the Planning Commission and Staff as an appropriate addition.

   (a) On lands outside urban growth boundaries and rural service centers along Highways 97, 20 and 126, as well as along Century Drive, South Century Drive, portions of
Three Creeks Lake Road, Fall River Road, roads from Highway 97 to Smith Rocks, Pine Mountain Road and all along other streams and roadways for which landscape management is prescribed on the 1990 Comprehensive Plan, a case-by-case review area shall be established. This area is not to extend more than 1/4 mile on either side from the centerline of roadways, nor more than 200 feet from either side of rivers, measured from the mean high water level.

Within the prescribed area, new structures (excluding fences, existing structures, or other structures less than $1,000.00 in total value) shall be subject to review by the County at the time of application for a building or zoning permit.

Acceptance of any such development plan will be dependent on site screening by existing natural cover and/or compatibility with scenic vistas. Outdoor advertising signs should be informational only and oversized displays discouraged.

The primary purpose of this review shall be to obtain a structure as compatible with the site and existing scenic vistas as is possible, rather than to establish arbitrary standards for appearance or to otherwise restrict construction of appropriate structures.

A study will be concluded within one year of this plan's acknowledgement which will result in recommendations to the County as regards the permanent size and standards for landscape management areas. This study shall also address the legal issues raised by the Fifth Amendment to the U. S. Constitution, which states, "No person shall be deprived of life, liberty or property, without just compensation". Recommendations for appropriate mechanisms to help compensate landowners severely restricted in the use of their land by the establishment of landscape management rules shall also be included in the report. A citizen's committee to help review areas and standards shall also be a part of this process.

(b) Development restrictions shall be established for the rimrocks along the Deschutes and Crooked Rivers in order to minimize the visual impact structures built on the rimrock will have on these areas when viewed from the river. (Amended by Ordinance 82-014).

2. Consideration should be given to designation of appropriate segments of Fall, Deschutes, Little Deschutes, and Crooked Rivers as Scenic Waterways. Reasonable protective and State agency coordinative measures should be instituted.

Page 125 - Deschutes County Comprehensive Plan
3. Public ownership of scenic, open space and historic areas should be maintained and increased where feasible, and a variety of open space and recreational sites should be maintained to protect the existing natural diversity and to serve the varying needs of both tourists and residents. The natural capabilities of each site should determine its level of use.

4. The concepts of developmental rights transfer, tax credits and conservation easements as ways to protect open space should be studied and encouraged at both local and State levels.

5. As part of subdivision or other development review the County shall consider the impact of the proposal on the air, water, scenic and natural resources of the County. Specific criteria for such review shall be developed. Compatibility of the development with these resources shall be required as deemed appropriate at the time given the importance of those resources to the County while considering the public need for the proposed development.

6. Because management of State and Federal lands affects areas under the County's jurisdiction and vice versa, better coordination of land use planning between the County, U. S. Forest Service, State Land Board, Bureau of Land Management and other agencies shall be sought.

7. Zoning should be established to protect areas of special interest such as eagle nests, endangered species areas or points of geologic interest. A reference book on such areas specifying items to be protected and possible mitigating measures shall be prepared by the Planning staff.

8. Because of their slow growth and usefulness as a visual and noise buffer and their relationship to air quality, tree removal for utility lines, sewers, roads and other construction shall be minimized by planning for the continued maintenance of the streets in the development. All development proposals will be reviewed for this factor by the County Planning staff before approval of the applicant's development.

9. Loss of riparian areas and other important open spaces because of dam construction for recreation or other purposes should be minimized.

10. Although DEQ has existing environmental standards with which the County shall coordinate, in instances where such standards are inadequate or non-applicable because of local conditions, the County may establish more stringent regulations. Noise regulations are an example of such a program.
THINGS YET TO BE DONE

The completion of a comprehensive plan is never the end of the planning process. There always exist things yet to be done. Not only are there the issues where insufficient time existed for them to be adequately considered during the planning, but also entirely new questions can be raised because of the improved level of understanding about the community which point to issues previously generally unrecognized. All of this results in additional studies that must be performed so that a more accurate reflection of conditions can be obtained and the necessary changes made to better the plan.

In Deschutes County, a number of additional studies and reports should be performed. The following lists gives a short description of each of these suggested reports:

Groundwater: Additional information on the quantity and quality of local groundwater supplies, as well as developing an understanding of the capacity of the resource to accommodate utilization by a variety of uses.

Forest Lands: More in-depth data on the species, potential and volumes available, the effects of different uses at increasingly intensive levels, and the alternatives that may exist for local utilization and benefit.

Agricultural Lands: Further study into marginal agricultural lands and when conversion to developed uses is appropriate.

Surface Mining: More precise information about available resources, the impacts of development and the range of utilization.

Wind Power: Study the feasibility of wind-powered generation sites in the County.

Recycling: Create a recycling plan for Deschutes County by January 1,1981.

Geothermal: Study of the feasibility of exploring local geothermal sites.

Solar: In-depth review of the practicality of using solar power locally, with an orientation toward methods presently feasible.

Soils: A detailed identification of local soils to enable better planning and development decisions, utilizing a coordinated study between appropriate governmental agencies.
Historical and Archeological Sites: An on-going program to continue the identification of significant historical and archeological sites and the preparation of a more detailed protection plan.

Air Quality: Greater review of existing air quality conditions, and development of an understanding of the carrying capacity of the area's airsheds under a variety of potential situations.

Areas of Special Interest: Detailed studies of sites, views and areas that have unusual or unique qualities and greater specificity about protection and compatible uses. This should include a text on these areas for Planning staff use.

Population: Better information about demographic trends and characteristics to insure plans accurately reflect the needs of the public.

Attitude Analysis: To better understand the desires and interests of area residents specific surveys and other methods need to be utilized, particularly as regards attitudes toward development and economic diversification.

Economy: Significant gaps presently exist in available data on how the local economy functions and what may be anticipated in the future, as well as how possible changes may affect local economic and social conditions, as well as land use patterns. An in-depth study is required, and shall be completed by November 1, 1980.

Transportation: Further in-depth analysis of traffic circulation needs and potentials, plans for critical transportation corridors, as well as determination of the feasibility of various non-automobile transportation systems. Also necessary is a better understanding of how transportation and the local economy interrelate.

Public Facilities and Services: Further study into appropriate levels and locations of public facilities and creation of a sophisticated analysis mechanism for determining acceptable phasing and sizes of facilities.

Housing: An improved analysis of area needs; study of how the local housing market functions; and identification of suitable programs for encouraging the types of housing necessary locally.

Urban Coordination: Several studies designed to identify how each urban area in the County is developing and how the County
may most efficiently and equitably represent the public's interests and coordinate with other local and special district governments.

**Rural Development**: More detailed analysis of recreational and rural development and the impacts (social, economic and environmental) resulting therefrom, as well as development for a methodology for how best to guide appropriate development.

**Hazards**: A more detailed study of the probabilities and locations of natural hazards.

**Implementation**: Study and review of various alternative methods for the implementation of the comprehensive plan by such means as environmental criteria and performance zoning.

**Landscape Management**: Specific studies and plans for all areas identified in the comprehensive plan as landscape management areas.

**County Lands**: Study of the capabilities and opportunities provided on County-owned land.

**Compensatory Actions**: A study of various methods by which private property owners may be compensated for the effects of planning and zoning shall be undertaken.

Many of these subjects have been addressed in this plan, but from a more general County-wide perspective. These studies, when combined with specific, more detailed studies of smaller portions (sub-areas) of the County, would enable a "fine tuning" of the plan so that it even more accurately reflects the needs of the County's people and identifies appropriate means for achieving the necessary results. In addition, the information from these studies would assist in the updating process, thereby assuring a plan reflective of current conditions.

**IMPLEMENTATION**

A comprehensive plan is only pieces of paper and colorful maps until it is implemented. Zoning and subdivision ordinances are the most widely recognized tools used in applying the ideas of a plan to the realities of the land.

Zoning ordinances contain a series of categories (land use zones) which specify what uses are allowed within those categories. The uses listed are those felt to be compatible with each other. In addition, a number of conditional uses are usually also included. These activities are allowed only by special permit after conditions have been attached which mitigate the probable negative impacts anticipated to be created by the proposed use. The zoning categories are determined by the policies established in the
comprehensive plan. Once the appropriate zoning categories have been created then using additional policies and criteria set in the plan these zones are applied to the land.

Comprehensive plan maps show generally how various uses will be allocated throughout the jurisdiction, but the zoning map takes this general prescription and specifically identifies how each individual piece of property is to be zoned. However, zoning attempts only to provide sufficient zoned land for development as will be required for three to five years, while the remainder is placed in holding or protective zones allowing only limited change. For example, a commercial area may be designated on a plan map and appear to be approximately 200 acres in size. The actual zoning initially may provide only 50 acres of commercial zoning, with the remainder held in a commercial buffer zone or a residential zone. As time passes additional land for businesses in that location will be required and will be so zoned, either by the property owner requesting a zone change or by the County initiating the action and legislatively changing the zone. The final result is that by the end of the plan's useful life approximately 200 acres of that area have been zoned commercially and used as such for everyone's collective benefit. In this way zoning serves as an implementing tool bringing into reality, through phased development, the goals and policies first identified in the comprehensive plan.

Less controversial, but normally a more important development ordinance, is the subdivision ordinance. In Oregon the process of dividing the land into smaller parcels is done within three categories. Minor partitions are the creation of two or three lots, where formerly only one existed, without the establishment of a street or way. Major partitions create two or three lots with a street or way. And, subdivisions create four or more lots with or without a street or way. Predictably the requirements become increasingly stringent as one progresses from minor partition to subdivision. Because subdivision regulations establish requirements for facilities to be provided, allow review of the design to assure the safety and general welfare of the future residents, as well as permit requirement of deed restrictions (protective covenants) to enable neighborhoods once established to retain their character, the subdivision ordinance very often will do more to determine the long term character of an area than will the zoning ordinance.

Therefore, it is of critical importance that subdivision and partitioning ordinances be properly formulated, complementary to the zoning ordinance and strictly adhered to if the community is to benefit from their administration.

In addition many jurisdictions offer an opportunity for planned developments (PD) which permit a less than strict adherence to both zoning and subdivision regulations in order that developments may create a better overall design which still meets the policies
established for that particular area. These planned developments most often occur in places where unusual conditions exist such that a conventional development would not be able to most efficiently utilize the site. This may be true because of characteristics such as rock outcrops or because the area contains deer range, agricultural land, unique historical remains, or the other resources that must be protected from development.

In some areas local governments do not establish all their land use restrictions within the zoning ordinance. Flood plain, mobile home, design review and airport ordinances are often created separately and administered in addition to the requirements of the zoning ordinances. In Deschutes County these regulations will all be joined into the zoning ordinance to provide ease of access and understanding for the public.

Zoning and subdivision ordinances are the most common types of regulation but there are many other means used in implementing a comprehensive plan. Capital Improvement Plans are commonly used. These plans lay out for a five to six year period how and where streets, sewers, and other public facilities will be constructed. The provision of these services often determines the feasibility of numerous types of community growth patterns.

Conservation easements, or other types of less than fee acquisition, are becoming increasingly popular. An easement, lease, or purchase of a certain right can often be obtained from a property owner and thereby a specific use may be prohibited or some special resource protected. The purchase of this easement is less expensive than the purchase of the property, and for certain uses may even be granted without cost to the public. These arrangements thereby seek to eliminate the charge that the local government has "taken" the property through its zoning ordinance. A "taking" occurs when zoning is so restrictive all or substantially all the value of the land has been removed by the restrictions of the zone established on the property. Zoning has usually been held as a reasonable exercise of the State’s police powers unless a "taking" does occur.

Coordination agreements are another common tool for implementing a plan. Often local governments (cities and counties) have overlapping interests within certain areas, such as urban growth areas, as well as overlaps with other public bodies, such as special districts (i.e., school and irrigation districts) and Federal agencies. Establishment of cooperative arrangements reduce the probability of conflicts arising and assure that all these public agencies are working toward common goals, thereby increasing efficiency and the likelihood of achieving these goals.

Use of tax incentive to promote appropriate use of land is also receiving increased attention. Exclusive Farm Use zoning is an example of this. Land set aside and used for farm use may only be
taxed for that farm value, rather than any potential development value. This then enables the farmer to better afford remaining on the farm.

Another implementation tool is the trading of land. Deschutes County is lucky to have available County lands which can be traded with private individuals and public agencies to better achieve the goals of the plan.

In addition, innovative methods are being created and tried which permit greater flexibility while assuring appropriate standards are met. Performance zoning is an example of this type of regulation. With this type of ordinance a zone is established on property but instead of stating the type of uses that will be permitted it sets a number of standards that must be satisfied. These criteria set limits on pollution, traffic generated, noise, population density, height, etc. The developer is then free to construct any use he desires, as long as the performance standards are met. Should the use not comply it will have to be modified so that it does or be shut down. Unfortunately, performance zoning requires a relatively large staff using sophisticated equipment if it is to be successful, and it is therefore used mostly in larger jurisdictions where sufficient budgets exist.

Not only are there ordinances and plans adopted by official action of the governing body but administrative decision makers, like the Planning staff, Hearings Officer, or Planning Commission, often establish criteria for use in reviewing applications brought to them. Naturally these criteria are consistent with existing regulations, plans and policies. They simply serve as a way for assuring equitable treatment for all applicants and that all pertinent issues are addressed. An example of such a mechanism is Table 1, taken from the American Society of Planning Officials publication (by M. M. Meshenverg) Environmental Planning: Environmental Information for Policy Formation. This table lists the various categories of environmental features (i.e., land, water, air, cultural, etc.) which may be encountered, then lists probable development problems that may be encountered. Restrictions on use are suggested, as are methods for implementing the policies on restrictions. The list of restrictions also usually suggests some mitigating measures that may be used to ameliorate the potential hazards.

Whatever method, or more likely methods, used it is important that their intent be to implement the policies established in the Comprehensive Plan. However, of greatest consequence is that these methods actually achieve the goals set by the people in their plan. It is not enough that there be good intentions, there must also be
good results. Both means and ends must be brought together in an appropriate way. Good results need to be obtained in the right way. Every community must decide what is the proper manner for their plan to be implemented, and therefore no two implementation programs are the same.
<table>
<thead>
<tr>
<th>Category</th>
<th>Feature</th>
<th>Description</th>
<th>Tolerance/Suitability</th>
<th>Development Policies</th>
<th>Methods and Techniques of Implementing Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Wet Soil</td>
<td>Soil with high moisture content because of high water table or poor drainage; often a seasonal problem.</td>
<td>Such soils perform an important water storage function; when septic tanks are used, water supply may be contaminated; foundations settle and crack; stagnant pools may exist during certain periods.</td>
<td>&quot;Floating&quot; or other specially constructed structures may be permitted when supplied with public water and sewerage; selective draining or filling may be permitted if it does not interfere with the water supply.</td>
<td>No septic tanks; deep wells permitted but only where development can be tolerated and septic tanks are absent. Subdivision and sanitary regulations requiring public water supply and sewage disposal.</td>
</tr>
<tr>
<td></td>
<td>Impervious Soil</td>
<td>Dense soils inhibiting the free flow of water; such soils usually have a high clay content.</td>
<td>Impermeability of soil may cause septic tanks to overflow and contaminate water supply; unsuitable for development without public water supply and sewerage.</td>
<td>No special development limitation with public water supply and sewerage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor Load-bearing Soil</td>
<td>Soils unable to support structures such as roads and buildings; usually easily compacted because of moisture content, particle size, or where excessive internal spaces or voids are present; filled lands, or mineral or industrial waste piles often have these characteristics.</td>
<td>Generally unsuitable for intensive development because of difficulty and cost of construction.</td>
<td>Certain types of light or flexible structures; recreation areas; agriculture.</td>
<td>Heavy structures must be anchored in bedrock. Building code and grading ordinance prescribing development standards.</td>
</tr>
<tr>
<td>Flat Land</td>
<td></td>
<td>Land with no significant slope.</td>
<td>Depending on other conditions; flat; land is highly suitable for and tolerant to development.</td>
<td>All uses.</td>
<td>No restrictions except pollution control (social, economic, technical, etc., factors may suggest other limitations. Pollution control ordinances, land-use controls.</td>
</tr>
<tr>
<td>Low Slope</td>
<td></td>
<td>Slope generally between 5 and 10 per cent.</td>
<td>Fairly tolerant to development; although excessive removal of ground cover may cause erosion; generally are good sites for residential development.</td>
<td>Residential development, intensive and extensive recreation, agricultural and grazing.</td>
<td>Densities may be fairly high with grading controls and limitations on vegetation removal and sedimentation. Grading ordinances limiting terracing, berms, and vegetation removal, etc.; subdivision controls setting appropriate street and utility design standards; zoning to limit density of development.</td>
</tr>
<tr>
<td>Moderate Slope</td>
<td></td>
<td>Slope generally between 10 and 25 per cent (exact percentage may vary).</td>
<td>Very high construction costs; loss of ground cover may cause erosion and frequently land slippage; often of scenic beauty.</td>
<td>Limited development, contour agriculture, forest.</td>
<td>Density of about one house or less per acre; maintenance of vegetative cover; erosion control; retaining walls; roads turned slightly up from contour lines; special hillside development zoning controls to minimize grading; drainage control.</td>
</tr>
<tr>
<td>Land Type</td>
<td>Description</td>
<td>Development Impact</td>
<td>Open Space Use</td>
<td>Redevelopment Impact</td>
<td>Public Access</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ridge Lines</td>
<td>Lines separating drainage basins, i.e., where water flow in opposite directions; may be barely noticeable in flat country but highly pronounced in hilly areas.</td>
<td>No particular reasons for restricting development on minor ridge lines.</td>
<td>Any use permitted on minor ridge lines—changes in topography are barely noticeable.</td>
<td>Limited development on major ridge lines to preserve scenic beauty.</td>
<td>None.</td>
</tr>
<tr>
<td>Valley</td>
<td>Generally a long narrow depression in the earth's surface with sloping land along its sides; old valleys, however, may be wide with extensive plains on either side.</td>
<td>Suitable for development except where (1) other features suggest limitations, or (2) scenic qualities can be preserved.</td>
<td>No restrictions except those associated with other features such as special engineering design for structural stability on steep slopes and limited or no development in floodplains or public sewage where aquifers are close to the surface; preserve for scenic value only where particularly abundant or of special aesthetic value.</td>
<td>Weight and density restrictions in zoning ordinances.</td>
<td>No special methods; scenic qualities can be preserved by open-space or agricultural zoning; public purchase of easements or development rights; conservation zoning.</td>
</tr>
<tr>
<td>Gorge and Canyon</td>
<td>A deep and narrow valley with steep sides often vertical or undercut; usually in relatively arid regions.</td>
<td>Unsuitable for development because of construction difficulty; usually in recreational purposes; tourist attractions.</td>
<td>Low intensity development for scenic-recreational purposes.</td>
<td>No development except to enhance recreational and scenic value.</td>
<td>Public purchase; zoning controls to limit peripheral development.</td>
</tr>
<tr>
<td>Glacial Moraine</td>
<td>A deposit of material beneath the surface of the earth shaped by the action of moving glaciers.</td>
<td>Scientific and educational role in understanding of geologic history, poor drainage in upland types of deposits.</td>
<td>Preservation of selected areas in natural state for recreation and scientific investigation.</td>
<td>No restrictions in areas available for private development, except where drainage problems are present.</td>
<td>Zoning for high-rise buildings; view protection regulations.</td>
</tr>
<tr>
<td>Promontory</td>
<td>A cusp or point of high land extending out over low land, usually associated with a body of water or valley, often associated with scenic views.</td>
<td>No particular ecological role; often suitable for high-rise development to take limited advantage of view.</td>
<td>Selective development for high-rise, medium-density purposes.</td>
<td>View protection.</td>
<td>Public purchase in fee or purchase of easements.</td>
</tr>
<tr>
<td>Abrupt Relief Changes</td>
<td>Lines separating distinctly different land forms; usually associated with piedmont-plains areas and with significant vertical displacement along fault lines.</td>
<td>Generally no special ecological roles although they may be barrier to movement depending on geologic formations; sometimes can have visual impact; faulted areas may be subject to earthquakes.</td>
<td>Uses limited to those which heighten the visual effect of the change; such open space uses as a row of trees can be effective (see area of weak substructure, below).</td>
<td>Limited low-intensity, low-rise development.</td>
<td>Zoning for low-density and low-rise development and to exclude areas of assembly and uses which would create serious hazards during earthquakes; building codes prescribing special construction methods and materials.</td>
</tr>
<tr>
<td>Category</td>
<td>Feature</td>
<td>Description</td>
<td>Tolerance/Suitability</td>
<td>Development Policies</td>
<td>Methods and Techniques of Implementing Policies</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Land</td>
<td>Minerals Deposit</td>
<td>Site currently used or potentially available for extraction of minerals, including sand, gravel, limestone, rock, coal, etc.</td>
<td>Source of important mineral resources; other development may preclude extractive operations. However, requires special regulations to ensure compatibility with surroundings during and following completion of operations, and prevention of water-supply contamination.</td>
<td>Reservation for extractive operations.</td>
<td>Natural resource zoning including performance standards to prevent encroachment, performance bond to ensure site rehabilitation; preferential assessment.</td>
</tr>
<tr>
<td>Water</td>
<td>Surface Water and Riparian Land</td>
<td>Any body of water including lakes, streams, rivers, and oceans and their shorelines, estuaries (see below) and tidal areas.</td>
<td>Value for water supply, waste dispersion, transportation, recreation, power generation, source of food, scenic beauty; quality and quantity of water needs to be maintained.</td>
<td>Scurbows, water/waste treatment plants, recreation, marinas, water-related industry, cluster development, public-access points.</td>
<td>Planned-unit development controls; sanitary ordinance prohibiting use of septic tanks; water quality standards to restrict discharge of pollutants; water zoning to separate incompatible water users; zoning to restrict shoreline development to water-compatible uses; public works planning.</td>
</tr>
<tr>
<td>Floodland</td>
<td>The land area adjacent to a water body that is covered by excess water during periods of flooding; may be divided into zones based on frequency, e.g., channel, floodway, floodplain, especially for land-use and development controls.</td>
<td>Essential role in carrying excess water during floods; danger to life and property; provides recreational land; filling, damming or leveeing decreases storage capacity and flood velocity increasing flood potential downstream; soils often very fertile and suitable for agriculture; usually contains substantial groundwater.</td>
<td>Those unharmed or improved by flooding, e.g., those associated with Surface Water and Riparian Land, and forestry, some types of agriculture, excessive recreation, institutional open space, open space for housing and other uses, improvement banks.</td>
<td>Same restrictions as for Surface Water and Riparian Land; flood-proof development; filling and diking only where essential and where flow is not seriously restricted.</td>
<td>Same methods as for Surface Water and Riparian Lands; zoning controls to exclude structures from the channel and floodway; building code requiring flood-proofing of structures; limitations on grading, filling, dredging, and diking.</td>
</tr>
<tr>
<td>Wetland:</td>
<td>Marsh, Bog, Swamp</td>
<td>Terrestrial low-lying land which are saturated with moisture and usually overgrown with vegetation. (Marsh: general term, bog covered with water; swamp: generally supporting tree vegetation and not permanently covered with water; bog: consists largely of decaying vegetation [distinctions are imprecise].)</td>
<td>Act as sponges to absorb excess runoff; reduces flooding potential; important wildlife habitats; recreational, educational, scientific value; some agricultural value; often have scenic beauty; filling may cause flooding elsewhere.</td>
<td>Recreation: hunting, fishing, sailing, observing; scientific investigation; certain types of agriculture.</td>
<td>No on-site or peripheral development which will interfere with maintenance of the ecosystem, especially its water-storing and wildlife maintenance ability.</td>
</tr>
<tr>
<td>Estuary</td>
<td>A water passage where the tide meets a river current, especially an arm of the sea at the lower end of a river; the area where seawater mixes with fresh water; frequently includes marshes and other low-lying wetland.</td>
<td>As the breeding ground for a great variety of organisms, estuaries are particularly important to water disposal, dredging, and filling; these activities can destroy important plant and animal communities such as oyster beds and spawning areas.</td>
<td>Fishing, shell fishing and other harvesting, recreation, limited associated urban development.</td>
<td>No development which reduces the ability of the estuary to support plant and animal life, e.g., pollutant discharges, dredging, filling, excessive recreation or overharvesting.</td>
<td>Increased state control over estuary and coastal zone use; more stringent U.S. Corps of Engineers control over dredging, filling, draining; zoning to restrict development to uses requiring coastal zone locations, pollution controls.</td>
</tr>
<tr>
<td>Category</td>
<td>Definition</td>
<td>Limitations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>A water-bearing layer of sand, gravel, or porous rock.</td>
<td>No development which will affect the quality and quantity of water or be structurally adverse to the presence or withdrawal of groundwater.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquifer</td>
<td>As a major source of water, quality must be maintained; removal must not exceed rate of replenishment.</td>
<td>Subdivision and sanitary controls requiring public sewerage; pollution discharge controls; prevention of intrusion of salt water or other groundwater contaminants; special sewer construction techniques; limitations on dredging, stream widening, filling, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquifer-Recharge Area</td>
<td>Area of interconnection between an aquifer and the surface; the point at which precipitation and surface water infiltrate the aquifer.</td>
<td>Intolerant to development because of danger of polluting water supply.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td>A term describing the path of movement of the air, generally physically bounded by valley walls; important in terms of micro-climatic considerations and air pollution dispersal.</td>
<td>No disposal of possible pollutants, specifically no septic tanks; sewers must be sealed to avoid leakage; investigate effects of any disturbance to area such as channel digging or widening, dredging, filling that might permit the intrusion of pollutants.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation and wildlife</td>
<td>Woodyland - A tract of land dominated by trees but usually also containing woody shrubs, grasses, and other vegetation. Where extensive, woodlands are intolerant to intensive development because of their role in the water cycle, oxygen replenishment, wildlife support, recreation, and as a source of raw materials; also have special aesthetic value in urban areas.</td>
<td>Highly restricted development of sources of pollution; preferably stringent source controls.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wildlife Habitat</td>
<td>The natural environment of an animal species; usually associated with other features such as marshes or woodland. Tolerance to development depends on species; some habitats should be maintained for scientific, recreational, or educational purposes; destruction of habitat may affect other parts of the ecosystem.</td>
<td>Depending on wind speed, air direction and other meteorological factors, sources and receptors of pollution should not be permitted in the same corridor; reforestation would help to relieve summer heat and humidity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prime Agriculture Land</td>
<td>Arable cropland producing a high-value yield, often of a generally scarce nature such as vineyards, orchards, and truck farms. Of limited extent in some areas, development tends such land unsuitable for agriculture.</td>
<td>Depends largely on water-related role: dense forests can maintain housing of, say, one family per acre but only where abundant; well-managed commercial forestry; recreation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture land</td>
<td>Land used for grazing of domestic animals. Depending on slope, soil and subsurface conditions, this land is often tolerant to and suitable for development.</td>
<td>Very limited development to maintain vital ecological roles and aesthetic appearance; limited tree cutting for development or sustained commercial yield.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forest conservation controls, e.g., zoning and subdivision controls limiting intensity of development, limiting destruction of vegetation, and setting standards for improvements; authorization for limited lumbering.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Land use controls restricting locations of polluters upstream of receptors; source controls; performance standards in zoning ordinances.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category and Wildlife Continued</td>
<td>Feature</td>
<td>Description</td>
<td>Tolerance/Suitability</td>
<td>Development Policies</td>
<td>Methods and Techniques of Implementing Policies</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Prairie</td>
<td>A term referring more to vegetation characteristics than to topography; a tract of land, generally flat or gently rolling, containing a great variety of grasses with other low vegetation, with few or no trees; virgin prairies are rare remnants of the past, supporting complex ecological communities.</td>
<td>Highly intolerant to development, or intensive use; virgin prairies have important scientific and educational value; their rarity suggests that no development should be permitted.</td>
<td>Selected plots of prairie, especially virgin prairies, should be preserved on aesthetic, educational, and scientific grounds; peripheral development permitted only where it does not disrupt the ecosystem.</td>
<td>Public purchase; zoning and other limitations on surrounding areas.</td>
<td></td>
</tr>
<tr>
<td>Unique Remnant Landscape Feature of unusual or rare occurrence, generally associated with previous epochs, such as stands of redwoods, geological outcrops, natural bridges, meteorite craters, overglades, geyser, etc.</td>
<td>While many have no major ecological role, they should be preserved for historic, recreational, educational, and aesthetic reasons.</td>
<td>Low-density recreation; preservation for natural history, ecological education, and aesthetic purposes.</td>
<td>No development which would deteriorate the quality of the feature.</td>
<td>Public purchase; zoning and other limitations on surrounding areas.</td>
<td></td>
</tr>
<tr>
<td>Scenic Vistas</td>
<td>An area which has a pleasing aesthetic character; may include both natural and cultural features.</td>
<td>Suitable for limited development if carefully controlled; some areas may be worth maintaining for aesthetic reasons.</td>
<td>Purchase of easements or development rights; very low-density zoning; open space or agricultural zoning.</td>
<td>Public purchase or purchase by civic groups; architectural control; historic area zoning; landmarks commission.</td>
<td></td>
</tr>
<tr>
<td>Historical and Archaeological Sites</td>
<td>Historical monuments, buildings, forts, towns, battle-grounds, archaeological digs and other sites.</td>
<td>Development may destroy historical character; valuable for educational, recreational, aesthetic reasons.</td>
<td>Preservation in the current state with restoration if warranted.</td>
<td>No development which would interfere with viewing and appreciating the site.</td>
<td></td>
</tr>
</tbody>
</table>
Deschutes County's implementation program, as specified in this plan, will be a combination of zoning, subdivision and other necessary ordinances. There will also be provided tax incentives and the possibility for land swaps. Investigation into the feasibility of conservation easements and performance zoning may yield new and better tools for implementation. And certainy the staff will be seeking administrative criteria to use in their evaluation. Yet, despite all of the complexity built into the system efforts will be made to keep these processes as simple as possible and provide for the expeditious handling of all applications. The resulting process will seek to achieve the desired "good results in the right way"; however, for this to happen it will require not only the efforts of the elected and appointed officials as well as the professional staff but also the people of Deschutes County. This area is ours to live in and to pass on to our posterity. If we work together we will be successful in passing on the environment we all enjoy so much.

CONCLUDING REMARKS

The plan seeks to protect the important resources in Deschutes County, yet it is not a no-growth plan. Growth is being anticipated and accommodated in urban areas. Rural Service Centers, like Tumalo and Terrebonne, are being adjusted to serve the growing needs of the rural areas. Plans to assist LaPine in becoming a full service community and eventually leading to incorporation and the ability to serve a better organised rural area are being laid down. And even though rural development is restricted, provision for small farms and rural homes is being included in areas and at densities appropriate for such activity. Also, important areas and sites with unusual characteristics are being identified for protection. And adequate provision is being made to allow, in an appropriate manner, the commercial and industrial areas we will be needing.

Perhaps most importantly this is the beginning of a process that will continue to obtain better, more useful information so that the changing character of the County can be accommodated and regulations sufficiently flexible, but accurately reflecting local conditions and needs, may be promulgated.
ATTACHMENT 7

FINAL

DESHUTES COUNTY

GOAL EXCEPTION STATEMENT
INTRODUCTION

The purpose of this document is to identify the lands where Deschutes County shall request the Oregon Land Conservation and Development Commission grant an exception to meeting the requirements of either Planning Goal 3 (Agricultural Lands) or Goal 4 (Forest Lands). Further, this statement shall also explain the findings and reasoning which justifies such an exception be granted.

During the preparation of the Deschutes County Comprehensive Plan it became apparent that many of the rural areas in the County had already received substantial development. These lands have largely been sold and become committed to non-resource lands while recognizing that development which exists, and establishing a more efficient development pattern.

Because of the rural development there have been created Rural Service Centers to provide necessary public (i.e., schools) and private services to the rural population. These Service Centers reduce transportation requirements and serve as a focus for social and some economic activities. Deschutes County has chosen to emphasize the Rural Service Centers as the appropriate location for the services and facilities needed by the rural residents and to encourage most additional rural residences to be constructed in the Rural Service Centers. This development of the Service Centers would then permit some limited rural living opportunities, while insuring they occur in areas of existing development at higher densities, compatible with the rural environment and consistent with future transportation and utility networks. To accommodate the Rural Service Centers some of the less productive resource lands are being committed to non-resource uses. The commercial areas are those lands already developed or committed to commercial use, while the residential areas are relatively small surrounding areas where some development has already occurred.

The other areas being used for non-resource uses are those lands included within the urban growth boundaries. Each of the three urban areas has identified an urban growth boundary (UGB). Inside the UGB the ultimate use of the land is to be of an urban nature. Each urban area plan contains the findings and reasoning which justifies the lands contained within the UGB; therefore, this statement will not address resource lands which are included in the urban areas.

The flexibility which the exceptions process permits will allow Deschutes County to accommodate the existing and future needs of the County's ever-growing population, while serving as a base upon which the County can construct its plans for the protection of the resource lands which are so important to the local economy and environment.
METHODOLOGY

To determine where an exception to the State goals is required it was first necessary to obtain adequate data as to the location of the lands with agricultural and timber capabilities. The Resource Element of the Deschutes County Comprehensive Plan contains maps which reflect the information that was gathered, and serves as much of the basis by which the County has determined with what lands have agricultural and/or forest capabilities.

Agricultural Lands

One of the most hotly debated issues in the preparation of the Deschutes County Plan was agricultural lands. Considerable testimony and evidence was submitted which indicated that the County is a relatively marginal agricultural producer. Other information pointed to the livestock capability of the area and the stability of agricultural production locally.

Complicating the issue further was (and is) a lack of detailed soils information, which would have permitted the identification of lands with agricultural capability Classes I – VI. The General Soil Map that was available for the County-wide area did not reflect the character of the soils locally. Much of the soil in the western and southern areas of the County is derived from pumice and ash that has been deposited in depressions in the underlying basalt. The result is pockets of soil with adequate rooting depth intermixed with some very low productivity areas. The result is certain areas, such as Lower Bridge, Terrebonne, Cloverdale, Alfalfa, Tumalo and Redmond, have a mixture of cropland, rangeland and non-productive land. Other areas do not have the cropland and may find the rangeland varying in its ability to support livestock.

An example of the difficulty in using the General Soils Map is the Deskamp Association which has the best agricultural capabilities in the County. Of that association six percent of the soils have "good" irrigation capability (the rating system uses excellent, good, fair, poor and very poor). "Fair" soils constituted 59 percent of the soils and the rest are poor or very poor. Yet a look at the topsoil capabilities of the soil indicate 50 percent is "good", "fair" is 12 percent, while "poor" is 38 percent. A look at the U.S. Soil Conservation Service data indicated the Deschutes Soils are generally Class VI but can be classed as IIland III when irrigated, while Deskamp Soils are Classes III and IV when irrigated and otherwise Class VI. Some other less productive soils also are part of this association. What this seems to indicate is that even in the "best" County soils the agricultural capability is limited, there is considerable mixing with poor soils and that without irrigation water the land is only suitable for livestock. Obviously, what was needed was more detailed soils mapping.
The local SCS office was able to furnish the County Planning Department with detailed soils mapping and agricultural capability maps for only that portion of the County near Terrebonne, Redmond, Bend and Tumalo, this small area constituting only a portion of the known agricultural lands. To supplement the soils information the County obtained high altitude infra-red photography of the county, which clearly revealed the irrigated lands. Since crops require irrigation in Central Oregon this information could be relied upon to have identified the cropland areas. to determine the rangeland areas the County Assessor's records were surveyed to obtain all lands on farm tax deferral. Because the County had an active deferral program it was determined that combining the soils, irrigated lands and farm deferral information would produce a reasonable representation of all the private agricultural lands in the County. Public lands in agricultural areas were assumed to be agricultural for purposes of zoning while public lands in forested areas were assumed to be timber areas, unless some other use was known to exist on a particular site.

Using the preceding information and assumptions, the County was finally able to determine the local agricultural lands in an objective and empirical manner.

Forest Lands

The identification of lands with timber producing capabilities was not characterized by as much controversy. Working with the Oregon Department of Forestry, the County Planning staff utilized a document entitled, A Technique for Mapping Forest Land by Site Productivity Using Soil Survey Information. The techniques supplied by this document, coupled with the experience of local ODOR foresters, permitted the drafting of the Timber Productivity Map, which can be found on Page 86 of the Comprehensive Plan's Resource Element. Utilizing this map, it was possible to determine the lands with commercial timber potential (High-site Class 4 through Moderate-site Class 6). It was immediately apparent that the LaPine and Black Butte areas, which have received significant recreational and rural development, were going to be in conflict with the requirements of the Forest Lands goal. However, before taking any formal action, it was necessary to determine the extent of the lands already developed, and what remained to be utilized for timber.
EXCEPTIONS ANALYSIS

To determine which lands are already committed to development, aerial photography at a scale of 2" = 1 mile was obtained and used as a base map. Areas of concern not covered by the aerial photography were few and in these instances other maps were obtained.

LaPine

First the public lands were identified. Since these areas are to be zoned for timber, they were excluded from consideration. Next private agricultural and timber lands were identified and marked for an appropriate zone complying with the State goals. Thirdly, all lands upon which a house had been constructed were identified. And, finally, all lands which had been subdivided or partitioned into parcels less than 10 acres in size were added to the map. The result was a series of overlays indicating which areas are substantially committed to residential development, committed to timber or agriculture, and uncommitted. In the LaPine area these categories account to the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Committed</td>
<td>13,083</td>
</tr>
<tr>
<td>Resource Committed</td>
<td>18,232</td>
</tr>
<tr>
<td>Uncommitted</td>
<td>4,825</td>
</tr>
</tbody>
</table>

(Amended by Ordinance 80-203)

Redmond

The major concern in the northern portions of the County was compatibility with the Agricultural Lands Goal. Again, on the aerial photo base map, the private and public lands were identified. The public lands were marked for agricultural (or other resource) use. Lands which met the agricultural definition (SCS Class I - VI soils), or where detailed soils information was unavailable, identification as having obtained Farm Tax Deferral in the five years preceding the Plan or fund under irrigation as shown on the County's Irrigated Lands Map) were determined. Then the houses which had been constructed and the lands which had been subdivided were added. From the resulting map, it was possible to determine those areas where substantial development had taken place, and, therefore, to be identified as committed lands. In areas where agricultural continued to be the predominant use, the development as seen as not committing the area to further division and the area was to be zoned as an agricultural district.

In addition to the agricultural and forest lands, there is a 56-acre parcel containing aggregate deposits which is being excepted in the Tumalo area. This parcel is surrounded on three sides by existing residential development which would be
incompatible with mining the resource, particularly when alternative aggregate site exist.

The Redmond map reflects the following figures:

<table>
<thead>
<tr>
<th>Type</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Committed</td>
<td>18,579</td>
</tr>
<tr>
<td>Resource Committed</td>
<td>69,348</td>
</tr>
<tr>
<td>Uncommitted</td>
<td>14,780</td>
</tr>
</tbody>
</table>

**Bend**

The process followed in the Bend area was the same as that for the Redmond area and the results were very similar, although even more residential development has occurred because of proximity to the City of Bend:

<table>
<thead>
<tr>
<th>Type</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Committed</td>
<td>9,894</td>
</tr>
<tr>
<td>Resource Committed</td>
<td>46,718</td>
</tr>
<tr>
<td>Uncommitted</td>
<td>7,815</td>
</tr>
</tbody>
</table>

In addition to the preceding, 95,227 acres east of Horse Ridge are being designated for Exclusive Farm Use. The remainder of the private lands in the County are either in private forest lands being protected for timber production or within one of the three urban growth boundaries. Near the Bend Urban Growth Boundary an additional 360 acre area originally identified as Surface Mining Reserve has been changed to agricultural because of testimony indicating incompatibility with surrounding development. There also existed testimony that other sites were available with would not be so offensive.

The Bend Municipal Airport lies approximately two miles east of the Bend Urban Growth Boundary, at the intersection of Butler Market Road and the Powell Butte Highway. Originally established in 1942, this public transportation facility is an important part of the County's transportation and economic planning. An airport master plan has been prepared by the City and the land use elements accepted by Deschutes County. This master plan provides adequate demonstration of the need for such a facility and that its present location is the only viable site available. Further, sufficient planning has occurred to insure the environmental, economic, social and energy consequences are acceptable and compatible with adjacent uses. Therefore, this area of 354 acres shall be excepted from complicity with State Land Use Planning goal 3.

See Pages 10 through 23.
EXCEPTION AREA PLAN

It is apparent that Deschutes County has had significant rural development in the past. From the perspective of the State Land Use Goals, perhaps this rural growth is unfortunate; however, it is an existing reality. The County's efforts shall be aimed at recognizing those areas that are committed and servicing them in the most efficient and equitable manner possible. On the other hand, there are also policies in several sections of the Comprehensive Plan (particularly the Rural Development Agriculture, Forest Lands and Public Facilities chapters) which seek to prevent further losses of resource lands. Each of the three areas is dealt with separately and a program drafted to fit that area's particular needs. The major differences in the programs largely result from whether they involve agriculture or forest land.

LaPine

The subdivisions in LaPine are characterized by small lots (one acre or less) and to a great extent have already been sold. Some have been purchased for retirement, others for speculation and some for an immediate permanent residence. In those areas where subdivision, construction and existing rural services have largely committed the land to residential use (see LaPine map), Deschutes County proposes to zone the area for rural residential, rather than forest lands. The rural residential zone would permit the construction of homes, but the new 10-acre minimum lot size would prevent further significant division. These areas would then satisfy the need for residential and lower cost rural lots in the County. Other County actions to encourage clustering, foster adequate public facilities and prevent development in hazardous or resource areas, would insure the growth of the area is consistent with appropriate economic, social environmental and energy considerations (see the Rural Development chapter of the Comprehensive Plan).

Resource areas would be committed to resource use, as would be the uncommitted lands. The encouragement of small forest land management for the smaller acreage timber lands that can be found between the residential and larger ownership timber areas shall be a County policy. In this way the small timber owners are compatible with each adjoining use, while buffering the residential and timber areas from each other.

Redmond

On the committed lands the County will establish a Multiple Use Agricultural (MUA) Zone which will encourage the use of these lands as agricultural, although a a "hobby farm" or non-commercial level which requires a subsidy of the agricultural operation by employment elsewhere. Here again the County seeks to supply the
need for rural living opportunities and the need to subsidize more marginal farm land by non-agricultural employment to maintain the area's farm production (see Agricultural chapter of the Comprehensive Plan). But equally important is the recognition that the development and services exist already and must be dealt with. County policies shall seek to encourage clustering of housing and to otherwise improve the efficiency of supplying services to these existing areas while preventing substantial increases in the rural population. Better review of proposed development is also established with the new plan and ordinances to assure the long-range economic, social, environmental and energy effects are acceptable.

The MUA areas also serve to provide a buffer between residential and agricultural lands, while permitting some people to enjoy a rural lifestyle. More stringent enforcement of the goal would save little agricultural land and would not make farming more viable than will the proposed course of action. A stricter policy would certainly adversely affect a large segment of the population and raise serious questions in regard to the County's ability to satisfy State Land Use Goal 10 (housing), which requires the County to provide a variety of housing opportunities to meet the needs of the area's population.

Bend

The conditions in the area covered by the Bend map are the same as those in the Redmond area. Actions proposed for the Bend area are the same as the Redmond area.

Rural Service Centers

Rural Service Centers are a special situation. Originally established to provide needed public and commercial services to rural areas, thereby increasing public services while receiving transportation costs, these Centers have had mixed results. Some have been very useful in providing necessary facilities, while others have been used to foster sprawl.

One of the purposes of the new County Comprehensive Plan is to identify which of the existing Rural Service Centers should be continued and where new ones shall be established. The plan identifies nine RSCs and leaves the possibility of another in the future as an option if needed. The nine identified are Alfalfa, Brothers, Hampton, LaPine, Millican, Terrebonne, Tumalo, Whistletop and Wickiup Junction. Of these, only Brothers, Hampton and Millican are not on the three aerial photo base maps. All the others, except Alfalfa, are within the areas identified as having significant existing development and are designated as already committed to development.
Alfalfa is a special case in that existing development consists of a small store, a public school and a few nearby farm and non-farm residences. The land identified for the Center is that containing the store and lands owned by the Central Oregon Irrigation District and Alfalfa Water Users Association. The expectation is that these lands will be needed for facilities necessary to the continued existence of Alfalfa, which may include some limited commercial use and residences (at a five-acre density three houses would be permitted). No other sites exist for the location of the Center and the land is not presently creating agricultural products. The proposed development would certainly be compatible with existing and proposed uses and consistent with the County's long-range environmental, economic, social and energy policies.

Brothers, Hampton and Millican are small communities along Highway 20, in the eastern portion of the County. Each community has small existing commercial and residential areas. These uses serve important functions for the residents of the area and transients through the area. Without these Centers local residents would have a long (sometimes impossible) drive into Bend for gasoline, groceries, etc. The areas identified in the plan are those already in existence. Once again, the County is simply recognizing that which exists. The Centers are also important public service and social activity focal points. No alternative sites are available or desirable, and their anticipated environmental, social, economic and energy consequences are seen as beneficial.

**TOTAL AREA**

The total area to be excepted from the State Land Use Planning Goals is 41,556 acres. These lands are those residentially developed, committed to development or needed for Rural Service Centers. Once again, the County's purpose here is to recognize that which exists, while attempting to foster an efficient and equitable plan for the County's growth. (Amended by Ordinance 80-203).
CONCLUDING REMARKS

This exceptions statement is not meant to be an elaborate document. Deschutes County is not proposing large new areas for rural development. The primary concern is simply to acknowledge the development which exists, and to seek reasonable ways to deal with those committed lands. Many areas which have some development, but not enough to justify identification as committed lands, have been placed in resource zones which will permit non-resource uses only by conditional use on non-productive sites. Only those areas with significant amounts of development have been identified and the County has developed policies to promote greater efficiency in the growth of those areas. In light of County policies encouraging other alternatives (i.e., Rural Service Centers and urban plans) when combined with increasing service and energy costs, it is anticipated actual development will not actually use all the excepted areas. To obtain approval of any future rural development will be more difficult than in the past, and shall be compatible with County needs and State planning goals.
This map is for info purposes only as requested by Deschutes County Planning Commission. For more information see June 13 staff memo.

Taxlots: 2,774
Acres: 23,663
<table>
<thead>
<tr>
<th>Name/Names</th>
<th>Mailing Address and Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rory Ishell</td>
<td>50 SW Bond St Suite 4, Bend, OR 97702</td>
<td>541-647-2930</td>
</tr>
<tr>
<td>Corey Heath</td>
<td>61374 Powell Rd, Bend OR 97702</td>
<td>541-388-6363</td>
</tr>
<tr>
<td>Jay Vanneman</td>
<td></td>
<td>503-947-6089</td>
</tr>
<tr>
<td>Tom Jones</td>
<td></td>
<td>541-325-6928</td>
</tr>
<tr>
<td>Veronica Newton</td>
<td>18180 Tumalo Res. Rd, Bend OR 97703</td>
<td>215-275-0081</td>
</tr>
<tr>
<td>Eva Cane</td>
<td>17212 Pine Dr, Sisters</td>
<td></td>
</tr>
<tr>
<td>J. Jardine</td>
<td>66435 Tekampe Rd</td>
<td>541-388-5655</td>
</tr>
<tr>
<td>Bruce Bowen</td>
<td>17212 Pine Dr, Sisters</td>
<td>541-420-0179</td>
</tr>
<tr>
<td>Ted Bishop</td>
<td>163367 Faun Ln, Bend OR 97703</td>
<td></td>
</tr>
<tr>
<td>Rick Kar</td>
<td>1235 Moonings Ave OR 97701</td>
<td></td>
</tr>
<tr>
<td>John Jacobs</td>
<td>60435 Tekampe Rd</td>
<td></td>
</tr>
<tr>
<td>Jacqueline Newbold</td>
<td>19615 Tumalo Res. Ct, Bend OR</td>
<td></td>
</tr>
<tr>
<td>Jack Godard</td>
<td>87110 Lake Drive, Sisters OR</td>
<td></td>
</tr>
<tr>
<td>Karna Gustafson</td>
<td>1929 NW River Mist Bend</td>
<td>503-738-1819</td>
</tr>
</tbody>
</table>
I would like to address the Burden created by EFU Zoning on smaller EFU parcels. These small parcels do not meet the Primary Goal of the State of Oregon Land Use System and think they have are not properly zoned.

These small EFU parcels look more like Rural Residential than Commercial-Scale Agriculture and do not contribute to the farm economy, but, do contribute to the County and State by Real Estate Taxes collected.

We live less than a mile from the UGB and as a crow flies, the edge of our property is about 1250’ from the City. Please refer to the maps to understand our scenario.

We own Lot 1300 and Lot 1201 all lots are zoned EFU. There is a house on each of these lots. Lot 1300, we call our Guest House and currently rent it out. *I have put a black box around GH so you can follow. We live on Lot 1201 with a black box around H; and a box around SHOP.*

Our tenant would like to purchase this Guest House. We would like to sell this house, but, keep the shop. We understand that we can not divide this parcel because it is EFU.

As you look at the enlarged map and find Lot 1300, you will see the house is on Non Resource Land and the Shop is just below this rock outcropping. We thought this may be the perfect scenario to partition this lot and separate the house from the shop. I was disappointed to find that because we have irrigation on this property, it will not be considered Non Resource and not be able to partition this property.

If you look at the Zoning Map, you will see Lot 1300 in Yellow, The Red Parcels adjacent parcels Zoned RR10; the Chartreuse Yellow Zoned MUA10. Many have similar configuration to Lot 1300, house, barn, green field and lawn which all are fed with Arnold Irrigation.

What I am saying, it is difficult to distinguish which is EFU, RR10 or MUA10. We are all Rural Residential and all of us are watering our property to keep the value of our land up by keeping our water rights in tact. If we were zoned RR10 or MUA10, we may have a chance at spiting Lot 1300. But, we can't because we are EFU.

*Please refer to Deschutes County Non Resource Map and Zoning Map*
Comprehensive Plan Amendment Suggestion
6/13/19
Joann Jacobs

We all have irrigation and we know that if soil maps did not exist, as in SE Bend, the state zoned irrigated land EFU. Our RR10 and MUA10 neighbors all have irrigated land.

These small EFU parcels in this area should not be zoned EFU, but Rural Residential. Irrigation is provided to other zones, small farms to not generate profit and close to urbanization.

We plead with the Planning Commission to support efforts to Change these archaic State laws and to allow regional flexibility and grant these small EFU parcels the chance to get out of EFU.

*Please refer to Deschutes County Non Resource Map and Zoning Map*
This map is for info purposes only as requested by Deschutes County Planning Commission. For more information see June 13 staff memo.

Taxlots: 2,774
Acres: 23,663
To: Deschutes County Commissioners and Planners

Fm: Brendon and Shannon Hirschberg

Re: Rezoning EFUTRB land

In 1972 Legislative action passed Planning Goals regarding Agricultural Lands, Section 2.2, that created protection for farm lands to advance the economic benefits of agriculture. Unfortunately, these broad statutes were not based on good science and were applied inappropriately to all lands that were “non-urban, non-forest, undeveloped and uncommitted” which were declared to be farmlands and zoned EFU. Most of these lands in south Deschutes County do not allow viable farming activity.

This draconian classification with its stringent requirements has led to hardships on the current owners and paradoxically will result in exactly what it was meant to prevent. Self-appointed “Watch Dog organizations” have taken upon themselves to be the judge of what is best for everyone in Oregon by enforcing through litigation these archaic designations rather than correcting the problems.

These organizations, ironically, share the same goals as the land owners: to reduce density, maintain rural lifestyles, maintain agricultural pursuits, and be good stewards of the land, wildlife, and water. Unfortunately, although our goals are similar, these aggressive organizations have not recognized that the path to these goals has changed! We need a new solution due to new economics. Following the old laws will actually have the exact opposite effect and reduce the chance of success to our goals.

Even in a 1992 Farm Study it was noted that farm land needed to be 80 acres to be economically viable, with the EFU designation at a minimum of 20/23 acres. Now, 25 years later, the economics have worsened. In the under-80-acres category, ALL farms run at a loss and are limited in viability by the depth of the owner’s pockets. The rural designations of RR10 and MUA10 have the best chance of sustainability, simply because more owners can afford the losses and continue to maintain the land. The alternative is a downward spiral of aging owners with fixed incomes and unprofitable farms facing ever increasing costs. Eventually this
leads to abandonment of our goals, loss of water rights, deterioration of the property and decreasing land values.

Allowing EFU-zoned lands which are close to city boundaries, and other RR or MUA zoned properties, to be granted a Zone change will solve these problems. Cities can have a low-density “buffer area” between city densities and large farms, owners can enjoy rural lifestyles, small Agri-businesses will thrive, the owners can afford long-term maintenance, with preservation of land value. The cities profit from a better tax base and the ability to attract new citizens, and ease of eventual expansion.

For these reasons, we urge you to work toward “a more flexible land use system that responds to regional variations” for your Amended Comprehensive Plan. This EFU rezoning proposal will allow Deschutes County to move forward in a way that responds to current reality.

Thank you for your consideration,

Brendon and Shannon Hirschberg
June 12, 2019

To the Deschutes County Planning Commission:

Five years ago, the County Planning Department sponsored a series of workshops labeled as an “agricultural lands review process.” This process was a forum for presenting a proposal to rezone some EFU lands as “Non-Resource Lands” so as to facilitate their development for non-agricultural uses.

Across the County, the response at these forums was largely that there was no need for such a change and that indeed most rural residents were concerned about the down side of such an action. After several months of study and discussion, the County wisely abandoned this proposal, realizing that it was neither necessary nor popular.

And yet, here we are in 2019 with a proposal to allow wholesale of EFU lands as “Non-Prime Resource Lands” and therefore suitable, as a class, for rural residential subdivisions. The name may be somewhat different, but I have the same reaction to this proposal now as I and many of my neighbors had five years ago.

I urge you to reject the NPR-20 proposal currently under discussion, both because it is unnecessary and because it will do more harm than good.

The change is unnecessary because where flexibility is needed on EFU land, there is already a process to achieve that through the conditional use process. The current process places the burden of proof where it ought to be, on the owner who feels that a parcel must be rezoned in order to be used. In the case of the six already platted residential areas that are to get the NPR-10 designation, we can do a wholesale change that recognizes the need for a change. But for other EFU areas, permission for new types of uses should be granted only through the existing application process.

The proposal is harmful when it assumes that significant acreage currently designated EFU is has no agricultural value. The definition for “prime” versus “non-prime” that is proposed today is not future-oriented. These lands may well become very useful for agriculture from new technology, improved irrigation techniques, or natural events. Let’s remember that in the Willamette Valley, there was a strong effort to allow residential development on the sloping hills that now grow very valuable grape vines.

More harmful still, turning EFU land into subdivisions is a choice that we will live with forever. We must not lock Central Oregon resources away under concrete, thus putting them out of reach for future generations.

So do the benefits outweigh the harm? I think not. This proposal’s negative impact on our agricultural potential is offered up as the price of improving our housing supply, but it will not achieve what is promised. We need affordable housing, not rural residential ranchettes.
Affordable housing will be achieved on small lots within our urban growth boundaries, adjacent to existing services and transportation networks. The proposal before us will not create housing that is affordable for families, and worse yet, it will also lead to higher costs for public service agencies.

To me, the proposal to downgrade EFU land so it can be rezoned into 20 acre residential properties makes no sense from a public interest perspective. This may enable some folks to make a lot of money building houses where they cannot do so today, but it does not provide the affordable housing that we need in Central Oregon. If enacted, this policy will lock up potentially valuable agricultural land forever and impose serious new costs on our communities. I hope you will pass this idea by in favor of better approaches for livability in Central Oregon.

Eva Eagle
17212 Pine Drive
Sisters, OR 97759
Deschutes County admits their farm land designations are highly controversial and they are in widespread agreement that much of the local farm land is marginal. We believe that many of the EFU zoned properties in Southeast Bend are erroneously zoned. We want the County to address this issue and give the EFU owners the ability to re-zone their property to zones of their adjacent neighbors.

Reading through the Deschutes County Comprehensive Plan Draft we came across valuable information that we thought would support our concern. The bold italic type is taken from this draft.

Section 2.2 Agricultural Lands
One primary goal of the State of Oregon land use system, is to protect farm lands and the economic benefit of agriculture..... The main concept is that local governments must inventory and protect farm lands through the use of Exclusive Farm Use (EFU) Zones that provide primarily for the continuation of commercial-scale agriculture..... And to provide a science based method of identifying farm lands.

After reading this statement, we felt for sure we could qualify for a zone change since we never made a profit on farming. Farming to us is just using our irrigation to keep our property green and keep our water rights like many of our EFU neighbors. And, we question the ability to use a science based method of identifying farm lands in Southeast Bend since the USDA did not do an soil analysis here.

County Agricultural Designations
Farm land designations in Deschutes County have been and continue to be highly controversial. In designating farm lands in the late 1970's, the County was hampered by the limited availability of soil maps. Where soil maps existed they were consulted, the County also included irrigated lands and lands receiving farm deferrals for the previous five years as farm lands...... But, in general, non-urban, non-forest, undeveloped and uncommitted lands were determined to be farm lands.

The USDA did an extensive soil analysis only on the North side of Bend. Southeast Bend is mostly dotted with ancient lava flows covered by junipers, ponderosa and sage. We think, the Southeast Bend area must have been determined to be farmland because it was non-urban, non-forest, undeveloped and uncommitted land. Where soil maps did not exist, the County included irrigated land and lands receiving farm deferrals as EFU.

We are asking the County to address EFU parcels in Southeast Bend that were zoned based on this statement. Most of Arnold irrigation water does not go to EFU farms, but to Rural Residential and most of the soil is covered with lava under a minor amount of dirt in Southeast Bend.
Proposal 3 to County Comprehensive Plan Amendment
Don Jacobs
6/13/19

We are not sure when Arnold Irrigation water was available in Southeast Bend. We are sure that many RR10, MUA10 parcels receive Arnold Irrigation water. Most of Deschutes River Woods and Southeast Bend is on Arnold Irrigation and are not EFU.

In the 1979 Resource Element, the 1992 farm study noted the challenges of local commercial farming because of the following: High Elevation (2700-3500), short growing season. (88-100), low rainfall........

Southeast Bend EFU land is at a higher elevation with a shorter growing season. There are times in the heat of summer, when we do not receive our allocated water from Arnold Irrigation because of a low snow pack or protecting endangered frogs.

The 1992 the farm study resulted in minimum lot sizes that are smaller than the State requirement of 80 acres for farm land to be viable.

We hope the County will address our re-zoning based on many of the EFU parcels are less than 80 acres as the State stated are not viable.

Source: USDA, National Agricultural Statistics Service 2007 Census of Agriculture -59% of farmers list primary occupation as ‘Other’ rather than farming. For a majority of farmers, farming is not a sustaining economic activity, but rather a lifestyle choice. Living on a farm and farming as a secondary economic activity acknowledge a shift from commercial farming towards the benefits of a rural lifestyle.

We would like the County to reconsider zoning these 'lifestyle' properties on EFU to their neighbors zone of RR10 or MUA10. The above statement by the County suggests that this rural lifestyle can be attained on RR10 or MUA10 and does not have to be EFU because they are not commercially farmed.

Many of the EFU parcels in Southeast Bend were purchased to enjoy a rural lifestyle and not to farm. Many were purchased not understanding the restrictions of EFU zoning. There was no required disclosure on restrictions on zoning of land by the real estate industry.

The Big Look Task Force in 2009 findings recognized One of the primary conclusions reached was that Oregon needs a more flexible land use system that responds to regional variations.

We think our EFU parcels do not qualify as commercial agriculture, have no science based soil map, the county determined these parcels to be farmland because it was non-urban, non-forest, undeveloped and uncommitted land at the time of zoning. We believe the above data supports Deschutes County addressing a re-zoning of EFU parcels near urban areas as a third Option to this Amended Comprehensive Plan especially if these EFU Zoned properties are surrounding by RR10 or MUA10.
Talking points for Option 3 for Comprehensive Plan on EFU zoning

Option 3 states the County needs to address the erroneous zoning of EFU in S.E. Bend and allow these EFU parcels to re-zone

- The State of Oregon Land Use System primary goal... “must protect farm lands for the continuation of commercial-scale agricultural” and to “provide a science based method of identifying farm lands.

- The State of Oregon Land Use recognize a minimum of 80 acres to be viable as farm land.

- USDA & National Agricultural Statistics Service 2007 Census of Agriculture state: For the majority of farmers in Southeast Bend, farming is not a sustaining economic activity, but a rural lifestyle. This clearly shows that we do not have to protect these EFU farm lands because of economic contribution.

- The Big Look Task Force by the State of Oregon in 2009 recognized that Oregon needs a more flexible land use system that responds to regional variations. Our land use laws were written 50 years ago when most of the farming was on the west side of the Cascades.

- In the 1979 Resource Element, the 1992 farm study noted the challenges of local commercial farming because of the following: High Elevation (2700-3500) S.E. Bend is at a higher elevation we believe. Short Growing Season (88-100) and low rainfall. S.E. Bend is also, subject to the periodic irrigation shut downs during the summer which makes crop production erratic.

- The USDA did a soil analysis in 1958 in mostly the Northern part of Bend and Deschutes County. We believe our S.E. Bend area EFU zoning was not part of this soil analysis and EFU parcels were zoned EFU because they were non-urban, non-forest, undeveloped and uncommitted land where soil maps did not exist. We believe the County assumed in S.E. Bend, even though it appears to be on a lava flow area, that because there was irrigation nearby, that this area qualified as EFU.

Most of the EFU parcels in this S.E. Bend grouping are surrounded by RR10 and MUA10, within one mile of the UGB and some parcels within 600 feet of the City of Bend, and definitely in the path of growth evidenced by the new High School being built at 15th Street & Knott.

EFU Parcels in this grouping should be able to re-zone to that of their neighbors.
June 13, 2019

Deschutes County Planning Commission  
Attn: Zechariah Heck, Associate Planner  
117 NW Lafayette Avenue  
Bend, OR 97708

Re: Nonprime Resource Lands Amendments

Dear Chair Crawford and Commissioners,

Thank you for the additional opportunity to comment on the proposed “Nonprime Resource Lands Amendments” (the “amendments.”) For the reasons below, in addition to the reasons we presented to the Planning Commission at the May 23, 2019 hearing, LandWatch again urges the Planning Commission to recommend denial of the proposed amendments that would create both the new NPR-10 and NPR-20 plan designations.

1. **Deferral of showing goal compliance is not good planning.**

   As we stated in our May 23, 2019 letter, the amendments impermissibly fail to demonstrate compliance with several of the statewide land use planning goals. All post-acknowledgment plan amendments must show compliance with the goals. ORS 197.175(2)(a).

   At a minimum, the amendments must show compliance with statewide land use planning goals 3, 4, 5, 11, 12, and 14. They must also show compliance with Goal 2, which requires the County to undertake comprehensive planning:

   “To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.” (Goal 2)

Goal 2 ensures that a comprehensive planning process provides planned, orderly, and coordinated use of land that is supported by an adequate factual base. By actually designating land for certain uses in coordinated comprehensive plans, local governments provide certainty to be relied on by both private landowners and the public in future land use decisions.
When it passed SB 100 in 1973, the legislature declared its intent for requiring comprehensive planning throughout Oregon that complies with the goals:

“(1) Uncoordinated use of lands within this state threaten[s] the orderly development, the environment of this state and the health, safety, order, convenience, prosperity and welfare of the people of this state.

(2) To promote coordinated administration of land uses consistent with comprehensive plans adopted throughout the state, it is necessary to establish a process for the review of state agency, city, county and special district land conservation and development plans for compliance with goals.” (ORS 197.005(1)-(2))

Deferring plan designations, and the required showing of Goal compliance, until future quasi-judicial applications does not achieve the coordinated, comprehensive, fact-supported land use planning that Goal 2 requires local governments to complete. The proposed amendments would abdicate this public responsibility to private landowners.

Staff recently provided a map of Agricultural lands that would be eligible for the proposed NPR-20 zone. The NPR-20 zone, as proposed, would be drastically different than these lands’ existing EFU and Forest zones, as it has a much smaller minimum lot size and would allow different uses than those allowed in the EFU and Forest zones. Now that these lands have been identified as eligible, Goal 2 requires that the County produce findings, supported by an adequate factual base, that demonstrate how redesignating these lands will comply with the Goals.

The failure of the proposed amendments and draft findings to demonstrate compliance with the statewide land use planning goals fails Goal 2’s requirement that comprehensive plan designations provide a basis for all land use decisions, it fails to achieve the intent of comprehensive land use planning in Oregon, and is simply not good planning.

2. The proposed amendments are not more restrictive than the existing process for redesignating resource lands

Options to redesignate resource lands already exist. One option is the Goal 2 exceptions process, which allows any landowner to seek an exception to Goal 3 or Goal 4. Another option is to submit a quasi-judicial plan amendment application wherein a landowner seeks to have their land redesignated as not agricultural or not forest land. Such applications have been rare, as they must prove that their current designation is incorrect. The County determined in 2014/2015 that no errors
were made when it assigned comprehensive plan designations in its first comprehensive plan. With the County having already determined that no errors are present, that a few applications have received redesignations by showing that their current designation is incorrect points to there being no need for what the County is proposing, and should not to be relied on as a basis for future planning.

Unfortunately, the current County proposal appears to be motivated strongly by a desire to expand residential development in rural areas, which is contrary to fundamental principles of Oregon land use law and to the history concerning designation of agricultural and forest lands in Deschutes County.

County staff has argued that what is being proposed is no different than what an applicant can already apply for and that, in fact, the 20-acre proposal is better for preserving larger tracts because otherwise a rezoning would result in 10-acre parcels in the MUA-10 or RR-10 zone. If it is so similar a process, why the changes, particularly where there has been so little use? The agenda of the County is obviously to expand rezonings by normalizing and clarifying the process. The alleged benefit of 20-acre parcels over 10-acre parcels is of little importance where current applications have been so few, and any 20-acre standard would be transitory at best. Where the agenda of the County is so clearly to expand development in rural areas, the next step in the County’s death-by-a-thousand-cuts approach to land use planning would obviously be to then allow 10-acre parcels. At its root, the County’s proposed changes are to normalize and increase the rezoning of agricultural and forest lands to enable more development on rural lands. Such rezoning is not appropriate.

An additional reason why the proposed NPR-20 designation would not be more restrictive than the County’s current protections for resource land is because the County’s current resource designations reflect the policy of the state to preserve agricultural land. Extensive evidence already in the record shows that no mistakes were made in the County’s initial identification and designation of agricultural lands. The proposed amendments seek to actively facilitate taking land out of agricultural designations. The Agricultural land use policy of the State of Oregon, codified in statute at ORS 215.243, declares that preserving the maximum amount of agricultural land is necessary for a variety of reasons:

“(1) Open land used for agricultural use is an efficient means of conserving natural resources that constitute an important physical, social, aesthetic and economic asset to all of the people of this state, whether living in rural, urban or metropolitan areas of the state.
(2) The preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state’s economic resources and the preservation of such
land in large blocks is necessary in maintaining the agricultural economy of the state and for the assurance of adequate, healthful and nutritious food for the people of this state and nation.

(3) Expansion of urban development into rural areas is a matter of public concern because of the unnecessary increases in costs of community services, conflicts between farm and urban activities and the loss of open space and natural beauty around urban centers occurring as the result of such expansion.

(4) Exclusive farm use zoning as provided by law, substantially limits alternatives to the use of rural land and, with the importance of rural lands to the public, justifies incentives and privileges offered to encourage owners of rural lands to hold such lands in exclusive farm use zones." (ORS 215.243)

The Oregon Supreme Court recently emphasized and reaffirmed the statewide importance of preserving agricultural land:

"the legislature has declared that preservation of agricultural land, particularly in large blocks, is an important statewide policy and that limitations on urban expansion into, and alternative uses of, agricultural and forest lands are necessary and a matter of statewide concern. The legislature’s policy for dwellings on farm and forest lands ... similary seeks to ‘[l]imit the future division of and the siting of dwellings upon the state’s more productive resource lands.’" (Save the Dump Coal. v. Yamhill County, 364 Or 432, 442 (2019))

Creating a new plan designation – the sole purpose of which is to remove lands from EFU and Forest zoning and fast-track development of rural lands – would be a significant weakening of the County’s protections for resource lands.

3. Lands comprised of Class VII soils are suitable for grazing and are agricultural land.

Many of the Agricultural lands identified by the County as eligible for the proposed NPR-20 zone have predominantly Class VII soils. Class VII soils are suitable for grazing, and are used for grazing throughout Central and Eastern Oregon. Class VII soils are also suitable for other agricultural uses that are not irrigation or soil-dependent, such as poultry and bee production. Accordingly, Class VII lands are not “nonresource” lands as many Class VII lands meet Goal 3’s definition of agricultural land:

“(1)(a) ‘Agricultural Land’ as defined in Goal 3 includes:
(A) Lands classified by the U.S. Natural Resources Conservation Service (NRCS) as predominantly Class I-IV soils in Western Oregon and I-VI soils in Eastern Oregon;
(B) Land in other soil classes that is suitable for farm use as defined in ORS 215.203(2)(a), 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; and accepted farming practices.” (OAR 660-033-0020(1)(a)(A)-(B)) (emphasis added)

To remove the Agricultural designation from the lands identified as eligible for the proposed NPR-20 zone, the County must demonstrate that each of those lands cannot be used for grazing or other farm uses not dependent on soils or irrigation. That a particular parcel with Class VII soils may be too small to support an independent grazing operation, or may have been overgrazed in the past, might affect that parcel’s price as ranchland but does not affect its inherent suitability for grazing. Suitability for grazing does not depend on the size of the parcel or the skill of the landowner as a rancher, but is an inherent characteristic of the land that can be improved over time.

The purpose of preserving agricultural land is not limited to irrigated agriculture. The purpose also includes preservation of all land that supports any type of agricultural use, including grazing and other agricultural uses not dependent on irrigation. The policy of the state is to preserve these lands, too, for future generations.

4. A “committed” exception is required to redesignate resource lands claimed to be committed to residential use.

The proposed amendments and draft findings repeatedly claim that lands in the proposed NPR-10 zone are “committed” to residential use. A process exists to allow uses not allowed by Goal 3 or Goal 4 because the lands are committed to nonresource use, and it is called the exceptions process. In order for the County to redesignate the lands in the proposed NPR-10 zone to nonresource use, it must go through the exceptions process at OAR Chapter 660 Division 004.

But, as pointed out by DLCD at the May 23, 2019 hearing, the exceptions process does not allow new goal exceptions to be approved when existing development on a property was approved pursuant to Goal 3 or Goal 4. Because the lands in the proposed NPR-10 zone were vacant when first designated for resource use, but now are now claimed to be committed to residential use, they are not eligible for exceptions to Goal 3 or Goal 4 if the circumstances that led to their being committed to residential use occurred after their initial designation for resource use.
5. The proposed amendments do not comply with the “Go Below” statute and the Deschutes County Comprehensive Plan.

Oregon statute, at ORS 215.780, provides that lands designated as Agricultural or Forest must conform to certain minimum lot sizes:

“Except as provided in subsection (2) of this section, the following minimum lot or parcel sizes apply to all counties:
(a) For land zoned for exclusive farm use and not designated rangeland, at least 80 acres;
(b) For land zoned for exclusive farm use and designated rangeland, at least 160 acres; and
(c) For land designated forestland, at least 80 acres.”

Deschutes County does have acknowledged minimum lot sizes for its EFU subzones that are smaller than those listed in ORS 215.780. See Deschutes County Comprehensive Plan Table 2.2.1. These minimum lot sizes range from 23 to 320 acres. The proposed amendments would allow lands that are correctly zoned as EFU and forestland to be divided into 10- or 20-acre lots or parcels. These lot or parcel sizes clearly violate both the mandatory minimum lot sizes of ORS 215.780 and the Deschutes County Comprehensive Plan.

6. The proposed amendments are inappropriate for facilitating future urbanization.

Although the draft findings for the proposed amendments only mention future urbanization once (Findings at page 10 under Goal 9 Economic Development), staff at the May 23, 2019 hearing repeatedly stated that facilitating future urbanization is a core reason for the new NPR-20 zone.

As discussed above, the “Go Below” statute and the Deschutes County Comprehensive Plan require certain minimum lot sizes in EFU and Forest zones. The proposed amendments seek to impose a much smaller minimum lot size, which would allow further parcelization of resource land, making efficient urbanization more difficult.

The proper and legal way to facilitate future urbanization is to work cooperatively with a city to identify and designate Urban Reserve Areas (URAs) following the process at ORS 195.145. The proposed NPR-20 zone would allow further parcelization of potentially urbanizable land, and would effectively abdicate the joint County/City planning responsibility to private landowners. Similar to the bad planning described in “1. Deferral of showing goal compliance is not good planning” above, this deferral of actual planning for future urbanization fails the requirements of Goal 2.
7. The proposed amendments will exacerbate wildfire risk.

Most of Deschutes County is at high risk for wildfire, and that risk will only increase as our climate becomes more arid and variable. The increased development in areas of high wildfire risk that the proposed amendments would allow creates unnecessary risk to residents, firefighters, and first responders, and also results in the irresponsible use of public money to protect private property in the likely event of wildfire.

A recent report from the U.S. Forest Service and Pyrologix, attached as Exhibit 6, ranks the Bend community at number four in Oregon “with greatest cumulative housing-unit exposure to wildfire.” Redmond is ranked number 7, with Terrebonne number 12, Sisters number 20, and La Pine number 34. The report describes how “most of the wildfire exposure occurs in a relatively small number of communities” and that “focusing mitigation efforts on the most-exposed communities is likely to result in the greatest benefit.” Exhibit 6 at page 3.

For all of these reasons, LandWatch urges to Planning Commission to recommend denial of the proposed amendments. Thank you for your consideration of these comments.

Sincerely,

Roby Isbell
Staff Attorney
Central Oregon LandWatch

Attachments

Exhibit 6: USFS report “Exposure of human communities to wildfire in the Pacific Northwest.”

---

1 As used in the report, the term “community” means all population within a 45-minute drive of the boundary of the community core.
Exposure of human communities to wildfire in the Pacific Northwest

Joe H. Scott, Pyrologix
Julie Gilbertson-Day, Pyrologix
Richard D. Stratton, USDA Forest Service

Purpose and background
At the request of the United States Forest Service Pacific Northwest Regional Office, Pyrologix\(^1\) assessed the exposure to wildfire of housing units within named human communities across the Pacific Northwest Region (Oregon and Washington). The purpose of the assessment was to identify the communities most threatened by wildfire. The fifty most-threatened communities in each state were identified.

These results have several applications. A home buyer can use these results for comparing the relative wildfire exposure of homes in different communities; homeowners can gauge their wildfire exposure compared to their peers in neighboring communities. Governments and other organizations can potentially use the results to prioritize communities for home-loss mitigation efforts, allocate mitigation funding, inform building codes, and guide residential development. Finally, land owners and land management agencies can use the exposure-source results to identify locations within their ownerships that produce damaging wildfires.

What is exposure to wildfire?
In the broadest sense, wildfire exposure encompasses the likelihood of wildfire burning a given location on the landscape, and the potential intensity of a wildfire if one were to occur. For this assessment we focus only on wildfire likelihood because the effect of fire intensity on home loss rate is not well studied, and because the inclusion of intensity for this and similar assessments did not influence the conclusions. Wildfire likelihood is measured by annual burn probability, a measure generated by comprehensive simulation of wildfire occurrence and spread (see section below on Wildfire hazard simulations).

What is a human community?
We defined a human community as the population (housing units) within a community core as defined by the Populated Place Areas dataset produced by the United States Census Bureau plus the population within a 45-minute drive of the boundary of the community core\(^2\).

Housing unit data
The West Wide Wildfire Risk Assessment (Sanborn Map Company 2013) produced a spatial dataset called Where People Live (WPL). The WPL layer, which was generated by processing LANDSCAN and U.S. Census data, represents the estimated density of housing units across the 17 western states. We converted those housing-unit density values to housing-unit counts. Summing the housing-unit count

---

\(^1\) Pyrologix is a Montana-based wildfire threat assessment research firm (www.pyrologix.com).
\(^2\) The drive-time analysis was conceived and conducted by Dr. Alan Ager and his staff at the Rocky Mountain Research Station, USDA Forest Service.
values for all locations in a named community provides an estimate of the total number of housing units in the community.

For this assessment, housing units were considered directly exposed to wildfire if they were located on burnable land cover. Housing units were considered indirectly exposed to wildfire if they were located on nonburnable land cover (other than open water) but within 150 m of burnable land cover. Only directly or indirectly exposed housing units are summarized in this report. Nonexposed housing units (those within an urban core, for example) are not included.

**Wildfire hazard simulations**

This assessment relies on wildfire behavior simulations produced using a comprehensive wildfire occurrence, growth and behavior simulation system called FSIm (Finney and others 2011). The FSIm modeling for Oregon was conducted for the Pacific Northwest Region Quantitative Wildfire Risk Assessment (QWRA), which was completed in 2018 (Gilbertson-Day and others 2018). The FSIm model works by simulating 10,000 or more “iterations” to produce spatial data representing annual burn probability—the annual likelihood that a wildfire will reach a given point on the landscape. Each iteration is a possible realization of a complete calendar year. The FSIm burn probability results show considerable variation in wildfire likelihood across the states (Figure 1).

In addition, FSIm records the start location and final perimeter for each of its simulated wildfires, enabling us to attribute housing-unit exposure to the origin location, which we use in an assessment of the source of exposure of housing units to wildfire.

**Housing-unit exposure to wildfire**

**Mean burn probability**

We calculated the mean burn probability where the housing units are located within each community. This measure represents the mean likelihood that a housing unit in a community will experience a wildfire in one year. The higher this value, the more likely it is that an individual housing unit will experience a wildfire. Mean burn probability is not a cumulative measure for a community, so it does not necessarily increase as the number of housing units increases. Instead, this measure is sensitive to the general location of a community within the burn probability map (Figure 1) and the specific locations of housing units with each community.

**Community-wide housing-unit exposure**

We first generated raster data representing the expected annual number of housing units exposed to wildfire (the product of housing-unit count and burn probability). We then summed those results within each community; a community with more housing units can therefore have a greater community-wide exposure. The resulting sum represents the estimated mean annual number of housing units expected to experience a wildfire. The top 50 Washington communities by this measure are listed in Table 1; the top 50 Oregon communities are listed in Table 2.

---

3Burnable and nonburnable land cover is characterized by the LANDFIRE 2014 FBFM40 data layer (www.landfire.org), with minor calibration edits informed by local expert knowledge. Burnable land cover includes land covered by grasses, forbs, shrubs, tree litter, understory trees, or logging slash. Nonburnable land cover includes urban areas, irrigated agricultural land, permanent snow or ice, bare ground, and open water.
A community can be ranked as highly exposed due a combination of high likelihood or high population. To illustrate those contributing factors, we plotted mean burn probability against total housing unit count for the 50 communities with the greatest cumulative exposure (Figure 2 and Figure 3). Both axes are plotted on a common-log scale. The plot is divided into a 4-by-3 grid, which is convenient for interpreting the results with the communities plotted in the lower right-hand corner having the greatest likelihood of burning, but relatively few exposed housing units, while communities in the top left square have the greatest number of housing units and relatively low burn probability. The communities plotted in the middle, far-right squares have some of the highest burn probabilities and a moderate number of housing units exposed. These communities could be further evaluated for wildfire mitigation opportunities to reduce exposure near the homes.

**Landscape-wide sources of housing-unit exposure**

We assessed the relative potential for different parts of the landscape to produce wildfires that expose housing units. That damage potential is a function of spatial variation in fire occurrence and fire growth potential (which is simulated by FSIm), in conjunction with spatial variation in housing-unit count. To do this we summed the number of housing units within each simulated fire perimeter, then attributed the start location of each fire with that number. We then created a smoothed surface that represents the relative annual number of housing units exposed by fires originating across the landscape (Figure 4). Even though a small number of large fires account for the vast majority of wildfire area burned (Strauss and others 1989) it appears that wildfires originating near populated areas are responsible for the vast majority of the housing-unit exposure. The areas of higher exposure-source tend to fall near where communities exist.

**Discussion**

**Spatial inequality in housing-unit exposure to wildfire**

We show results for the 50 most-exposed communities in both Washington and Oregon, but we assessed exposure to all 1,005 named communities across the two states. In Washington, the 50 communities most exposed to wildfire comprise only 12% of the 2,196,244 housing units located on or near burnable land cover in the state. However, those same communities represent roughly 70% of the cumulative housing-unit exposure. In Oregon, the 50 most-exposed communities comprise only 19% of the 1,196,187 housing units located on or near burnable land cover, but 80% of the cumulative housing-unit exposure. Across both states combined, the 100 most-exposed communities comprise 15% of the housing units located on burnable land cover but 76% of the cumulative housing-unit exposure.

These results illustrate an unequal distribution of wildfire exposure among human communities—most of the wildfire exposure occurs in a relatively small number of communities. The unequal distribution suggests that focusing mitigation efforts on the most-exposed communities is likely to result in the greatest benefit.

**Ownership at source locations of housing-unit exposure**

In contrast with other “risk transmission” analyses, we did not focus on the effects of fires originating on any particular land ownership (e.g., USFS land) on housing-unit exposure. Instead, we identified locations with greater potential for reaching housing units using a purely spatial approach. When USFS land ownership is overlaid on this map, it is evident that USFS land is not the dominant contributor to overall housing-unit exposure in the Pacific Northwest. Fires with potential to affect housing units tend
to start near housing units, and the land surrounding housing units is generally not in USFS ownership. Exceptions exist, however. Fires originating on some portions of USFS land ownership, especially east of the Cascade Mountains in Washington, can indeed reach significant numbers of housing units.

More information
The full list of communities in Washington and Oregon and their exposure to wildfire is available here as a Microsoft Excel workbook.

Additional detailed spatial information about wildfire hazard and risk to homes in Oregon can be found at the Oregon Wildfire Risk Explorer.

References


Suggested citation
Figure 1. Annual burn probability across the states of Washington and Oregon and exposed human communities in each state. The 50 most-exposed communities in each state are mapped in dark red. The most-exposed communities tend to be in areas with the highest annual burn probabilities based on the FSim modeling results.
Figure 2. Exposure of Washington communities to wildfire. The 50 most-exposed communities (by cumulative annual housing-unit exposure) are shown as larger gray dots. The top 15 are labeled with the rank and community name. See Table 1 for the names of the remaining top-50 communities. Smaller gray dots represent communities not among the 50 most exposed. Only the 382 communities with a mean burn probability greater than 0.0001 (1 in 10,000) are shown; 245 communities with a lower mean burn probability are not shown. Axes are shown on a common-log scale (base 10).
Figure 3. Exposure of Oregon communities to wildfire. The 50 most-exposed communities (by cumulative annual housing-unit exposure) are shown as larger gray dots. The top 15 are labeled with the rank and community name. See Table 2 for the names of the remaining top-50 communities. Smaller gray dots represent communities not among the 50 most exposed. Only the 244 communities with a mean burn probability greater than 0.0001 (1 in 10,000) are shown; 133 communities with a lower mean burn probability are not shown. Axes are shown on a common-log scale (base 10).
Table 1. The 50 communities in Washington with greatest cumulative housing-unit exposure to wildfire. The "mean of exposed housing units" rank indicates the mean (typical) burn probability of housing units within each community.

<table>
<thead>
<tr>
<th>Community Exposure Ranking</th>
<th>Community Name</th>
<th>Total number of housing units exposed to wildfire</th>
<th>Estimated mean annual number of housing units visited by wildfire</th>
<th>Mean annual burn probability</th>
<th>Burn probability rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leavenworth</td>
<td>4,025</td>
<td>43.5</td>
<td>0.0108</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Ellensburg</td>
<td>12,204</td>
<td>42.3</td>
<td>0.0035</td>
<td>76</td>
</tr>
<tr>
<td>3</td>
<td>Selah</td>
<td>5,873</td>
<td>32.6</td>
<td>0.0056</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Spokane</td>
<td>58,409</td>
<td>26.2</td>
<td>0.0004</td>
<td>165</td>
</tr>
<tr>
<td>5</td>
<td>Wenatchee</td>
<td>11,864</td>
<td>20.4</td>
<td>0.0017</td>
<td>112</td>
</tr>
<tr>
<td>6</td>
<td>Chelan</td>
<td>2,938</td>
<td>20.3</td>
<td>0.0069</td>
<td>37</td>
</tr>
<tr>
<td>7</td>
<td>Goldendale</td>
<td>3,341</td>
<td>17.9</td>
<td>0.0053</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>Tonasket</td>
<td>2,343</td>
<td>17.5</td>
<td>0.0075</td>
<td>28</td>
</tr>
<tr>
<td>9</td>
<td>Cashmere</td>
<td>3,822</td>
<td>17.1</td>
<td>0.0045</td>
<td>62</td>
</tr>
<tr>
<td>10</td>
<td>Omak</td>
<td>4,065</td>
<td>17.1</td>
<td>0.0042</td>
<td>65</td>
</tr>
<tr>
<td>11</td>
<td>Twisp</td>
<td>1,364</td>
<td>16.4</td>
<td>0.0121</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>Deer Park</td>
<td>6,684</td>
<td>16.3</td>
<td>0.0024</td>
<td>96</td>
</tr>
<tr>
<td>13</td>
<td>Clarkston Heights-Vineland</td>
<td>3,198</td>
<td>15.0</td>
<td>0.0047</td>
<td>59</td>
</tr>
<tr>
<td>14</td>
<td>Okanogan</td>
<td>1,947</td>
<td>13.8</td>
<td>0.0071</td>
<td>32</td>
</tr>
<tr>
<td>15</td>
<td>Colville</td>
<td>4,720</td>
<td>13.7</td>
<td>0.0029</td>
<td>87</td>
</tr>
<tr>
<td>16</td>
<td>Cle Elum</td>
<td>1,936</td>
<td>13.7</td>
<td>0.0071</td>
<td>33</td>
</tr>
<tr>
<td>17</td>
<td>Winthrop</td>
<td>1,095</td>
<td>13.3</td>
<td>0.0122</td>
<td>6</td>
</tr>
<tr>
<td>18</td>
<td>Sunnyslope</td>
<td>2,528</td>
<td>12.7</td>
<td>0.0050</td>
<td>58</td>
</tr>
<tr>
<td>19</td>
<td>Brewster</td>
<td>1,973</td>
<td>12.6</td>
<td>0.0064</td>
<td>41</td>
</tr>
<tr>
<td>20</td>
<td>Kittitas</td>
<td>1,952</td>
<td>12.5</td>
<td>0.0064</td>
<td>42</td>
</tr>
<tr>
<td>21</td>
<td>Entiat</td>
<td>1,570</td>
<td>12.3</td>
<td>0.0079</td>
<td>25</td>
</tr>
<tr>
<td>22</td>
<td>Ahtanum</td>
<td>2,318</td>
<td>12.3</td>
<td>0.0053</td>
<td>56</td>
</tr>
<tr>
<td>23</td>
<td>Summitview</td>
<td>1,361</td>
<td>11.5</td>
<td>0.0084</td>
<td>23</td>
</tr>
<tr>
<td>24</td>
<td>Malott</td>
<td>830</td>
<td>10.0</td>
<td>0.0120</td>
<td>8</td>
</tr>
<tr>
<td>25</td>
<td>Manson</td>
<td>1,670</td>
<td>9.3</td>
<td>0.0056</td>
<td>51</td>
</tr>
<tr>
<td>26</td>
<td>Springdale</td>
<td>1,388</td>
<td>9.2</td>
<td>0.0066</td>
<td>40</td>
</tr>
<tr>
<td>27</td>
<td>Thorp</td>
<td>757</td>
<td>8.6</td>
<td>0.0114</td>
<td>9</td>
</tr>
<tr>
<td>28</td>
<td>Asotin</td>
<td>947</td>
<td>8.5</td>
<td>0.0089</td>
<td>18</td>
</tr>
<tr>
<td>29</td>
<td>Riverside</td>
<td>638</td>
<td>8.4</td>
<td>0.0131</td>
<td>2</td>
</tr>
<tr>
<td>30</td>
<td>Republic</td>
<td>1,057</td>
<td>8.3</td>
<td>0.0078</td>
<td>26</td>
</tr>
<tr>
<td>31</td>
<td>Mead</td>
<td>6,614</td>
<td>8.0</td>
<td>0.0012</td>
<td>126</td>
</tr>
<tr>
<td>32</td>
<td>South Wenatchee</td>
<td>2,090</td>
<td>7.8</td>
<td>0.0037</td>
<td>73</td>
</tr>
<tr>
<td>33</td>
<td>White Swan</td>
<td>1,035</td>
<td>7.6</td>
<td>0.0073</td>
<td>29</td>
</tr>
<tr>
<td>34</td>
<td>Inchelium</td>
<td>1,022</td>
<td>7.3</td>
<td>0.0072</td>
<td>31</td>
</tr>
<tr>
<td>35</td>
<td>Oroville</td>
<td>2,317</td>
<td>7.3</td>
<td>0.0031</td>
<td>84</td>
</tr>
<tr>
<td>36</td>
<td>Klickitat</td>
<td>734</td>
<td>7.2</td>
<td>0.0099</td>
<td>13</td>
</tr>
<tr>
<td>37</td>
<td>Yakima</td>
<td>22,047</td>
<td>7.2</td>
<td>0.0003</td>
<td>176</td>
</tr>
<tr>
<td>38</td>
<td>Naches</td>
<td>1,147</td>
<td>7.1</td>
<td>0.0062</td>
<td>44</td>
</tr>
<tr>
<td>39</td>
<td>Ephrata</td>
<td>3,623</td>
<td>6.9</td>
<td>0.0019</td>
<td>108</td>
</tr>
<tr>
<td>40</td>
<td>White Salmon</td>
<td>2,487</td>
<td>6.7</td>
<td>0.0027</td>
<td>91</td>
</tr>
<tr>
<td>41</td>
<td>Othello</td>
<td>3,961</td>
<td>6.5</td>
<td>0.0016</td>
<td>115</td>
</tr>
<tr>
<td>42</td>
<td>Addy</td>
<td>1,157</td>
<td>6.5</td>
<td>0.0056</td>
<td>50</td>
</tr>
<tr>
<td>43</td>
<td>Kennewick</td>
<td>22,660</td>
<td>6.4</td>
<td>0.0003</td>
<td>178</td>
</tr>
<tr>
<td>44</td>
<td>Newport</td>
<td>3,871</td>
<td>6.4</td>
<td>0.0017</td>
<td>114</td>
</tr>
<tr>
<td>45</td>
<td>West Richland</td>
<td>4,889</td>
<td>6.1</td>
<td>0.0013</td>
<td>125</td>
</tr>
<tr>
<td>46</td>
<td>Spokane Valley</td>
<td>30,340</td>
<td>6.0</td>
<td>0.0002</td>
<td>186</td>
</tr>
<tr>
<td>47</td>
<td>Trout Lake</td>
<td>814</td>
<td>5.9</td>
<td>0.0072</td>
<td>30</td>
</tr>
<tr>
<td>48</td>
<td>Cowiche</td>
<td>864</td>
<td>5.8</td>
<td>0.0067</td>
<td>39</td>
</tr>
<tr>
<td>49</td>
<td>Terrace Heights</td>
<td>2,960</td>
<td>5.4</td>
<td>0.0018</td>
<td>109</td>
</tr>
<tr>
<td>50</td>
<td>Gleed</td>
<td>1,557</td>
<td>5.4</td>
<td>0.0035</td>
<td>77</td>
</tr>
</tbody>
</table>
Table 2. The 50 communities in Oregon with greatest cumulative housing-unit exposure to wildfire. The “mean of exposed housing units” rank indicates the mean (typical) burn probability of housing units within each community.

<table>
<thead>
<tr>
<th>Community Exposure Ranking</th>
<th>Community Name</th>
<th>Total number of housing units exposed to wildfire</th>
<th>Estimated mean annual number of housing units visited by wildfire</th>
<th>Mean annual burn probability</th>
<th>Burn probability rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Merlin</td>
<td>4,628</td>
<td>34.2</td>
<td>0.0074</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Redwood</td>
<td>4,451</td>
<td>28.9</td>
<td>0.0065</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>Medford</td>
<td>29,340</td>
<td>26.3</td>
<td>0.0009</td>
<td>128</td>
</tr>
<tr>
<td>4</td>
<td>Bend</td>
<td>41,321</td>
<td>23.4</td>
<td>0.0006</td>
<td>145</td>
</tr>
<tr>
<td>5</td>
<td>Warm Springs</td>
<td>1,362</td>
<td>23.0</td>
<td>0.0169</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Eagle Point</td>
<td>4,443</td>
<td>21.3</td>
<td>0.0048</td>
<td>45</td>
</tr>
<tr>
<td>7</td>
<td>Redmond</td>
<td>13,005</td>
<td>21.3</td>
<td>0.0016</td>
<td>103</td>
</tr>
<tr>
<td>8</td>
<td>Grants Pass</td>
<td>14,718</td>
<td>20.6</td>
<td>0.0014</td>
<td>108</td>
</tr>
<tr>
<td>9</td>
<td>Ashland</td>
<td>9,853</td>
<td>19.5</td>
<td>0.0020</td>
<td>90</td>
</tr>
<tr>
<td>10</td>
<td>Prineville</td>
<td>9,285</td>
<td>17.7</td>
<td>0.0019</td>
<td>92</td>
</tr>
<tr>
<td>11</td>
<td>New Hope</td>
<td>2,616</td>
<td>17.7</td>
<td>0.0067</td>
<td>25</td>
</tr>
<tr>
<td>12</td>
<td>Terrebonne</td>
<td>3,353</td>
<td>16.6</td>
<td>0.0050</td>
<td>43</td>
</tr>
<tr>
<td>13</td>
<td>Williams</td>
<td>1,481</td>
<td>15.4</td>
<td>0.0104</td>
<td>9</td>
</tr>
<tr>
<td>14</td>
<td>Cave Junction</td>
<td>2,049</td>
<td>15.2</td>
<td>0.0074</td>
<td>20</td>
</tr>
<tr>
<td>15</td>
<td>Wimer</td>
<td>1,617</td>
<td>14.8</td>
<td>0.0091</td>
<td>13</td>
</tr>
<tr>
<td>16</td>
<td>Gold Hill</td>
<td>2,576</td>
<td>14.8</td>
<td>0.0057</td>
<td>35</td>
</tr>
<tr>
<td>17</td>
<td>Chenoeweth</td>
<td>1,650</td>
<td>14.8</td>
<td>0.0090</td>
<td>15</td>
</tr>
<tr>
<td>18</td>
<td>Talent</td>
<td>4,138</td>
<td>12.5</td>
<td>0.0030</td>
<td>71</td>
</tr>
<tr>
<td>19</td>
<td>Central Point</td>
<td>6,282</td>
<td>12.4</td>
<td>0.0020</td>
<td>91</td>
</tr>
<tr>
<td>20</td>
<td>Sisters</td>
<td>3,336</td>
<td>11.3</td>
<td>0.0034</td>
<td>67</td>
</tr>
<tr>
<td>21</td>
<td>Tumalo</td>
<td>3,119</td>
<td>11.2</td>
<td>0.0036</td>
<td>62</td>
</tr>
<tr>
<td>22</td>
<td>Selma</td>
<td>1,055</td>
<td>10.1</td>
<td>0.0096</td>
<td>12</td>
</tr>
<tr>
<td>23</td>
<td>Jacksonville</td>
<td>2,132</td>
<td>10.1</td>
<td>0.0047</td>
<td>47</td>
</tr>
<tr>
<td>24</td>
<td>Rogue River</td>
<td>2,189</td>
<td>10.1</td>
<td>0.0046</td>
<td>49</td>
</tr>
<tr>
<td>25</td>
<td>Klamath Falls</td>
<td>12,620</td>
<td>9.9</td>
<td>0.0008</td>
<td>134</td>
</tr>
<tr>
<td>26</td>
<td>Madras</td>
<td>4,408</td>
<td>9.9</td>
<td>0.0022</td>
<td>82</td>
</tr>
<tr>
<td>27</td>
<td>Ruch</td>
<td>1,463</td>
<td>9.7</td>
<td>0.0067</td>
<td>26</td>
</tr>
<tr>
<td>28</td>
<td>Phoenix</td>
<td>3,346</td>
<td>9.5</td>
<td>0.0028</td>
<td>75</td>
</tr>
<tr>
<td>29</td>
<td>White City</td>
<td>4,186</td>
<td>9.4</td>
<td>0.0022</td>
<td>83</td>
</tr>
<tr>
<td>30</td>
<td>Ontario</td>
<td>6,086</td>
<td>8.8</td>
<td>0.0015</td>
<td>106</td>
</tr>
<tr>
<td>31</td>
<td>Glendale</td>
<td>1,356</td>
<td>8.8</td>
<td>0.0065</td>
<td>28</td>
</tr>
<tr>
<td>32</td>
<td>Shady Cove</td>
<td>1,804</td>
<td>8.6</td>
<td>0.0048</td>
<td>46</td>
</tr>
<tr>
<td>33</td>
<td>Burns</td>
<td>1,778</td>
<td>7.9</td>
<td>0.0044</td>
<td>51</td>
</tr>
<tr>
<td>34</td>
<td>La Pine</td>
<td>6,357</td>
<td>6.7</td>
<td>0.0011</td>
<td>120</td>
</tr>
<tr>
<td>35</td>
<td>Eagle Crest</td>
<td>1,565</td>
<td>6.6</td>
<td>0.0042</td>
<td>53</td>
</tr>
<tr>
<td>36</td>
<td>Takilma</td>
<td>532</td>
<td>6.0</td>
<td>0.0112</td>
<td>8</td>
</tr>
<tr>
<td>37</td>
<td>The Dalles</td>
<td>6,032</td>
<td>5.0</td>
<td>0.0008</td>
<td>132</td>
</tr>
<tr>
<td>38</td>
<td>Odeli</td>
<td>2,239</td>
<td>5.0</td>
<td>0.0022</td>
<td>84</td>
</tr>
<tr>
<td>39</td>
<td>Halfway</td>
<td>619</td>
<td>4.9</td>
<td>0.0079</td>
<td>16</td>
</tr>
<tr>
<td>40</td>
<td>La Grande</td>
<td>5,426</td>
<td>4.1</td>
<td>0.0008</td>
<td>138</td>
</tr>
<tr>
<td>41</td>
<td>Foot Creek</td>
<td>683</td>
<td>4.1</td>
<td>0.0060</td>
<td>31</td>
</tr>
<tr>
<td>42</td>
<td>Culver</td>
<td>1,207</td>
<td>3.9</td>
<td>0.0033</td>
<td>69</td>
</tr>
<tr>
<td>43</td>
<td>Trail</td>
<td>763</td>
<td>3.9</td>
<td>0.0052</td>
<td>41</td>
</tr>
<tr>
<td>44</td>
<td>Mount Hood</td>
<td>664</td>
<td>3.8</td>
<td>0.0058</td>
<td>34</td>
</tr>
<tr>
<td>45</td>
<td>Elgin</td>
<td>997</td>
<td>3.5</td>
<td>0.0036</td>
<td>63</td>
</tr>
<tr>
<td>46</td>
<td>Mitchell</td>
<td>310</td>
<td>3.5</td>
<td>0.0114</td>
<td>7</td>
</tr>
<tr>
<td>47</td>
<td>Hines</td>
<td>970</td>
<td>3.4</td>
<td>0.0035</td>
<td>65</td>
</tr>
<tr>
<td>48</td>
<td>Butte Falls</td>
<td>560</td>
<td>3.3</td>
<td>0.0059</td>
<td>33</td>
</tr>
<tr>
<td>49</td>
<td>Prairie City</td>
<td>650</td>
<td>3.3</td>
<td>0.0050</td>
<td>21</td>
</tr>
<tr>
<td>50</td>
<td>Pendleton</td>
<td>6,215</td>
<td>3.2</td>
<td>0.0005</td>
<td>29</td>
</tr>
</tbody>
</table>
Figure 4. Sources of housing-unit exposure to wildfire across Washington and Oregon and exposed communities across the two states. The fifty most exposed communities in each state are shown in dark red, the remaining communities in gray. Dark blue areas of the map tend to produce greater annual housing-unit exposure.
To: Deschutes County Commissioners and Planners

Fm: Brendon and Shannon Hirschberg

Re: Rezoning EFUTRB land

In 1972 Legislative action passed Planning Goals regarding Agricultural Lands, Section 2.2, that created protection for farm lands to advance the economic benefits of agriculture. Unfortunately, these broad statutes were not based on good science and were applied inappropriately to all lands that were “non-urban, non-forest, undeveloped and uncommitted” which were declared to be farmlands and zoned EFU. Most of these lands in south Deschutes County do not allow viable farming activity.

This draconian classification with its stringent requirements has led to hardships on the current owners and paradoxically will result in exactly what it was meant to prevent. Self-appointed “Watch Dog organizations” have taken upon themselves to be the judge of what is best for everyone in Oregon by enforcing through litigation these archaic designations rather than correcting the problems.

These organizations, ironically, share the same goals as the land owners: to reduce density, maintain rural lifestyles, maintain agricultural pursuits, and be good stewards of the land, wildlife, and water. Unfortunately, although our goals are similar, these aggressive organizations have not recognized that the path to these goals has changed! We need a new solution due to new economics. Following the old laws will actually have the exact opposite effect and reduce the chance of success to our goals.

Even in a 1992 Farm Study it was noted that farm land needed to be 80 acres to be economically viable, with the EFU designation at a minimum of 20/23 acres. Now, 25 years later, the economics have worsened. In the under-80-acres category, ALL farms run at a loss and are limited in viability by the depth of the owner’s pockets. The rural designations of RR10 and MUA10 have the best chance of sustainability, simply because more owners can afford the losses and continue to maintain the land. The alternative is a downward spiral of aging owners with fixed incomes and unprofitable farms facing ever increasing costs. Eventually this leads to abandonment of our goals, loss of water rights, deterioration of the property and decreasing land values.

Allowing EFU-zoned lands which are close to city boundaries, and other RR or MUA zoned properties, to be granted a Zone change will solve these problems. Cities can have a low-density “buffer area” between city densities and large farms, owners can enjoy rural lifestyles, small Agri-businesses will thrive, the owners can afford long-term maintenance, with preservation of land value. The cities profit from a better tax base and the ability to attract new citizens, and ease of eventual expansion.

For these reasons, we urge you to work toward “a more flexible land use system that responds to regional variations” for your Amended Comprehensive Plan. This EFU rezoning proposal will allow Deschutes County to move forward in a way that responds to current reality.

Thank you for your consideration,

Brendon and Shannon Hirschberg
This map is for info purposes only as requested by Deschutes County Planning Commission. For more information see June 13 staff memo.

Taxlots: 2,774
Acres: 23,663
Hello-

Thanks again for your interest in evaluating some additional data regarding Goal 5 resources for the Nonprime Resource Lands proposal and the hearing set for June 13. ODFW is hopeful that this can initiate a broader conversation about using the best available data in the county’s land use decisions to evaluate conflicting uses to wildlife resources of the state. As I mentioned, we are working internally to compare the current Goal 5 overlays with our best available data, including highlighting some data gaps and opportunities for additional considerations, but this analysis is not complete. For example, we coordinate with our federal partners for the migratory bird datasets and there are some golden and bald eagle nest sites, as well as some documented bat roosting sites, that do not seem to be covered in the county’s current Sensitive Bird and Mammal Habitat Combining Zone. Our GIS Conservation Coordinator, Arthur Rodriguez, is evaluating these datasets, and he’s included on this email. Please let us know if you have questions or need further clarification as you prepare your analysis/maps.

Below are the links to the some of the available data sets to consider, however, it is important to note that this list is not inclusive of all Goal 5 categories. For example, we did not include an updated data layer for wetlands, or other aquatic resources (e.g., fish distribution), and many of the existing natural resource datasets are a result of collaborating with multiple partners. ODFW is not recommending that any of the existing Goal 5 overlay protections be removed, or that these datasets take priority over existing Goal 5 protections. With that said, we do recommend the county coordinate with ODFW and other partners to integrate these datasets into county land use decisions and update the inventories in a collaborative process.

**Big Game Habitat:**
Eastern Oregon Big Game Habitat is comprised of two datasets: Eastern Oregon Deer Winter Range and Eastern Oregon Elk Winter Range. Winter range is a subset of the habitat needs for big game. Deer Winter Range includes a single set of polygons which encompass the general outline of deer winter range for eastern Oregon, east of the crest of the Cascades. ODFW considers Winter Range to be that area normally occupied by deer from December through April. Utilizing the most recent big game data would help support the life history needs for big game and avoid or minimize conflicts with increased development densities. Please see the map rationale link in the link below, as well as the GIS dataset:

**Sage-Grouse Habitat:** Here is the dataset for Core Habitat:

This following two additional links are useful when evaluating projects within Sage-Grouse Habitat. The Sage-Grouse Data Viewer provides information about the current vegetative condition, existing development, restoration potential, development potential, and other data within sage-grouse habitat. :
[https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=sage_grouse_dev_siting](https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=sage_grouse_dev_siting) is a useful tool for applicant’s to consider siting projects to avoid and/or minimize impacts to sage-grouse.
**Conservation Opportunity Areas (COA):** These areas were identified during the 2016 Oregon Conservation Strategy revision, as places where broad fish and wildlife conservation goals would best be met in the state. COAs are generally either areas of high biodiversity, areas with unique habitat values, or areas with known restoration needs. Deschutes County has several COAs, with some mix of public and private ownership. For example, you can read more about the Little Deschutes COA here, which does have some scattering of private parcels: [http://oregonconservationstrategy.org/conservation-opportunity-area/little-deschutes-river/](http://oregonconservationstrategy.org/conservation-opportunity-area/little-deschutes-river/)

Here is a link to all the available GIS data for COAs: [https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=897.xml](https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=897.xml)

Here is a link that will highlight just those COAs that fall within Deschutes County (and the link to take you to the COA profiles): [http://compass.dfw.state.or.us/visualize/#x=-120.83&y=43.94&z=9&logo=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=549&dls%5B%5D=true&dls%5B%5D=0.94&dls%5B%5D=570&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=546&dls%5B%5D=true&dls%5B%5D=0.99&dls%5B%5D=627&basemap=ESRI+Satellite&themes%5B%5D=33&themes%5B%5D=39&tab=active&print=false](http://compass.dfw.state.or.us/visualize/#x=-120.83&y=43.94&z=9&logo=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=549&dls%5B%5D=true&dls%5B%5D=0.94&dls%5B%5D=570&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=546&dls%5B%5D=true&dls%5B%5D=0.99&dls%5B%5D=627&basemap=ESRI+Satellite&themes%5B%5D=33&themes%5B%5D=39&tab=active&print=false)

**Strategy Habitat and Strategy Species:** The 2016 Oregon Conservation Strategy identifies 11 Strategy Habitats which focus on native habitats of conservation concern that are essential to many Strategy Species within the state. Strategy Species identifies 294 species of greatest conservation need and are defined as having small or declining populations, are at-risk, and/or are of management concern. For each Strategy Habitat and Strategy Species, information is provided in the Strategy that includes a conservation overview, data gaps, limiting factors to the species or habitat, recommended conservation actions, and available resources. To support the 10 year Oregon Conservation Strategy revision in 2016, the Institute for Natural Resources (INR) Oregon Biodiversity Information Center (ORBIC) at Portland State University was contracted to use best available data and analyses to update the mapped extent and distribution of the Oregon Conservation Strategy Habitats. The objective was to comb existing data sources and use the most up-to-date and highest resolution maps available in Oregon for each Strategy Habitat, within their associated ecoregion. The results of this effort are presented in this Strategy Habitat dataset as a 30m pixel raster grid. Strategy Habitats are useful tools to identify where potential rural resource lands may have conflicting uses with habitat that support sensitive fish and wildlife habitat (e.g., Strategy Species), and can be a useful dataset to supplement and inform the species/habitat to protect for the Sensitive Bird and Mammal Habitat Combining Zone. Here is the link: [https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=892.xml](https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=892.xml)

**OR Spotted Frog Critical Habitat:** Given that critical habitat has been identified in Deschutes County, here is a link to that dataset: [https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02A](https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02A)

You likely have seen this, but I also wanted to highlight the recent DLCD Rural Resource Lands report. ODFW coordinated with DLCD for recommendations related to fish and wildlife habitat, so this may be a helpful overview as well: [https://www.oregon.gov/lcd/Commission/Documents/2019-05_Item_6_Attch_A_Report.pdf](https://www.oregon.gov/lcd/Commission/Documents/2019-05_Item_6_Attch_A_Report.pdf)

Thanks again for your consideration and we look forward to continuing to work with the county on the Nonprime Resource Lands proposal, and hopefully on the opportunity to update to Goal 5. We understand the short timeframe prior to June 13 hearing, but please let us know if you would like to discuss anything further or if you have any questions.

Joy Vaughan  |  Land Use and Waterway Alterations Coordinator  
ODFW Wildlife Division  
503-947-6089 office  |  503-949-3796 cell  
joy.r.vaughan@state.or.us  
[www.dfw.state.or.us](http://www.dfw.state.or.us)
Check out the Oregon Conservation Strategy! http://www.oregonconservationstrategy.org/

From: Joy R Vaughan  
Sent: Monday, June 03, 2019 8:32 AM  
To: 'Zechariah Heck' <Zechariah.Heck@deschutes.org>  
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Morning, Zechariah,

Thanks for your email. We are working internally on compiling some of our data and evaluating some of the priority areas that we could highlight for the county to consider. However, due to the timing, we likely won’t have this analysis ready by Tuesday. With that said, I will be sending you the links to our available data for you (or Tim) to overlay later today.

Thanks and I’ll be in touch soon,

Joy

From: Zechariah Heck <Zechariah.Heck@deschutes.org>  
Sent: Friday, May 31, 2019 12:20 PM  
To: 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>  
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Hi Joy,

I want to check in regarding the maps/spatial data. Do you think that you can provide us with the info by Monday? If we are going to provide the data to the Planning Commission, we will need the info by Tuesday, EOD, at the latest.

Please be in touch if you have any questions.

---

Disclaimer: Please note that the information in this email is an informal statement made in accordance with DCC 22.20.005 and shall not be deemed to constitute final County action effecting a change in the status of a person's property or conferring any rights, including any reliance rights, on any person.

From: Joy R Vaughan <Joy.R.Vaughan@state.or.us>  
Sent: Tuesday, May 28, 2019 9:31 AM  
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>; 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>  
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us>  
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Thanks for your email, Peter. We greatly appreciate the interest for additional discussion related to Goal 5 from the Planning Commission. I will follow up with our District staff this week, and we will be in touch soon on the next steps for providing the county with updated data.
Best,

Joy

---

From: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Sent: Friday, May 24, 2019 12:36 PM
To: 'Joy R Vaughan' <Joy.R.Vaughan@state.or.us>
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us> <corey.heath@state.or.us>; Zechariah Heck <Zechariah.Heck@deschutes.org>; Tim Berg <Tim.Berg@deschutes.org>
Subject: RE: Deschutes County Nonprime Resource Lands Proposal

Joy,

I just left you a voice message. The Planning Commission appreciated your letter last night. They respectfully requested updated wildlife habitat inventories from ODFW for rural Deschutes County. Is it possible to send those inventories as spatial shape files? If so, please send them to Tim Berg, who is cc’d with this email. Staff will overlay the updated inventories in relationship to our Wildlife Area, Sage Grouse, and Sensitive Bird and Mammal Combining Zones for the Planning Commission’s June 13 public hearing.

---

From: Joy R Vaughan <Joy.R.Vaughan@state.or.us>
Sent: Thursday, May 23, 2019 3:04 PM
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Cc: EDELMAN Scott <scott.edelman@state.or.us>; JININGS Jon <jon.jinings@state.or.us>; MURPHY Tim <timothy.murphy@state.or.us>; Sara C Gregory <Sara.C.Gregory@state.or.us>; Corey Heath <corey.heath@state.or.us> <corey.heath@state.or.us>; Zechariah Heck <Zechariah.Heck@deschutes.org>
Subject: Deschutes County Nonprime Resource Lands Proposal

Good Afternoon,

Thank you for taking the time yesterday to discuss Deschutes County’s Nonprime Resource Lands proposal. As we discussed, ODFW invites additional coordination with the County to better understand the proposal, especially for the Committed Residential Use Policies. We would appreciate further discussion to explore opportunities to find collaborative solutions to address conflicting uses to fish, wildlife and their habitats.

I sincerely apologize for the late submittal of the attached comments. Please enter them into the record for the hearing tonight. Thank you for the consideration of these comments.

Joy Vaughan | Land Use and Waterway Alterations Coordinator
ODFW Wildlife Division
503-947-6089 office | 503-949-3796 cell
joy.r.vaughan@state.or.us
www.dfw.state.or.us
Check out the Oregon Conservation Strategy! http://www.oregonconservationstrategy.org/
Hello Commissioners Crawford, Kirby, Swisher, Beeger, Palcic, Kieras and Hudson,

I am strongly opposed to the nonprime resource lands amendments. I run a local Engineering company who helps consult with building planning and development. We pay close attention to the costs and effects of sprawl and are convinced that weakening protections for agricultural lands will enable the wrong type of development for Central Oregon. You don't have to look far into other jurisdictions to see how pro-sprawl-development has changed the livability and quality of life for those areas (not to mention increase costs/strain on infrastructure resources.)

Thank you,

John Fischer, PE
From: Peter Gutowsky
Sent: Tuesday, June 04, 2019 2:43 PM
To: Zechariah Heck
Subject: FW: N.E Bend EFU "Farmland" is actually a rock pile with a bit of sand- did you know?

Please enter into the record.

From: Ham Corter <hamcorter@gmail.com>
Sent: Tuesday, June 4, 2019 2:38 PM
To: Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Subject: N.E Bend EFU "Farmland" is actually a rock pile with a bit of sand- did you know?

Mr. Gutowsky,

Thanks for serving, it may make my land value plummet or rise- I do not know, but it will help the homeless problem when more housing is allowed.

Please check with Jim Clinton, former Mayor, as he told me (a better source can hardly be imagined) that Crater Lake (Mt. Mazama) blew up 7,760 years ago, dropping 18 inches of ash on Central Oregon. If not for this 18 inches of sand, N.E. of Bend, much of Central Oregon, would look like the lava-scape near Lava Butte BECAUSE Lava Butte blew up AFTER Crater lake blew up.

I sincerely believe basic facts of geology are entirely missed by State officials- and there is apparently no one locally to promote the good result of preserving farmland while not choking Bend into bloated land, utility, service, protecting sandy rock piles that are perfect for single family homes with an acre or few.

To avoid destabilizing land values, respectfully recommend EFU lots each get one CUP for one more single family dwelling. This is fair, keeps many dynamics stable (roads, electricity, well water) and spreads the growth somewhat evenly. It must be added proximity to power, roads, cities, are necessary dynamics to this recommendation.

There are two other dynamics I would like to respectfully offer for your examination and confirmation....

1) The water table is roughly 600-700 feet down- leach fields, so demonized, EVAPORATE upwards. Therefore, drain fields are uniquely suited to the low spots that 18 inches of Crater Lake ash blew into. As the lava rock piles stick up, there are wondrous sandy-ash in the nearby depressions almost everywhere. One cannot imagine better sites for leach fields, drain fields.
2) If Deschutes County allows 2 to 7 acre lots, on sandy, EFU, rock piles such as N.E. Bend, it MAY NOT lower or slow land price bloat, but it WILL bring investment by persons that are not poor, near bankrupt. This fortifies the Deschutes County tax base- the opposite of creating homelessness by falsely creating a lack of homes to save sandy rock piles as if farmland were a real option in these parts. The farm-able zones are very easy to spot- they have irrigation, are green, grow something, do not have rock piles sticking up every hundred or so feet.

I watch neighbors illegally place families and housing on 4 acre lots recently, I spent 20 years paying property taxes and not renting out illegal homes. I would not be in debt if breaking the law as is now openly done. I pay about 4,000 dollars a year for a wonderful, sandy, rock pile zoned EFU I can hardly do anything with- neighbors will force me to pave a mile long road I have maintained and improved (10-20,000 spent) for about 20 years now. I am not rich, not middle class, just planned way, way, ahead.

My days openly fighting for intelligent growth in Central Oregon are over- found out how mean things get if not embracing the status quo. You may, however, use this message to explain how much opportunity there is, like a bow pulled way, way, back, for the arrow of truth to pierce the poverty guilt trips that disable Central Oregon.

Notice the guilt-games caused Bend UGB to sit out an entire Boom-Bust cycle- 2005 to 2016? Deschutes County can accommodate the lack of available housing by letting EFU zoned sandy rock piles near towns, lacking irrigation and soil, get a CUP for a second single family dwelling.

Ham
To:  Zechariah Heck, Associate Planner  
    Deschutes County Community Development

From:  Don & Joann Jacobs

We applaud Deschutes County for addressing the archaic State Land Use Planning Goals regarding Agricultural Lands, Section 2.2. These laws were created to protect farm lands and the economic benefits of agriculture.

Proposal 1: Approve

Proposal 2: Too restrictive.

Does not address property owners who wish to downsize and have the ability to sell a portion of their land.

We propose:

Proposal 3. SOME EFUTRB is Non-Prime Resource Land.

Just because a EFUTRB has water or it has been farmed does not make it a Resource land. We think the county needs to address the smaller acreage Non-Economic EFUTRB PARCELS of 20 acres or less. These EFU parcels are mostly homeowners of what appears as larger RR10 or MUA10 land.

The county needs to understand small acreage farms in Deschutes County are mostly Non-Resource lands because even if you did not consider the Cost of the Land, Cost of the Equipment, Cost of Water, Cost of Electric Power to Irrigate, Cost of Fertilizer, Cost of Labor you can not have a economically sustainable farm. Farming small acreage does not make a profit or contribute to the economy of Deschutes County or the State of Oregon.

Most of the landowners surrounding our EFU land near the area of Tekampe Rd & Knott RD, are RR10 & MUA10. Like us, they are using water from Arnold Irrigation to keep their fields green and keep their water rights.

Oregon Rural Residential land is attractive. We would like the county to address the ability to re-designate the zoning on these lands to Rural Residential. Designating these smaller EFU parcels into smaller Rural Residential parcels will benefit both the County and the State with added tax revenue and still provide Oregon rural lifestyle.
Zechariah Heck

From: Joann Jacobs <joann@cascadeviewranch.com>
Sent: Thursday, May 30, 2019 2:40 PM
To: Zechariah Heck
Subject: Re: Non Prime Resource Land zoning

Zechariah,

Thank you for taking the time to give us a call.

We have always considered us a 'Nonprime Resource Land' because we have never made any profit from farming and found our soils to be non-productive, even though we could make our fields turn green.

We find the new zoning NPR 10 & NPR 20 to be prohibitive and perhaps suggest a 3rd zone for EFU home owners located within a particular distance from City development or UGB. That is homeowners, not farmers, that have been using water from Arnold Irrigation along with our RR10/MUA10 neighbors to keep our property green.

Don is in the process of sending you a formal letter to add to your comments. We understand time will be of the essence.

Thank you again for your response and taking the time to listen to our plea.. We are one of many on Tekampe Road/Sholes Road that feel this way.

Sincerely,
Don & Joann Jacobs

On May 30, 2019, at 12:51 PM, Zechariah Heck <Zechariah.Heck@deschutes.org> wrote:

Don and Joann,

Thank you for providing your comments on the Nonprime Resource Lands amendments. I hope I was able to answer your questions during our phone call.

Zechariah Heck | Associate Planner
DESHUTES COUNTY COMMUNITY DEVELOPMENT
117 NW Lafayette Avenue | Bend, Oregon 97703
PO Box 6005 | Bend, Oregon 97708
Tel: (541) 385-1704 | www.deschutes.org/cd

Disclaimer: Please note that the information in this email is an informal statement made in accordance with DCC 22.20.005 and shall not be deemed to constitute final County action effecting a change in the status of a person's property or conferring any rights, including any reliance rights, on any person.
To: Zechariah Heck <Zechariah.Heck@deschutes.org>
Subject: Non Prime Resource Land zoning

Zechariah,

We attended your meeting on May 23rd. We also heard the comments from organizations & citizens not wanting to address any changes to the zoning… We feel differently.

We are 4 home owners, not farmers, on EFU zoned land. We are all in our 80’s. We all need to downsize our work load on these properties. We have lived here many years and Do Not want to leave our home where we have lived in a long time and we, specifically, the last 26 years.

We see the zoning of our adjacent neighbors (RR10/MUA10) and would like to change our zone. We would like the ability to sell a portion of our land. This would alleviate some of our ‘work load’ and provide us with income that we may need for our future.

We are so close to the City of Bend and the UGB. All of these lots are with in 1 mile of the UGB.

Is there any plan or action that the City of Bend, County of Deschutes, or the State of Oregon could initiate that would allow us to change our zone?

We are not contributing to the economy of Deschutes County by farming… We only contribute by paying our taxes.

Please help us change our zone and allow us to sell off some of this work.

I have attached maps that show adjacent RR10/MUA10 zoning around our lots and another map that shows the proximity to our properties and the City of Bend and the UGB.

Sincerely,
Don & Joann Jacobs
541-419-4438
FW: I oppose residential/ commercial development in rural Deschutes Co.

To: Zechariah Heck

From: Ashley Williams

Sent: Friday, May 31, 2019 7:18 AM

Subject: FW: I oppose residential/ commercial development in rural Deschutes Co.

Disclaimer: Please note that the information in this email is an informal statement made in accordance with DCC 22.20.005 and shall not be deemed to constitute final County action effecting a change in the status of a person's property or conferring any rights, including any reliance rights, on any person.

-----Original Message-----
From: Kermit Williams <kermit.donna@gmail.com>
Sent: Thursday, May 30, 2019 10:29 PM
To: Planning Commission <PlanningCommission@deschutes.org>
Cc: Kermit and Donna <kermit.donna@gmail.com>
Subject: I oppose residential/ commercial development in rural Deschutes Co.

To the Deschutes Co. Planning Commission:

As a resident of Deschutes Co., I strongly oppose the Planning Commission's leaning towards allowing commercial and residential development of agricultural land. Since moving to Deschutes Co. I have seen the "death by a thousand cuts" of the laws that were set to prevent rampant development and sprawl in the county. There seems to be only the goal of the Planning Dept. to weaken rules protecting strict zoning of land for exclusive farm use. Agricultural land obviously has been set aside for the use of farming and ranching, but developers have used their clout to create undue pressure on established laws to ignore or weaken them in the name of money.

In the 2006-07 era, there was the push of developers to create destination resorts in every corner of the county making rampant development plans appear like a malignant cancer. They tried to circumvent state laws governing Destination Resorts, making these "resorts" to be no more than expansion of suburbs, all the while so not to have to pay the SDC's required for a suburban development. The resorts also tried to build on agricultural land, esp. in the Powell Butte area. Friends of mine who owned ranch land there fought this and were able to change the destination resort mapping for Crook Co. through a ballot measure. Destination resorts also were flatly ignoring the law requiring them to build a certain number of lodging rooms for rent based on the number of homes to be built. Many got away with not meeting this requirement for years.

My other top complaint and opposition to expansion into EFU zones, is that EFU land provides valuable wildlife habitat. As a member of multiple conservation groups which advocate for wildlife and preservation of their habitat and connectivity, I cannot stress enough how much the Planning Dept. And Deschutes Co. Commissioners have ignored this threat to wildlife. There were laws that were ripped apart that protected winter range habitat for deer. Certain types of development were not allowed within deer winter range, including churches. The ignoring of this rule led to the allowing of a church to conduct wedding venues within protected winter deer range. There are only three designated
winter deer ranges in Deschutes Co. and with mule deer at only 50% of their sustainability (you can verify this figure with ODFW wildlife biologists), any weakening of protections can be a severe threat to their survival. Another example of changing the rules to the benefit of developers involved the allowing of illegally permitted water ski lakes that were excavated without permits, in addition to giving the go-ahead for the development of high end homes surrounding these "lakes" within the Tumalo winter deer range, again destroying important life-saving habitat. People often say that they move to Deschutes Co. not only to be close to outdoor recreation but also to be able to view and enjoy wildlife close-up. What will you say to these people when you have taken away all the habitat for wildlife to thrive, leaving residents with only a view of more homes, and more commercial buildings? I think the negative risks of a breakdown of protections for EFU zoning far outweigh any of the "positive" gains that only developers can see through their greedy eyes.

Sincerely,
Donna Harris

Sent from my iPad
May 29, 2019

To: Mr. Nick Lelack
    Mr. Peter Gutowsky
    Mr. Zechariah Heck

From: Jack Godard

RE: Nonprime Resources Land – Planning Commission Hearing May 23, 2018

Gentlemen, thank you for your patience with my involvement in the non-prime resource discussion that Deschutes County is facilitating. I hope my enthusiasm in trying to ensure that the right decision is made is not misinterpreted.

Realizing that the proper protocol at our last public hearing was to submit copies of one’s oral testimony, I have attached mine for your inclusion in to the record.

I look forward to seeing the results of the “conceptual mapping” that was suggested at last week’s meeting. I do realize, as Mr. Gutowsky stated, it is not the intent of the County to map property as part of this planning effort.

If the mapping results, no matter how fluid, are available prior to the next hearing on June 13th, I would be interested in seeing these ahead of the hearing. I personally, do not have any interest in the historical search of the “six committed areas.”

Again, thanks for your patience and insights, look forward to seeing you in a couple of weeks.

Sincerely,

Jack

Jack Godard
69710 Lake Drive
Sisters, Oregon

whychus@gmail.com
May 23, 2019

To: Deschutes County Planning Commission
    Deschutes County Department of Community Development

From: Jack Godard

RE: Godard presentation @ Nonprime Resource Lands Planning Commission Hearing

Good evening, Chairman Crawford & members of the commission, my name is Jack Godard.

Thank you for inviting me to speak tonight. Also thank you for your service on the Planning Commission.

I have met and spoke with members of this commission and staff on a couple of occasions. I am here tonight to continue this dialogue.

The purpose of my testimony is to request that if Deschutes County, and this Planning Commission is committed to protecting agricultural and forest lands, that you forward a recommendation to the Board of County Commissioners not to proceed with this project. A project to amended the Deschutes County Comprehensive Plan, to establishes criteria for “Non-Resource” lands within agricultural and forest lands of Unincorporated Deschutes County.

There are five (5) components to my request that I would like for you to consideration:

- The outcome of this process “at the citizen level”, has (seems to have) been predetermined.
- There has not been a good faith effort to communicate the true implications of this project to the citizens of Deschutes County.
- A framework does not exist for identifying and analyzing the internal and external factors that can have an impact on the viability or legality of this project.
- There are deficient criteria for proposed future application of NPR 20.
- Misguided prioritization of resources to accomplish this project.

Cui bono, ...who’s to benefit?
1. We became aware of this effort by reading a small article in the newspaper, announcing an open house in Sisters to discuss the county’s proposed fix to an error in land use designation. After coffee, tea, cookies…. we soon found out that this was not a work shop, or charrette, or attempt to solicit suggestions or improvements, it was a defensive presentation, that check the box as public involvement. It appears that this effort is trying to take cover behind innocent folk’s subject to a “misfortunate error”, while loosening the protection of farm & forest lands. You pick the idiom, mine is “A wolf in sheep's clothing”.

I started my quest to find out what going on. Yes, I am late to this party, and I am no land use expert…. this has been going on for over 5 years, and there is lots for me to learn....

- There is the Southern Oregon County Pilot project, I ask, is there any discussion or findings as to how this project might relate to your efforts?
- In 2018 Douglas County amended its comprehensive plan. Proposing some 3500 acres or more as non-resource. In December 2018 (?) Deschutes County sent a letter supporting Douglas County’s efforts, indicating their intent to implement a similar amendment.
- Is this Citizen Involvement (Goal 1), or has this cake has been baked, frosted & just waiting to light the candles?

2. What are the implications of this project? At the meeting on April 25th, I asked specific question about:

- If NPR-10 & 20 are approved, what’s the zoning going to look like?
- Where will the NPR-20 land uses be applied? Have you identified candidate lands?
- The response I received, “that’s the next step”, the next box to check. Is this a divide and conquer strategy?
- a. Even the outlaw Douglas County, had the wherewithal to prepare exhibits showing within the Comprehensive Plan suggested application & zoning standards. (Attached mapping exhibit from Douglas County Comp Plan.)
- b. What is being communicated is “we are just trying to fix a misfortunate error” .... But put an exhibit like this (the Douglas County map) in to the Bulletin, Source, Nugget, Central Oregon News daily, Channel 21, .... see what kind of public input you will receive!
3. Before you embarked on this project, was a framework identifying and analyzing the internal and external factors that can have an impact on the project’s viability prepared?
   a. Does this exist? So, what are the strengths, weaknesses, threats... how much time & money, and county resources will this effort take? Has this been quantified? If so, can we see a copy?
   b. Douglas County Comp Plan amendment has a LCDC hearing is on June 18th, what can we learn there? Is there a decision point in the process to re-evaluate?

4. I am not a rural land use expert; but my read of the proposed criteria to permit or deny future NPR land uses in the Forest lands, appears to ignore the benefits large parcel Forest land provides.
   a. I also don’t see the documentation or provisions that provide adequate:
      i. Ag Land protection
      ii. Forest Land Protection
      iii. Goal 5 resource protection
      iv. Wildfire Protection
   b. At our April 25th “open house”, there were promises and assurances that:
      i. Four walls would be built
      ii. Not a hair of the camel would enter the tent
   c. I don’t see it.....If this was true, wouldn’t we see some form of mechanism that not only protects agricultural and forest lands, but go a step further and enhances it. You are familiar with wetlands mitigation banking? You know how it might go, you remove an acre, you create 2 acres.... If I saw such an approach in the document, I might be a believer? I’m sorry, I don’t see it.... I really don’t see any creative approach for protection that has been promised.

5. Misguided prioritization of resources to accomplish this project.
   Cui bono, ....Why?
   a. The State farm & forest experts have completed the 2016-17 Oregon Farm & Forest Report
   b. Page 3 of the Analysis, “Oregon’s statewide land use planning program continues to be effective.”
   c. The report continues to say, there are concerns...” concerns about the cumulative impact of dwellings and other uses on the working farm & forest lands.”
   d. On page 3 of the Farm & Forest Report there is a finding. “A Portland State University study found that less than half of all buyers of farmland between
2010 and 2016 had a clear connection to agriculture with many buyers focused on estate/property development, investing, or manufacturing.” What does this mean to you, ask yourself, will your action further this degradation of Farm & Forest Land you are promising to protect?

e. In the past, Deschutes County screwed up, you are calling it a mapping error. There are 237 lots impacted by this error, some impacted more than others. I would probably estimate that there are 10% legacy owners, folks who owned the land prior to “the error”. If you are so inclined to compensate these folks for their loss value, so be it….you can do the math, it’s probably less than 15% of CDC’s annual budget?

f. Is this project Enhancing the Lives of Citizens? Is this creating Safe Communities, Healthy People, and promoting Environmental Stewardship. No:
   i. NPR does nothing to solve the affordable housing challenges, it ignores it,
   ii. NPR does nothing to solve transportation issues, it contributes to it.
   iii. NPR does nothing to solve the disparity between the haves and have’s not, it expands it.
   iv. NPR does nothing to bring local food from farm to table, it isolates it
   v. NPR does nothing to solve the impact of wild fires, it flames it

In conclusion, I would like to restate:

If this Planning Commission is truly committed to protecting agricultural and forest lands of Deschutes County, you must forward a recommendation to the Board of County Commissioners not to proceed with this project.

I started my involvement in this process to believing in the need to warn of the “unintended consequences”, now I believe the warning may be of the “intended consequences”!!

Thank you.
Zechariah Heck

From: Jim Powell <jhp@bendbroadband.com>
Sent: Saturday, May 25, 2019 11:38 AM
To: Zechariah Heck
Subject: "Documentation" of 1979 Comp Plan decisions
Attachments: Cover letter.pdf; DCCP ResourceElement_red.pdf; 1979 Comp Plan_red.pdf

[EXTERNAL EMAIL]

______________________________

Zechariah

Since two of the commissioners wanted more tangible information about how decisions were made for land use designations for parcels and policy now being reviewed, I would submit the attached in the hopes it will help. The “cover letter” offers a roadmap for the segments in the other documents.
You have, or should have, documentation of the discussions back in 2014-15, which include the notes about the CDD staffs’ conversation with John Andersen, the Senior Planner responsible for the 1979 Comprehensive Plan.

What follows is the best I can do to provide from documents that I still have “documentation” of how decisions were made for defining and designation lands for zoning back in 1978-79. My involvement was as a volunteer on the “Overall CAC”. The CDD has a copy of the 1979 Comprehensive Plan but I do not know if they have a copy of the Resource Element, which includes commentary, methodology, the few maps and a list of references.

Unfortunately, creating a synthesis of this information will require work on your part. Selected sections, some only to give a flavor of the county and issues then, are in the accompanying PDF’s. A partial roadmap is listed below – for easier navigation, page numbers refer to the PDF page number, not the page number of the document itself.

Resource Element
- Soils: The plan’s association of soil type with land use designations is under “Using Soils Information” [pg. 8]
- Forest Lands: Informational
- Agricultural Lands: Some of the controversy on the use of “soils” as the determining measure (surrogate) of agricultural land is un “Soil” [pg. 26]
- Areas of Special Interest - Open Spaces Then as now, the so-called “resource lands” were an essential part of open space and livability precepts [pg. 34]. The vigorous insistence on preservation were sources of conflict with some owners of those resource lands.
- Population: Informational
- Urbanization: Informational
- Rural Development: Beginning on [pg. 48] is the background on the rapid partitioning and development spread into rural land. The only color map of the element and plan shows “existing uses” on [pg. 58].

Comprehensive Plan
- First 18 pages are background information about the character of the County in the late 1970’s
- Rural Development: The introduction reflects concerns that are the same as those expressed today [pg. 19] Policy 7 never gained any traction [pg. 20]
- Agricultural Lands The introduction [pg. 26] outlines some of the issues in defining agricultural land for the purposes of the Plan [pg. 27]. The latter’s evolution is covered in the preamble to Policies [pg. 29]. Some of the economic, water and conversion considerations are present under Zoning [pg. 31] You may wish to note Policy 16 [pg. 32]
- Forest Lands Scattered development [pg. 33] was recognized as a problem. And is implied in policy 8 [pg. 34] and in the Introduction under a subsequent section Exceptions [pg. 53]
• Open Space  Much of what was important then [pg. 35] is important today. As discussed in the Resource document, most of us then as well as today perceive private “resource” lands as part of our expected “open space”.

• Exceptions:  [pg. 53] This section includes the acknowledgement of platted subdivisions, sometimes referred to as “recreational subdivisions”, without sufficient development to label them as “committed” to other uses but enclosed in the “resource” land umbrella.

As Mr. Tim Murphy pointed out the “surrogates” for farm and forest lands now have a few more parameters than just soil types and a 1947 soil type inventory with a partial county update in 1973. They are included below for reference. With a new program (state-wide land use planning), a county which had aggressively allowed subdividing and resistance to “state control” in a number of sectors, there was little flexibility in the exceptions route for Deschutes in 1979.

660-033-0020
Definitions

For purposes of this division, the definitions in ORS 197.015, the Statewide Planning Goals, and OAR chapter 660 shall apply. In addition, the following definitions shall apply:

(1) (a) "Agricultural Land" as defined in Goal 3 includes:

(A) Lands classified by the U.S. Natural Resources Conservation Service (NRCS) as predominantly Class I-IV soils in Western Oregon and I-VI soils in Eastern Oregon;

(B) Land in other soil classes that is suitable for farm use as defined in ORS 215.203(2)(a), 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; and accepted farming practices; and

(C) Land that is necessary to permit farm practices to be undertaken on adjacent or nearby agricultural lands.

(b) Land in capability classes other than I-IV/I-V that is adjacent to or intermingled with lands in capability classes I-IV/I-VI within a farm unit, shall be inventoried as agricultural lands even though this land may not be cropped or grazed;

(c) "Agricultural Land" does not include land within acknowledged urban growth boundaries or land within acknowledged exception areas for Goal 3 or 4

660-006-0005
Definitions

7) "Forest lands" as defined in Goal 4 are those lands acknowledged as forest lands, or, in the case of a plan amendment, forest lands shall include:

(a) Lands that are suitable for commercial forest uses, including adjacent or nearby lands which are necessary to permit forest operations or practices; and

(b) Other forested lands that maintain soil, air, water and fish and wildlife resources.
DESHUTES COUNTY
COMPREHENSIVE PLAN
Resource Element

Prepared and Presented
By
The Deschutes County Planning Department
In Cooperation With
The Citizens of Deschutes County

William G. Monroe
Planning Director

Long-Range Planning Section
John E. Andersen     Carole Wells     Brian Christensen
Senior Planner      Associate Planner  Assistant Planner

Merlyn Paine
Assistant Planner

Current Planning Section
Richard Knowles     Craig Smith     Barbara Taylor
Associate Planner   Associate Planner  Assistant Planner

George Cress     Philip Paschke
Assistant Planner  Assistant Planner

Clerical Section
Nancy Smith     Carol Olson     Judie Martin
Senior Office Associate  Office Associate  Office Associate

1979
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td><strong>Natural Resources</strong></td>
<td></td>
</tr>
<tr>
<td>Geology</td>
<td>2</td>
</tr>
<tr>
<td>Soils</td>
<td>13</td>
</tr>
<tr>
<td>Geomorphology</td>
<td>22</td>
</tr>
<tr>
<td>Climate &amp; Air Quality</td>
<td>38</td>
</tr>
<tr>
<td>Water Resources</td>
<td>45</td>
</tr>
<tr>
<td>Fish &amp; Wildlife</td>
<td>59</td>
</tr>
<tr>
<td>Forest Lands</td>
<td>80</td>
</tr>
<tr>
<td>Agricultural Lands</td>
<td>89</td>
</tr>
<tr>
<td>Areas of Special Interest</td>
<td>102</td>
</tr>
<tr>
<td><strong>Human Resources</strong></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>110</td>
</tr>
<tr>
<td>Historic &amp; Cultural</td>
<td>122</td>
</tr>
<tr>
<td>Population</td>
<td>132</td>
</tr>
<tr>
<td>Economy</td>
<td>140</td>
</tr>
<tr>
<td>Housing</td>
<td>160</td>
</tr>
<tr>
<td>Energy</td>
<td>174</td>
</tr>
<tr>
<td>Transportation</td>
<td>182</td>
</tr>
<tr>
<td>Public Facilities &amp; Services</td>
<td>196</td>
</tr>
<tr>
<td>Recreation</td>
<td>214</td>
</tr>
<tr>
<td>Urbanization</td>
<td>232</td>
</tr>
<tr>
<td>Rural Development</td>
<td>236</td>
</tr>
<tr>
<td><strong>Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>248</td>
</tr>
<tr>
<td>Glossary</td>
<td>256</td>
</tr>
</tbody>
</table>
SOILS

Recent years have witnessed a growing interest in using the natural capabilities of the land to determine appropriate uses, due to a recognition that various areas are able to cope with or support activities differently, depending upon the inherent characteristics of the site. Problems with housing foundations, septic tanks, campgrounds and roads often relate to inadequate soils information. Also, the need to protect scarce agricultural or forestry land, as well as other resources important to the personal and economic future of the area's residents, can be greatly aided by useful soil studies.

Deschutes County is fortunate to have had a general soil study completed in 1973 by the U.S.D.A. Soil Conservation Service and Oregon Agricultural Experiment Station, with funding assisted by the County. Unfortunately, detailed soils mapping has been done only for that portion of the County north of Bend to near Sisters and Terrebonne, roughly following U.S. Highways 20 and 97. While this significantly limits the overall usefulness of the soils data we are still able to carry on with the general information where the more detailed data is not forthcoming.

Our purpose here is to explain the characteristics of each of the twelve soils associations present in the County, breaking this down into more detail about specific soils when appropriate, and providing some discussion concerning the significance and usefulness of the information that is available. Hopefully, the reader will then be able to use this information in their deliberations about the local resources and our common future.

DESCHUTES COUNTY SOILS

There are nearly a hundred thousand kinds of soil in the United States, of which 35 are found in Deschutes County. Even these soils can be, and are, categorized further by slope since this can alter the soils capabilities. An example is Deschutes sandy loam which is placed in four categories 0 to 3 percent, 3 to 7 percent, 7 to 12 percent, and 12 to 20 percent. Although the soil arises from a common parent material (basalt), grows the same plant community (juniper, bitterbrush, Idaho fescue, and forbs), and has other similar characteristics, the difference in slope between the first two and the final two means the erosion hazard changes from slight to moderate, thereby requiring different land management and/or building techniques.
Generally, soils are developed when the parent material (such as basalt, sandstone, or other base rock) is acted upon by the climate and biota (all living things) over time in various ways, and depending on topography, creating soil material. These soils are usually divided into four major categories: sand (grains 1 to .05 millimeters in size), silt (.05 to .005), clay (.005 and smaller), and loams (a combination of all three). Depending upon each soil's character some combination of terms may be used in its description (i.e. clayey sand = a predominantly sandy soil with more than 10% clay). These various combinations then determine the characteristics and capabilities of the individual soils.

In Deschutes County, the soils are typical of a semi-arid region being composed principally of entisols and spodosols* in the western and southern portions of the County and aridisols** in the drier eastern areas. These soils are formed from a number of parent materials. The western and southern portion of the County has seen its soils developed from pumice, ash and glacial till which range from a few

*Entisols and Spodosols = Soils formed on coarse pumice are mostly light-colored, coarse-textured, and moderately to slightly acid. Strongly acid Spodosols with subsoils of iron accumulation have formed at higher elevations. Poorly-drained soils occur in depressions.

**Aridisols = most of these soils are on lava plains. They are shallow, stony and light-colored with clayey or loamy subsoils.
inches to several feet thick. Pumice deposits are generally deeper and coarser textured in the south. To the north, the pumice becomes finer textured, thinner and mixed with materials developed from andesite and basalt. The eastern area developed from a mix of wind and deposited sands and gravel over basalt bedrock.

To briefly explain the different soils and where they may be found locally, the following short descriptions are provided from the Deschutes County General Soil Map:

**Areas Dominated By Cold, Well-Drained, Gently Sloping Soils On Tablelands**

1. **Floke-Olson association**: Shallow soils with a very stony surface layer, clay subsoil over hardpan and 0 to 8 percent slopes; and shallow soils with a loam surface layer, clay loam subsoil over hardpan and 0 to 2 percent slopes. Found mostly east of Horse Ridge.

**Areas Dominated By Warm, Well To Somewhat Excessively Drained, Gently Sloping To Steep Soils On Tablelands And Escarpments**

2. **Deschutes-Deskamp association**: Moderately deep sandy loam soils over basalt bedrock and 0 to 20 percent slopes; and moderately deep loamy sand soils over basalt bedrock and 0 to 12 percent slopes. Containing the best of the agricultural soils, they are scattered north and east of Bend to the County line.

3. **Gosney-Deschutes association**: Shallow, very stony loamy sand soils over basalt bedrock and 0 to 12 percent slopes; and moderately deep sandy loam soils over basalt bedrock and 0 to 20 percent slopes. The association is found outside the National Forest between Plainview and Horse Ridge and the northern County line, and is the major soil group in these areas.

4. **Simas-Searles association**: Deep soils with a clay loam surface layer, clay subsoil over tuff and 10 to 35 percent slopes; and moderately deep soils with stony or very stony loam surface layer, very gravelly clay loam subsoil over bedrock and 0 to 65 percent slopes. Found only north of the Crooked River in Deschutes County.

**Areas Dominated By Cold, Somewhat Excessively To Somewhat Poorly Drained Ashy Soils On Nearly Level To Moderately Steep Plateaus And Cinder Cones**

5. **Kotzman association**: Moderately deep soils with very gravelly loamy coarse sand surface layer, loam subsoil over basalt bedrock and 0 to 15 percent slopes. Found southeast of Pine Mountain, primarily outside the National Forest boundaries.
6. Klawhop-Shanahan association: Deep soils with loamy sand surface layer, loamy coarse sand subsoil over very cobbly loam and 0 to 15 percent slopes; and very deep soils with loamy sand surface layer over loam subsoil and 0 to 15 percent slopes. The major soil group in the southern part of the County, outside the mountainous and alluvial plain areas.

7. Sister-Wanoga association: Very deep soils with a loamy sand surface layer and subsoil over gravelly loamy sand, 0 to 15 percent slopes; and moderately deep soils with loamy fine sand surface layer, sandy loam subsoil over hardpan and 0 to 15 percent slopes. Found mostly inside the National Forest to the west and northwest of Bend.

8. Shanoohan association: Very deep soils with loamy sand surface layer over loam subsoil and 0 to 15 percent slopes. Mainly in the alluvial plain area from north of Sunriver south to the County line.

Areas Dominated By Cold Excessively Drained Ashy Soils On Nearly Level, Moderately Steep And Steep Uplands

9. Cultus-Shukash association: Very deep soils with sandy loam surface layer, loamy sand subsoil over very gravelly sandy loam and 0 to 65 percent slopes; and very deep soils with loamy sand surface layer and subsoil over very gravelly loam and 0 to 65 percent slopes. Found all along the lower slopes of the Cascades and Mt. Newberry.

10. LaPine association: Very deep cindery soils with very gravelly loamy sand texture and 5 to 35 percent slopes. Lying in a band due east of Mt. Newberry, this soil is an obvious result of Newberry's volcanic action.

11. Winopee-Moolack association: Moderately deep soils with loamy sand surface layer, gravelly coarse sand subsoil over very cobbly glacial till and 0 to 65 percent slopes; and very deep soils with sandy loam surface layer over gravelly coarse sand subsoil and 0 to 15 percent slopes. Basically, this constitutes the top of Mt. Newberry and the lower reaches of the Cascades.

12. Rock Outcrop-Winopee association: Escarpment areas of rock outcrop, talus, rock slides; and moderately deep soils with loamy sand surface layer, gravelly coarse sand subsoil over very cobbly glacial till and 0 to 65 percent slopes. Found in the higher levels of the Cascades.
SOIL ASSOCIATIONS

- Floke-Olson
- Deschutes-Deskamp
- Gosney-Deschutes
- Simas-Searles
- Kotzman
- Klawhop-Shanahan
- Sisters-Wanoga
- Shanahan
- Cultus-Shukash
- Lapine
- Winnep-Moolack
- Rock Outcrop Winnep

Soil Conservation Service data, 1973
USING SOILS INFORMATION

The preceding identifies the various soil associations and their general locations, but to most people, the important part of soils information is how it will help them make development decisions. While it must be cautioned that the data presently available is relatively general and therefore not at a scale appropriate for individual properties, except for that portion of the County where more detailed studies have been done, it does provide sufficient information for some general planning decisions.

The Deschutes-Deskamp association soils have been identified as having "fair" potential* as agricultural land. Since the conservation and protection of agricultural lands are an important element of all rural comprehensive plans, this identification gives reason for consideration of these lands as appropriate for protection as agricultural lands. Of course, other pertinent data such as available water and climate will have to be considered, but the soils do provide a starting point. Also, alluvial areas in the County may prove to have good agricultural potential.

The Klawhop-Shanahan and Shanahan associations both provide generally good soils for septic tanks, and while other criteria may inhibit the use of septic tanks, soils would normally allow for septic tank development. This means the southern portions of the County now receiving such intense recreational home-site development may be able to physically cope with the septic tank effluent for the immediate future, as long as densities do not become too great or other issues such as pockets of poorer soil or high water table (as we have seen occur)** do not interfere. On the other hand, the rest of the County generally has severe limitations for septic tank fields. This does not mean areas suitable for septic tanks are not available, but that generally they will be more isolated and difficult to find than in the southern portion of the County.

Table One is a listing of the various soils associations in the County, along with their suitability or limitations for a variety of uses. By itself, soils information is not sufficient for making land-use decisions, but it does provide significant indications of the physical capacity of an area to support different activities. Using this information does permit some initial decisions about the appropriateness of certain uses. These decisions can then be further refined by the addition of information of a more detailed nature or by setting criteria such as transportation access or environmental sensitivity.

*Fair = Slopes less than 12%, rooting depth of 20 to 40 inches, and the soils are warm.

**50% of recent septic tank applications have been refused by DEQ due to a high water table.
Perhaps even more significantly, when detailed soils information is available, decisions about uses on specific sites are possible. Hazards may be avoided or otherwise unknown opportunities may be identified when adequate data is available. A detailed soils mapping should be undertaken for Deschutes County within the immediate future so that this data can be made available to optimize our development decisions, such as in LaPine where too much development could create serious health problems.

In addition, soils data would assist in dealing with the effects of frost heaving, the heavy loss of water in agriculture due to high soil porosity, as well as help with planning to reduce soil erosion, such as occurs because of wind and/or water action. The Deschutes County Soil Conservation Service office estimates local cultivated fields can lose as much as 22 tons of soils per acre each year if conservation practices are not followed. To protect our people and our resources more in-depth information is needed.

CONCLUSION

Soils data provides valuable information for people involved with the making of development decisions. Presently, Deschutes County has sufficient information to generally identify appropriate areas for certain developments, and definitely adequate data to set standards and identify criteria for what constitutes reasonable development. While soils data must be combined with other information for the making of final decisions, it does permit initial decisions about various land uses and point the way toward final determinations.
<table>
<thead>
<tr>
<th>Soils Association</th>
<th>Area</th>
<th>Irrigation</th>
<th>Topsoil</th>
<th>Sand and Gravel</th>
<th>Dwellings Without Basements</th>
<th>Septic Tank Absorption Fields</th>
<th>Local Road and Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FLOKE-OLSON ASSOCIATION</td>
<td>371,000</td>
<td>VERY POOR 50%</td>
<td>POOR 65%</td>
<td>UNSUITED 92%</td>
<td>SEVERE 49%</td>
<td>SEVERE 92%</td>
<td>SEVERE 49%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POOR 50%</td>
<td>FAIR 25%</td>
<td>POOR 4%</td>
<td>MODERATE 43%</td>
<td>SLIGHT 8%</td>
<td>MODERATE 43%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GOOD 4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. DESCHUTES-DESKAMP ASSOCIATION</td>
<td>78,000</td>
<td>FAIR 89%</td>
<td>GOOD 50%</td>
<td>POOR 76%</td>
<td>MODERATE 78%</td>
<td>SEVERE 85%</td>
<td>MODERATE 86%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 6%</td>
<td>POOR 38%</td>
<td>UNSUITED 24%</td>
<td>SLIGHT 12%</td>
<td>MODERATE 6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. GOSNEY-DESCHUTES ASSOCIATION</td>
<td>294,000</td>
<td>VERY POOR 48%</td>
<td>POOR 58%</td>
<td>POOR 86%</td>
<td>SEVERE 50%</td>
<td>SEVERE 92%</td>
<td>SEVERE 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 44%</td>
<td>GOOD 32%</td>
<td>UNSUITED 12%</td>
<td>MODERATE 38%</td>
<td>MODERATE 6%</td>
<td>MODERATE 38%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 4%</td>
<td>FAIR 10%</td>
<td>GOOD 2%</td>
<td>SLIGHT 12%</td>
<td>SLIGHT 2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SIMAS-SEARLES ASSOCIATION</td>
<td>2,400</td>
<td>VERY POOR 57%</td>
<td>POOR 92%</td>
<td>UNSUITED 86%</td>
<td>SEVERE 100%</td>
<td>SEVERE 92%</td>
<td>SEVERE 92%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POOR 35%</td>
<td>GOOD 8%</td>
<td>POOR 8%</td>
<td>MODERATE 6%</td>
<td>MODERATE 10%</td>
<td>MODERATE 8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 8%</td>
<td></td>
<td>GOOD 6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. KOTZMAN ASSOCIATION</td>
<td>40,000</td>
<td>POOR 85%</td>
<td>POOR 96%</td>
<td>POOR 88%</td>
<td>MODERATE 86%</td>
<td>SEVERE 89%</td>
<td>MODERATE 88%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNSUITED 8%</td>
<td>SLIGHT 10%</td>
<td>SLIGHT 8%</td>
<td>MODERATE 88%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAIR 4%</td>
<td>SEVERE 4%</td>
<td>MODERATE 4%</td>
<td>MODERATE 88%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. KLAWHOP-SHANAHAN ASSOCIATION</td>
<td>334,000</td>
<td>VERY POOR 94%</td>
<td>POOR 96%</td>
<td>POOR 85%</td>
<td>SLIGHT 68%</td>
<td>SLIGHT 66%</td>
<td>SLIGHT 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POOR 6%</td>
<td>FAIR 4%</td>
<td>GOOD 6%</td>
<td>SEVERE 18%</td>
<td>SEVERE 66%</td>
<td>SEVERE 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAIR 6%</td>
<td>MODERATE 14%</td>
<td>MODERATE 10%</td>
<td>MODERATE 16%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNSUITED 3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soils Association</td>
<td>Acres</td>
<td>Irrigation</td>
<td>Topsoil</td>
<td>Sand and Gravel</td>
<td>Dwellings Without Basements</td>
<td>Septic Tank Absorption Fields</td>
<td>Local Roads and Streets</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>7. SISTERS-WANOHA ASSOCIATION</td>
<td>156,000</td>
<td>VERY POOR 95%</td>
<td>POOR 74%</td>
<td>POOR 85%</td>
<td>SLIGHT 56%</td>
<td>SEVERE 60%</td>
<td>MODERATE 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 5%</td>
<td>FAIR 20%</td>
<td>UNSUITED 9%</td>
<td>SEVERE 34%</td>
<td>SLIGHT 40%</td>
<td>SEVERE 28%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 6%</td>
<td>GOOD 6%</td>
<td>MODERATE 10%</td>
<td></td>
<td>SLIGHT 6%</td>
<td></td>
</tr>
<tr>
<td>8. SHANAHAN ASSOCIATION</td>
<td>156,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>POOR 80%</td>
<td>SLIGHT 75%</td>
<td>SLIGHT 70%</td>
<td>SLIGHT 70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 10%</td>
<td>FAIR 20%</td>
<td>UNSUITED 10%</td>
<td>MODERATE 15%</td>
<td>MODERATE 15%</td>
<td>MODERATE 15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 10%</td>
<td>GOOD 10%</td>
<td>MODERATE 10%</td>
<td></td>
<td>SEVERE 15%</td>
<td>SEVERE 15%</td>
</tr>
<tr>
<td>9. CULTUS-SHUXASH ASSOCIATION</td>
<td>212,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>POOR 74%</td>
<td>SEVERE 70%</td>
<td>SEVERE 72%</td>
<td>SEVERE 62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 20%</td>
<td>FAIR 20%</td>
<td>SEVERE 15%</td>
<td>MODERATE 3%</td>
<td>SEVERE 22%</td>
<td>MODERATE 3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD 4%</td>
<td>GOOD 4%</td>
<td>MODERATE 15%</td>
<td></td>
<td>SLIGHT 15%</td>
<td>MODERATE 16%</td>
</tr>
<tr>
<td>10. LAPINE ASSOCIATION</td>
<td>60,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>FAIR 80%</td>
<td>SEVERE 62%</td>
<td>SEVERE 62%</td>
<td>SEVERE 62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 20%</td>
<td>FAIR 20%</td>
<td>SEVERE 34%</td>
<td>MODERATE 4%</td>
<td>MODERATE 4%</td>
<td>MODERATE 4%</td>
</tr>
<tr>
<td>11. WINOPE-MOOLACK ASSOCIATION</td>
<td>215,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>POOR 90%</td>
<td>SEVERE 81%</td>
<td>SEVERE 80%</td>
<td>MODERATE 13%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 10%</td>
<td>FAIR 10%</td>
<td>MODERATE 13%</td>
<td></td>
<td>SLIGHT 20%</td>
<td>SLIGHT 10%</td>
</tr>
<tr>
<td>12. ROCK OUTCROP-WINOPE ASSOCIATION</td>
<td>40,000</td>
<td>VERY POOR 100%</td>
<td>POOR 100%</td>
<td>UNSUITED 45%</td>
<td>SEVERE 80%</td>
<td>SEVERE 80%</td>
<td>MODERATE 15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIR 10%</td>
<td>FAIR 10%</td>
<td>MODERATE 15%</td>
<td></td>
<td>SEVERE 20%</td>
<td>Slight 5%</td>
</tr>
</tbody>
</table>
FOREST LANDS

Forest lands and the products derived therefrom are an important part of Deschutes County's economic, natural and social environments. Because this is true generally throughout the state the Oregon Land Conservation and Development Commission has defined forest lands as:

"...(1) lands composed of existing and potential forest lands which are suitable for commercial forest uses; (2) other forested lands needed for watershed protection, wildlife and fisheries habitat and recreation; (3) lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use; and (4) other forested lands in urban and agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors, and recreational use."

and required that lands which meet this definition are to be conserved for forest uses. Given this state mandate, and the obvious local need to protect this valuable resource, Deschutes County established and supported the work of a special citizens advisory committee composed of interested persons and technical people with extensive expertise in forestry in order to obtain adequate information to meet this goal. In addition, the Oregon State Forestry Department provided significant assistance.
A 1971 study entitled *The Forest Resources of Deschutes County, Oregon* written by P.H. Authier of the Oregon State Forestry Department provides some basic background on local forestry resources. Unfortunately the data is at least ten years old and changes undoubtedly have occurred, however the information does provide some understanding of local conditions and relationships. Significantly, of the 6,223 million board feet (Scribner) of sawtimber in Deschutes County at that time, over 95 percent was under public ownership. This left about 514 million board feet of sawtimber in private lands (mostly under ownership by Brooks-Scanlon and Gilchrist Lumber), which by comparison does not seem large, but is still a significant amount of timber particularly since it is intermixed with the public timberland.

Table 1 shows how the sawtimber breaks down as far as species. Obviously, Ponderosa Pine is the most important, followed closely by Lodgepole (Jack) Pine. The large volume of Mountain Hemlock is not considered commercial timber.

**TABLE 1**

Volume of Sawtimber
(million board feet - Scribner)
By Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Million Board Feet</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>3,503</td>
<td>56%</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>89</td>
<td>1%</td>
</tr>
<tr>
<td>Western White Pine</td>
<td>68</td>
<td>1%</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>859</td>
<td>14%</td>
</tr>
<tr>
<td>Whitebark Pine</td>
<td>22</td>
<td>a/</td>
</tr>
<tr>
<td>Engelmann Spruce</td>
<td>35</td>
<td>a/</td>
</tr>
<tr>
<td>Noble Fir</td>
<td>46</td>
<td>1%</td>
</tr>
<tr>
<td>Mountain Hemlock</td>
<td>1,038</td>
<td>17%</td>
</tr>
<tr>
<td>True Firs</td>
<td>556</td>
<td>10%</td>
</tr>
<tr>
<td>Hardwood</td>
<td>1</td>
<td>a/</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,223</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

a/ Less than 1%

Interestingly, consideration of the annual growth indicates that Lodgepole Pine produces almost as much wood as is grown by all other softwoods, excluding Ponderosa Pine.

**TABLE 2**

Annual Growth (thousand board feet - Scribner)
of Sawtimber, By Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>37,921</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>-43</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>18,665</td>
</tr>
<tr>
<td>Other softwoods</td>
<td>18,911</td>
</tr>
</tbody>
</table>

a/ Mortality exceeds growth
When annual growth is considered in light of forest type the predominance of Ponderosa Pine remains but Lodgepole appears even more significant.

TABLE 3
Annual Growth (thousand board feet - Scribner) of Sawtimber, By Forest Type

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>38,515</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>- 74 a/</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>20,617</td>
</tr>
<tr>
<td>True Firs</td>
<td>8,909</td>
</tr>
<tr>
<td>Other softwoods</td>
<td>7,403</td>
</tr>
<tr>
<td>Non-stocked</td>
<td>84</td>
</tr>
<tr>
<td>All Types</td>
<td>75,454</td>
</tr>
</tbody>
</table>

a/ Mortality exceeds growth

Of course, while there is growth there is also mortality. Table 4 indicates the species losses annually (this was already deducted from the figures in the preceding tables, so that actual growth would be the combination of Table 4 with species data in the appropriate table).

TABLE 4
Annual Mortality (thousand board feet - Scribner) of Sawtimber, By Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Annual Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>7,844</td>
</tr>
<tr>
<td>Douglas Fir</td>
<td>731</td>
</tr>
<tr>
<td>Lodgepole Pine</td>
<td>3,133</td>
</tr>
<tr>
<td>Other softwoods</td>
<td>5,765</td>
</tr>
<tr>
<td>Total</td>
<td>17,463</td>
</tr>
</tbody>
</table>

Bureau of Land Management timberlands amount to 21,685 acres. The LaPine Forest Management Area alone contains 19,125 M.B.F. (Scribner) of B.L.M. timber, while the Central Oregon F.M.A. has an additional 17,160 M.B.F. In addition, B.L.M. administers over 96,000 acres of juniper lands, which may eventually become a commercial wood source. All of the preceding is 1978 data obtained from the Prineville Office of the Bureau of Land Management.

Private timberland accounts for 92,915 acres of sawtimber, which can be broken down as follows:
TABLE 5
Private Land Volumes By Species
(trees 16" D.B.H. and larger)

Ponderosa Pine 307,764 M.B.F.
Douglas Fir 6,457
Western Larch 38
White Fir 10,193
Sugar Pine 301
Lodgepole Pine 1,025
Western White Pine 350
Mountain Hemlock 79

Total 326,237 M.B.F.

While a number of hardwood species exist locally (Aspen, Black Cottonwood, Golden Chinkapen, Oregon White Oak, and Red Alder) they have not been in sufficient quantities, nor have identifiable markets appeared, to warrant their consideration as commercial timber. Perhaps this may change in the future, but no such trend is presently apparent locally.

ECONOMIC IMPORTANCE

Since the turn of the century, when two major sawmills were constructed in Bend, the forests have been a major factor in the local economy. Still today timber plays a decisive role in the area’s prosperity, not only because of lumber but also due to the ever-burgeoning recreational industry associated with the local timberlands and related areas.

The manufacture of lumber and wood products directly employed 2,726 workers in Deschutes County during 1978, of which 2,074 were in Bend. This is up from 2,700 employees in 1977 when they constituted 69 percent of the total local manufacturing workforce, and 14 percent of the total workforce.

Much of the lumber and wood products employment has become even more dependent on the public forest lands for timber. The annual allowable cut on the Deschutes National Forest is 189 million board feet, while local sawmills are capable of cutting about 615 M.B.F. with three shifts. Continued debate over the allowable cut and the balancing of short-term employment versus long-term timber productivity can be anticipated. Obviously, when the supply of the resource is considerably less than the manufacturing capacity inefficiencies will develop, probably resulting in lower employment in local sawmills. Two trends are presently occurring: first, local sawmills are developing their ability to handle smaller logs, such as Lodgepole Pine; second, the mills are consolidated and improving their equipment to maintain their productivity as much as possible (i.e. Brooks-Scanlon's recent closure of the Redmond sawmill in favor of the Bend facility).
The increasing competition for log sales will undoubtedly continue to rise since private timber is in short supply (private reforested lands are largely many decades from harvest) and public timberlands are restricted to their allowable cut. As timber supplies grow shorter west of the Cascades greater competition from mills in Western Oregon for timber sales locally may be expected. Hopefully more expenditure for reforestation on both private and public lands will be forthcoming soon.

One beneficial result of the increasing prices received for timber would be greater amounts of timber revenues provided to local school and county government. Deschutes County received $3.6 million in 1978 from timber sales in the area. Overall however, this hardly balances the potential economic changes that may occur.

Significantly the rising importance of the recreational/tourism industry may counterbalance the wood products employment difficulties. In fact, the importance of this employment sector is a strong argument in favor of the maintenance of local forests, not only for long-term productivity and economic stability but also for short-term employment. Development decisions need to consider their effect on forest lands, particularly as the County seeks to maintain a stable economy while accommodating a burgeoning population.

**FIRE HAZARD AREAS**

A factor often overlooked until too late is the potential for wildfire created by developments occurring in forested areas. Usually planned developments and destination resorts (i.e. Sunriver and Black Butte Ranch) have anticipated fire hazards and taken steps to ameliorate potential problems. However, many subdivisions and partitions give little or no thought to fire, not only as far as protection of structures but also the possibility of timber losses in nearby forest lands. Particularly, developments outside of rural fire protection districts, as well as those in areas where considerable fuel (brush, high weeds, slash, etc.) exists or on steep slopes where fire spreads more rapidly, are subjecting future residents to a greater risk of fire damage and loss of life. Adequate provision for exit routes, fuel control, fire protection, and proper building materials in rural subdivisions should be required.

**FOREST LANDS IDENTIFICATION**

LCDC Goal 4 states: "In the process of designating forest lands, comprehensive plans shall include the determination and mapping of forest site classes according to the United States Forest Service manual - Field Instructions for Integrated Forest Survey and Timber Management Inventories - Oregon, Washington and California, 1974."
To assist local planning departments in the identification of lands with commercial timber productivity potential the Oregon Department of Forestry has prepared a document entitled "A Technique for Mapping Forest Land By Site Productivity Using Soil Survey Information." The West Central Oregon District of D.O.F. was able to furnish staff to assist county staff in the preparation of a forest lands productivity map for use in our planning efforts. In addition, further refinements were made after discussion with U.S.F.S. and private foresters.

The resulting inventory indicates productivity classes ranging from four to seven (classes four through six are lands with commercial productivity potential), with much of the drier northeastern and eastern areas without any forest lands potential. Most of the area outside the national forest are classes seven, or non-productive, which are the non-commercial lands. The only private lands (other than timber company ownership) with significant forest potential lies in the LaPine area, which has seen substantial recreational/residential development in recent years.
TIMBER PRODUCTIVITY
By Soil Association

- High (Relatively)
- Moderately High
- Moderate
- Low
- Unmapped
- Rocky or Alluvial Soils

Data from Oregon Department of Forestry, 1978
Because of the general nature of the soil maps used it is probable that some areas are not properly classified by the forest productivity map. More detailed soils mapping and further field study will reduce these errors in the future. During the interim period the empirical nature of the data will allow a case-by-case review and determination consistent with state and local policies.

**Categories of Forest Land**

The categories of forest land as suggested by the forest lands committee for Deschutes County are restricted, commercial and other.

These categories of forest land were based upon the four part definition of forest lands as stated in the LCDC Goals and Guidelines for Forest Lands. The basis for establishing these categories of forest land is stated below.

<table>
<thead>
<tr>
<th>Category</th>
<th>LCDC Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F-1 Restricted Forest Land</strong></td>
<td>&quot;2. ...forested lands needed for watershed protection, wildlife and fisheries habitat and recreation.&quot;</td>
</tr>
<tr>
<td><strong>F-2 Commercial Forest Land</strong></td>
<td>&quot;1. Lands composed of existing and potential forest lands which are suitable for commercial use.&quot;</td>
</tr>
<tr>
<td><strong>F-3 Other Forest Land</strong></td>
<td>&quot;3. Lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use.&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;4. ...forested lands in urban and agriculture areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors recreational use.&quot;</td>
</tr>
</tbody>
</table>

The priority for protection of forest land from conversion to other uses is as follows:

a. **Priority 1**: F-1, Restricted Forest Lands, should not be converted to other uses, since protection of these unique forest lands is a prime land use planning objective.
b. Priority 2: F-2, Commercial Forest Lands may be converted to F-1, Restricted Forest Lands. The land should not be converted to other uses, since the production of timber is an essential land use planning objective.

c. Priority 3: F-3, Other Forest Lands (such as juniper lands), may be converted to F-1 or F-2. The land should not be converted to other non-forest uses, unless a higher and better use can be adequately demonstrated.

CONCLUSION

Forests are an important local resource. The preservation of the present high quality of life and economic prosperity requires the protection of local timber lands. Conversion of these lands to recreational and residential development should occur only after less productive areas have been considered and careful consideration has been given to the costs and benefits that will accrue to the public.
AGRICULTURAL LANDS

The importance of agriculture to the economic, social and environmental well-being of Oregon and the United States is without question. The large number of programs and legislation oriented to protecting and preserving agriculture gives strong testimony to the prominent place this activity enjoys in our society. A variety of reasons are given for protecting agricultural land:

1. Maintaining the land resource for the production of agricultural products, particularly important now because of the ever-growing world population;

2. Promoting and preserving the local and state economics;

3. Stabilizing farmland taxes to allow existing farmers to remain in business;

4. Curtailing conflicts between agricultural and residential/urban land uses;

5. Bettering control of the public costs created by leap-frog, strip, or other kinds of uncontrolled developments;

6. Protecting the local social fabric by preserving the family farms.

Certainly, these reasons lie behind Oregon's Agricultural Lands Goal.

Of course, it is one thing to identify a goal, and another to then apply that goal. Particularly when the goal is as all encompassing as Oregon's. The mandate that, "Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space," requires considerable and in-depth study of local agricultural conditions and useful estimates as to what is required in the future, so that adequate protection of the resource can be achieved. The following section contains information that should help in understanding conditions in Deschutes County, as well as point towards appropriate goals and policies.

INVENTORY

Historically, range agriculture was the major farming activity in Deschutes County. Although some dryland growing of grain, seed and hay did occur north of the County, it was not until the development of irrigation projects between 1901 and 1905 in the upper Deschutes Valley that growing of grains and alfalfa began in Deschutes County. Commercial potato growing began after the coming of the railroad in 1911, which provided the necessary access to outside markets. Starting in 1926, the production of alsike
clover seed provided a major cash crop for the area. In addition, turkey raising and dairying also became important farming activities in the County. Recent years have witnessed the loss of both the clover and turkey operations, and a considerable lessening in the importance of dairying. However, growing of other crops has developed and an interesting diversification in livestock is occurring.

The 1974 Census of Agriculture identifies 120,934 acres in Deschutes County farms. This is down from 163,340 acres in 1969, a loss of 42,406 acres. During the same period, cropland declined from 68,249 acres to 36,683 acres, a loss of 31,566 acres. Of course, it is impossible to say how much of this lost land was actually productive farm land.

Interestingly, the County Assessor's Office indicates 162,008 acres of land under Farm Tax Deferral in 1977, however this larger figure is probably largely due to definitional differences and undoubtedly includes a number of acres not actually producing any significant amount of agricultural products. The following table provides some information about Deschutes County Farm Tax Deferrals, as well as farm sizes locally.

**TABLE 1**

<table>
<thead>
<tr>
<th>Acres</th>
<th>No. of Tax Lots</th>
<th>% of Total Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 0-5</td>
<td>236</td>
<td>276</td>
</tr>
<tr>
<td>2. 6-20</td>
<td>325</td>
<td>390</td>
</tr>
<tr>
<td>3. 21-40</td>
<td>408</td>
<td>429</td>
</tr>
<tr>
<td>4. 41-80</td>
<td>244</td>
<td>260</td>
</tr>
<tr>
<td>5. 81-160</td>
<td>170</td>
<td>177</td>
</tr>
<tr>
<td>6. 161-320</td>
<td>85</td>
<td>89</td>
</tr>
<tr>
<td>7. 321-640</td>
<td>40</td>
<td>37</td>
</tr>
<tr>
<td>8. 641-1,300</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>9. 1,301-3,000</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>10. 3,001-6,000</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL LOTS** | **1,540**  | **1,698**

**TOTAL ACRES** | **161,008** | **162,007**

Source: Deschutes County Assessor's Office

While employment has been rapidly growing in the County, the agricultural labor force has been declining. Between 1968 and 1971, the number of workers employed in agricultural activities declined from 740 to 720, a loss of 2.7 percent. Farm operators between 1969 and 1974 declined from 503 to 438, a loss of almost 13 percent, as compared to a statewide
loss of eight percent; and commercial farms* went from 277 to 239, almost a 14 percent loss, while statewide commercial farm numbers remained relatively stable.

Deschutes County farms tend to be owned by full-owners more than is true statewide (74.9% versus 70.4%). Combined with the fact that 60.8% of local individual or family operation farmers work more than 100 days each year off the farm, as compared with 43.9% statewide, it seems to reflect the predominance of part-time farming locally.

Indicative of the predominance of relatively small farms in Deschutes County, as compared with the state, is the following table.

TABLE 2
SIZE OF FARMS (ACRES)

<table>
<thead>
<tr>
<th></th>
<th>DESCHUTES COUNTY</th>
<th></th>
<th>OREGON</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>1-49</td>
<td>196</td>
<td>44.75</td>
<td>10,813</td>
<td>40.42</td>
</tr>
<tr>
<td>50-499</td>
<td>211</td>
<td>48.17</td>
<td>11,611</td>
<td>43.40</td>
</tr>
<tr>
<td>500-999</td>
<td>12</td>
<td>2.74</td>
<td>1,568</td>
<td>5.86</td>
</tr>
<tr>
<td>1,000 &amp; over</td>
<td>19</td>
<td>4.34</td>
<td>2,761</td>
<td>10.32</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

Equally significant is TABLE 3, which reflects the number of farms by value of agricultural products sold. Again, indicating the smaller farm unit orientation of farming in Deschutes County.

TABLE 3
NUMBER OF FARMS
BY VALUE OF AGRICULTURAL PRODUCTS

<table>
<thead>
<tr>
<th></th>
<th>DESCHUTES COUNTY</th>
<th></th>
<th>OREGON</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Under $2,500</td>
<td>210</td>
<td>47.95</td>
<td>10,196</td>
<td>38.19</td>
</tr>
<tr>
<td>2,500-9,999</td>
<td>110</td>
<td>25.11</td>
<td>6,034</td>
<td>22.60</td>
</tr>
<tr>
<td>10,000-39,999</td>
<td>78</td>
<td>17.81</td>
<td>5,216</td>
<td>19.54</td>
</tr>
<tr>
<td>40,000-99,000</td>
<td>28</td>
<td>6.39</td>
<td>3,838</td>
<td>10.63</td>
</tr>
<tr>
<td>100,000 &amp; Over</td>
<td>12</td>
<td>2.74</td>
<td>2,414</td>
<td>8.97</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

*Commercial farms are defined by the U.S. Census as farms with sales of $2,500 or more.
While most areas are noting the increasing average age of farm operators, Deschutes County's commercial farmers average age remained stable at 52.5 between 1969 and 1974, and of all farmers, it actually declined from 52.4 to 51.7. This lower figure reflects a small increase in the 35 to 44 year category and a significant loss of farmers 55 years and older.

Agricultural products can, and often do, vary considerably within local areas. Deschutes County is probably typical in this regard in that farm products have varied somewhat over the years while certain items have continued to play a significant role in the local economy. Figure 1 illustrates the relative importance of the County's agricultural outputs.


Apparently, cattle and calves continue to play an important role, while other field crops (mint, grass seed, and potatoes), hay, and dairy products are becoming relatively even more important. This greater significance is due largely to the stability of these crops in a time of an overall decline in agricultural income. The growing importance of horse and llama raising to the local economy is seen in the miscellaneous livestock category, while the shrinkage of the other category reflects a growing farm specialization taking place here.
The following table depicting agricultural income shows an increasing income from 1970 to 1973, then followed by a decline, and a recent increase, in which inflation undoubtedly played a part. Most of the fluctuation through the years is likely due to changing market prices, since the Extension Service reports that production remained very stable throughout the entire period even though the amount of farmland declined.

**TABLE 4**

**DESHUTES COUNTY ANNUAL GROSS FARM INCOME**

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>$4,974,000</td>
</tr>
<tr>
<td>1971</td>
<td>$6,470,000</td>
</tr>
<tr>
<td>1972</td>
<td>$8,381,000</td>
</tr>
<tr>
<td>1973</td>
<td>$11,414,000</td>
</tr>
<tr>
<td>1978 estimate</td>
<td>$10,316,000</td>
</tr>
</tbody>
</table>

Related to production and income, as well as a variety of other variables such as land development occurring locally, is farm value. In Deschutes County the total value has risen from $43,657,000 in 1969 to $55,728,000 in 1974, and the average per farm jumped from $86,792 to $127,233. Interestingly, the percentage increase of per farm value was 46.6 percent, which is less than the 73.2 percent evident statewide. Perhaps even more significant was the 72.2 percent increase in value of land resulting from development locally.
AGRICULTURAL DETERMINANTS

Critical to an understanding of County agriculture is a review of the four major determinants of farming — soils, water, climate, and economics.

Soils in Deschutes County are derived from volcanic ash and igneous basalt, under conditions of low rainfall and good drainage. The better farming soils are largely limited to the northern portion of the County.

SOIL

A study of land capability for farming prepared by the Oregon Agricultural Experimental Station and U.S. Soil Conservation Service, in 1947, for the better farm areas (except Lower Bridge) in northern Deschutes County indicated approximately 3,000 acres of class I soils, 31,000 acres of class II soils, 39,000 acres of class III soils, and 6,000 acres of IV soils. A 1973 study by the Oregon Student Public Interest Research Group estimated about 61,000 acres of class I through III soils in Deschutes County. A 1978 review of county soils by the Agricultural Citizens Advisory Committee emphasizing climatic limitations, as recommended by the state office of the U.S. Soil Conservation Service and the Land Conservation and Development Commission, resulted in the committees reclassification of available soils to show no class I or class II soils, and 500 acres of class III soils (without irrigation). Under irrigated conditions, the County was estimated to have; approximately 17,000 acres rated "good" as to soils capability and about
200,000 rated "fair" as to soil suitability for irrigation. An estimate of over 900,000 acres of class VI soils was also obtained (class VI soils are not generally suited to crop cultivation).

Some question has been raised by knowledgeable soils experts as to the appropriateness of the study due to the exclusive use of climate as a determinant in the 1978 study, rather than a combination of the various factors as required for a reclassification. However, the review certainly serves to point-out the limitations that climate may place on local agricultural activities.

An obvious conclusion from all these studies is that the better agricultural soils are severely limited in Deschutes County. Therefore, emphasis on livestock-raising and protection of the limited amount of the better agricultural soils may be appropriate locally.

Of the total privately-owned lands, 425,123 acres, the irrigated croplands total 51,428 acres and the dry croplands total 7,675 acres.

Fortunately, most of the better soils are clustered in the northern half of the County, in and around Terrebonne, Lower Bridge, Redmond, Cloverdale, Plainview, Tumalo, Alfalfa and areas between these communities. This clustering will make the establishment of Farm Use Districts considerably easier.
WATER

Water is also an issue of critical importance in a semi-arid area such as Central Oregon. Without adequate water, there is no possibility of producing commercially competitive cultivated crops. Even grazing, which can exist on the poorer soils and in colder areas, requires some access to water. Because of this need for adequate water, several irrigation districts have been created. The oldest district is Deschutes Reclamation and Irrigation Company (Swalley), totalling 4,500 acres. Arnold Irrigation District has rights for 4,400 acres, while the largest, Central Oregon Irrigation District, has 30,300 acres in Deschutes County. Deschutes County Municipal Improvement District (Tumalo District) has 7,200 irrigation acres. Snow Creek Irrigation District has rights to 560 acres. Squaw Creek Irrigation District has rights to 7,400 irrigation acres. This is a total of 54,360 acres (the difference between this figure and the preceding irrigated levels figure is because some irrigation water is not used for cropland each year and because the 51,428 acres figure is only a U.S. Census of Agriculture estimate). In addition to irrigation districts, a number of farms irrigate from their own wells, (6,407 acres - 3,588 acres of primary and 2,819 acres of supplemental rights). The difficulty in purchasing water rights, (the Deschutes River was closed to future water rights in 1916), and the high cost of clearing land make the development of new farm land difficult and of limited potential.

CLIMATE

Another important factor in farming is climate. Deschutes County's location east of the Cascades and proximity to the mountains creates special conditions that if not unique are certainly more predominant here than in any other county in the state. The climate determines the small rainfall necessitating irrigation water, but even more importantly it sets the growing season. Without an adequate growing season, agricultural production is largely limited to grazing, pasture, and some marginal raising of cultivated crops.

Growing Season, frost free 32° days*, is the period of time between the last frost in Spring and the first frost in Fall. In Redmond, the last frost in Spring has occurred as late as June 30 and the first frost in Fall as early as July 2. In Bend the last frost of Spring has occurred as late as June 30 and the first frost in Fall as early as July 1. Because some crops do exist below 32°, a 28° growing

*While some crops can exist below 32°, there is no useful growth occurring, although maturing may continue.
season is also often considered in agricultural production. Table 5 reflects both seasons.

<table>
<thead>
<tr>
<th></th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redmond</td>
<td>94</td>
<td>84</td>
</tr>
<tr>
<td>Bend</td>
<td>72</td>
<td>44</td>
</tr>
</tbody>
</table>

The average frost free growing season for Redmond is 84 days, and the average frost free growing season for Bend is 44 days. For comparison, The Dalles is 205 days, Klamath Falls is 131 days, and Umatilla is 190 days.

The lack of climatological information for Deschutes County has necessitated questioning individuals familiar with the County to help determine our soil capabilities. It has been found that in the northern portion of the County, at lower elevations, the growing season is long enough, in many instances, to produce competitive yields with some crop diversification. The area East of the Deschutes River in Terrebonne does not seem to enjoy the same climate as Lower Bridge, but is very close.
ECONOMICS

Related to the long-term ability of an area to support agriculture is the issue of economics. Not only must the County be sure the physical resources exist, but also if farmers are to be expected to remain in farming, there must be at least a minimally adequate economic situation. Of course, there are two different views of economics that can be taken, short-term and long-term. The results obtained from these two viewpoints can be quite different.

Short-term economics is concerned with the day-to-day and/or yearly operation of a farm, as well as the results of such actions within a few years. A breakdown of the farms with various levels of expense, by percentage, is as follows, and reflects the predominance of small farms locally:

<table>
<thead>
<tr>
<th>Deschutes County</th>
<th>Oregon</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1-999</td>
<td>13.5%</td>
</tr>
<tr>
<td>1,000-4,999</td>
<td>37.2</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>20.0</td>
</tr>
<tr>
<td>10,000-19,999</td>
<td>14.7</td>
</tr>
<tr>
<td>20,000-59,999</td>
<td>10.6</td>
</tr>
<tr>
<td>60,000 &amp; over</td>
<td>4.1</td>
</tr>
<tr>
<td>13.1%</td>
<td>35.5</td>
</tr>
<tr>
<td>15.1</td>
<td>12.0</td>
</tr>
<tr>
<td>13.7</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Source: 1974 U.S. Census of Agriculture

This data reflects the smaller scale of agriculture in the County. Referring once more to TABLE 4, and including a 48.5 percent factor for inflation during this period, it appears agricultural income in the area has remained stable. However, when provision is made for the rapidly increasing cost of operating a farm, it seems apparent that an actual decline has taken place.

The profitability of various crops depends upon a variety of factors, but a check of information prepared under the auspices of the O.S.U. Extension Service provides the following information about some local farm crops.

<table>
<thead>
<tr>
<th>ALFALFA HAY</th>
<th>1977</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per ton at 3 ton yield/acre</td>
<td>$110.47</td>
</tr>
<tr>
<td>Cost per ton at 4 ton yield/acre</td>
<td>82.86</td>
</tr>
<tr>
<td>Cost per ton at 5 ton yield/acre</td>
<td>66.28</td>
</tr>
<tr>
<td>Cost per ton at 6 ton yield/acre</td>
<td>55.24</td>
</tr>
</tbody>
</table>
There are approximately 23,000 acres of harvested cropland in Deschutes County. Approximately 21,500 acres are devoted to hay (approximately 93%). The average yield for farms with sales of $2,500 and over was 2.65 ton/acre in 1974. The average yield for hay in 1977 was 3.3 ton/acre.

What the TABLE 7 figures reflect are the break-even points for various crop yields. Testimony from local farmers indicates that due to low yields, they must often face the higher costs, thereby making competition with other areas difficult.

Local cattle operations have suffered in recent years because of nationwide cattle market conditions. Recent indicators are that this situation is improving. Horse production in the County is becoming increasingly popular and successful, although most of the operations are part-time.

The preceding information also does not reflect the problem local farmers have with transporting their products to distant markets. Local inability to compete economically with areas having better market access is a severe problem, although some of the local produce is consumed locally.

While farmers face years where they do not make a profit, many rely on the increasing value of their land to make them an overall profit in the long-run. To operate each year, they must obtain operating loans.

A check of local banks indicates the following characterizes farm loans: 1) Loans are based on the farmer's ability to produce (primarily land capability and farming experience); 2) The final security for the loan is the land; 3) Loans are not based on the farmer's ability to subdivide, however, there may be an indirect impact since the overall ability to subdivide may be considered when the bank assesses an individual's financial soundness, which may decide whether a loan is granted in cases where there is some concern over the applicant's farming abilities; and 4) The Federal Land Bank bases its loans on farms smaller than 40 acres in size on outside income rather than productivity, due to the inability of these small farms to produce crops in commercial quantities.

Taxes are another great concern to farmers since property taxes can be a major expense to someone whose basic capital expense is land. Of course, it is the intent of exclusive farm use zoning to reduce this burden and thereby compensate the farmer for the loss of some of the development rights that might otherwise exist. At the time this report is written, the County does not have EFU zoning, but nearly the same result is obtained by Farm Tax Deferral, except that the tax is only deferred and must be paid when the land is sold for non-farm use.
While most of the preceding concerns short-term economic effects, there are also long-term impacts. The loss of agricultural land would undoubtedly have negative impacts on the County. While the loss of farm products income might be off-set by residential development it is doubtful this result would last over the long-run. Also, the loss of the esthetic values found in farm land, as well as the costs and hazards created by development, could effect the overall local economy, which depends so greatly on the area's natural beauty. Therefore, this is an issue of County-wide importance.

THE FUTURE

Agricultural production in Deschutes County will probably continue to be based largely on hay, specialty crops, and livestock. The improving nature of beef prices, general stability of sheep prices, and increasing diversity in types of livestock (horses, goats, llamas, etc.) should assure the predominance and strength of livestock production locally, particularly since the soils and climate are more conducive to such products. In addition, the growing local market for agricultural products may lead to greater production for local consumption. However, to protect the agricultural resource the land must be preserved from residential development, in sizes allowing commercially competitive farm operations. Obviously not an easy task in any area with so many relatively small and marginal operations, but a task important to the long-term prosperity of Deschutes County.
AREAS OF SPECIAL INTEREST

For the purposes of this plan Areas of Special Interest shall be defined as Open Spaces (areas to be left open and undeveloped for the overall benefit of the public) and Areas of Special Concern (sites, areas, or identifiable entities with unusual or unique attributes making their identification and protection important).

Central Oregon is blessed with a variety and large quantity of natural beauty. Deschutes County is fortunate to have received much of this incredible resource. This wealth varies from grand views of mountains, forests and plains covering huge expanses, to individual plant or animal species found in only small areas. Undoubtedly many of the new residents of this area have located here in order to enjoy this natural bounty. It's protection is important not only to the preservation of the existing high quality of life, but also for the continued prosperity of the region.

In addition to the maintenance of the open and scenic areas (such as are found in agricultural, forested or recreational lands) there is also the important job of protecting the physical manifestations of man's past involvement in the area's development. Historic sites play a significant role in providing that link with the past that helps us understand ourselves and guide our way in the future.

How well we deal with the challenge of preserving and maintaining these natural and man-made resources will determine not only our immediate future, but that of our children and their children as well.

OPEN SPACES

Much of the open space found in any area is usually not simply being left open and unused. Some other purpose exists for the owner to be able to maintain this land in an open and esthetically-pleasing manner, while the public receives not only the benefit of the owner's use but also the protection of the open space. An obvious example of this is agricultural land. Not only does agricultural land produce important food, fiber, and other products, but it plays an important role in open space. By keeping the countryside relatively close to it's natural state; by maintaining a green and relatively diverse area, visually pleasing and educationally productive to the public; by maintaining areas for wildlife; by protecting large areas from undesirable developments; and by serving as recharge areas for air and water, as well as for people seeking relief from urban pressures and landscapes,
agricultural land plays an important role in any community's open space planning.

Similar to agricultural land is the role assumed by forested land. While an important source of building and industrial materials is highly important to our local prosperity, the timber lands also serve as a significant open area as well. Once again, these areas recharge the air and water resources, as well as the human spirit. Although it is common to encounter some skepticism about the value of these areas to the less quantifiable aspects of maintaining people's equilibrium and/or sanity, it is obvious that the millions of visitor-days spent in local national forests each year occur because people recognize the need to experience the views, tastes, sounds, smells and experiences which come with a visit to these open spaces.

Perhaps not so well recognized as the areas previously discussed, but also important open space areas, are mineral and aggregate sites. To assure an adequate supply of these resources the sites where they are located must be protected from incompatible development. Before the mining begins the area is usually productive as open space, sometimes with access permitted and other times only available to the eye. During mining operations the site is normally not available as open space, but once digging, etc. ceases the land can be (and often is) reclaimed and made available once again.
POPULATION

Knowledge of an area's population characteristics and probable changes is important to the development of a plan that meets the needs of that populace. The purpose of this element is to provide that description of the present population, as well as to speculate on the likely make-up of the County residents in the future.

PAST AND PRESENT

Deschutes County is a relatively young county. Formed by vote on December 13, 1916 the population of the county was fairly small (9,622 in 1920), and predominately in the Bend area. By 1930 the number of people in the county had grown by 53.3 percent to 14,749. Table 1 reflects the growth of Deschutes County from 1920 to the present. The steady increase in population is significant, but not as much as the fluctuation in percent increase, which is now on the rise again after a low period during the 1950's.

TABLE 1
POPULATION GROWTH

<table>
<thead>
<tr>
<th>Year</th>
<th>DESCHUTES COUNTY</th>
<th></th>
<th>BEND</th>
<th></th>
<th>REDMOND</th>
<th></th>
<th>SISTERS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent Increase</td>
<td>Number</td>
<td></td>
<td>Number</td>
<td></td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>9,622</td>
<td>----</td>
<td>5,415</td>
<td></td>
<td>585</td>
<td></td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>1930</td>
<td>14,749</td>
<td>53.3</td>
<td>8,848</td>
<td></td>
<td>944</td>
<td></td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td>18,631</td>
<td>26.3</td>
<td>10,021</td>
<td></td>
<td>1,876</td>
<td></td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>21,812</td>
<td>17.1</td>
<td>11,409</td>
<td></td>
<td>2,956</td>
<td></td>
<td>723</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>23,100</td>
<td>5.9</td>
<td>11,936</td>
<td></td>
<td>3,340</td>
<td></td>
<td>602</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>30,442</td>
<td>31.8</td>
<td>13,710</td>
<td></td>
<td>3,721</td>
<td></td>
<td>516</td>
<td></td>
</tr>
<tr>
<td>1978</td>
<td>49,700*</td>
<td>63.26*</td>
<td>17,100</td>
<td></td>
<td>6,450*</td>
<td></td>
<td>810</td>
<td></td>
</tr>
</tbody>
</table>

*Not a 10 year period.

Sources: U.S. Census and Center for Population Research and Census.

Combined with this growing population is a shift away from a concentration inside the City of Bend. Of course, much of this new population growth is taking place around Bend, but outside the incorporated limits of the City. It is estimated 33,000 people live in and around Bend, which is about 66 percent of the total County population. This figure is close to the historic percentage of population in the Bend area. The low City of Bend figure undoubtedly is partially due to the rapid growth occurring on the undeveloped land around the city and the slowness of these areas in annexing to the city.

As witnessed by Table 2 it is also apparent that Redmond is not only rapidly gaining in population but is additionally
increasing it's share of the County's population.* Further, the unincorporated areas are seeing a great inflow of people. Areas like Sunriver, LaPine, Terrebonne, and Tumalo are growing. On the other hand, Sisters has reversed its declining population trend but is still loosing as a percentage of the County.

**TABLE 2**

PERCENTAGE OF COUNTY POPULATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bend</td>
<td>53.79</td>
<td>52.31</td>
<td>51.67</td>
<td>45.04</td>
<td>34.41</td>
</tr>
<tr>
<td>Sisters</td>
<td>------</td>
<td>3.31</td>
<td>2.61</td>
<td>1.70</td>
<td>1.63</td>
</tr>
<tr>
<td>Incorporated Area</td>
<td>63.86</td>
<td>69.17</td>
<td>68.74</td>
<td>58.95</td>
<td>49.01</td>
</tr>
<tr>
<td>Unincorporated Area</td>
<td>36.14</td>
<td>30.83</td>
<td>31.26</td>
<td>41.06</td>
<td>50.99</td>
</tr>
</tbody>
</table>

Sources: U.S. Census and Center for Population Research and Census.

Of special significance is the burgeoning population growth south of Sunriver. As of November, 1977 Mid-State Electric Cooperative had 2,540 customers in this area, of which 1,610 are full-time residents, 110 residential connections and 110 commercial connections exist in LaPine, while the majority are widely scattered to the north (over 80 percent of the platted lots are north of Burgess Road). Comparison of electrical connections and occupied lots permit an estimate of between 4,670 and 4,850 permanent residents (estimating 2.9 persons per household). These figures are probably somewhat high due to the high number of retirees in the area, since these families usually average less than 2.0. The U.S. Post Office in LaPine estimates the local population may climb as high as 10,000 during the summer months.

A look at the differences between the State and Deschutes County, as far as age and gender, is possible with Graph 2. The two 1970 population pyramids overlain in this graph demonstrate a number of things. First, while the number of children 0-4 is about the same, those 5 through 14 exceed the state, and the percentage of people 15-29 is less than the state percentage. When viewed in combination with the second major difference, the larger County percentage of people 15-29 is less than the state percentage. When viewed in combination with the second major difference, the larger County percentage in 30-44 age group, it appears that the area is experiencing an influx of established families (most likely professional, skilled laborers, and businessmen) who bring a number of children with them. These children leave to find jobs and/or

*Redmond's recent population growth is partially due to a number of annexations incident to sewer construction programs.
GRAPH 1
Population Growth

SOURCE: U.S. Census, 1978
educational opportunities upon graduation from high school. The third interesting factor is the number of retirees indicated in the pyramids. Two groups can then be anticipated to demand local services; the families requiring school, health and recreational facilities; and the retirees seeking health, recreational, and other social services. In addition, the overall growth will continue to require ever greater expenditures for all types of public and private services.

GRAPH 2

![Graph showing pyramid demographics for males and females in Oregon and Deschutes County, with years grouped from 0-4 to 75+ and percent of population indicated. Source: U.S. Census, 1970]
Racially the county is 97.83 (1970 Census) percent Caucasian, 1.45 percent persons of a Spanish Language heritage (441 persons), 0.34 percent other (103 persons - primarily Oriental), 0.31 percent American Indian (93 persons) and 0.08 percent Black (24 persons). The American Indian population probably results from people connected either to the Warm Springs Reservation in Jefferson and Wasco Counties, or the former Klamath Reservation to the south.

MIGRATION

The most dramatic element to local growth is migration. While natural growth accounts for a portion of the local increase, it is undoubtedly the rapid influx of people that is creating the heavy demands on local facilities and resources. This expanding population, attracted largely by the favorable recreational climate and dramatic beauty of the area, has made Deschutes County the fastest growing County in the State.

This trend is consistent with state and national trends which indicate people are seeking retirement communities and/or rural areas where a higher quality of life (as they see it) can be obtained. It appears the local trend will continue for some time, although there are bound to be fluctuations due to changes in economic conditions, as well as changes to the quality of life which originally attracted the new residents. It is therefore predictable that continued population growth will occur in Deschutes County, at least for the near future, even though the exact percentage change is somewhat speculative.

PROJECTIONS

No population element is complete without a projection as to the future number of residents. When an area has a history of stability and little new development is anticipated the projection can be completed relatively easily, but when an area has experienced great fluctuations and is presently undergoing a massive increase in population (with more anticipated) the process of estimating the future population must fall within the province of an educated guess. The County's Economic Citizen Advisory Committee has completed a study of a variety of projections which range between 58,844 and 97,632 people by 1990, as well as high and low estimates of the 2000 population by the Center for Population Research and Census of 174,843 and 65,700. After due consideration the committee determined that an intermediate projection was the most appropriate and would serve as an adequate gauge for anticipating growth and change. The projection chosen is shown in Table 3, and reflects a 4.5 percent annual increase.
GRAPH 3

Percentage of County
Deschutes County

% 70
60
50
40
30
20
10

INCORPORATED
UNINCORPORATED
BEND
REDMOND
SISTERS


SOURCE: U.S. CENSUS
TABLE 3
DESCHUTES COUNTY
POPULATION PROJECTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>46,800</td>
</tr>
<tr>
<td>1980</td>
<td>53,400</td>
</tr>
<tr>
<td>1985</td>
<td>66,600</td>
</tr>
<tr>
<td>1990</td>
<td>82,900</td>
</tr>
<tr>
<td>1995</td>
<td>103,400</td>
</tr>
<tr>
<td>2000</td>
<td>128,200</td>
</tr>
</tbody>
</table>

While a 4.5 percent annual increase is probably appropriate for the County as a whole it is also likely that the emphasis on development occurring in urban areas will cause a somewhat higher growth rate in urban areas. Redmond for instance, has determined that their overall growth until the year 2000 will approximate 5 percent annually (resulting in a year 2000 population of 23,093). Given present trends in Sisters it is likely they will enjoy a similar increase (averaging about 4.5 percent). Bend also should obtain a great increase because of the urban growth boundary and the expansion of municipal utilities and services. The City of Bend is presently anticipating 62,500 people in the Bend Area by the year 2000, up from 33,000 presently. It seems likely however that with an emphasis on urban, rather than rural development, that the actual figure may be over 84,000, depending on how well counter urbanization policies are implemented.

Much of the rest of the population growth not located in urban areas will probably be in the LaPine area. Although recreational and retirement related development will continue to bring people to the LaPine area it is probable that the overall increase in this area will be somewhat slower than farther north. However, continued in-migration could result in at least a 50 percent increase over the existing population (4,670 - 4,850) during the period to the year 2000.

CONCLUSION

Population is a significant determinant for all land use plans, but it is important to remember that all populations are made up of a diverse group of individuals. For that reason their actions and needs are not always easily predictable. However, this projection and description should assist in making important decisions. Perhaps of even greater consequence is that this element can serve as a measuring device. By comparing actual population changes with the predictions it is possible to gain some partial understanding of how well the overall plan is reflecting the needs of the public and serve as one indicator of whether or not changes are needed in the plan.

As prepared this element does provide some understanding of trends occurring locally. The incredibly rapid growth of the County is demonstrated, as is the increasing importance of retirement age people as well as the growing numbers of young to middle-age families moving to the area. Many of these
people are seeking the recreational activities and quieter rural lifestyle available locally. The question is whether in their seeking of this better life they will not eliminate it's existence here. That is the real challenge of this plan.
URBANIZATION

Deschutes County is presently the fastest growing County in the state. Much of this growth is taking place in and around the incorporated communities of Bend, Redmond, and Sisters.

Because the development has been so rapid, much of this new population is locating in the unincorporated areas around the cities, lying within the County's jurisdiction. The percentage of the County residents in the unincorporated areas has increased from 36.14 percent in 1940 to 49.13 percent in 1977. While annexation will eventually bring most of this urban area population within city limits, the pace of new development will continue to allocate construction to suburban areas in the County, even with a greater emphasis on regulations encouraging or requiring "in-filling" (use of undeveloped lands already in areas of existing housing) and high densities. Because of this situation, state land use regulations and accepted urban planning theory calls for the establishment of urban growth boundaries to serve as the planning and service areas for existing communities, as well as to contain development in a more efficient manner and protect important rural resources and values. However, to make this process function requires considerable coordination and cooperation between city, county, and special district governing bodies as well as the public as a whole.

Present county policy is to work with the incorporated cities in the preparation of urban area plans, then to jointly adopt and administer those plans. In that way, the Bend, Redmond and Sisters Plans are also the plans governing county actions within the adopted urban areas. This type of mutual effort and cooperation will ultimately work to everyone's advantage.

The purpose of this element of the plan is not to provide a recitation of all the facts and figures or policies that the County should use in administering and coordinating with Bend, Redmond, and Sisters, rather it is only to briefly describe existing and anticipated problems and point toward some necessary actions by all parties concerned. Policies will be addressed in the goals and policies section of this plan, as well as within the comprehensive plans being, or already, prepared for the three cities and their urbanizing areas by each community. These urban area plans will also contain the many facts and figures used and necessary for the writing of the goals and policies that will govern subsequent development decisions.
BEND

The Bend Urban Area alone is estimated to have over 31,000 residents, constituting 66 percent of the County's population. While always the major city in Deschutes County, recent years have seen growth and change transform the community into a major commercial and service center. Coming years will undoubtedly continue to see on-going efforts to bring urban services, streets, etc. up to appropriate levels that lag somewhat behind the development. However, more planning and better coordination should improve this situation dramatically. Also, Bend's growth may lead it in new directions, such that continued updating and consideration of major changes (as for example - industrial diversification) will be required to assure the most efficient and equitable goals and policies. This will not be an easy task, and will make necessary on-going educational and informational programs combined with strong citizen involvement and cooperation if the final result is to be the best possible.

REDMOND

Redmond also is receiving a great influx of population, which is expected to continue and possibly increase. The reservation of a large acreage of suitable land for industrial development would seem to indicate considerable potential for growth as new industry is attracted to Deschutes County. Accompanying industrial construction is sure to be commercial and residential growth, which also must be accommodated.
Concern also has been expressed over the possibility of continued development along U.S. Hwy. 97 eventually resulting in a strip of commercial uses stretching from Redmond to Bend thereby eliminating the scenic vistas and open spaces so important to the local economic, cultural, and environmental characteristics of Deschutes County.

And the proximity of Redmond to some of the better agricultural lands, particularly to the West, has pointed to the need for a plan which intrudes as little as necessary on these agricultural lands, and may eventually change the community's growth from its westward drift to a greater utilization of lands to the East. Of course, a change such as that will require many years and numerous changes before it even appears to be a reality.

Here again, close cooperation between the City and the County will be required if such controversial issues as the preservation of the dry canyon, lying west of the City, for open space and recreational purposes is to be achieved. Tensions, misunderstandings and "red tape" may be encountered but the overall long-term efficiency of the process should mean important benefits for most everyone involved.
SISTERS

Sisters is certainly a special case. Dependent largely on tourism and recreational visitors, the City has in recent years seen a revitalization due to its downtown redevelopment. A declining population trend has changed to an increasing population such that the census is the highest in 30 years. While still declining as a percentage of the population, this reversal is nevertheless an important step in the resurgence of this colorful and important community.

Sisters, because of its dependence on tourism, must cooperate with the County to ensure the maintenance of the kind of environment that continues to attract and hold visitors. Special concern for scenic vistas and a high environmental quality have practical, as well as philosophical importance to this City and the lands under county jurisdiction within that area.

CONCLUSION

Each segment of the preceding review has discussed and emphasized the need for coordination and cooperation. Coordination to assure that all involved agencies and individuals are aware of and communicating their concerns and desires; and cooperation because it is not enough to talk together, some reasonable compromise between conflicting desires, and rational decision as to the best alternative, must be determined.

No one can expect that this program will be an easy one. Debate, sometimes heated, will characterize much of the process. But, the stakes are too high for everyone involved to allow this cooperative process to fail. A burgeoning population, all expecting adequate services, while we (the people of Deschutes County) seek to preserve and wisely utilize our natural and human resources, must obviously create tremendous pressures and burdens on the people, and the agencies which serve those people. And it must be remembered that while city limit lines may change legal authority, there is no question that the needs of the people are not stopped by legal boundaries. Planning must occur for the whole area, not be simply limited because of differing jurisdictions. It is a challenge that we must face together, working to obtain the best long-term result for all. Success will depend on the commitment and sacrifice of all. Every society depends upon the mutual commitment of its members to the maintenance of the social and environmental basis upon which it is supported. Certainly, we are no different. The Deschutes County citizens will succeed because to do otherwise would be to suffer negative social and ecological consequences that would contradict the reasons for which people stay and move to our County. Our urban areas will offer many challenges, but properly planned and justly administered, they will serve the needs of the people well.
RURAL DEVELOPMENT

Deschutes County has witnessed rapid change and growth in recent years, which is naturally reflected in a large amount of land being divided for residential, commercial, and industrial uses. In addition, the scenic beauty and climate of the area has attracted large numbers of people interested in recreational opportunities. This has resulted in a number of recreational subdivisions and destination resorts (i.e. Black Butte and Sunriver) being established locally. The overall result was, and is, large amounts of land being taken from resource and open space uses to either part time or permanent residential use.

One example of this conversion process is the estimated loss, during the first half of 1978, of 660 acres of "good" farm land and 747 acres of more marginal agricultural land to residential development (Deschutes County Planning Department estimate). In addition another 3,793 acres of land within urbanizing and scabland areas also was subdivided.

During the period 1963-1977, 25,507 lots were created in Deschutes County. Assuming a potential for 2.67 persons per household (present average household size) this creates sufficient single-family lots for 68,103 people, or enough to satisfy permanent population estimates until about 1986. Of course, this illustration does not account for lots purchased for retirement, multi-family housing, recreational uses, changes in household size, and a number of other factors. However, it does point to the speed at which land is being divided and causes concern over whether this process is not proceeding at too rapid a pace; particularly when consideration is given as to where some of this subdivision is occurring (i.e. natural resource and potential hazard areas) and the problems that may be created such as higher public costs, because of inappropriate location of the development.

Related to rural subdivision growth are the changes taking place in the rural service centers. Unincorporated communities such as LaPine, Tumalo and Terrebonne have seen varying degrees of change and development as the land in and around them has changed from rural to residential and commercial uses. This growth has often meant increased demands for facilities and services previously not required because of the rural character of the area. Even places like Alfalfa, Brothers, Hampton and Millican which have seen little change are anticipating development as the County's population continues to increase.

Another interesting phenomenon of rural development in Deschutes County has been the construction of such major destination resorts as Black Butte Ranch and Sunriver. Catering to the more wealthy seeker of recreational opportunities (both seasonally and as permanent residents) these facilities have provided well-planned, esthetically pleasing communities.
The combination of all this development has changed Deschutes County from a quiet rural area to one of a more metropolitan character. Concern now has been expressed that if adequate controls are not established the attractive rural character will be permanently changed and the quality of life locally will be seriously hurt. Already problems with providing adequate and healthy water, disposing of sewage, loss of scenic vistas, skyrocketing land costs, and obtaining sufficient and reasonably priced public services have been identified. Common restraints such as lack of water, little or no police and fire protection, and inadequate roads have not stopped development as people have been willing to sacrifice these services to obtain a rural parcel of land. To deal with these problems we must first understand the situation and then move to control the circumstances for the public's benefit. The following sections provide information about the various types of rural development occurring in the County and generally point to some actions necessary to best serve the general welfare of the county's populace.

RURAL DEVELOPMENT

In order to more fully understand the magnitude of subdivision occurring in the county the following figures on platted subdivision lots in various parts of Deschutes County, as of August 24, 1977, have been prepared:
NUMBER OF SUBDIVIDED LOTS BY YEAR

DESHUTES COUNTY

GRAPH I
Black Butte Ranch ....................... 1,250
Cloverdale/Redmond-Sisters Highway .......... 205
Tumalo/Deschutes Junction .................. 2,602
East to Alfalfa .................................. 591
East beyond Millican ............................ 1,535
Terrebonne Area .................................. 930
Sunriver ........................................ 1,399
South of Sunriver to the County line ...... 10,251
Other Rural Areas ............................... 2,753

Total Lots 29,060

In addition to lots with final approval there also existed
an additional 813 lots in the LaPine Area and another 384
lots in the LaPine Area and another 384 lots outside the
Bend Urban Area, all of which had preliminary approval.
This combination of final and preliminary approved lots
totaled 22,713. Another 8,931 lots existed or had preliminary
approval in urban areas, for a total of 31,644. Interestingly
this indicates only 28 percent of the lots in Deschutes
County are in urban areas, while the rest lie in the supposedly
rural hinterland. It should be noted that the numbers presented
here give no indication of the acreages in each lot, which
can vary dramatically. Nor does it account for land partitions
(creation of only two or three lots) or unrecorded subdivisions.
Subdivision activity in the County has proceeded at a rapid
pace in recent years! As can be seen in Graph I the approval
of new lots has been somewhat political, often following
major economic fluctuations such as the recession during
the early 1970's. What is as interesting as the many
fluctuations is the cumulative effect of all these years of
development activity. From 1963 through 1977 there were
platted in Deschutes County 25,507 lots, which would seem
to indicate that during this period the amount of available
lots increased by about 400 percent. A figure considerably
in excess of the new population.

Recent figures from the County Assessor's Office indicate of
the 32,300 (1978) lots in the County almost 46 percent are
designed rural recreation, of which 80 percent are undeveloped
(11,760 lots, approximately). These recreational lots are
supposedly being purchased for speculation, recreation, and
retirement. However, many are providing a relatively inexpen-
sive way for people to obtain a year-round home. Unfortunately
as increasing numbers of people move into these lots
(largely located south of Sunriver), as they retire or just
to move to a rural area, they bring demands for more public
services. These services are expensive and since the
recreational subdivisions do not pay sufficient taxes to
support the demanded services they must be subsidized by
other taxpayers elsewhere. In addition, these subdivisions
located in rural areas often create fire hazards (or are
susceptible to wildfire hazard), are wasteful of energy,
produce transportation problems, and negatively effect
natural and cultural resources (i.e. wildlife, timber, water,
scenic areas, and historic sites).
The Oregon State Extension Service released a report in November, 1977 which studied, "The Impact of Recreational and Rural Residential Subdivisions in Klamath County, Oregon." The isolated recreational subdivisions studied are very similar to those in Deschutes County, and in fact, were located just south of the Deschutes-Klamath County line, across the line from the major recreational subdivision area in Deschutes County. Because of the direct comparability of this study to local county conditions the following information is presented as representative of both Klamath and Deschutes Counties.

**TABLE 1**
(1976)
IMPACT OF RECREATIONAL DEVELOPMENT

<table>
<thead>
<tr>
<th>REVENUES</th>
<th>School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>General Fund</td>
<td>$4,140</td>
</tr>
<tr>
<td>Road Fund</td>
<td>2,462</td>
</tr>
<tr>
<td>TOTAL</td>
<td>33</td>
</tr>
<tr>
<td>$1,069</td>
<td>$6,635</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPENDITURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>$10,731</td>
</tr>
<tr>
<td>Difference</td>
<td>$4,096</td>
</tr>
<tr>
<td>$2,131</td>
<td></td>
</tr>
</tbody>
</table>

Apparently these subdivisions are costing the County, mostly in road costs, and the school district more than the additional revenues being generated. Given recent demands in the LaPine area for new roads, additional schoolrooms, more police protection, etc., it seems likely that this revenue/expenditure situation is true for Deschutes County as well, if not worse.

In addition, a study of recreational subdivision in Deschutes County was conducted during 1970-71 by the Oregon State University Extension Service. The findings also confirm the Klamath County study. The following table is taken from the report and indicates the likely net impact of various levels of development occurring in the recreational subdivision studied:
TABLE 2
NET IMPACT OF LEVELS OF DEVELOPMENT
ON LOCAL PUBLIC FINANCE

<table>
<thead>
<tr>
<th></th>
<th>4%</th>
<th>50%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Government</td>
<td>$1,466</td>
<td>-$14,286</td>
<td>-$29,171</td>
</tr>
<tr>
<td>Public Schools</td>
<td>52,377</td>
<td>-71,118</td>
<td>-209,708</td>
</tr>
<tr>
<td>Community College</td>
<td>3,197</td>
<td>7,427</td>
<td>54,869</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$57,040</strong></td>
<td><strong>$92,831</strong></td>
<td><strong>$293,748</strong></td>
</tr>
</tbody>
</table>

Obviously as build-out continues to take place the subdivision's net effect is to cost more and more.

While the recreational subdivisions may have been a boon initially they presently, and will continue to, cause severe financial problems for local government. Better land use control will have to be exercised to improve or at least mitigate some of the excesses of this predicament.

The LaPine Area presently has about 11,000 lots, of which 50 percent (the greatest probable amount) are unbuildable under Department of Environmental Quality regulations. Given that in 1977 there were 2,540 full-time and seasonal electrical users in the vicinity of LaPine, and that area is growing at about two percent each year, it appears there are sufficient existing subdivided lots to serve that area's needs until the year 2017.

Elsewhere in the county subdivision is often more oriented to people seeking a relatively small parcel of land (5 to 20 acres) upon which they can raise a few animals, participate in some very small scale farming, and simply enjoy the quieter life possible in rural homesites. Much of this activity has occurred in the Bend-Tumalo-Redmond Area, and to some lesser extent in the Plainview and Terrebonne Areas. Sisters also has some of this activity although most of the subdivision activity there is more oriented to seasonal and full-time recreational use. Unfortunately these locations often occur on some of the better agricultural land. As was mentioned previously, during the first half of 1978 over 1,400 acres of agricultural land was lost to non-farm uses, thereby reducing further the feasibility of maintaining the County's agricultural resource, as well as associated economic and environmental benefits.

Ever greater conflicts between subdivisions and the basic resources of the area may be anticipated in the future. Agriculture, forestry, sand and aggregate, fish and wildlife, as well as other elements of local natural resources will increasingly be restrained or lost to development unless appropriate action is taken now.
RURAL SERVICE CENTERS

Fortunately much of the rural development is occurring in or near rural service centers which can service as loci for the development of the necessary commercial and governmental services. LaPine, Tumalo, and Terrebonne are good examples of unincorporated communities which have grown to accommodate the increasing demand for services. Others, such as Alfaifa, Brothers, and Cloverdale have maintained their relatively quiet rural nature.

LAPINE

Relatively major commercial expansion has taken place as new stores, service stations, banks, and offices have opened to serve the growing local population. This situation is particularly evident in summer when great influxes of seasonal residents may swell the population by as much as a hundred percent. While recent losses such as the destruction of the shakemill by fire have set-back the community's growth, continued interest in industrial expansion by local citizens has been indicated. Although restrained by a lack of public facilities (i.e. sewer and water), appropriate new commercial and industrial development combined with an increasing residential density must occur in the core area if LaPine is to become a viable incorporated city serving the needs of a large portion of the county's residents. To assist this process Deschutes County is presently negotiating with the Bureau of Land Management to obtain land east of LaPine for possible use as an industrial park.
TUMALO

Small acreage, non-commercial farms in the vicinity and new residential development inside Tumalo have resulted in the construction of a new water system and, combined with tourist-attraction, new commercial development. While the community is concerned that their quiet and pleasing environment be maintained, they also recognize the need to accommodate increasing development as the nearby Bend Urban Area continues to expand. Particularly a problem in Tumalo is the need to accommodate local surface mining operations while providing adequate growth area. Timing of regulations is important to dealing with these issues since mining resources need to be protected until the resource is exhausted.

TERREBONNE

Because of the rapid pace of change and increase in the Redmond area the nearby community of Terrebonne has also obtained significant growth. Problems with septic tanks and environmental protection have been identified. The maintenance of the rural agricultural character of the area seems to be important to local residents, and they recognize the need for some land use restrictions if they are to protect their community from undesirable development.
DESCHUTES JUNCTION

While only recently receiving development interest this area north of Bend has shown recent changes as commercial and mobile home developments have occurred in addition to an expanding industrial area. Without careful regulation development along Highway 97 could lead to a large commercial strip development reaching from Bend to Terrebonne.

OTHER

Other centers such as Alfalfa, Brothers, Cloverdale, Hampton, and Millican have not yet had significant development take place. Most interests in these areas would prefer to see this remain the case, with some flexibility to allow for needed service facilities located in the core areas and the maintenance of the rural character around the center; while recognizing the individual characteristics and needs of the local residents.

DESTINATION RESORTS

Two major destination resorts exist in Deschutes County - Black Butte Ranch and Sunriver. In addition some others, such as part of Crooked River Ranch, are also factors in the local situation. To a large extent these facilities are characterized by good planning, effective management, and concern for the welfare of their guests and residents. In order to provide needed services, like fire protection, they have undertaken to form special districts or provide in advance the necessary services. The larger developments
cater to the more wealthy and therefore can afford to make necessary expensive improvements. Undoubtedly, the major destination resorts are overall a beneficial addition to the County. Of course, care must be taken to assure they remain so, since they too require services and could expect more in the future.

LAND USE

As Deschutes County develops the pattern of land use is modified. Areas in LaPine formerly used for agricultural and forestry purposes have now been converted to recreational subdivisions. The rural service centers have seen an expansion of commercial uses. Industrial uses have grown, usually within urban growth areas, but occasionally in rural areas. Sometimes these industrial uses have been compatible with the rural character of the area, such as Bend Research outside of Tumalo, while others have been of questionable value. Rural tracts (larger parcels of land located in rural areas, often established to meet the demand for small ranchettes) have sprawled-out across the northern part of the county from Bend to Sisters and Terrebonne. And residential subdivisions have proliferated around the urban centers.

Inside the urban areas development has been a complex picture of public and private uses, as well as residential, commercial, and industrial uses mixing together. Description of these areas may be found in each of the cities comprehensive plans.

Public ownership is a major point of interest to local citizens because so much of the county is publicly owned. A study by the Deschutes County Planning Department reveals that of the 1,533,277 acres (78.30%) are publicly owned. This ownership pattern has a major effect on development and land use planning for this area. In addition to reducing the available tax base (federal in-lieu monies replace some of the lost property tax revenue) this pattern requires that there be close cooperation between governmental units if either's plans are to be successful.

Deschutes County has been successful in a number of land trades to obtain lands from other public agencies that then can be put to useful private or County purposes, for the community's benefit. Presently the County is involved with a trade with the Bureau of Land Management for lands east of LaPine, north of the Redmond Airport and near the new county shops on Arnold Market Road. These lands will be put to use in productive local projects while the traded County lands (scattered throughout the county) will be used to consolidate or augment BLM property.
### TABLE 3
**LAND OWNERSHIP IN DESCHUTES COUNTY**

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Acres</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Forest Service</td>
<td>979,317.0</td>
<td>50.01</td>
</tr>
<tr>
<td>Bureau of Land Management</td>
<td>500,218.0</td>
<td>25.54</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>1,413.3</td>
<td>0.07</td>
</tr>
<tr>
<td>Deschutes County</td>
<td>21,542.0</td>
<td>1.10</td>
</tr>
<tr>
<td>State of Oregon</td>
<td>29,539.9</td>
<td>1.51</td>
</tr>
<tr>
<td>Misc.</td>
<td>161.0</td>
<td>0.01</td>
</tr>
<tr>
<td>City of Bend</td>
<td>771.6</td>
<td>0.04</td>
</tr>
<tr>
<td>City of Redmond</td>
<td>304.0</td>
<td>0.02</td>
</tr>
<tr>
<td>City of Sisters</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td><strong>Public Lands</strong></td>
<td><strong>1,533,276.9</strong></td>
<td><strong>78.30</strong></td>
</tr>
<tr>
<td><strong>Private Lands</strong></td>
<td><strong>425,123.1</strong></td>
<td><strong>21.71</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,958,400.0</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Obviously, a major reason for this plan is to assure that the future land use pattern be more efficient and productive for the overall needs of the County's populace, than has been the case in the past.

**CONCLUSION**

Development of the rural areas in Deschutes County has proceeded at a rapid pace. For some the speed of change has been too fast, for others not fast enough, and for still others in the wrong places. Obviously there are serious problems and great concern exists locally that improvements be made. Protection of scenic and natural resources is an important part of any plan, but particularly so in a county such as this one where the basic economy is so closely tied to these assets.

Special concern over the loss of agricultural land, strip development along U.S. Highway 97, and detrimental recreational subdivision in the La Pine Area has been identified. As Deschutes continues to change from a rural recreational area to the metropolitan center of Central Oregon (the Bend Urban Area has almost half of all the people in Crook, Deschutes, and Jefferson Counties) the existing pressures will grow even greater. Strong, effective and equitable planning will be required to meet these challenges.
SOIL ASSOCIATIONS

- Floke-Olson
- Deschutes-Deskamp
- Gosney-Deschutes
- Simas-Searles
- Kotzman
- Klawhop-Shanahan
- Sisters-Wanoga
- Shanahan
- Cultus-Shukash
- Lapine
- Winoopee-Moolack
- Rock Outcrop Winoopee

Soil Conservation Service data, 1973
FINAL
DESHUTES COUNTY
YEAR 2000
COMPREHENSIVE PLAN
NOVEMBER 1979
DESHUTES COUNTY
COMPREHENSIVE PLAN
YEAR 2000
Prepared and Presented
By
The Deschutes County Planning Department
In Cooperation With
The Citizens of Deschutes County

Acknowledgments:
The Deschutes County Board of Commissioners
Clay Shepard 1979
Abe Young, Chairman 1980
Robert Paulson, Jr.

The Deschutes County Planning Commission
Folmer Bodtke, Chairman
Ted Smith, Vice Chairman
Don Halligan
Sharon McCloughry
Rick Quackenbush
Kay Nelson
Robert Appleby
Gorden Detzel
Harold Baughman

1979
The Deschutes County Planning Staff

William G. Monroe
Planning Director

Long-Range Planning Section

John E. Andersen
Senior Planner

Carole Wells
Assistant Planner/
Local Coordinator
(1977-79)

Brian Christensen
Assistant Planner

Merlyn Paine
Assistant Planner

Elizabeth Shay
Associate Planner/
Local Coordinator

Current Planning Section

Richard Knoll
Associate Planner

Craig Smith
Associate Planner

Philip Paschke
Assistant Planner

Bruce Knowlton
Associate Planner

George Cress
Associate Planner

Margaret Hayden
Code Coordinator

Clerical Section

Nancy Smith
Senior Office Associate

Jill Reed
Office Associate

Elizabeth Pallone
Office Associate
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Definitions</td>
<td>4</td>
</tr>
<tr>
<td>Existing Conditions</td>
<td>14</td>
</tr>
<tr>
<td>Planning Organization</td>
<td>20</td>
</tr>
<tr>
<td>Alternatives</td>
<td>25</td>
</tr>
<tr>
<td>Goals and Policies</td>
<td>30</td>
</tr>
<tr>
<td>Growth Management</td>
<td>33</td>
</tr>
<tr>
<td>Rural Development</td>
<td>34</td>
</tr>
<tr>
<td>Urbanization</td>
<td>62</td>
</tr>
<tr>
<td>Economy</td>
<td>69</td>
</tr>
<tr>
<td>Housing</td>
<td>75</td>
</tr>
<tr>
<td>Transportation</td>
<td>78</td>
</tr>
<tr>
<td>Public Facilities and Services</td>
<td>91</td>
</tr>
<tr>
<td>Recreation</td>
<td>99</td>
</tr>
<tr>
<td>Energy</td>
<td>105</td>
</tr>
<tr>
<td>Natural Hazards</td>
<td>110</td>
</tr>
<tr>
<td>Resource Management</td>
<td>113</td>
</tr>
<tr>
<td>Agriculture</td>
<td>114</td>
</tr>
<tr>
<td>Forest Lands</td>
<td>120</td>
</tr>
<tr>
<td>Open Spaces</td>
<td>123</td>
</tr>
<tr>
<td>Surface Mining</td>
<td>127</td>
</tr>
<tr>
<td>Fish and Wildlife</td>
<td>134</td>
</tr>
<tr>
<td>Historic and Cultural</td>
<td>136</td>
</tr>
<tr>
<td>Water</td>
<td>138</td>
</tr>
<tr>
<td>Citizen Involvement</td>
<td>141</td>
</tr>
<tr>
<td>Plan Flexibility and Updating</td>
<td>144</td>
</tr>
<tr>
<td>Things Yet to Be Done</td>
<td>146</td>
</tr>
<tr>
<td>Implementation</td>
<td>148</td>
</tr>
<tr>
<td>Concluding Remarks</td>
<td>158</td>
</tr>
</tbody>
</table>
EXISTING CONDITIONS AND CONCERNS

Before a plan can be prepared for a community, there must be an understanding of the physical structure, general attitudes and existing trends which identify that community as the unique society that it constitutes. Further, it is important that there exist some understanding of the problems and issues facing the local community. The purpose of this portion of the plan is to briefly review the status of some of the elements which make up Deschutes County in 1979 and discuss the apparent direction which the County seems to be taking into the future. More detailed information on local conditions and trends may be found in the Resource Element which is part of this plan.

POPULATION:

Probably one of the most dramatic indicators of local conditions is population. Certainly the rapidly expanding growth in Deschutes County is having dramatic effects throughout the community. Increasing at a rate of 6.3 per cent annually (average from 1970-77), the County is known as the fastest growing county in Oregon. The 1978 population estimates by the Center for Population Research and Census indicated the local population is 49,700, an increase of 63.26 per cent from the 30,442 of 1970. Present indications are that the rapid rate of growth is expected to continue for the immediate future and slow some time in the late 1980s. Overall, it is anticipated that the growth rate between now and the year 2000 will average approximately 4.5 per cent annually, resulting in an overall increase of 158 per cent to a population 128,200. Much of this growth is expected to take place in and around the two major existing population centers, Bend and Redmond. Somewhat slower growth is expected elsewhere, except in La Pine.

La Pine is an exceptional situation. Original appraisals of two per cent annual growth have been questioned and estimates as high as 12 to 15 per cent have been suggested. Certainly the higher growth rate would help to explain the growing problems the community has had with poor water quality, loss of forest and agricultural lands, increasing strip development and logging public facilities and services.

As important as the number of people is some knowledge of the age distribution of people moving here. A comparison of the estimated populations for the County and the State made in Socio-Economic Indicators – 1978 revealed that Deschutes County has a higher percentage of people 17 years and younger and 65 years and older than is characteristic State-wide. Apparently, the area is attracting numerous retirees, as well as young families with children. Characteristically, these groups make demands on a variety of services, particularly schools and health care. Young families tend to seek single family residences, while retirees seem to find a variety of housing styles acceptable (depending on Page 14 - Deschutes County Comprehensive Plan
income) but are usually attracted by lower maintenance facilities such as apartments and mobile home parks. Apparently, both of these groups are being attracted by what is seen as the higher quality of life, whether for raising children or for retirement activities, which may be found locally.

ECONOMY:

Equally important in understanding the local area is the economic base of the community. Presently the timber and wood products sector is the major manufacturing employer locally, with 2,720 employees as of March 1978. However, major changes may be expected during the 20-year planning period and the overall result is difficult to assess. It does appear that conversion to processing smaller trees and maintenance of the allowable cut will permit some growth in employment but overall timber and wood products will probably play a proportionally smaller role in the County's future economy. In fact, total manufacturing is presently decreasing in importance locally. How much decrease this ultimately will amount to is difficult to predict. Regionally and nationally the economy is shifting to a more service- and trade-oriented status. Given the emphasis on promoting manufacturing in Redmond and to a lesser extent in La Pine and the growing local labor pool, it seems probable that some gains in industrial employment may be expected although as a proportion of the economy some small decline may occur.

One of the strongest segments of the local economy is construction which grew 187.5 per cent between 1970 and 1978. Related to construction is the growth in finance, insurance and real estate employment, up 95.8 per cent during the same period. These industries are directly related to the large in-migration of people occurring in the County.

Tourism is also a significant factor locally, as is reflected in the strong growth (up 107.3 per cent) taking place in the services sector of the economy. Some of this growth is likely to be related to population growth and a national trend to more services. Unfortunately, service jobs tend to be somewhat lower paying and more seasonal than some other types of employment. However, the City of Sisters has chosen to base its economy almost solely on tourism. And tourism locally is a less seasonable economy which seems to provide many jobs for the young and second incomes for families.

Wholesale and retail trade has also witnessed rapid growth, up 96.9 per cent, and is probably tied to a burgeoning population and a growing importance for Bend as a regional shopping center. Agriculture, once a major factor in the local economy, has continued to decline. Only livestock areas and some of the better cropland areas, which have remained largely undivided, have continued to produce significant amounts of agricultural products. Many small farms exist in the County, but their agricultural...
production is largely subsidized by off-farm employment. The
definition of marginal farm land and how much is marginal is a
major issue in this area.

It appears Deschutes County is shifting from a rural economy to
one more characteristic of a growing urban area. Growth in trade
and services seems likely to continue with a growing interest in
manufacturing employment, presently not evident, probable once an
adequate pool of labor exists.

Unemployment has consistently been higher in Deschutes County for
many years. To some extent, this situation is related to the
seasonable fluctuations of such industries as tourism, logging and
agriculture. Most recently, the major reason is probably the
rapid influx of new residents. Many of these people are young
skilled individuals who have moved here for the higher quality of
life available locally and are willing to accept jobs for which
they are over-qualified or to create their own employment. Given
the rapid influx of people, which likely hides a large
out-migration of people unable to find adequate employment
(in-migration is still faster than the out-migration so the
population increases), it is perhaps surprising the economy has
accommodated so many.

HOUSING:

Nineteen seventy-seven housing data indicates Deschutes County
residents build more single family units (62.5 per cent of all new
dwelling unit permits versus a State average of 55.32 per cent),
buy more mobile homes (20.4 per cent versus 15.92 per cent), and
construct fewer multiple family units (17.1 per cent versus 28.75
per cent) than is characteristic statewide. These findings appear
to be consistent with the earlier population information. The low
vacancy rates found locally, for single family dwellings and
multiple family units, are indicative of the rapid growth locally.
One aspect of the local housing situation that is difficult to
determine is the effect of seasonable housing on local housing
demand. Surveys indicate about 10 per cent of the local housing
stock is used as seasonable housing and is, therefore, generally
unavailable to meet the need of local residents. This is a factor
which must be remembered when assessing how much land needs to be
set aside for housing construction.

LAND USE:

One of the most obvious results of growing County population has
been the sprawling residential development that has spread rapidly
over much of western Deschutes County. This has caused the loss
of valuable agricultural and forest land and accentuated the need
for expensive public services. Recreational and rural tract lots
in the County in 1979 accounted for 58 per cent of the total lots.
Interestingly, of these lots, 17,377 were found to be undeveloped.
Page 16 - Deschutes County Comprehensive Plan
It appears the County presently has enough available empty lots to
more than serve the needs of the anticipated new rural residents.

In the La Pine area, recreational subdivisions once seen as a boon
to the County taxpayer have slowly been changing to more
permanent occupancies that demand schools, buses, sheriff and fire
patrol, as well as a variety of other expensive services that must
be delivered over a large area.

Historic structures and sites, so important to the preservation of
the County's history and the education of the community, have been
lost to the dictates of unregulated change.

Strip commercial development has continued to stretch out from the
urban areas along the highways, often obliterating scenic views
and natural lands while promoting inefficient energy consumption
and traffic patterns.

Rural Service Centers have not been used as originally intended.
Often the land uses constructed have little or nothing to do with
the servicing of the rural population, but instead are just
further examples of the spread of commercial uses along the
highways or the use of loopholes to avoid planned development
(i.e., Deschutes Junction).

PUBLIC FACILITIES:

As has been mentioned previously, the sprawling pattern of
development which has been characteristic locally has resulted in
extensions of increasingly expensive public services. Further,
growth has been so rapid that even in urban areas services have
lagged behind the population growth, although not so seriously as
in La Pine. Occasionally, the lack of services has even created
the potential for serious problems, such as the lack of sheriff's
protection in La Pine and the use of irrigation water for drinking
in the Bend-Tumalo areas.

Many people have expressed concern over rising tax rates and the
possibility that they are subsidizing those areas of the County
they would like to see left open and unchanged.

TRANSPORTATION:

In Deschutes County, as is typical of rural areas, the primary
mode of transportation is the private automobile. In fact, this
area's love of outdoor activities and sprawled development seems
to have resulted in a higher rate of vehicular ownership than is
characteristic statewide. Certainly these attitudes and
conditions are much of the reason mass transit has been so
unsuccessful locally.

Page 17 - Deschutes County Comprehensive Plan
Concern has been expressed over the loss of wildlife habitat, such as the subdivision of deer winter ranges and the blockage of deer migration corridors in the La Pine area. The Oregon Fish and Wildlife Department has been outspoken in its concern and has, upon occasion, sued to protect the dwindling habitat.

Problems with water quality have been found to exist in La Pine and septic tanks have failed in Terrebonne. Increasingly the major environmental damage has been the loss of scenic vistas and sensitive environment areas along highways, rivers and other areas where development has occurred. Often the resources lost have been irreplaceable locally.

Fortunately, Deschutes County still has many scenic and natural resources available. Public ownership constitutes over 78 percent of the land in the County. Proper management of both public and private lands can assure the area's primary resource——its natural beauty and diversity——is maintained for future residents.

OTHER:

Energy usage has been growing dramatically in Deschutes County, not only because of the population growth but also due to the low density sprawled-out pattern, construction of energy consumptive commercial uses and a general unconcern about energy by many citizens. Interestingly, the heavy use of wood heat locally does seem to have saved a significant amount of electrical energy. Problems with coordinating activities and regulations between the various Federal, State and local agencies have often created unnecessary delays and expenses. Often this has been expressed in comments about excessive government regulation, at the same time complaints about lax enforcement of local ordinances are being received. While improvement has been noted, much more will be necessary for the coordinated and productive management of public resources and services locally, particularly if growth and change continue to occur at a pace as rapid as it is now.

This brief summary of conditions, trends and local issues is not meant to be all-encompassing, but it does include the major characteristics and trends of concern in the preparation of this plan. Deschutes County has available tremendous environmental and human resources but it also suffers from many of the problems common to areas with rapid rates of growth. The scenic and environmental qualities that first attracted people will be needed in the future as well.

However, not all of the results of growth are bad. Increasing population has brought new businesses and services to the area. Educational and cultural opportunities have improved significantly. Employment alternatives have increased, as have wages. And, a lot of new people have been able to improve their quality of life. Growth and change is a mixed blessing. The purpose of this plan is to address the issues and provide the best available development alternative for this County's people. Given
the complexity of local issues and the importance of the task, it is not surprising that the preparation of this plan has been a controversial and lengthy process.
The program began with a well-publicized educational meeting at the local college to acquaint Deschutes County residents with citizen involvement in land use planning and the upcoming opportunities for participation. One hundred and fifty persons attended to view a slide show on the goals, hear an explanation of the program, fill out an attitude survey (later compiled by college students) and receive several handouts. For a month thereafter, people volunteered for advisory committee membership and were accepted without restriction.

The Board of County Commissioners, acting as the committee to evaluate the citizen involvement program, appointed 17 technical and area advisory committees and an Overall Citizens Advisory Committee with a total of 326 officially appointed members. Up to 300 additional persons also were indirectly involved.

The technical committees functioned as a panel of experts (often including Federal, State, local and district agency personnel) and interested citizens. These committees covered the following topics: minerals and aggregates, agriculture, forest lands, fish and wildlife, historic and cultural, economy, transportation, public facilities and services, recreation, housing and energy. Each committee was given a general work program to collect information, identify needs and problems and prepare justified recommendations. Committees met two to four times per month and ten to twenty times totally. Each group prepared a detailed and factual preliminary report which was then submitted to the Overall Citizens Advisory Committee (OCAC) for comment. Revisions to each report were made and submitted as a final report to the OCAC and Planning staff. The initially weak data base as well as the demanding time schedule for plan completion were handicaps the committee had to overcome. Their detailed reports were often used word for word in the preparation of the resource element and preliminary plan.

The area committees involved interested citizens from the three major rural service center areas, La Pine, Terrebonne and Tumalo. An attempt was also made to form a Sunriver committee but little interest was expressed by residents of that area. The committees addressed each of the LCDC goals and developed a list of programs, needs and directions for future community growth. Their reports were reviewed by the OCAC in the same manner as the technical reports and eventually used in the preparation of the preliminary plan.

There were also three urban area advisory committees appointed to work with each city's planning staffs in order to prepare urban area plans for each city and its surrounding urbanizing area. While the Bend Urban Area Plan was largely completed by the time the OCAC was formed, the Redmond and Sisters planner periodically reported to the Overall Citizens Advisory Committee to assure communication and coordination.
The Overall Citizens Advisory Committee was the largest committee and the one most broadly representative of the various interests and areas of the County. Their primary function was to resolve conflicts between the recommendations of the various committees. In addition, they also reviewed the recommendations to assure they met the State's goals and guidelines. The OCAC also initiated many of the recommendations regarding development in urbanizing and rural areas of the County, thereby tying together the various elements of the plan. It was their direction to the staff which served as the basis for the preliminary plan.

In this period the County Planning staff also wrote several reports to provide information to the OCAC. These papers covered geology, geomorphology, soils, areas of special interest, climate, hydrology, history and population. The OCAC also considered this information in their deliberations.

During this citizens' committee stage of the process, over 200 meetings were held and in excess of over 10,000 hours of time were spent by volunteers working on the plan. More than 5,000 newsletters were mailed to interested citizens and thousands of letters, mailings, posters and flyers were also distributed. Radio, television and newspaper coverage was extensive. The largest local newspaper printed an explanatory article on each of the committees' and staff's reports. This was to insure that everyone, whether involved directly in the process or not, was kept up to date as to where the plan was heading.

Once in the preliminary plan stage, the document was brought to the County Planning Commission for review. A newspaper supplement describing the major elements of the plan was placed in the major newspaper in Deschutes County and the local news media were very cooperative in disseminating information about the plan. The Planning staff also spoke to various groups in the community. Copies of the plan were placed in local libraries and made available to everyone interested. The Planning Commission held a number of hearings on the preliminary plan and then provided a series of recommendations to the Board of County Commissioners.

The County Commissioners also held hearings on the plan. These hearings seemed to be emotion-packed events which generated large turnouts and spirited testimony. Using the public testimony (both written and verbal) and the recommendations of the Planning Commission and staff, the Board compiled a working draft of the Comprehensive Plan. This working draft was then sent out to outside legal and planning consultants for review and comment. Earlier, the preliminary plan had been given to an outside reviewer to determine the adequacy of the energy elements of the plan. All these reports were then delivered to the Board of County Commissioners. Their determination was that the Planning staff should take some additional time to use these studies to improve the plan where necessary. This new draft was then taken to the Overall Citizens Advisory Committee and Planning Commission for comment, before the Board took any final action. The Board, Page 23 - Deschutes County Comprehensive Plan
also determined that an additional public hearing would be held to hear testimony on planned exceptions to be taken to the agricultural and forest land goals of the State Land Conservation and Development Commission. The use of such an extensive citizen involvement program, as well as the utilization of specific professional assistance, was a complex but extremely useful combination. The preparation of the plan was not only speeded but the quality of the overall document was significantly improved. It is expected that this will produce a document that will effectively serve as a basis upon which to build a bright future for the people of Deschutes County.
INTRODUCTION:

The alternative chosen for growth in Deschutes County was one which emphasized accommodating the anticipated growth of the area primarily in the urban areas, with some rural development taking place in the Rural Service Centers and in existing subdivisions. This new pattern would then provide much greater efficiency in the provision of public services and foster savings in energy, particularly in transportation. The development pattern would also protect scarce resources, while permitting compatible improvements.

Rural Development is the chapter that serves as the basis for the rest of the plan. Basic guidelines to do away with the former inefficient development pattern and to accommodate the anticipated 7,050 new rural residents are contained in this section. Emphasis is placed on maintaining the existing rural character of the County, while acknowledging that Deschutes County is becoming more urban, by concentrating new rural development in the Rural Service Centers. In that way people desiring a rural lifestyle may do so without unduly increasing the costs to others or utilizing resource lands. The only exception to this rural pattern is in the La Pine area where emphasis is laid on the incorporation of the community and improvements in local services provided. The La Pine rural area is also likely to receive many of the over 3,000 new rural homes which will be built, because so many lots already exist in that area.

Urbanization links this plan to those of the three incorporated communities. This chapter provides parameters for the establishment and expansion of the urban boundaries and provides common guidelines to the cities to help them accommodate the 71,450 new residents that will live in the urban areas by the year 2000. These new County residents will need over 35,600 homes and 29,000, perhaps as high as 35,000, new jobs. Sufficient land must be allocated and managed to serve these new local citizens.

The Economy chapter discusses the need to protect our existing timber, agriculture, mining and scenic resources for our future prosperity. It also provides policies to help Deschutes County in its metamorphosis from a rural resource economy to a more commercial/industrial orientation as an urban center, perhaps providing between 7,700 and 16,000 new manufacturing jobs and 27,000 to 32,000 new non-manufacturing positions.

Housing emphasizes the need for flexibility in housing styles and costs so as to provide adequate homes for all segments of the community. Also fostered are programs to help rehabilitate existing homes and to accommodate low and moderate-income families through government programs and efforts to reduce development costs.
The Transportation chapter seeks to aid movement to and between the communities and to improve the ability of the communities to efficiently deal with the new residential, commercial and industrial uses which are anticipated. Greater public safety is promoted, as is preparation of a shift from automobile dependence to public transit and other transportation alternatives.

To accommodate existing and anticipated populations and land uses the Public Facilities and Services chapter provides basic guidelines for the construction of new facilities, while again fostering urban rather than rural development.

Recreation seeks to accommodate both the growing local population and the tourist industry. New facilities and cooperative plans are identified and, while the County seeks to provide primarily a facilitator function, there is made a greater commitment to recreation and associated activities.

The Energy chapter emphasizes more local independence in providing energy, protection of future energy resources and better coordination with energy providers. Information and education about energy and local opportunities are stressed. As the population continues to grow and because of the importance of tourism, energy will play an ever more dominant role in local planning efforts. These policies seek to emphasize the need for greater efficiency in development patterns and construction, while surveying our available future options.

The Natural Hazards chapter seeks to guide development away from identified hazards, such as wildfire, while making use of areas that need to be protected from development for other useful purposes. The protection of the 100-year flood plain is an example of an area where development shall be prohibited but wildlife and recreation opportunities will be fostered.

One of the more controversial resource chapters has been Agriculture. The policies in this plan seek to protect identified agricultural areas, while recognizing that marginal agricultural conditions are present in some areas. Some hobby farming is permitted in the more marginal areas so as to increase agricultural productivity, while a program to research local marginal lands and to determine how they may be utilized while agricultural production is preserved, is mandated for future updates of the plan.

Forest Lands seeks to protect existing areas with timber capability, while permitting compatible development on non-productive lands that will foster other aspects of the local economy. The loss of much of La Pine to development is recognized (see Exceptions Statement) but in those areas where larger lots exist, small woodlot management is encouraged and commercial timber is protected where it remains feasible (primarily the national forest and on timber company ownerships).
The local economy and environment is very dependent on the protection of this County's scenic and natural areas. Because of that the Open Spaces chapter identifies the policies required to protect those resources for the area's tourism, recreation and quality of life needs, while recognizing the appropriateness of flexibility when dealing with individual property owners.

The Surface Mining chapter seeks to preserve known mining resource sites for ultimate mining activity and to permit mining as it is needed in the County. There is also recognition of the County's responsibility to protect adjoining residents (safety and health hazards) and the general public (excessive construction costs and hazards created by a shortage of building materials as well as loss of scenic qualities and pollution).

Fish and Wildlife seeks to balance the wildlife needs of the area against the requirements of a growing population. The important economic and lifestyle qualities are recognized and irreplaceable wildlife areas protected, while precautions that permit limited development are identified.

One of the most non-controversial chapters is Historic and Cultural, which seeks to protect the ever dwindling supply of historic and cultural sites, protection that will have important economic and social benefits for a community growing as is Deschutes County presently.

Water is the resource without which there will be no future growth in Deschutes County. Preservation of existing water quality and greater efficiency in delivering available water supplies is being sought. The new and existing residents will need all that is presently identified. Agriculture, new employment opportunities and maintenance of the tourism/recreation industry all require water. This plan seeks to improve coordination and planning for that water's use.

The final chapter is Citizen Involvement. Planning is a dynamic process and one that does not stop with the adoption of a plan. More study to keep the plan functional and up-to-date will be required. The County's efforts will continue to be aimed at involving the public, in meaningful ways, with the preparation of future plans and studies. There is also an emphasis on explaining planning, its purposes and techniques, so that it will be better understood and more usable by County residents.

The plan policies must be read as a whole, as the County will grow as a single unit, not sixteen separate pieces or aspects. Taken together these policies point the direction for the County's future, a future full of change but one full of promise as well.
GROWTH MANAGEMENT

Rural Development

Urbanization

Economy

Housing

Transportation

Public Facilities & Services

Recreation

Energy

Natural Hazards
The primary duty of this comprehensive plan is to guide growth and development in the rural areas of Deschutes County. The Urbanization chapter discusses urban area growth but the primary plans for the County's major communities are the three urban area plans. The Deschutes County Year 2000 Comprehensive Plan is focused upon the changes that will be taking place outside the urban growth boundaries. This chapter is meant to tie together the various more specific chapters which deal with resource and growth management so that an integrated plan for the development of the County may be obtained.

Being the fastest growing County in Oregon has meant many changes for Deschutes County. Some of the changes, such as improved social, cultural and economic opportunities, are seen as beneficial. Others, such as traffic congestion, loss of scenic views, and rising taxes to pay for public services, are changes most people would like to do without.

Recent years have witnessed County-wide growth occurring at about 6.3 per cent annually. The present population of Deschutes County is estimated at 49,700. Growth is expected to continue at a slower rate (4.5 per cent annually) to the year 2000. By that time, the County will likely have about 128,200 residents. Of that number, 84,000 will be in the Bend Urban Area; another 23,093 will be in and around Redmond; 2,135 are expected for Sisters; and La Pine will have incorporated and reached an urban area population of 3,620. This leaves a rural population of 15,350 people, up from an estimated 8,300 presently.

To accommodate the new rural population will require 3,039 lots (assumes 2.32 persons per household). There were available in Deschutes County, as of January 1, 1979, 17,377 undeveloped rural tract and recreational lots. It appears that County-wide there is in excess of 14,000 lots beyond the public's housing needs until the year 2000. That does not preclude the possibility of certain areas needing new lots, since the vast majority of those existing lots are in the La Pine area, but it does indicate the County must give serious review before approving any further rural development.

Much of the development which has occurred locally has been the standard parcelization of land into small (less than 10 acres) lots. This dispersed pattern is often the most costly to serve; the most wasteful of energy, land and resources; the least esthetic; and the most destructive to rural character. Planned Developments, such as Indian Ford Planned Development, often provide a more efficient and beneficial manner in which to serve the public demand for a rural recreational or residential experience. Destination resorts, such as Black Butte Ranch and dude ranches, have been found locally to be economically and socially desirable land uses, when located and developed.
consistent with the capabilities of the land and the abilities of various public and private agencies to serve that area.

Recreational subdivision was originally seen as a benefit to the County as the non-resident landowners would be contributing to the County tax base. This probably resulted in areas like La Pine subsidizing other portions of the County. Now the recreation subdivisions are filling up with retirees and younger people seeking less expensive building lots. The result is a call for more services in areas far from existing service facilities and in subdivisions where roads and other improvements were meant only for seasonable and limited use. As demand continues to grow, to provide adequate service levels it will be necessary for other areas to subsidize the recreational areas for many years. Studies by Oregon State University indicate that Deschutes County is likely faced with such a situation presently.

The County has witnessed losses of agricultural, forest and other resource lands, as well as seen the expense and esthetic losses created by urban sprawl. Studies such as The Costs of Sprawl have emphasized the greater efficiencies that can be obtained by a more condensed and planned development pattern. When these factors were combined with State requirements to contain development in urban areas there was no question to the Overall CAC that the updated comprehensive plan would have to address the issue of containing urban sprawl and protecting the rural character of the County.

The predominant rural land uses in the County are open spaces, pasture and limited crop production, livestock production, natural resource utilization and wildlife cover. There is also residential use and some commercial and industrial activity in the rural service centers. Unfortunately, the unrestrictive zoning permitted in the rural service centers has allowed incompatible adjacent land uses and not resulted in providing the needed services for the surrounding rural areas. In the case of Deschutes Junction this result is combined with another factor in that Bend's urban sprawl is augmented by development at the junction.

Interestingly, the residents of the rural service centers, except for La Pine, have expressed concern that higher levels of development in their locales would be incompatible with the existing rural nature of the area. They agree that there is a need for limited and controlled growth, but that the rural character of the community must be maintained.

To guide development into appropriate patterns the following goals have been prepared:
GOALS:

1. To preserve and enhance the open spaces, rural character, scenic values and natural resources of the County.

2. To guide the location and design of rural development so as to minimize the public costs of facilities and services, to avoid unnecessary expansion of service boundaries, and to preserve and enhance the safety and viability of rural land uses.

3. To provide for the possible long term expansion of urban areas while protecting the distinction between urban (urbanizing) lands and rural lands.

POLICIES:

The policies needed to accomplish the identified goals were largely developed by the Overall CAC during its deliberations on the preliminary plan. It was obvious that some policies were needed to pull the various resource and management chapters together and to fill in some gaps so that an integrated and cohesive plan was available.

Rural Development policies are meant to pertain to all non-urban areas (areas outside urban growth boundaries) and are the basic policies to be followed in guiding rural growth. Specific resource or management policies from other chapters shall augment these policies so that the plan must be viewed as an integrated whole rather than a series of individual chapters.

Residential/Recreational Development

1. Because 91 per cent of the new County population will live inside an urban area, with only 3,039 new rural lots required, and in light of the 17,377 undeveloped rural tracts and lots as well as the energy, environmental and public service costs, all future rural development will be stringently reviewed for public need before approval. As a guideline for review if a study of existing lots within 3 miles of the proposed development indicates approximately 50 per cent or more of those lots have not had structures constructed thereon, then the developer shall submit adequate testimony justifying additional lots in that area. This will permit development in areas where such is needed (other policies considering energy, public facilities, safety and other development aspects shall also be considered) while restricting future division in areas where many undeveloped lots already exist.

2. To further restrict subdivision outside urban areas the minimum parcel size shall be 10 acres, except where other
policies supercede this minimum (see Rural Service Centers, Agriculture and Forest Lands).

3. Cluster or planned development offers significant savings to the developer because of reduced roadway, utility and construction costs. Public costs to serve cluster developments are also usually lower. Therefore, to encourage development and planned developments, rather than parcelization, the County shall permit an increase in density up to 33 per cent above the density permitted in the zone for cluster and planned developments.

4. Cluster and planned developments shall maintain a minimum of 65 per cent of the land in open space, timber or agricultural uses compatible with the surrounding area and the development area. The open space of the development may be platted as a separate parcel or in common ownership of some or all of the clustered units; however, the open area shall not be subject to development unless the whole development is brought inside an urban growth boundary. Also, service connections shall be the minimum length necessary and underground where feasible. Roads shall meet County standards, be dedicated to the public and may be accepted in the County Road System by the County for maintenance.

5. Destination resorts and dude ranches are important elements of the local economy. Densities will be determined upon the merits of the proposal. These developments shall not be permitted in exclusive farm use districts and only under certain conditions in forest districts (see Forest Lands Chapter). They may be allowed in other rural areas if compatible with the environmental capabilities of the site, near existing transportation and utility facilities, consistent with the rural character of the area, and unlikely to create undue public service burdens.

6. Other than as outlined in Policy 5, no further recreational (seasonal) subdivision will be approved in rural areas.

7. Parcels legally existing at the time of this plan's adoption shall continue to function as legal lots and will not be unduly affected by the new lot size. The County will develop mechanisms to encourage the replatting of existing rural subdivisions to cluster the dwellings in a more efficient manner; this shall apply primarily in the La Pine and Sisters areas.

Commercial and Industrial Development

8. Within one mile of acknowledged urban growth boundaries, use of the planned or cluster development concepts shall permit to an increase of 100 per cent in density for developments in Multiple Use Agriculture or Rural Residential zones (not...
under a combining zone which would prevent such) resulting in a density of one unit per five acres.

9. Temporary on-site processing and storage of either mineral and aggregate materials or agricultural products shall be permitted as appropriate, in order to support the continued productivity of the County's natural resources.

10. Certain industrial uses, such as research and development facilities (requiring quiet and open surroundings) and manufacturers of hazardous materials (requiring long distances between the plant and neighbors) are more suitably located in rural areas. The County shall consider making provision for such uses as the need is found to exist (see Tumalo).

11. Certain industrial uses, such as research and development facilities (requiring quiet and open surroundings), wrecking or salvage yards and manufacturers of hazardous materials (requiring long distances between the plant and neighbors) are more suitably located in rural areas. The County shall consider making provision for such uses as the need is found to exist (see Tumalo).

12. Because large scale recreation facilities cannot normally be accommodated in urban areas, uses such as motorcross tracks, rodeo grounds and livestock arenas shall be conditional uses which may be approved in rural areas adjacent to existing highways and other public facilities.

Rural Service Centers

13. Because there is a need to accommodate some rural residential development and to provide necessary commercial services to existing rural residents, the County shall designate the following rural service centers in order to provide a more efficient pattern of development and energy use, as well as provision of public services: Alfalfa, Brothers, Hampton, La Pine, Millican, Terrebonne, Tumalo, Whistlerstop, Wickiup Junction, Deschutes Junction and Wild Hunt. In addition other sites, such as in the Fall River/Spring River area, may be approved in the future as dictated by need of existing rural residents.

14. Each Rural Service Center shall have a compact commercial area to serve the convenience-commercial, agricultural and repair service needs of the surrounding rural lands. In addition, larger Rural Service Centers along major highways, where public facilities such as schools already exist, shall have a residential area designated (see individual RSC maps and policies). The size and uses of rural service centers shall be such as to maintain the rural character of the area.
15. Construction on open lands shall be in a manner least intrusive to the esthetic and natural character of those lands and neighboring lands (fences and access roads shall not be considered structures).

16. Because there have been problems in obtaining community centers in some areas, centers approved on the original subdivision plat or development plan shall be permitted uses in rural residential zones.

17. Due to the more dispersed pattern of dwellings in rural areas the notice requirement area for public hearings on quasi-judicial land use actions shall be larger than in urban areas.

18. More effective dog control programs should be considered by the County to counter existing problems.

19. Pre-existing status shall be granted to subdivisions and partitions with at least preliminary approval and buildings with at least an issued building permit at the time of plan adoption by the Board of County Commissioners.
RESOURCE MANAGEMENT

Agriculture
Forest Lands
Open Spaces
Surface Mining
Fish & Wildlife
Historic and Cultural
Water
AGRICULTURAL LANDS

Agriculture played an important role in the growth and development of Deschutes County. While agriculture continues to be important, its early dominance of the economy is gone. Production has remained relatively stable (see Oregon Extension Service crop and livestock reports) but the total income from agricultural products has been declining in recent years.

The State of Oregon, like many other states, has identified the protection of agricultural land as an important objective. For that reason State Land Use Planning Goal 3 is of major importance. In Deschutes County, where some lands has severe limitations for the commercial production of agricultural products, this has resulted in considerable debate and occasional hostility. The County has found itself between angry landowners who do not wish to protect what they see as marginal agricultural land, other County residents who are adamant that agricultural land is a non-renewable resource that must be preserved and a State law mandating specific actions that must be taken to protect the land defined as agricultural land. The issue is further complicated by a lack of detailed soils data for most of the County.

The proximity to the Cascades, higher altitudes and semi-arid climate have resulted in a short growing season and a need for irrigation water locally. Without irrigation, little soil may be classified better than SCS Agricultural Capability Class VI. Combined with a shallow rooting zone in some areas and a long distance to many of the markets for local produce, the result is an often discouraging and frustrating experience for many farmers, although some farmers do seem to manage to be successful.

Another problem is the growing demand for farmland by many people seeking a rural home. The result has been an increase in land prices which often makes it difficult for people to enter into or stay in full-time farming. On the other hand, smaller part-time operations appear to be somewhat successful in maintaining some agricultural production due to a heavy commitment of nonfarm income. Smaller farms have also resulted in smaller losses in some areas, since a $100 per acre loss is more easily born by a 10-acre owner than a 100-acre owner.

The possibility of additional farm land in the County appears to be small, except for the development of wells (as in Lower Bridge and Cloverdale) or if the lining of irrigation canals should become more economically feasible, because no additional adjudicated water may be expected from the Deschutes River.

However, the grazing of livestock is, and will likely continue to be, an important farm product in all portions of the County. And, much of the crop land production locally is tied to the production of hay for local and Willamette Valley livestock. Particularly in the area of and east of Horse Ridge livestock production is a highly viable agricultural endeavor. Much of Deschutes County's
future agricultural production may be associated with the great diversity of livestock presently grown in the County.

Certainly agriculture is an important economic element in the County, directly contributing an estimated $10,316,000.00 in 1978, which resulted in a $25,800,000.00 direct and indirect contribution to the local economy. Also important are such secondary benefits as the open space and scenic appearance agriculture lends to the County, benefits which may also pay economic returns in the form of tourist dollars.

Because of the controversial nature of agriculture land protection and the marginal character of some farm land a certain amount of flexibility in zoning regulations and programs designed to foster local family farms may be required. The use of incentives, rather than negative regulations, may in the long run be more effective in preserving agricultural lands.

Since detailed soils mapping exists for only a portion of the County, it was necessary to develop a more elaborate definition than that found in the State Goal. The definition finally agreed to by the County uses the available information on agricultural land and lays a foundation for future additions or deletions as better soils information becomes available.

**Agricultural Lands Definition**

Agricultural lands are those lands which are identified as possessing Soil Conservation Service Agricultural Capability class I-VI soils (S.C.S. Land Capabilities Classification Map) or where detailed soils information is not available, agricultural land shall be identified by showing that it has been listed as on Farm Tax Deferral within the five years preceding the adoption of this plan (as indicated on the Existing Land Use Map compiled from County Assessor's records) and/or by the fact that the land is indicated on the County Planning Department's Irrigated Lands Map.

Having a definition was only the first step, as then it was necessary to differentiate between the various types of agriculture to be found locally and to identify the various areas they characterized. The following types of agriculture and their characteristic areas were identified by members of the Planning Staff, the Agricultural CAC and the Overall CAC.

**Types of Agricultural Land:**

A. High Desert Sagebrush and Juniper Land: This is dry land with generally inferior soils (somewhat alkaline in places) with rather severe climatic conditions. It is suitable only for grazing of livestock and an occasional planting of dryland rye. Predominant farm ownership size, outside rural service centers, is several hundred to several thousand acres. There are few non-agricultural dwellings. Lands in the vicinity of
and east of Horse Ridge are characteristic of this agricultural type.

B. Riparian Meadows: These meadows (mostly natural) border waterways and are sub-surface irrigated. In spite of a rather severe climate they are suited for the grazing of livestock and the harvesting of a limited tonnage of meadow hay. Lot sizes vary, but the most frequently occurring are 40 and 80 acre lots with 80 acres the median and the average of the parcels equaling 109 acres. Ownership often combine lots to create areas several hundred to several thousand acres in size. Due to the groundwater and frequent flooding, there are few residences. Typical lands are along the Upper Deschutes river, the Little Deschutes river and in the Sisters area.

C. Irrigated Commercial Crop Land: This land, because of more favorable soil characteristics, climate and topography, is suitable for raising diversified row crops, grain, etc., with a yield sufficiently high to make farm operation generally self-sustaining and profitable. The predominant lot size is 80 acres with some large ownerships, causing the average to be 170 acres. The pattern is a mixture of larger and smaller. Few non-farm dwellings exist in this area. Lower Bridge is characteristic of this description.

D. Irrigated Marginally Commercial Land: This type of land, because of less favorable soil and climatic conditions, is not able to raise as wide a variety of crops as Type C above, nor is the potential yield as high. However, it can produce occasional row crops, grain, hay and pasture, as well as livestock, on a generally self-sustaining basis, although somewhat marginal at times. A mixture of lot sizes can be found throughout these areas and while there are some large farm ownerships the predominant ownership and tax lot size is 40 acres. Lands around Alfalfa, Cloverdale, and Terrebonne are characteristic of this agricultural type.

E. Dry Rangeland: This land has little water and is without irrigation. Suited only for livestock production presently, it often lies in areas where the introduction of irrigation water would make marginal crop production possible, and therefore is a resource for the future. Predominant ownership and tax lot size appears to be 40 acres. Lands characteristic of the type are found near Odin Falls.

F. Marginal Farm Land - Undeveloped: This land will support agricultural production only if subsidized to some extent. The lands are suitable for hay and pasture and, more particularly, the raising of livestock, particularly if access to public grazing land is available. Ownership sizes cover a broad range but the most frequently occurring tax lot size is 40 acres; however, the mixture of sizes results in mean and
median lot sizes of 20 acres or only slightly larger. These areas are particularly susceptible to increasing non-farm development. Areas characteristic of this type of land are some parts of Arnold (east of Bend), Redmond, Sisters and Tumalo.

G. Marginal Farm Land - Developed: This land is much the same as Type F, but existing residential development and hobby farming activities have reduced the predominant ownership and tax lot size to less than 20 acres. The land is suitable for raising and grazing livestock on a small scale. Because people are able to subsidize the farm operation, productivity is believed to be higher than might otherwise be the case. Lands typical of these characteristics generally lie close in to urban areas, such as Bend, Plainview, Swalley and to some extent Tumalo.

Recognizing the importance of protecting agricultural land the following was chosen to meet State requirements and local needs:

GOAL:

To preserve agricultural land in Deschutes County for the production of farm and forestry products, as well as the public need for open space.

POLICIES:

It has been the policies which have generated the greatest debate. Controversial even before the process began, the identification of appropriate mechanisms to protect local agricultural lands has been characterized by heated discussion, polarization of attitudes and occasionally open hostility.

Much of the early debate focused on the Interim Agriculture Ordinance meant to protect agricultural lands until the final plan was prepared. The Agricultural CAC split into two factions with the predominant group (8 of the 15) agreeing upon an ordinance calling for 40-acre minimums in Lower Bridge and east of Horse Ridge, while the rest of the county was 10 acres. This plan was accepted by the County but rejected by the State Land Conservation and Development Commission. LCDC then placed an enforcement order on the County mandating all lands with Farm Tax Deferral status should be protected as agricultural land until a final plan was prepared.

In preparation of this plan the Agricultural CAC again proposed a 40-acre minimum for the northern and eastern portions of the County with the rest 10 acres. The Overall CAC, recognizing LCDC's reasoning and the testimony of other farmers and County residents, accepted most of the Agricultural CAC's recommendations
but rejected the proposed agricultural definitions and zoning because of:

1. Conflicts with other committees' recommendations for rural areas (particularly energy, transportation and public facilities);

2. Failure to adequately address rangelands and large farm ownerships; and,

3. Conflicts between the proposal and the intent of LCDC Goal 3.

The Overall CAC, with the assistance of a member of the Agricultural CAC, then prepared a new set of policies for definitions and zoning. These policies are basically those contained in this plan, although they have been modified to bring them even more into line with the requirements of the State Land Conservation and Development Commission because of review by the County's Planning Commission, Planning Staff, Board of County Commissioners and a team of consultants hired to check for such issues.

ZONING

1. All lands meeting the definition of agricultural lands shall be zoned Exclusive Farm use, unless an exception to State Goal 3 is obtained so that the zoning may be Multiple Use Agriculture.

2. No more than 25 percent of a given agricultural district shall be composed of lands not of the same agricultural type. Any agricultural lands not zoned EFU agriculture shall be identified in the County Exception Statement. Zoning districts shall be at least 40 acres in size.

3. A change from an EFU zone to a non-EFU zone (except SM or SMR) shall require a plan amendment (See Exceptions Maps).

4. Zones and lot minimums shall be established to assure the preservation of the existing agricultural character of the area:

<table>
<thead>
<tr>
<th>Agricultural Land Type</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - High Desert</td>
<td>EFU-320 acres</td>
</tr>
<tr>
<td>B - Riparian Meadows</td>
<td>EFU-80 acres</td>
</tr>
<tr>
<td>C - Irrigated Commercial Crop Land</td>
<td>EFU-80 acres</td>
</tr>
<tr>
<td>D - Irrigated Marginally Com. Crop Land</td>
<td>EFU-40 acres</td>
</tr>
<tr>
<td>E - Dry Rangeland</td>
<td>EFU-40 acres</td>
</tr>
<tr>
<td>F - Marginal Farmland, Undeveloped</td>
<td>EFU-20 acres</td>
</tr>
<tr>
<td>G - Marginal Farmland, Developed</td>
<td>MUA-10 acres</td>
</tr>
</tbody>
</table>
5. In order to provide some flexibility in the zoning and to assist farmers who may need to sell an isolated unproductive piece of land in order to assure continued operation of the farm, individual isolated partitions (creation of one or two new lots) establishing lots less than the EFU minimum lot size in EFU areas shall be permitted consistent with ORS 215.213. The remaining farm parcel must be at least the minimum established by the EFU zone. This shall not be interpreted to permit the creation of non-agricultural subdivisions in EFU areas.

6. So that a farmer who has lived on his land for 10 years or more may retire and sell his property while retaining the use of his existing home, a homestead exception may be permitted which allows the homesteader to retain a life estate lease on the home and some of the surrounding land. The lease will end with the death(s) of the homesteader and spouse. This exception shall not permit the creation of another residence on the property in question.

7. Public lands meeting the criteria for EFU zoning shall be so zoned unless some other resource (i.e., forest) or public use exists on the land.

8. Lands not meeting the agricultural lands definition but having potential for irrigation according to the Bureau of Reclamation Special Report - Deschutes Project, Central Division, Oregon, although presently without water, shall receive zoning consistent with Agricultural Type E.

9. The Multiple Use Agricultural Zone shall allow planned developments, destination resorts, planned communities and cluster development as conditional uses where it can be shown these uses would be consistent with or beneficial to the maintenance of agricultural uses in that area. Except for Destination Resorts no overall densities in excess of the underlying minimum lot sizes will be permitted.

10. Conversion of agricultural land to non-agricultural uses shall be based on the following:

(a) Acceptable environmental, energy, social and economic consequences;

(b) Demonstrated need consistent with Land Conservation and Development Commission goals and ORS 215.213.

11. Parcel size exceptions may be granted because of survey errors when original section lines were established, so that standard section divisions may be achieved (i.e., 160, 80, 40, 20, etc., acres). Man-made barriers such as roads or canals, over
which the applicant has no control, may serve as adequate justification for granting a parcel (lot) size variance.

12. Normal agricultural practices (i.e., aerial pesticide applications, machinery dust and noise, etc.) should not be restricted by non-agricultural interests in agricultural districts. The County shall consider requiring noise, dust, fly, etc., easements to be granted to adjoining farmers where non-agricultural uses are permitted.

13. Coordination between public and private landowners to encourage farm use shall be encouraged. And projects to increase productivity and to bring new land into agricultural production shall be fostered.

14. Control of noxious weeds through educational programs should be continued.

15. Farm and non-farm uses in rural areas shall be consistent with the conservation of soil and water.

16. The County Planning Department shall initiate an on-going study of marginal farm lands to develop information on how and when these lands should be converted to other uses, and to consider alternative methods of compensating landowners for loss of development potential.

17. The County Planning Department shall seek detailed soils information for all areas of the County through cooperation with the Soil Conservation Service, U. S. Forest Service, Bureau of Land Management, and Mid-State Soil and Water Conservation District.

18. Because of the possible adverse effects of EFU zoning to local taxing districts, the Board of County Commissioners shall take such action as is necessary to mitigate undue impacts after one year of experience with EFU zoning or upon sufficient and specific information on the effects of the zoning.

**FOREST LANDS**

Much of the beauty, and the employment, in Deschutes County is directly related to its large expanse of forest land. For these reasons, this resource is of particular importance to the County's two major industries, timber/wood products and tourism. The great majority of the timber harvested in Ponderosa and Lodgepole pine from the Deschutes National Forest and other nearby public lands. It is anticipated that growing demand combined with a stable or perhaps small decline in available timber supply will result in growing competition for log sales, and trend which is already evident. One positive aspect of such competition is an increasing
amount of revenue obtained by the County as its share of the monies received by the U. S. Forest Service.

It is hoped that increasing tourism and recreation revenues will offset possible employment and income losses resulting from decreasing timber production. Tourism is discussed further in the chapter on Economy.

One growing problem is the increasing threat to local timber supplies created by scattered developments occurring in forested areas. This is particularly true if the residents or activities are outside destination resorts or fire districts where fire protection is available.

In order to meet the State Land Conservation and Development Commission's requirement for an adequate inventory of forest site capability the County Planning Department worked with the State Department of Forestry. The resulting capabilities map may be found in the plan's resource element. Except in the La Pine area, where an exceptions statement will be necessary because of the existing development, most of the land with high (Site Class 4) through moderate (Site Class 6) capabilities lies in the Deschutes National Forest.

The U. S. Forest Service has recently approved a Land Management Plan for the Deschutes National Forest and the other major Federal land manager, the Bureau of Land Management, is presently evaluating its land for a variety of public purposes which will ultimately become a management plan. The decisions and actions of these agencies have, and will continue to have, major effects on the economic, social and natural environment of Deschutes County.

After discussion with several local forestry officials, it was determined that a 40-acre minimum would sufficiently restrict residential development in forest areas, and that in certain relatively small areas on the edges of the forest, a 20-acre minimum would be adequate to protect the land for forest uses.

Lot sizes in the F-3 Forest Use Area are predominantly 10 acres. The median lot size is 10 acres and the mean is 39 acres (private ownership mean is 20 acres).

Because of the importance of local forest lands the following goal has been set:

GOAL:

To conserve forest lands for forest uses.
POLICIES:

1. In order that a reasonable forest zoning pattern may be established, all forest land shall be assigned to one of three classes:

   F-1, Restricted Forest Land: Lands needed for watershed protection, wildlife and fisheries habitat and unusual or unique recreational opportunities (i.e., wilderness areas).

   F-2, Commercial Forest Land: Lands composed of existing and potential forest lands which are suitable for commercial forest use.

   F-3, Other Forest Land: Lands where extreme conditions of climate, soil or topography require the maintenance of vegetative cover, irrespective of use, and forested lands in urban, rural and agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors, recreational use, or marginal commercial timber uses.

2. Restricted Forest Land (F-1) and Commercial Forest Land (F-2) shall be protected for forest uses.

3. Other Forest Land (F-3) zones shall be established upon uncommitted land with moderate or better forest land capability in the La Pine area, in order to protect and manage forest and wildlife resources. The F-3 zone shall not be used to protect the larger commercial forest land parcels which shall be zoned F-2, but is to be used to encourage small woodlot management and will permit a single residence for the woodlot manager. Minimum existing parcel size for being zoned F-3 shall be 10 acres. Because 20 acres is a more reasonable woodlot size, in order to protect the wildlife and timber resources from too much scattered development and so as to make public facilities delivery more efficient (in light of existing problems), the minimum new parcel size for F-3 areas shall be 20 acres.

4. Destination resorts shall be permitted as conditional uses in F-2 and F-3 areas upon showing that the land where the resort is to be established has no significant commercial timber potential and that the resort activities are sufficiently buffered so that they will not adversely affect timber harvesting on adjacent or nearby lands.

5. Except as identified in this plan non-forest uses shall be discouraged in existing forested areas.

6. Forest management in Deschutes County shall be governed by the Oregon State Forest Practices Act, so as to assure continued timber productivity.
7. Better coordination and cooperation between the U. S. Forest Service and Deschutes County shall be fostered, particularly as it relates to restrictive use of such Forest Service lands as Mt. Bachelor Ski Area and the Bend Watershed. As a basis for mutual cooperation and coordination, the Land Management Plan for the Deschutes National forest shall be used.

8. Deschutes County shall file for an exception to State Land Use Planning Goal 4 on such lands meeting the exceptions criteria. All other forest lands shall be protected for forest uses.

9. To assure "forest-related" dwellings are compatible with forest uses and to encourage good forest management, a forest management plan prepared in a manner consistent with Department of Forestry guidelines shall be required by the County before the dwelling's building permit is issued. A site plan indicating that structures to be constructed are located on the less productive land and compatible with forest uses shall also be required.

OPEN SPACES, AREAS OF SPECIAL CONCERN, AND ENVIRONMENTAL QUALITY

A major factor in the local economy and a basic reason for much of the present population growth are the desirable scenic and natural environmental qualities of the County. Seasonal and many permanent residents, as well as the many tourists, repeatedly explain that their reasons for coming to Deschutes County are the high natural beauty, the numerous and diverse areas of scenic, geologic, archeological and biological significance, and the high quality of the air and water. Also, many of the resource industries, such as timber and agriculture, are also dependent on, as well as contributors to, that same environment.

Open spaces include not only parks, but also agricultural, forested, natural areas, mining sites and historical areas, as well as scenic waterways and other locations of unique scenic, environmental, social or cultural character. Often the protection of the scenic views from roads, trails and waterways is as important as the travelways themselves.

Segments of Fall, Deschutes, Little Deschutes and Crooked Rivers in Deschutes County have been identified as potential State Scenic Waterways.

Presently, no major air quality problems exist within the County; however, surface inversions, topographic conditions, certain activities (i.e., slash and field burning), wind-carried soils and increasing population can create significant potential for air quality degradation unless properly managed.
Some water pollution problems have been identified. The La Pine core area has been shown to have significant problems and septic tanks have failed in the Terrebonne area. The two major urban areas are presently developing sanitary sewer systems and treatment facilities.

The Oregon Department of Environmental Quality and Environmental Protection Agency have existing standards and programs affecting air and water quality as well as noise levels. DEQ presently maintains an air and water quality sampling program in Deschutes County which is important to knowledge about existing and changing conditions.

Private land suitable for open space designation are eligible for special property tax consideration (ORS 308.740-790), because they provide public benefits as regards maintaining scenic environmental quality.

Because open spaces, areas of special interest and environmental quality are so important to the local economy, environment and social well being of Deschutes County, the following goals have been chosen:

GOALS:

1. To conserve open spaces and areas of historic, natural or scenic resources.

2. To maintain and improve the quality of the air, water and land resources of Deschutes County.

However, despite general consensus that the environmental quality and amenities are important to this area's people, as well as to people statewide, there is also concern that regulations and policies to protect that environment could become too restrictive. The following policies have been developed with the intent of reaching the identified goals but in ways that restrict only as is necessary and with consideration of the individuals who may be affected by the needs of the public.

POLICIES:

1. Because a major concern is the protection of existing scenic views and environmental quality two related policies are created. The first was originally proposed by several citizen committees and, although modified, has been retained. The second policy was recommended by the Planning Commission and Staff as an appropriate addition.

(a) On lands outside urban growth boundaries and rural service centers along Highways 97, 20 and 126, as well as along Century Drive, South Century Drive, portions of
Three Creeks Lake Road, Fall River Road, roads from Highway 97 to Smith Rocks, Pine Mountain Road and all along other streams and roadways for which landscape management is prescribed on the 1990 Comprehensive Plan, a case-by-case review area shall be established. This area is not to extend more than 1/4 mile on either side from the centerline of roadways, nor more than 200 feet from either side of rivers, measured from the mean high water level.

Within the prescribed area, new structures (excluding fences, existing structures, or other structures less than $1,000.00 in total value) shall be subject to review by the County at the time of application for a building or zoning permit.

Acceptance of any such development plan will be dependent on site screening by existing natural cover and/or compatibility with scenic vistas. Outdoor advertising signs should be informational only and oversized displays discouraged.

The primary purpose of this review shall be to obtain a structure as compatible with the site and existing scenic vistas as is possible, rather than to establish arbitrary standards for appearance or to otherwise restrict construction of appropriate structures.

A study will be concluded within one year of this plan's acknowledgement which will result in recommendations to the County as regards the permanent size and standards for landscape management areas. This study shall also address the legal issues raised by the Fifth Amendment to the U. S. Constitution, which states, "No person shall be deprived of life, liberty or property, without just compensation". Recommendations for appropriate mechanisms to help compensate landowners severly restricted in the use of their land by the establishment of landscape management rules shall also be included in the report. A citizen's committee to help review areas and standards shall also be a part of this process.

(b) Development restrictions shall be established for the rimrocks along the Deschutes and Crooked Rivers in order to minimize the visual impact structures built on the rimrock will have on these areas when viewed from the river. (Amended by Ordinance 82-014).

2. Consideration should be given to designation of appropriate segments of Fall, Deschutes, Little Deschutes, and Crooked Rivers as Scenic Waterways. Reasonable protective and State agency coordinative measures should be instituted.
3. Public ownership of scenic, open space and historic areas should be maintained and increased where feasible, and a variety of open space and recreational sites should be maintained to protect the existing natural diversity and to serve the varying needs of both tourists and residents. The natural capabilities of each site should determine its level of use.

4. The concepts of developmental rights transfer, tax credits and conservation easements as ways to protect open space should be studied and encouraged at both local and State levels.

5. As part of subdivision or other development review the County shall consider the impact of the proposal on the air, water, scenic and natural resources of the County. Specific criteria for such review should be developed. Compatibility of the development with these resources shall be required as deemed appropriate at the time given the importance of those resources to the County while considering the public need for the proposed development.

6. Because management of State and Federal lands affects areas under the County's jurisdiction and vice versa, better coordination of land use planning between the County, U. S. Forest Service, State Land Board, Bureau of Land Management and other agencies shall be sought.

7. Zoning should be established to protect areas of special interest such as eagle nests, endangered species areas or points of geologic interest. A reference book on such areas specifying items to be protected and possible mitigating measures shall be prepared by the Planning staff.

8. Because of their slow growth and usefulness as a visual and noise buffer and their relationship to air quality, tree removal for utility lines, sewers, roads and other construction shall be minimized by planning for the continued maintenance of the streets in the development. All development proposals will be reviewed for this factor by the County Planning staff before approval of the applicant's development.

9. Loss of riparian areas and other important open spaces because of dam construction for recreation or other purposes should be minimized.

10. Although DEQ has existing environmental standards with which the County shall coordinate, in instances where such standards are inadequate or non-applicable because of local conditions, the County may establish more stringent regulations. Noise regulations are an example of such a program.
THINGS YET TO BE DONE

The completion of a comprehensive plan is never the end of the planning process. There always exist things yet to be done. Not only are there the issues where insufficient time existed for them to be adequately considered during the planning, but also entirely new questions can be raised because of the improved level of understanding about the community which point to issues previously generally unrecognized. All of this results in additional studies that must be performed so that a more accurate reflection of conditions can be obtained and the necessary changes made to better the plan.

In Deschutes County, a number of additional studies and reports should be performed. The following lists gives a short description of each of these suggested reports:

**Groundwater:** Additional information on the quantity and quality of local groundwater supplies, as well as developing an understanding of the capacity of the resource to accommodate utilization by a variety of uses.

**Forest Lands:** More in-depth data on the species, potential and volumes available, the effects of different uses at increasingly intensive levels, and the alternatives that may exist for local utilization and benefit.

**Agricultural Lands:** Further study into marginal agricultural lands and when conversion to developed uses is appropriate.

**Surface Mining:** More precise information about available resources, the impacts of development and the range of utilization.

**Wind Power:** Study the feasibility of wind-powered generation sites in the County.

**Recycling:** Create a recycling plan for Deschutes County by January 1, 1981.

**Geothermal:** Study of the feasibility of exploring local geothermal sites.

**Solar:** In-depth review of the practicality of using solar power locally, with an orientation toward methods presently feasible.

**Soils:** A detailed identification of local soils to enable better planning and development decisions, utilizing a coordinated study between appropriate governmental agencies.
Historical and Archeological Sites: An on-going program to continue the identification of significant historical and archeological sites and the preparation of a more detailed protection plan.

Air Quality: Greater review of existing air quality conditions, and development of an understanding of the carrying capacity of the area's airsheds under a variety of potential situations.

Areas of Special Interest: Detailed studies of sites, views and areas that have unusual or unique qualities and greater specificity about protection and compatible uses. This should include a text on these areas for Planning staff use.

Population: Better information about demographic trends and characteristics to insure plans accurately reflect the needs of the public.

Attitude Analysis: To better understand the desires and interests of area residents specific surveys and other methods need to be utilized, particularly as regards attitudes toward development and economic diversification.

Economy: Significant gaps presently exist in available data on how the local economy functions and what may be anticipated in the future, as well as how possible changes may affect local economic and social conditions, as well as land use patterns. An in-depth study is required, and shall be completed by November 1, 1980.

Transportation: Further in-depth analysis of traffic circulation needs and potentials, plans for critical transportation corridors, as well as determination of the feasibility of various non-automobile transportation systems. Also necessary is a better understanding of how transportation and the local economy interrelate.

Public Facilities and Services: Further study into appropriate levels and locations of public facilities and creation of a sophisticated analysis mechanism for determining acceptable phasing and sizes of facilities.

Housing: An improved analysis of area needs; study of how the local housing market functions; and identification of suitable programs for encouraging the types of housing necessary locally.

Urban Coordination: Several studies designed to identify how each urban area in the County is developing and how the County
may most efficiently and equitably represent the public's interests and coordinate with other local and special district governments.

**Rural Development:** More detailed analysis of recreational and rural development and the impacts (social, economic and environmental) resulting therefrom, as well as development for a methodology for how best to guide appropriate development.

**Hazards:** A more detailed study of the probabilities and locations of natural hazards.

**Implementation:** Study and review of various alternative methods for the implementation of the comprehensive plan by such means as environmental criteria and performance zoning.

**Landscape Management:** Specific studies and plans for all areas identified in the comprehensive plan as landscape management areas.

**County Lands:** Study of the capabilities and opportunities provided on County-owned land.

**Compensatory Actions:** A study of various methods by which private property owners may be compensated for the effects of planning and zoning shall be undertaken.

Many of these subjects have been addressed in this plan, but from a more general County-wide perspective. These studies, when combined with specific, more detailed studies of smaller portions (sub-areas) of the County, would enable a "fine tuning" of the plan so that it even more accurately reflects the needs of the County's people and identifies appropriate means for achieving the necessary results. In addition, the information from these studies would assist in the updating process, thereby assuring a plan reflective of current conditions.

**IMPLEMENTATION**

A comprehensive plan is only pieces of paper and colorful maps until it is implemented. Zoning and subdivision ordinances are the most widely recognized tools used in applying the ideas of a plan to the realities of the land.

Zoning ordinances contain a series of categories (land use zones) which specify what uses are allowed within those categories. The uses listed are those felt to be compatible with each other. In addition, a number of conditional uses are usually also included. These activities are allowed only by special permit after conditions have been attached which mitigate the probable negative impacts anticipated to be created by the proposed use. The zoning categories are determined by the policies established in the
comprehensive plan. Once the appropriate zoning categories have been created then using additional policies and criteria set in the plan these zones are applied to the land.

Comprehensive plan maps show generally how various uses will be allocated throughout the jurisdiction, but the zoning map takes this general prescription and specifically identifies how each individual piece of property is to be zoned. However, zoning attempts only to provide sufficient zoned land for development as will be required for three to five years, while the remainder is placed in holding or protective zones allowing only limited change. For example, a commercial area may be designated on a plan map and appear to be approximately 200 acres in size. The actual zoning initially may provide only 50 acres of commercial zoning, with the remainder held in a commercial buffer zone or a residential zone. As time passes additional land for businesses in that location will be required and will be so zoned, either by the property owner requesting a zone change or by the County initiating the action and legislatively changing the zone. The final result is that by the end of the plan's useful life approximately 200 acres of that area have been zoned commercially and used as such for everyone's collective benefit. In this way zoning serves as an implementing tool bringing into reality, through phased development, the goals and policies first identified in the comprehensive plan.

Less controversial, but normally a more important development ordinance, is the subdivision ordinance. In Oregon the process of dividing the land into smaller parcels is done within three categories: Minor partitions are the creation of two or three lots, where formerly only one existed, without the establishment of a street or way. Major partitions create two or three lots with a street or way. And, subdivisions create four or more lots with or without a street or way. Predictably the requirements become increasingly stringent as one progresses from minor partition to subdivision. Because subdivision regulations establish requirements for facilities to be provided, allow review of the design to assure the safety and general welfare of the future residents, as well as permit requirement of deed restrictions (protective covenants) to enable neighborhoods once established to retain their character, the subdivision ordinance very often will do more to determine the long term character of an area than will the zoning ordinance.

Therefore, it is of critical importance that subdivision and partitioning ordinances be properly formulated, complementary to the zoning ordinance and strictly adhered to if the community is to benefit from their administration.

In addition many jurisdictions offer an opportunity for planned developments (PD) which permit a less than strict adherence to both zoning and subdivision regulations in order that developments may create a better overall design which still meets the policies
established for that particular area. These planned developments
most often occur in places where unusual conditions exist such that
a conventional development would not be able to most efficiently
utilize the site. This may be true because of characteristics such
as rock outcrops or because the area contains deer range,
agricultural land, unique historical remains, or the other
resources that must be protected from development.

In some areas local governments do not establish all their land use
restrictions within the zoning ordinance. Flood plain, mobile
home, design review and airport ordinances are often created
separately and administered in addition to the requirements of the
zoning ordinances. In Deschutes County these regulations will all
be joined into the zoning ordinance to provide ease of access and
understanding for the public.

Zoning and subdivision ordinances are the most common types of
regulation but there are many other means used in implementing a
comprehensive plan. Capital Improvement Plans are commonly used.
These plans lay out for a five to six year period how and where
streets, sewers, and other public facilities will be constructed.
The provision of these services often determines the feasibility of
numerous types of community growth patterns.

Conservation easements, or other types of less than fee
acquisition, are becoming increasingly popular. An easement,
lease, or purchase of a certain right can often be obtained from a
property owner and thereby a specific use may be prohibited or some
special resource protected. The purchase of this easement is less
expensive than the purchase of the property, and for certain uses
may even be granted without cost to the public. These arrangements
thereby seek to eliminate the charge that the local government has
"taken" the property through its zoning ordinance. A "taking"
occurrs when zoning is so restrictive all or substantially all the
value of the land has been removed by the restrictions of the zone
established on the property. Zoning has usually been held as a
reasonable exercise of the State's police powers unless a "taking"
does occur.

Coordination agreements are another common tool for implementing a
plan. Often local governments (cities and counties) have
overlapping interests within certain areas, such as urban growth
areas, as well as overlaps with other public bodies, such as
special districts (i.e., school and irrigation districts) and
Federal agencies. Establishment of cooperative arrangements reduce
the probability of conflicts arising and assure that all these
public agencies are working toward common goals, thereby increasing
efficiency and the likelihood of achieving these goals.

Use of tax incentive to promote appropriate use of land is also
receiving increased attention. Exclusive Farm Use zoning is an
example of this. Land set aside and used for farm use may only be
taxed for that farm value, rather than any potential development value. This then enables the farmer to better afford remaining on the farm.

Another implementation tool is the trading of land. Deschutes County is lucky to have available County lands which can be traded with private individuals and public agencies to better achieve the goals of the plan.

In addition, innovative methods are being created and tried which permit greater flexibility while assuring appropriate standards are met. Performance zoning is an example of this type of regulation. With this type of ordinance a zone is established on property but instead of stating the type of uses that will be permitted it sets a number of standards that must be satisfied. These criteria set limits on pollution, traffic generated, noise, population density, height, etc. The developer is then free to construct any use he desires, as long as the performance standards are met. Should the use not comply it will have to be modified so that it does or be shut down. Unfortunately, performance zoning requires a relatively large staff using sophisticated equipment if it is to be successful, and it is therefore used mostly in larger jurisdictions where sufficient budgets exist.

Not only are there ordinances and plans adopted by official action of the governing body but administrative decision makers, like the Planning staff, Hearings Officer, or Planning Commission, often establish criteria for use in reviewing applications brought to them. Naturally these criteria are consistent with existing regulations, plans and policies. They simply serve as a way for assuring equitable treatment for all applicants and that all pertinent issues are addressed. An example of such a mechanism is Table 1, taken from the American Society of Planning Officials publication (by M. M. Meshenverg), Environmental Planning: Environmental Information for Policy Formation. This table lists the various categories of environmental features (i.e., land, water, air, cultural, etc.) which may be encountered, then lists probable development problems that may be encountered. Restrictions on use are suggested, as are methods for implementing the policies on restrictions. The list of restrictions also usually suggests some mitigating measures that may be used to ameliorate the potential hazards.

Whatever method, or more likely methods, used it is important that their intent be to implement the policies established in the Comprehensive Plan. However, of greatest consequence is that these methods actually achieve the goals set by the people in their plan. It is not enough that there be good intentions, there must also be
good results. Both means and ends must be brought together in an appropriate way. Good results need to be obtained in the right way. Every community must decide what is the proper manner for their plan to be implemented, and therefore no two implementation programs are the same.
<table>
<thead>
<tr>
<th>Category</th>
<th>Feature</th>
<th>Description</th>
<th>Tolerance/Suitability</th>
<th>Development Policies</th>
<th>Methods and Techniques of Implementing Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Wet Soil</td>
<td>Soil with a high moisture content because of a high water table or poor drainage; often a seasonal problem.</td>
<td>Such soils perform an important water storage function; when septic tanks are used, water supply may be contaminated; foundations settle and crack; stagnant pools may exist during certain periods.</td>
<td>&quot;Floating&quot; or other specially constructed structures may be permitted when supplied with public water and sewerage; selective draining or filling may be permitted if it does not interfere with the water supply.</td>
<td>No septic tanks; deep well permitted but only where development can be tolerated and septic tanks are absent.</td>
</tr>
<tr>
<td></td>
<td>Impervious Soil</td>
<td>Dense soil inhibiting the free flow of water; such soils usually have a high clay content.</td>
<td>Impermeability of soil may cause septic tanks to overflow and contaminate water supply; unsuitable for development without public water supply and sewerage.</td>
<td>No special development limitation with public water supply and sewerage.</td>
<td>Subdivision and sanitary regulations requiring public water supply and sewage disposal.</td>
</tr>
<tr>
<td></td>
<td>Poor Load-bearing Soil</td>
<td>Soils unable to support structures such as roads and buildings; usually easily compacted because of moisture content, particle size, or where excessive internal spaces or voids are present; filled lands, or mineral or industrial waste piles often have these characteristics.</td>
<td>Generally unsuitable for intensive development because of difficulty and cost of construction.</td>
<td>Certain types of light or flexible structures; recreation areas; agriculture.</td>
<td>Heavy structures must be anchored in bedrock. Building code and grading ordinance prescribing development standards.</td>
</tr>
<tr>
<td>Flat Land</td>
<td>Land with no significant slope</td>
<td></td>
<td>Depending on other conditions; flat land is highly suitable for and tolerant to development.</td>
<td>All uses.</td>
<td>No restrictions except pollution control (social, economic, technical, etc., factors may suggest other limitations. Pollution control ordinances, land-use controls.</td>
</tr>
<tr>
<td>Low Slope</td>
<td>Slope generally between 5 and 10 per cent.</td>
<td>Fairly tolerant to development, although excessive removal of ground cover may cause erosion; generally good sites for residential development.</td>
<td>Residential development, intensive and extensive recreation, agriculture and grazing.</td>
<td>Densities may be fairly high with grading controls and limitations on vegetation removal and sedimentation. Grading ordinances limiting terracing, topsoil and vegetation removal, etc.; subdivision controls setting appropriate street and utility design standards; zoning to limit density of development.</td>
<td></td>
</tr>
<tr>
<td>Moderate Slope</td>
<td>Slope generally between 10 and 25 per cent (exact percentage may vary).</td>
<td>Very high construction costs; loss of ground cover may cause erosion and frequently land slippage; often of scenic beauty.</td>
<td>Limited development, contour agriculture, forest.</td>
<td>Density of about one house or less per acre; maintenance of vegetative cover; erosion control; retaining walls; roads turned slightly above contour lines; special landslide development zoning controls to minimize grading; drainage control.</td>
<td>Density zoning; grading ordinance requiring sedimentation control; subdivision ordinance requiring maintenance of vegetation and design standards for streets; these may all be incorporated in special hillside development controls.</td>
</tr>
<tr>
<td>Land</td>
<td>Steep Slope</td>
<td>Development causes major erosion problems by increasing runoff velocity; major site engineering necessary; difficult to farm; suitable for extensive recreation, often of scenic beauty.</td>
<td>Open space use; reforestation when necessary; recreation.</td>
<td>No development (or highly regulated and engineered development of very low density).</td>
<td>Public purchase in fee; open space zoning; scenic or other easements; reforestation.</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ridge Lines</td>
<td>Line separating drainage basins, i.e., where water on either side flows in opposite directions; may be barely noticeable in flat country but highly pronounced in hilly areas.</td>
<td>No particular reasons for restricting development on minor ridge lines.</td>
<td>Any use permitted on minor ridge lines—changes in topography are barely noticeable.</td>
<td>No restrictions.</td>
<td>Height and density restrictions in zoning ordinances.</td>
</tr>
<tr>
<td>Valley</td>
<td>Generally a long narrow depression in the earth's surface with sloping land along its sides; old valleys, however, may be wide with extensive plains on either side.</td>
<td>Suitable for development except where (1) other features suggest limitations, or (2) scenic qualities can be preserved.</td>
<td>No restrictions except those associated with other features such as special engineering design for structural stability on steep slopes and limited or no development in floodplains or public sewage where aquifers are close to the surface; preserve for scenic value only where particularly abundant or of special aesthetic value.</td>
<td>No special methods; scenic qualities can be preserved by open space or agricultural zoning; public purchase; purchase of easements or development rights; conservation zoning.</td>
<td>No special methods; scenic qualities can be preserved by open space or agricultural zoning; public purchase; purchase of easements or development rights; conservation zoning.</td>
</tr>
<tr>
<td>Gorge and Canyon</td>
<td>A deep and narrow valley with steep sides often vertical or undercut; usually in relatively arid regions.</td>
<td>Unsuitable for development because of construction difficulties; their rarity suggests use for recreational purposes; tourist attractions.</td>
<td>Low intensity development for scenic-recreational purposes.</td>
<td>No development except to enhance recreational and scenic qualities.</td>
<td>Public purchase; zoning controls to limit peripheral development.</td>
</tr>
<tr>
<td>Glacial Moraine</td>
<td>A deposit of material beneath ice sheets, or at terminal points of melted glaciers.</td>
<td>Scientific and educational role in understanding of geologic history, poor avalanche in ungraded types of deposit.</td>
<td>Preservation of selected areas in natural state for recreation and scientific investigation.</td>
<td>No restrictions in areas available for private development except where drainage problems are present.</td>
<td>Zoning for high-rise buildings; view protection regulations.</td>
</tr>
<tr>
<td>Promontory</td>
<td>A crag or point of high land cutting out over low land, usually associated with a body of water or valley; often associated with scenic views.</td>
<td>No particular ecological role; often suitable for high-rise development to take limited advantage of view.</td>
<td>Selective development for high-rise, medium-density purposes.</td>
<td>View protection.</td>
<td>Public purchase in fee or purchase of easements.</td>
</tr>
<tr>
<td>Abrupt Relief Changes</td>
<td>Lines separating distinctly different land forms; usually associated with piedmont plains areas and with significant vertical displacement along fault lines.</td>
<td>Generally no special ecological role although it may be barrier to movement depending on geologic formations; sometimes can have visual impact; faulted areas may be subject to earthquakes.</td>
<td>Uses limited to those which heighten the visual effect of the change; such open space as a row of trees can be effective (see also Weak Substructure, below).</td>
<td>Special construction methods to assure stability; areas with earthquake potential require engineering design analysis for protection against movement damage; in areas where such potential is great, no development should be permitted.</td>
<td>Zoning for low-density and low-rise development and to exclude areas of assembly and uses which could create serious hazards during earthquakes; building codes prescribing special construction methods and materials.</td>
</tr>
<tr>
<td>Land Rock</td>
<td>Underground formation incapable of supporting heavy loads; often associated with certain types of rock, e.g., cavernous limestone, compressible peats, etc., and dynamic characteristics, e.g., faulting, volcanic activity, or with compressible or expansive sedimentary deposits and filled land.</td>
<td>Development may be hazardous because of possible subsidence or other earth movement, especially under earthquake condition.</td>
<td>Limited low-intensity, low-rise development.</td>
<td>Special construction methods to assure stability; areas with earthquake potential require engineering design analysis for protection against movement damage; in areas where such potential is great, no development should be permitted.</td>
<td>Zoning for low-density and low-rise development and to exclude areas of assembly and uses which could create serious hazards during earthquakes; building codes prescribing special construction methods and materials.</td>
</tr>
<tr>
<td>Category</td>
<td>Feature</td>
<td>Description</td>
<td>Tolerance/Suitability</td>
<td>Development Policies</td>
<td>Methods and Techniques of Implementing Policies</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Land</td>
<td>Mineral Deposit</td>
<td>Site currently used or potentially available for extraction of minerals, including sand, gravel, limestone, rock, coal, etc.</td>
<td>Source of important mineral resources; other development may preclude extractive operations; however, requires special regulation to ensure compatibility with surroundings during and following completion of operations, and prevention of water supply contamination.</td>
<td>Permitted Associated Uses: Reservation for extractive operations. Restrictions on Uses: Open-pit operations require appropriate screening and performance standards to reduce noise, dust, etc.; cannot interfere with existing use; planned post-mining reclamation for subsequent reuse.</td>
<td>Natural resource zoning including performance standards to prevent encroachment; performance bond to ensure site reclamation; preferential assessment.</td>
</tr>
<tr>
<td>Water</td>
<td>Surface Water and Riparian Land</td>
<td>Any body of water including lakes, streams, rivers, and oceans and their shorelines, estuaries (see below) and tidal areas.</td>
<td>Value for water supply, waste diversion, transportation, recreation, power generation, source of food, scenic beauty; quality and quantity of water needs to be maintained.</td>
<td>Permitted Associated Uses: Utilities, water/sewage treatment plants, recreation, marinas, water-related industry, cluster development, public-access points. Restrictions on Uses: No pollutants (including septic tanks); no nonwater-related development; no development that will produce undesirable changes in surface or subsurface water quality.</td>
<td>Planned-unit development controls; sanitary ordinance prohibiting use of septic tanks; water quality standards to restrict discharge of pollutants; water zoning to separate incompatible water users; zoning to restrict shoreline development to water-compatible uses; public works planning.</td>
</tr>
<tr>
<td>Floodland</td>
<td>The land area adjacent to a water body that is covered by excess water during periods of flooding; may be divided into zones based on frequency, e.g., channel, floodway, floodplain, especially for land-use and development controls.</td>
<td>Essential role in carrying excess water during floods; danger to life and property; provides recreational land; flooding, damming or leveeing decreases storage capacity and flood frequency increasing flood potential downstream; soils often very fertile and suitable for agriculture; usually contains substantial groundwater.</td>
<td>Those unharmed or improved by flooding, e.g., those associated with Surface Water and Riparian Land, and forestry, some types of agriculture, extensive recreation, institutional open space, open space for housing and other uses, impoundment basins.</td>
<td>Same restrictions as for Surface Water and Riparian Land; flood-proof development; filling and diking only where essential and where flow is not seriously restricted.</td>
<td>Same methods as for Surface Water and Riparian Lands; zoning controls to exclude structures from the channel and floodway; building code requiring flood-proofing of structures; limitations on grading, filling, dredging, and diking.</td>
</tr>
<tr>
<td>Wetland:</td>
<td>Marsh, Bog, Swamp</td>
<td>Teats of low-lying land which are saturated with moisture and usually overgrown with vegetation. (Marsh: general term; bog and covered with water; swamp: generally supporting tree vegetation and not permanently covered with water; bog: consists largely of decaying vegetation [distinctions are imprecise].)</td>
<td>Are as sponges to absorb excess runoff; reduces flooding potential; important wildlife habitats; recreational, educational, scientific value; some agricultural value; often have scenic beauty; filling may cause flooding elsewhere.</td>
<td>Recreation: hunting, fishing, sailing, observing; scientific investigation; certain types of agriculture.</td>
<td>No on-site or peripheral development which will interfere with maintenance of the ecosystem, especially its water-storage and wildlife maintenance ability. Public purchase or purchase of easements; grading and filling ordinances; agricultural zoning; limitations on surrounding areas to preserve ecological processes, e.g., withdrawal of water; diking, cutting of channels, excessive development; conservation zoning.</td>
</tr>
<tr>
<td>Estuary</td>
<td>A water passage where the tide meets a river current, especially an arm of the sea at the lower end of a river; the area where freshwater mixes with fresh water; frequently includes marshes and other low-lying wetland.</td>
<td>As the breeding ground for a great variety of organisms, estuaries are particularly intolerant to waste disposal, dredging, and filling; these activities can destroy important plant and animal communities such as oyster beds and spawning areas.</td>
<td>Fishing, shell fishing and other harvesting, recreation, limited associated urban development.</td>
<td>No development which reduces the ability of the estuary to support plant and animal life, e.g., pollutant discharges, dredging, filling, excessive recreation or overharvesting.</td>
<td>Increased state control over estuary and coastal zone use; more stringent U.S. Corps of Engineers control over dredging, filling, draining; zoning to restrict development to uses requiring coastal zone locations, pollution controls.</td>
</tr>
<tr>
<td>Water Subsurface</td>
<td>Aquifer</td>
<td>A water-bearing layer of sand, gravel, or porous rock.</td>
<td>As major source of water, quality must be maintained; removal must not exceed rate of replenishment.</td>
<td>No development which will affect the quality and quantity of water or be structurally adverse to the presence or withdrawal of groundwater.</td>
<td>Limitations on groundwater withdrawal.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Aquifer Recharge Area</td>
<td>Area of interchange between an aquifer and the surface; the point at which precipitation and surface water infiltrate the aquifer.</td>
<td>Intolerant to development because of danger of polluting water supply.</td>
<td>Varies depending on permeability of overlying strata; generally, any use which maintains high water quality and quantity.</td>
<td>No disposal of possible pollutants, specifically no septic tanks; sewers must be sealed to avoid leakage; investigate effects of any disturbance to area such as channel digging or widening, dredging, filling that might permit the intrusion of pollutants.</td>
<td>Subdivision and sanitary controls requiring public sewerage; pollution discharge controls; prevention of intrusion of salt water or other groundwater contaminants; special sewer construction techniques; limitations on dredging, stream widening, filling, etc.</td>
</tr>
<tr>
<td>Air</td>
<td>Air Corridor</td>
<td>A term describing the path of movement of the air, generally physically bounded by valley walls; important in terms of micro-climatic considerations and air pollution dispersal.</td>
<td>An analytical tool that helps determine development suitability depending on microclimate and location of polluters; may affect urban form, compatibility of uses and orientation of structures.</td>
<td>Depending on wind speed, air direction and other meteorological factors, sources and receptors of pollution should not be permitted in the same corridor; reforestation would help to relieve summer heat and humidity.</td>
<td>Highly restricted development of sources of pollution; preferably stringent source controls.</td>
</tr>
<tr>
<td>Vegetation and Wildlife</td>
<td>Woodland</td>
<td>A tract of land dominated by trees but usually also containing woody shrubs, grasses, and other vegetation.</td>
<td>Where extensive, woodlands are intolerant to intensive development because their role in the water cycle, oxygen replenishment, wildlife support, recreation, and as a source of raw materials; also have special aesthetic value in urban areas.</td>
<td>Depends largely on water-related role: dense forests can maintain housing of any one family per acre but only where abundant; well-managed commercial forestry; recreation.</td>
<td>Very limited development to maintain vital ecological roles and aesthetic appearance; limited tree cutting for development or sustained commercial yield.</td>
</tr>
<tr>
<td>Wildlife Habitat</td>
<td>The natural environment of an animal species; usually associated with other features such as marshes or woodland.</td>
<td>Tolerance to development depends on species; sensitive habitats should be maintained for scientific, recreational and educational purposes; destruction of habitat may affect other parts of the ecosystem.</td>
<td>Passive recreation including limited hunting and fishing, maintenance in a natural state to minimize disruption of animal communities; outdoor education laboratory.</td>
<td>In managed habitats, no development except access roads and recreation-associated structures; cabins if widely dispersed.</td>
<td>Public purchase, or purchase of scenic, hunting, fishing easements; zoning limitations on surrounding areas; very low-density zoning for seasonal cottages and restrictions on access roads.</td>
</tr>
<tr>
<td>Prime Agriculture Land</td>
<td>Rettle cropland producing a high-value yield, often of a generally scarce nature such as vineyards, orchards, and truck farms.</td>
<td>Of limited extent in some areas, development tends such land unsuitable for agriculture.</td>
<td>Agricultural uses only, except where such land is plentiful in a particular area.</td>
<td>Where other developable land is abundant, zoning for exclusive agricultural use (e.g., 35-acre minimum lots) is justifiable.</td>
<td>Exclusive agricultural zoning; preferential farmland assessment.</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Land used for grazing of domestic animals.</td>
<td>Depending on slope, soil and subsurface conditions, this land is often tolerant to and suitable for development.</td>
<td>Development where land is plentiful; where scarce, it should be retained in open space.</td>
<td>No development in urban areas lacking sufficient open space.</td>
<td>Open-space zoning where appropriate.</td>
</tr>
<tr>
<td>Category</td>
<td>Feature</td>
<td>Description</td>
<td>Tolerance/Suitability</td>
<td>Development Policies</td>
<td>Methods and Techniques of Implementing Policies</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Vegetation and Wildlife</td>
<td>Prairie</td>
<td>A term referring more to vegetation characteristics than to topography; a tract of land, generally flat or gently rolling, containing a great variety of grasses with other low vegetation, with few or no trees; virgin prairies are rare remnants of the past, supporting complex ecological communities.</td>
<td>Highly intolerant to development, or intensive use; virgin prairies have important scientific and educational value; their rarity suggests that no development should be permitted.</td>
<td>Selected plots of prairie, especially virgin prairies, should be preserved on aesthetic, educational, and scientific grounds; peripheral development permitted only where it does not disrupt the ecosystem.</td>
<td>Public purchase; zoning and other limitations on surrounding areas.</td>
</tr>
<tr>
<td>Cultural and Landscape</td>
<td>Unique Remnant</td>
<td>Landscape feature of unusual or rare occurrence, generally associated with previous epochs, such as sand dunes, geological outcrops, natural bridges, meteor craters, swamps, etc.</td>
<td>While many have no major ecological role, they should be preserved for historic, recreational, educational, and aesthetic reasons.</td>
<td>Low-density recreation; preservation for natural history, ecological education, and aesthetic purposes.</td>
<td>Public purchase; zoning and other limitations on surrounding areas.</td>
</tr>
<tr>
<td>Scenic Vistas</td>
<td></td>
<td>An area which has a pleasing aesthetic character; may include both natural and cultural features.</td>
<td>Suitable for limited development if carefully controlled; some areas may be worth maintaining for aesthetic reasons.</td>
<td>No development which would deteriorate the quality of the feature.</td>
<td>Purchase of segments or development rights; very low-density zoning; open space or agricultural zoning.</td>
</tr>
<tr>
<td>Historical and Archaeological Sites</td>
<td></td>
<td>Historical monuments, buildings, forts, towns, battlegrounds, archaeological digs and other sites.</td>
<td>Development may destroy historical character; valuable for educational, recreational, and aesthetic reasons.</td>
<td>Preservation in the current state with restoration if warranted.</td>
<td>Public purchase or purchase by civic groups; architectural control; historic area zoning; landmarks commission.</td>
</tr>
</tbody>
</table>
Deschutes County's implementation program, as specified in this plan, will be a combination of zoning, subdivision and other necessary ordinances. There will also be provided tax incentives and the possibility for land swaps. Investigation into the feasibility of conservation easements and performance zoning may yield new and better tools for implementation. And certainly the staff will be seeking administrative criteria to use in their evaluation. Yet, despite all of the complexity built into the system efforts will be made to keep these processes as simple as possible and provide for the expeditious handling of all applications. The resulting process will seek to achieve the desired "good results in the right way"; however, for this to happen it will require not only the efforts of the elected and appointed officials as well as the professional staff but also the people of Deschutes County. This area is ours to live in and to pass on to our posterity. If we work together we will be successful in passing on the environment we all enjoy so much.

CONCLUDING REMARKS

The plan seeks to protect the important resources in Deschutes County, yet it is not a no-growth plan. Growth is being anticipated and accommodated in urban areas. Rural Service Centers, like Tumalo and Terrebonne, are being adjusted to serve the growing needs of the rural areas. Plans to assist LaPine in becoming a full service community and eventually leading to incorporation and the ability to serve a better organized rural area are being laid down. And even though rural development is restricted, provision for small farms and rural homes is being included in areas and at densities appropriate for such activity. Also, important areas and site with unusual characteristics are being identified for protection. And adequate provision is being made to allow, in an appropriate manner, the commercial and industrial areas we will be needing.

Perhaps most importantly this is the beginning of a process that will continue to obtain better, more useful information so that the changing character of the County can be accommodated and regulations sufficiently flexible, but accurately reflecting local conditions and needs, may be promulgated.
FINAL

DESHUTES COUNTY

GOAL EXCEPTION STATEMENT
INTRODUCTION

The purpose of this document is to identify the lands where Deschutes County shall request the Oregon Land Conservation and Development Commission grant an exception to meeting the requirements of either Planning Goal 3 (Agricultural Lands) or Goal 4 (Forest Lands). Further, this statement shall also explain the findings and reasoning which justifies such an exception be granted.

During the preparation of the Deschutes County Comprehensive Plan it became apparent that many of the rural areas in the County had already received substantial development. These lands have largely been sold and become committed to non-resource lands while recognizing that development which exists, and establishing a more efficient development pattern.

Because of the rural development there have been created Rural Service Centers to provide necessary public (i.e., schools) and private services to the rural population. These Service Centers reduce transportation requirements and serve as a focus for social and some economic activities. Deschutes County has chosen to emphasize the Rural Service Centers as the appropriate location for the services and facilities needed by the rural residents and to encourage most additional rural residences to be constructed in the Rural Service Centers. This development of the Service Centers would then permit some limited rural living opportunities, while insuring they occur in areas of existing development at higher densities, compatible with the rural environment and consistent with future transportation and utility networks. To accommodate the Rural Service Centers some of the less productive resource lands are being committed to non-resource uses. The commercial areas are those lands already developed or committed to commercial use, while the residential areas are relatively small surrounding areas where some development has already occurred.

The other areas being used for non-resource uses are those lands included within the urban growth boundaries. Each of the three urban areas has identified an urban growth boundary (UGB). Inside the UGB the ultimate use of the land is to be of an urban nature. Each urban area plan contains the findings and reasoning which justifies the lands contained within the UGB; therefore, this statement will not address resource lands which are included in the urban areas.

The flexibility which the exceptions process permits will allow Deschutes County to accommodate the existing and future needs of the County's ever-growing population, while serving as a base upon which the County can construct its plans for the protection of the resource lands which are so important to the local economy and environment.
METHODOLOGY

To determine where an exception to the State goals is required it was first necessary to obtain adequate data as to the location of the lands with agricultural and timber capabilities. The Resource Element of the Deschutes County Comprehensive Plan contains maps which reflect the information that was gathered, and serves as much of the basis by which the County has determined withal lands have agricultural and/or forest capabilities.

Agricultural Lands

One of the most hotly debated issues in the preparation of the Deschutes County Plan was agricultural lands. Considerable testimony and evidence was submitted which indicated that the County is a relatively marginal agricultural producer. Other information pointed to the livestock capability of the area and the stability of agricultural production locally.

Complicating the issue further was (and is) a lack of detailed soils information, which would have permitted the identification of lands with agricultural capability Classes I - VI. The General Soil Map that was available for the County-wide area did not reflect the character of the soils locally. Much of the soil in the western and southern areas of the County is derived from pumice and ash that has been deposited in depressions in the underlying basalt. The result is pockets of soil with adequate rooting depth intermixed with some very low productivity areas. The result is certain areas, such as Lower Bridge, Terrebonne, Cloverdale, Alfalfa, Tumalo and Redmond, have a mixture of cropland, rangeland and non-productive land. Other areas do not have the cropland and may find the rangeland varying in its ability to support livestock.

An example of the difficulty in using the General Soils Map is the Deskamp Association which has the best agricultural capabilities in the County. Of that association six percent of the soils have "good" irrigation capability (the rating system uses excellent, good, fair, poor and very poor). "Fair" soils constituted 89 percent of the soils and the rest are poor or very poor. Yet a look at the topsoil capabilities of the soil indicate 50 percent is "good", "fair" is 12 percent, while "poor" is 38 percent. A look at the U.S. Soil Conservation Service data indicated the Deschutes Soils are generally Class VI but can be classed as IIand III when irrigated, while Deskamp Soils are Classes III and IV when irrigated and otherwise Class V11. Some other less productive soils also are part of this association. What this seems to indicate is that even in the "best" County soils the agricultural capability is limited, there is considerable mixing with poor soils and that without irrigation water the land is only suitable for livestock. Obviously, what was needed was more detailed soils mapping.
The local SCS office was able to furnish the County Planning Department with detailed soils mapping and agricultural capability maps for only that portion of the County near Terrebonne, Redmond, Bend and Tumalo, this small area constituting only a portion of the known agricultural lands. To supplement the soils information the County obtained high altitude infra-red photography of the county, which clearly revealed the irrigated lands. Since crops require irrigation in Central Oregon this information could be relied upon to have identified the cropland areas. To determine the rangeland areas the County Assessor's records were surveyed to obtain all lands on farm tax deferral. Because the County had an active deferral program it was determined that combining the soils, irrigated lands and farm deferral information would produce a reasonable representation of all the private agricultural lands in the County. Public lands in agricultural areas were assumed to be agricultural for purposes of zoning while public lands in forested areas were assumed to be timber areas, unless some other use was known to exist on a particular site.

Using the preceding information and assumptions, the County was finally able to determine the local agricultural lands in an objective and empirical manner.

Forest Lands

The identification of lands with timber producing capabilities was not characterized by as much controversy. Working with the Oregon Department of Forestry, the County Planning staff utilized a document entitled, A Technique for Mapping Forest Land by Site Productivity Using Soil Survey Information. The techniques supplied by this document, coupled with the experience of local ODOF foresters, permitted the drafting of the Timber Productivity Map, which can be found on Page 86 of the Comprehensive Plan's Resource Element. Utilizing this map, it was possible to determine the lands with commercial timber potential (High-site Class 4 through Moderate-site Class 6). It was immediately apparent that the LaPine and Black Butte areas, which have received significant recreational and rural development, were going to be in conflict with the requirements of the Forest Lands goal. However, before taking any formal action, it was necessary to determine the extent of the lands already developed, and what remained to be utilized for timber.
EXCEPTIONS ANALYSIS

To determine which lands are already committed to development, aerial photography at a sale of 2" = 1 mile was obtained and used as a base map. Areas of concern not covered by the aerial photography were few and in these instances other maps were obtained.

LaPine

First the public lands were identified. Since these areas are to be zoned for timber, they were excluded from consideration. Next private agricultural and timber lands were identified and marked for an appropriate zone complying with the State goals. Thirdly, all lands upon which a house had been constructed were identified. And, finally, all lands which had been subdivided or partitioned into parcels less than 10 acres in size were added to the map. The result was a series of overlays indicating which areas are substantially committed to residential development, committed to timber or agriculture, and uncommitted. In the LaPine area these categories amount to the following:

- Residential Committed: 13,083 acres
- Resource Committed: 18,232 acres
- Uncommitted: 4,825 acres

(Amended by Ordinance 80-203)

Redmond

The major concern in the northern portions of the County was compatibility with the Agricultural Lands Goal. Again, on the aerial photo base map, the private and public lands were identified. The public lands were marked for agricultural (or other resource) use. Lands which met the agricultural definition (SCS Class I - VI soils), or where detailed soils information was unavailable, identification as having obtained Farm Tax Deferral in the five years preceding the Plan or fund under irrigation as shown on the County's Irrigated Lands Map) were determined. Then the houses which had been constructed and the lands which had been subdivided were added. From the resulting map, it was possible to determine those areas where substantial development had taken place, and, therefore, to be identified as committed lands. In areas where agricultural continued to be the predominant use, the development as seen as not committing the area to further division and the area was to be zoned as an agricultural district.

In addition to the agricultural and forest lands, there is a 56-acre parcel containing aggregate deposits which is being excepted in the Tumalo area. This parcel is surrounded on three sides by existing residential development which would be
incompatible with mining the resource, particularly when alternative aggregate site exist.

The Redmond map reflects the following figures:

<table>
<thead>
<tr>
<th>Type</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Committed</td>
<td>18,579</td>
</tr>
<tr>
<td>Resource Committed</td>
<td>69,348</td>
</tr>
<tr>
<td>Uncommitted</td>
<td>14,780</td>
</tr>
</tbody>
</table>

Bend

The process followed in the Bend area was the same as that for the Redmond area and the results were very similar, although even more residential development has occurred because of proximity to the City of Bend:

<table>
<thead>
<tr>
<th>Type</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Committed</td>
<td>9,894</td>
</tr>
<tr>
<td>Resource Committed</td>
<td>46,718</td>
</tr>
<tr>
<td>Uncommitted</td>
<td>7,815</td>
</tr>
</tbody>
</table>

In addition to the preceding, 95,227 acres east of Horse Ridge are being designated for Exclusive Farm Use. The remainder of the private lands in the County are either in private forest lands being protected for timber production or within one of the three urban growth boundaries. Near the Bend Urban Growth Boundary an additional 360 acre area originally identified as Surface Mining Reserve has been changed to agricultural because of testimony indicating incompatibility with surrounding development. There also existed testimony that other sites were available with would not be so offensive.

The Bend Municipal Airport lies approximately two miles east of the Bend Urban Growth Boundary, at the intersection of Butler Market Road and the Powell Butte Highway. Originally established in 1942, this public transportation facility is an important part of the County's transportation and economic planning. An airport master plan has been prepared by the City and the land use elements accepted by Deschutes County. This master plan provides adequate demonstration of the need for such a facility and that its present location is the only viable site available. Further, sufficient planning has occurred to insure the environmental, economic, social and energy consequences are acceptable and compatible with adjacent uses. Therefore, this area of 354 acres shall be excepted from compulsion with State Land Use Planning goal 3.

See Pages 10 through 23.
EXCEPTION AREA PLAN

It is apparent that Deschutes County has had significant rural development in the past. From the perspective of the State Land Use Goals, perhaps this rural growth is unfortunate; however, it is an existing reality. The County's efforts shall be aimed at recognizing those areas that are committed and servicing them in the most efficient and equitable manner possible. On the other hand, there are also policies in several sections of the Comprehensive Plan (particularly the Rural Development Agriculture, Forest Lands and Public Facilities chapters) which seek to prevent further losses of resource lands. Each of the three areas is dealt with separately and a program drafted to fit that area's particular needs. The major differences in the programs largely result from whether they involve agriculture or forest land.

LaPine

The subdivisions in LaPine are characterized by small lots (one acre or less) and to a great extent have already been sold. Some have been purchased for retirement, others for speculation and some for an immediate permanent residence. In those areas where subdivision, construction and existing rural services have largely committed the land to residential use (see LaPine map), Deschutes County proposes to zone the area for rural residential, rather than forest lands. The rural residential zone would permit the construction of homes, but the new 10-acre minimum lot size would prevent further significant division. These areas would then satisfy the need for residential and lower cost rural lots in the County. Other County actions to encourage clustering, foster adequate public facilities and prevent development in hazardous or resource areas, would insure the growth of the area is consistent with appropriate economic, social environmental and energy considerations (see the Rural Development chapter of the Comprehensive Plan).

Resource areas would be committed to resource use, as would be the uncommitted lands. The encouragement of small forest land management for the smaller acreage timber lands that can be found between the residential and larger ownership timber areas shall be a County policy. In this way the small timber owners are compatible with each adjoining use, while buffering the residential and timber areas from each other.

Redmond

On the committed lands the County will establish a Multiple Use Agricultural (MUA) Zone which will encourage the use of these lands as agricultural, although a "hobby farm" or non-commercial level which requires a subsidy of the agricultural operation by employment elsewhere. Here again the County seeks to supply the
need for rural living opportunities and the need to subsidize more marginal farm land by non-agricultural employment to maintain the area's farm production (see Agricultural chapter of the Comprehensive Plan). But equally important is the recognition that the development and services exist already and must be dealt with. County policies shall seek to encourage clustering of housing and to otherwise improve the efficiency of supplying services to these existing areas while preventing substantial increases in the rural population. Better review of proposed development is also established with the new plan and ordinances to assure the long-range economic, social, environmental and energy effects are acceptable.

The MUA areas also serve to provide a buffer between residential and agricultural lands, while permitting some people to enjoy a rural lifestyle. More stringent enforcement of the goal would save little agricultural land and would not make farming more viable than will the proposed course of action. A stricter policy would certainly adversely affect a large segment of the population and raise serious questions in regard to the County's ability to satisfy State Land Use Goal 10 (housing), which requires the County to provide a variety of housing opportunities to meet the needs of the area's population.

Bend

The conditions in the area covered by the Bend map are the same as those in the Redmond area. Actions proposed for the Bend area are the same as the Redmond area.

Rural Service Centers

Rural Service Centers are a special situation. Originally established to provide needed public and commercial services to rural areas, thereby increasing public services while receiving transportation costs, these Centers have had mixed results. Some have been very useful in providing necessary facilities, while others have been used to foster sprawl.

One of the purposes of the new County Comprehensive Plan is to identify which of the existing Rural Service Centers should be continued and where new ones shall be established. The plan identifies nine RSCs and leaves the possibility of another in the future as an option if needed. The nine identified are Alfalfa, Brothers, Hampton, LaPine, Millican, Terrebonne, Tumalo, Whistles Stop and Wickiup Junction. Of these, only Brothers, Hampton and Millican are not on the three aerial photo base maps. All the others, except Alfalfa, are within the areas identified as having significant existing development and are designated as already committed to development.
Alfalfa is a special case in that existing development consists of a small store, a public school and a few nearby farm and non-farm residences. The land identified for the Center is that containing the store and lands owned by the Central Oregon Irrigation District and Alfalfa Water Users Association. The expectation is that these lands will be needed for facilities necessary to the continued existence of Alfalfa, which may include some limited commercial use and residences (at a five-acre density three houses would be permitted). No other sites exist for the location of the Center and the land is not presently creating agricultural products. The proposed development would certainly be compatible with existing and proposed uses and consistent with the County's long-range environmental, economic, social and energy policies.

Brothers, Hampton and Millican are small communities along Highway 20, in the eastern portion of the County. Each community has small existing commercial and residential areas. These uses serve important functions for the residents of the area and transients through the area. Without these Centers local residents would have a long (sometimes impossible) drive into Bend for gasoline, groceries, etc. The areas identified in the plan are those already in existence. Once again, the County is simply recognizing that which exists. The Centers are also important public service and social activity focal points. No alternative sites are available or desirable, and their anticipated environmental, social, economic and energy consequences are seen as beneficial.

**TOTAL AREA**

The total area to be excepted from the State Land Use Planning Goals is 41,556 acres. These lands are those residentially developed, committed to development or needed for Rural Service Centers. Once again, the County's purpose here is to recognize that which exists, while attempting to foster an efficient and equitable plan for the County's growth. (Amended by Ordinance 80-203).
CONCLUDING REMARKS

This exceptions statement is not meant to be an elaborate document. Deschutes County is not proposing large new areas for rural development. The primary concern is simply to acknowledge the development which exists, and to seek reasonable ways to deal with those committed lands. Many areas which have some development, but not enough to justify identification as committed lands, have been placed in resource zones which will permit non-resource uses only by conditional use on non-productive sites. Only those areas with significant amounts of development have been identified and the County has developed policies to promote greater efficiency in the growth of those areas. In light of County policies encouraging other alternatives (i.e., Rural Service Centers and urban plans) when combined with increasing service and energy costs, it is anticipated actual development will not actually use all the excepted areas. To obtain approval of any future rural development will be more difficult than in the past, and shall be compatible with County needs and State planning goals.
From: Zechariah Heck
Sent: Sunday, May 26, 2019 12:36 PM
To: Zechariah Heck
Subject: FW: THE OREGON LAND TRUST

FYI

From: David Doyle <David.Doyle@deschutes.org>
Sent: Sunday, May 26, 2019 10:33 AM
To: Nick Lelack <Nick.Lelack@deschutes.org>; Peter Gutowsky <Peter.Gutowsky@deschutes.org>
Subject: FW: THE OREGON LAND TRUST

DAVID DOYLE
Deschutes County Legal Counsel
1300 NW Wall Street, Suite 205
Bend, OR 97703
Telephone: (541) 388-6625
Facsimile: (541) 617-4748
Email: David.Doyle@deschutes.org

The information in this email, including any attachment, is for the sole use of the intended recipient and contains information belonging to Deschutes County, which is confidential and/or legally privileged. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or taking of any action in reliance on the contents of this email information is strictly prohibited. If you have received this email in error, please immediately notify the sender by reply email and destroy all copies of the original message.

From: CIRCLE BAR RANCHES LLC BEND. OR <RIAFF@CENTURYLINK.NET>
Sent: Friday, May 24, 2019 7:23 AM
To: Board <board@deschutes.org>
Subject: THE OREGON LAND TRUST
A QUESTION?

WHY IN THE HELL ARE YOU PEOPLE BENT ON DESTROYING THE LAND CONSERVATION TRUST, PEOPLE MOVE TO DESCHUTES FOR THE OPEN LAND AND LACK OF NO TRESPASSING SIGNS AND A QUALITY OF LIFE, WHY IN THE HELL WOULD YOU THREE AND YOUR PLANNING COMMISSION OF EDUCATED MORONS WITH NO COMMON SENSE BE BENT ON CREATING ANOTHER CALIF. OREGON STATE AND COUNTIES CAN’T EVEN POLICE WHAT EXIST NOW. THE CITY OF BEND IS BUILDING HOUSING COMPLEXES IN EXISTING NEIGHBORHOODS LOWERING PROPERTY VALUES OF EXISTING SINGLE FAMILY HOMES AND SOON TO BECOME GETTO’S IN TIME. THAT’S HISTORY. AND A POLICING NIGHTMARE. APPARENTLY, YOU THE BOARD WANT TO FOLLOW THE DOWNWARD SPIRAL OF BEND, I MOVED HERE FROM THE BAY AREA AND IF YOU PEOPLE GET OUT MORE YOU WILL DISCOVER THOUSANDS OF DESCHUTES COUNTY RESIDENTS MOVED HERE FOR THE REASONS ABOVE AND HOPEFULLY WILL TAKE A DIM VIEW OF THE BOARDS STAND ON DEVELOPMENT, THEIR PROBABLY ALREADY SICK OF THE PLANNING COMMISSION. YOU THREE RAN AS REPUBLICANS BUT ARE VOTING DEMOCRATIC THANK CHRIST FOR THE OREGON DEPT, OF LAND CONSERVATION. WHICH WAS PROBABLY ORIGINALLY CREATED TO SAVE QUALITY OF LIFE FOR FUTURE GENERATIONS.

THANKS
MIKE LYONS
KEEP UP THE GOOD JOB????????????

FREE Animations for your email - by IncrediMail

Click Here!