CLATSOP COUNTY COMPREHENSIVE PLAN UPDATE

# CLATSOP PLAINS CITIZEN ADVISORY COMMITTEE

**October 10, 2019**
**2:00 PM**

## PACIFIC GRANGE
## 90475 HIGHWAY 101

| TIME | TOPIC | LEAD |
|---|---|---|
| 4:00 PM | Call to Order | CPCAC Chair |
| 4:05 PM | Introductions | All |
| 4:10 PM | Review of August 8, 2019 Meeting Summary | CPCAC Members |
| 4:15 PM | Report from Countywide CAC Liaison | Robert Stricklin |
| 4:30 PM | Goal 3 Overview | Staff |
| 4:35 PM | Goal 3 - Discussion:<br>• How does zoning affect farming in Clatsop County?<br>• How will climate change affect farming in Clatsop County?<br>• How can the County balance demand for increased affordable housing with requirements to preserve and protect agricultural resource lands?<br>• Cannabis and hemp: Farm crop or noxious weed?<br>• **NOTE:** These are questions to create a discussion. It is not intended that they be addressed in one meeting. | CPCAC Members<br>Public |
| 5:35 PM | Public Comment and Input | Public |
| 5:45 PM | • Review of meeting dates and times<br>• Holiday schedule and preparation for Goal 5 | CPCAC Members / Staff |
| 5:50 PM | Distribute background materials for next meeting | Staff |
| 5:55 PM | Closing comments and adjournment | CPCAC Members |

**BACKGROUND MATERIALS PREVIOUSLY PROVIDED:**

- Goals 3 and 4 Workshop Notice
- Goal 3 Summary Report
- Statewide Planning Goal 3
- Clatsop County Goal 3
- 2016-2017 Farm Forest Report (January 25, 2019)
- Rural Resource Lands Research Report (May 16, 2019)
- State Board of Agriculture Report (January 2019)

**BACKGROUND MATERIALS FOR MEETING 5 PROVIDED:**

- Goal 4 Summary Report
- Statewide Planning Goal 4
- Clatsop County Goal 4
- Goal 4 Performance Review Worksheet
- Forest Practices Act Fact Sheet
- *Oregon's Forest Protection Laws An Illustrated Manual*
- Oregon Global Warming Commission *Forest Carbon Accounting Project Report (2018)*
- Timber Unity Public Comments

*All Comprehensive Plan Citizen Advisory Committee meetings are open to the public. Community members are welcome to observe and provide written comment at any time to comdev.co.clatsop.or.us. As time allows, verbal comment is welcome during the time specified on the agenda.*

**NOTE TO CAC MEMBERS:** Please contact the Community Development Department (503-325-8611) if you are unable to attend this meeting.

**ACCESSIBILITY:** This meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours prior to the meeting by contacting the Community Development Land Use Planning Division, 503-325-8611.

**@ClatsopCD**

**https://www.co.clatsop.or.us/landuse/page/comprehensive-plan-update**

# Summary of August 8, 2019
# Clatsop Plains Citizen Advisory Committee Meeting #3
# Pacific Grange
# 90475 Highway 101

**The meeting was called to order at 2:05 p.m. by Mary Kemhus, CPCAC Chair.**

| CPCAC Members Present | CPCAC Commissioners Absent | Staff Present | Public Present |
|---|---|---|---|
| Diane Heintz | | Gail Henrikson | Stuart Emmons |
| Mary Kemhus | | Julia Decker | Roger Dorband |
| Jerri Myers | | | Comm. Pamela Wev |
| Maria Pincetich | | | |
| Robert Stricklin | | | |

**Welcome and Introductions**

The CPCAC members, staff and members of the public introduced themselves.

**Review of July 11, 2019, Meeting Summary:**

The committee stated that the summary should reflect the committee's expressed desire to open membership on the CPCAC to any persons who might have a vested interested in the area, even if they did not reside within the Clatsop Plains Planning Area.

Ms. Henrikson stated that she would revise the summary accordingly.

**Report from Countywide CAC (CCAC) Liaison:**

Mr. Stricklin stated that the CCAC is a microcosm of the nation. He discussed the presentation that had been made by Maritza Romero of the Lower Columbia Hispanic Council and how it was timely given current events.

Mr. Stricklin discussed remarks made by Katy Pritchard, who wanted to emphasize the urban/rural divide. He stated that this is a part of the community. He stated that contention and political division is the same here as everywhere else in the nation.

The committee discussed the challenges associated with trying to reach out and involve underrepresented populations. Sometimes there is a fear of government or certain agencies. Ms. Henrikson stated that the Lower Columbia Hispanic Council had invited staff to speak to their constituents.

Ms. Henrikson stated that Viviana Matthews from Clatsop Community Action had also addressed the CCAC.

Ms. Kemhus asked about the presentation by Lisa Phipps from the Department of Land Conservation and Development. Ms. Henrikson described the presentation and reviewed the concepts that were covered. She stated that the meeting was recorded, but that the audio did not work. Ms. Henrikson stated that she would post the PowerPoint slides once she received them.

**Goal 2 Overview:**

Ms. Henrikson discussed the demographic information that had been provided in the packet. She stated that the population projections from the Population Research Center indicate that the unincorporated areas of the county will lose residents over the next 50 years.

Commissioner Wev stated that over the last eight years, the highest growth has been in unincorporated areas.

Mr. Emmons stated that the population projects from the Portland Metro area indicate a large amount of growth. He stated that he believes these numbers are too low.

Ms. Pincetich added that one large constraint on population increase is that there is no place to live. The committee discussed how second homes inflate property values, but deflate population.

Ms. Myers stated that Portland is growing by 50,000 residents per month. Mr. Emmons stated that this will cause people to start bailing out of the City.

Mr. Stricklin stated that people commute and commented on the "California commute". The committee discussed changes in working patterns, such as telecommuting. Ms. Myers stated that the United States is a driving society.

Ms. Heintz agreed with the projections. She cited the growth that occurred over the past 40 years within the county.

Ms. Henrikson reviewed the demographic slide, noting that the projections call for the population to become older overall over the next 50 years. She asked the committee to consider how this might impact housing needs and trends.

Ms. Henrikson also reviewed data from the recently completed Housing Study, which concluded that the county has enough land and dwelling units to support growth for the next 20 years. She added that the study also concluded that there is a mismatch between the cost of available housing and types of housing and local incomes. The committee discussed real life examples of how this was depressing local home ownership.

Ms. Pincetich asked how short-term rental units could be addressed in the comprehensive plan. She asked that there be future discussion, backed up by research, about how short-term rentals are managed and permitted. She stated that it eliminates the possibility of a family living there.

Mr. Stricklin discussed the inability of people to find roommates to share the costs of unaffordable rents.

Ms. Pincetich discussed other vacation cities which have already dealt with the issue of short-term rentals. She said that there are many pitfalls and that she was trying to avoid unintended consequence.

The committee discussed how changing short-term regulations might affect the cities. Ms. Henrikson clarified that the county and the cities have their own rules and that they don't regulate each other.

Ms. Henrikson reviewed the analysis of land supply from the housing study and mentioned some of the recent housing trends.

Mr. Stricklin stated that tiny homes do not necessarily equate to affordable housing.

Ms. Henrikson addressed the issue of people living in RVs. She stated that this is a common complaint and the county also receives many inquiries from people who want to do this. She stated that the code allows people to live in an RV for a maximum of 30 days during any 90-day period. The committee discussed their personal experiences and observations. The committee members wondered where the septic waste is being disposed. The group continued to discuss the pros and cons of using RVs as dwelling units. Ms.

Henrikson described some of the more egregious violations related to people living in RVs. Ms. Heintz stated that she thought the issue of living in an RV should be handled under some other process than code enforcement.

Ms. Henrikson identified some possible issues that will affect land use and development within Clatsop County over the next 20 years. These issues included:

- Climate change
- Wildlife/human interaction
- Natural disasters
- Water shortages
- Traffic

**Goal 2 Discussion:**

Ms. Kemhus listed what she saw as issues affecting how land is used in Clatsop County. These issues included:

- Fishing
- Recreation
- Boating
- Tourism
- Logging
- Agriculture
- Homelessness
- Commercial/business uses

There was general consensus from the committee that these were important issues.

The committee discussed climate change, how it's impacts might be mitigated and how strategies to address climate change can be incorporated into the comprehensive plan. Ms. Pincetich brought up the issue of water management. She stated that development doesn't always consider what happens downhill. She added that water will only become more valuable as climate change advances and that she would like to have this as a separate topic of discussion in the future.

Mr. Dorband said that he saw water management as a Goal 4 issue because of how ODF manages timber lands. He stated that he is interested in finding lands for places where trees would be planted. He discussed current science regarding reforestation that could assist in mitigating climate change. The committee agreed that possible future topics related to this might include water rights, water management and reforestation.

Mr. Stricklin discussed small parcels of land that could be used for reforestation and habitat conservation even if they are disconnected. He stated that county policies discouraged the county from acquiring and maintaining these types of properties.

Commissioner Wev discussed how the county acquires land. She stated that many of those parcels are acquired through foreclosure and that they do not have any access or parking, are very small in size and are not conducive to public parks. There is money available to purchase and develop land, but not necessarily to maintain improvements or provide law enforcement services.

Ms. Heintz mentioned that storm management is an important issue that needs be considered in conjunction with climate change. She recalled the December 2007 coastal gale and the disruptions it caused for residents.

Mr. Dorband discussed the Bear Creek watershed. The City of Astoria has approval to draw water from Youngs River as a contingency measure, but does not have the infrastructure in the event they should need it.

Ms. Myers provided examples from Israel as to have the manage and conserve water.

Ms. Henrikson stated that much of the development in the Clatsop Plains area is provided water by the City of Warrenton. Given growth within Warrenton, this might soon cause shortages. However, that area of the Clatsop Plains is where the county is directing growth.

Ms. Kemhus discussed the unintended consequences of using rain catchment systems, which may be preventing the aquafer is being fully replenished.

The committee discussed how health issues can be address in a land use plan.

Ms. Heintz discussed health impacts associated with lead pollution infiltrating the aquifer from the shooting range at Camp Rilea.

The committee listed the following public health issues that should be considered:

- Opioid crises and access to services to assist those in need
- The county's two hospitals are both located in low-lying areas
- There is a need for a traumatic brain injury clinic
- Light pollution
- Failing septic systems and people who do not have the funds to fix them

Ms. Pincetich asked whether additional topics could be added at a later date. Ms. Kemhus stated that she wanted to leave everything open to be reviewed again. The committee agreed with this.

The committee discussed the process for reviewing and approving the changes to the comprehensive plan.

Mr. Stricklin expressed his concern regarding place names that may disrespect the traditions and beliefs of indigenous persons. He cited Spirit Drive as an example.

**Distribution of Meeting #4 Materials:**

Ms. Henrikson reviewed the materials that had been distributed to the committee members at the start of the meeting. The next CPCAC meeting will be on the topic of Statewide Planning Goal 3 – Agricultural Lands.

The committee also discussed upcoming meeting dates and times. Due to scheduling conflicts, the committee agreed to cancel its September 12th meeting. The next CPCAC meeting will be held on October 10th.

**Closing Comments and Adjournment:**

***There being no further business the meeting was adjourned at 3:40pm.***

**REVISED**
**Summary of July 11, 2019**
**Clatsop Plains Citizen Advisory Committee Meeting #2**
Pacific Grange
90475 Highway 101
Warrenton, Oregon 97146

*Revisions shown in **bold italic**.*

**The meeting was called to order at 2:02 p.m. by Mary Kemhus, CPCAC Chair.**

| CPCAC Members Present | CPCAC Commissioners Absent | Staff Present | Public Present |
|---|---|---|---|
| Diane Heintz | Jerri Meyers - excused | Gail Henrikson | Comm. Sarah Nebeker |
| Mary Kemhus | | Julia Decker | Comm. Pamela Wev |
| Maria Pincetich | | | Don Y. Abing |
| Robert Stricklin | | | Jody D. Abing |
| | | | John B. Dunzer |
| | | | Stuart Emmons |

**Welcome and Introductions**

Clatsop County Board of Commissioners Chair, Sarah Nebeker, welcomed the group and spoke to them about the importance of their work. She thanked the group for their commitment to the process.

The group and public participants introduced themselves.

**Goal 1 Background Report and Presentation:**

Gail Henrikson, Community Development Director, briefly provided an overview of Goal 1.

Don Abing, speaking on behalf of the Chinook Indian Nation, addressed the committee. Mr. Abing also introduced his wife, Jody Abing. Mr. Abing spoke about the recent reclamation of a portion of Tansy Point by the Chinook Indian Nation. He discussed the fishing villages that used to exist in the area and their importance to the Chinook people. Mr. Abing shared the creation story of the Chinook Nation, explaining how the land now known as the Clatsop Plains was created and populated.

Mr. Abing also discussed concerns of the Chinook Indian Nation related to overdevelopment of the Clatsop Plains, destruction of sacred grounds, and the devastating impacts that will be caused in the area following an earthquake and/or tsunami. Mr. Abing also discussed the climate crisis that is affecting the world and Clatsop County in particular.

Mr. Abing discussed the Chinook Indian Nation's goal of expanding their presence in the area and reclaiming their fisheries. He talked about the interconnected lake and stream systems within the Clatsop Plains and of their historic importance to the Chinook people.

Following Mr. Abing's presentation, the committee recommended that the Board of Commissioners open nominations for the CAC to allow for the appointment of a member of the Chinook Indian Nation. The committee also encouraged someone from the Chinook Indian Nation to attend the CAC meetings, even if the nominations were not reopened. ***The committee also wanted to open membership on the committee to any person who has a vested interest, but who may not live in the Clatsop Plains Planning Area.***

**Discussion of Goal 1 – Citizen Involvement:**

The committee members discussed the strengths and weaknesses of the currently-adopted Goal 1. Ms. Pincetich pointed out that oftentimes public involvement comes too late in the process. Committee members recommended that distances for notification requirements be increased and that notices be written in succinct plain English. Ms. Decker explained the notification requirements.
The committee discussed the County's website and agreed that it was sometimes difficult to navigate. They suggested having a "Give your input now!" button on the homepage so that stakeholders could easily weigh in on a topic.

Committee members also questioned how communication between the county and the cities could be improved. Ms. Henrikson stated that the planning directors of Warrenton, Gearhart and Seaside had all been notified of this meeting, but that none of them had responded.

Ms. Henrikson asked the committee members if they believed the county's Goal 1 policies are consistent with Statewide Planning Goal 1. The committee members again stressed the need for clearer, less institutional language. The committee also agreed that the county's policies should be rewritten to more clearly support the goal.

The committee members expressed a strong interest in keeping the CAC active, even after the comprehensive plan update is completed. It was also suggested the CAC could become a subcommittee of the Planning Commission.

The committee discussed the application process for the CACs and stressed the need for staff to respond to applications and acknowledge that an application had been received. The committee agreed that it was important to acknowledge that citizens are reaching out and want to participate.

**Public Comment and Input:**
John Dunzer, 2964 Keepsake Drive, Seaside, addressed the committee. Mr. Dunzer discussed the need to have a public utility in this area and to constructed a renewable power plan. Mr. Dunzer provided Ms. Henrikson with documents related to this proposal (attached). Mr. Dunzer then discussed the new Seaside school and the process that was used to approve it. Mr. Dunzer also provided Ms. Henrikson with a letter dated March 12, 2019, addressed to Jim Rue, DLCD Director (attached). The letter addresses Mr. Dunzer's concerns regarding the 2017 Seaside School District Urban Growth Boundary Amendment.

**Distribution of Meeting #3 Materials:**
Ms. Henrikson reviewed the materials that had been distributed to the committee members at the start of the meeting.

**Closing Comments and Adjournment:**
***As there was no further business or discussion, Chair Kemhus adjourned the meeting at 3:49 p.m.***

**Clatsop County**
Community Development – Planning

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Astoria, OR 97103
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**TO:** Clatsop Plains Planning Area Citizen Advisory Committee Members

**FROM:** Gail Henrikson, AICP, Community Development Director

**DATE:** August 6, 2019

**RE:** **COMPREHENSIVE PLAN UPDATE - MEETING 4**

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**SUMMARY**

Enclosed are the agenda materials for the October 10, 2019, Clatsop Plains Planning Area Citizen Advisory Committee (CPCAC) meeting.

Included are the following background materials related to Goal 3:

- Goals 3 and 4 Workshop Notice
- Goal 3 Summary Report
- Statewide Planning Goal 3
- Clatsop County Goal 3
- 2016-2017 Farm Forest Report (January 25, 2019)
- Rural Resource Lands Research Report (May 16, 2019)
- State Board of Agriculture Report (January 2019)

When reviewing Goal 3, there is a significant amount of statistical data within the Goal, but no policies related to the goal. Some sample Goal 3 policies from Lane County are attached to this memo. As part of the review and overhaul of the Comprehensive Plan, committee members should consider whether policies should be added to Goal 3 and what those policies should be.

## GOAL THREE: AGRICULTURAL LANDS

1. Encourage agricultural activities by preserving and maintaining agricultural lands through the use of an exclusive agricultural zone which is consistent with ORS 215 and OAR 660 Division 33.

2. In Agricultural Rent zones 1 and 2 preference will be given to Goal 3. In Rent Zone 3, unless commercial agricultural enterprises exist, preference will be given to Goal 4.

3. Reserve the use of the best agricultural soils exclusively for agricultural purposes.

4. To insure that zoning districts applied to agricultural lands encourage valid agricultural practices in a realistic manner; emphasis shall be placed on minimum parcel sizes which are based upon a countywide inventory and which are adequate for the continuation of commercial agriculture. As minimum parcel sizes decrease to accommodate more specialized commercial agricultural activities, the burden of proof upon the applicant shall increase in order to substantiate the proposed agricultural activity and restrictions shall increase in order to obtain a residence on the commercial farm unit. Deviation from minimum parcel sizes of the Exclusive Farm Use land for the creation of a parcel not smaller than 20 acres may be allowed when at least 19 acres of the parcel being created are currently managed or planned to be managed by a farm management plan for a farm operation consisting of one or more of the following: berries, grapes or horticultural specialties.

5. Use planning and implementation techniques that reflect appropriate uses and treatment for each type of land.

6. Encourage irrigation, drainage and flood control projects that benefit agricultural use with minimum environmental degradation in accordance with existing state and federal regulations.

7. Some agricultural land in the Countv is not suitable or available for agricultural use by nature of built upon, committed to or needed for nonagricultural uses by using applicable comprehensive plan policies and the exceptions process of LCDC Goal 2, Part II.

8. Provide maximum protection to agricultural activities by minimizing activities, particularly residential, that conflict with such use. Whenever possible planning goals, policies and regulations should be interpreted in favor of agricultural activities.

9. Agricultural lands shall be identified as high value farm lands and farm lands in other soil classes in accordance with OAR 660 Division 33.

10. Such minimum lot sizes or land division criteria as are used in exclusive farm use zones

shall be appropriate for the continuation of the existing commercial agricultural enterprise in the region. The commercial agricultural, minimum field or parcel sizes and corresponding farming regions identified in Addendum to Working Paper: Agricultural Lands shall be used to Determine the appropriate division requirements for lands zoned Exclusive Farm Use (E).

11. Conversion of rural agricultural land to urbanizable land shall follow the process and criteria set forth in LCDC Goals 3 and 14.

12. Regard nonagricultural uses within or adjacent to agricultural lands as being subject to the normal and accepted agricultural practices of that locality.

13. No County policy shall be construed to exclude permitted and specially permitted nonfarm uses, as defined in ORS Chapter 215.213 and OAR 660 Division 33, from the EFU zones. Implementing ordinances shall provide for such uses, consistent with the statutory and OAR 660 Division 33 requirements. Special permits for commercial uses in conjunction with farm use shall have the same effect as making the use an outright permitted use on the affected parcel.

14. Land may be designated as marginal land if it complies with the following criteria:
    a. The requirements of ORS 197.247 (1991 Edition), and
    b. Lane County General Plan Policies, Goal 5, Flora and Fauna, policies numbered 11 and 12.

15. Lane County recognizes ORS 215.253 shall apply on land-zoned EFU.

16. Recreational activities in the Park and Recreation (PR/RCP) Zone District within agricultural areas that are outside lands for which a built or committed exception to a Statewide Planning Goal has been taken shall be limited to those uses consistent with Statewide Planning Goals 3 and 4.

# Background Report: Agricultural Lands

AUGUST 2019

CLATSOP COUNTY COMPREHENSIVE PLAN UPDATE

BACKGROUND REPORT: AGRICULTURAL LANDS

**STATEWIDE PLANNING GOAL 3:**

**AGRICULTURAL LANDS**

**To preserve and maintain agricultural lands.**
Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

## Farmlands in Oregon

### OVERVIEW

The statewide land use planning program in Oregon works to protect working landscapes in two ways. The statewide planning goals work to limit conversion of farm and forest land to other uses and to limit conflicts for these resource industries. To limit conversion, the program requires an urban growth boundary (or UGB) around each city in the state and urban uses must to be contained within the boundary. To limit conflicts, counties are required to apply strict zoning to farm and forest lands that permit only uses that will sustainably coexist with the farming and forestry activities around them.

***Oregon's Land Use Planning System was established by Senate Bill 100 in 1973.***

Oregon's farms and forests are working lands, and are sometimes referred to as "resource lands." When planners and others talk about "preserving" these areas, they are referring to preservation of the land for continued use as a commercial farm or forest. Preserving these areas for resource use also benefits wildlife habitat conservation, recreation opportunities, and protection of the scenery Oregon is so well known for.

### FARMLAND PROTECTION

Preserving Oregon farmland protects a key economic engine in our state. Farming and related industries, like food processing and equipment sales, are major employers and a chief source of export in Oregon. State-level guidance and requirements for county planning and zoning of farmland can be found in four places: Statewide Planning Goal 3 - Agricultural Lands, Oregon Revised Statutes (ORS) Chapter 197 - Comprehensive Land Use Planning, ORS Chapter 215 - County Planning, Zoning and Housing Codes, and Oregon Administrative Rules (OAR) chapter 660, division 33 - Agricultural Land. A local government writing or revising a comprehensive plan needs to refer to these state regulations to develop a plan that protects farms and complies with law and rule.

https://www.oregon.gov/lcd/FF/Pages/index.aspx

## Farmlands in Clatsop County

### OVERVIEW

As shown on the charts on the next two pages, while the total number of farms in Clatsop County has remained relatively stable since 1978, the total overall acreage of farmland and average size of farms has declined. As land values rise and the shortage of affordable housing units remains, the pressure to convert farmland to non-farm uses will only increase.

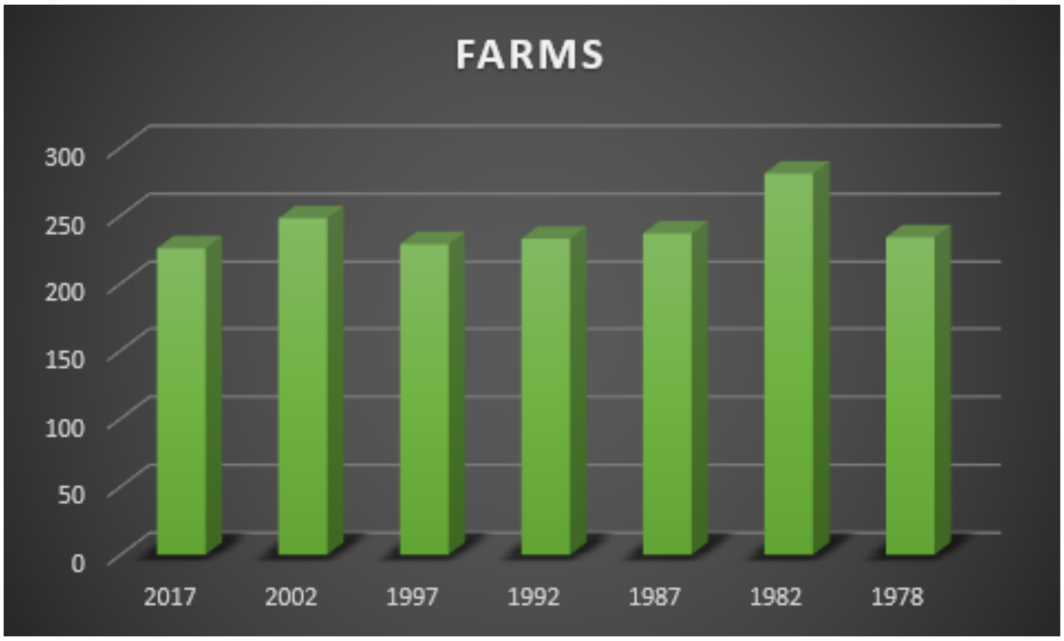
In January 2019, the Department of Land Conservation and Development released its *2016-2017 Farm Forest Report,* which details how much farmland was converted to non-farm uses during that period. Clatsop County approved one non-farm dwelling and six replacement dwellings on farmland. No primary farm dwelling approvals were granted by the County. Since 1994, Clatsop County has approved 78 total dwellings on farmland. Since 1978, farmland in Clatsop County decreased from 22,691 acres to 15,070 acres—a loss of 7,621 acres.

# By The Numbers

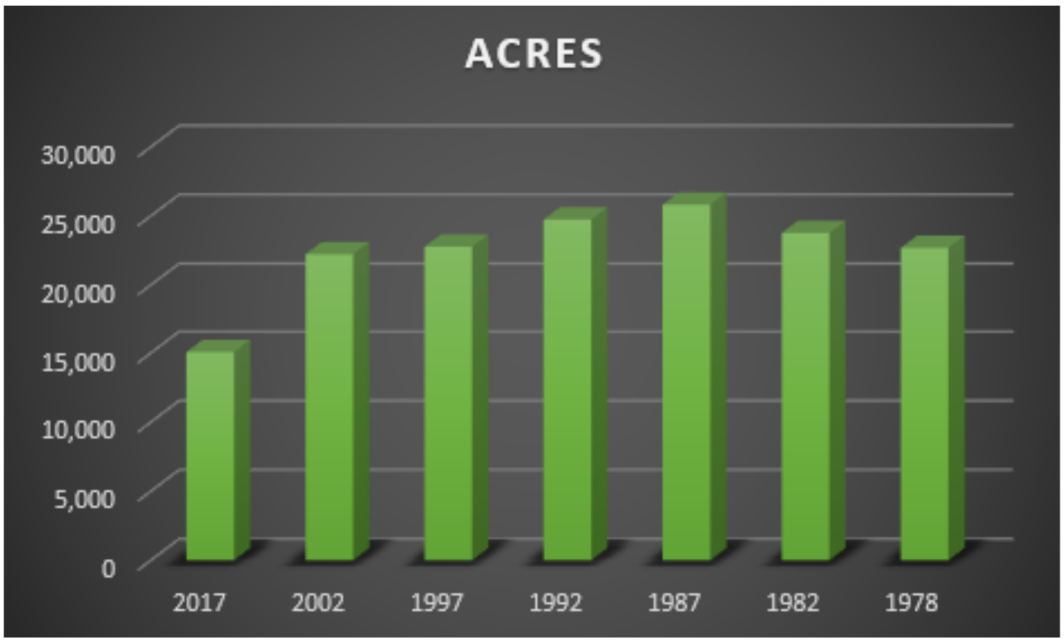
The following data was compiled from the 2017 Census of Agriculture conducted by the United States Department of Agriculture (USDA). National Agricultural Statistics Service.

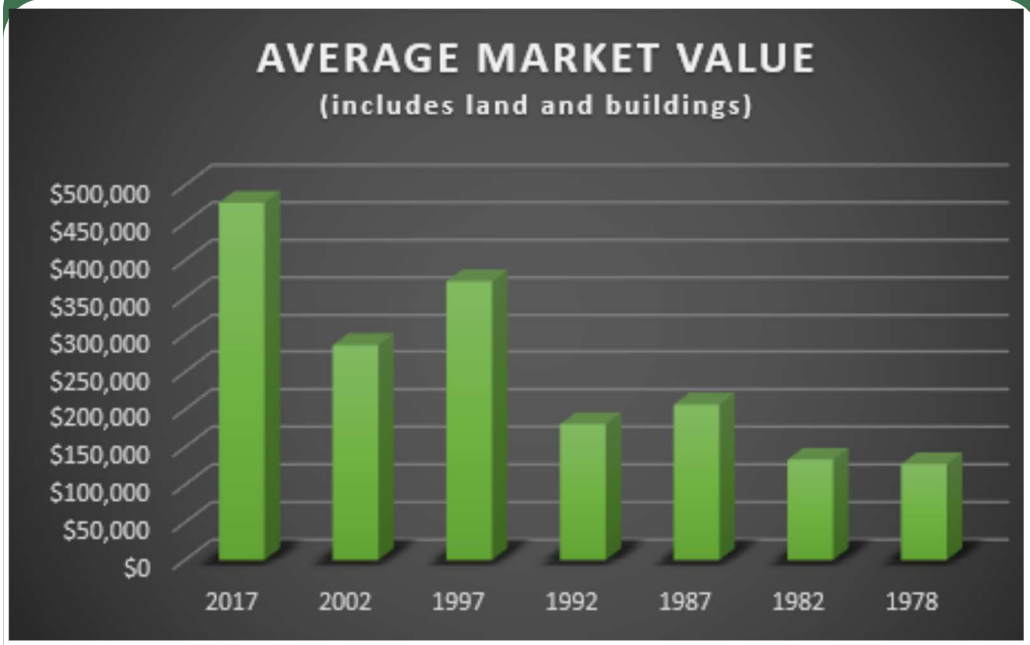
https://www.nass.usda.gov/Publications/AgCensus/2017/index.php

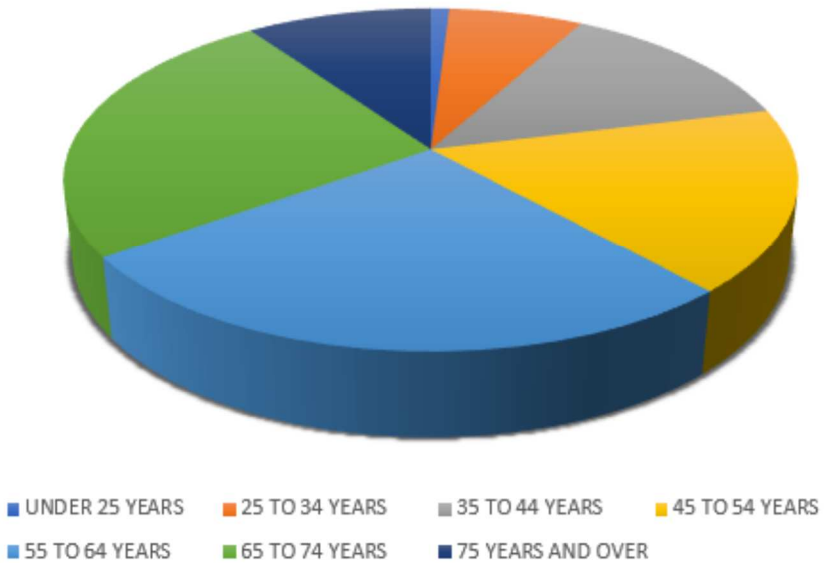
***The number of farms has been relatively stable since 1978, with the total number of farms decreasing slightly from 234 to 226.***

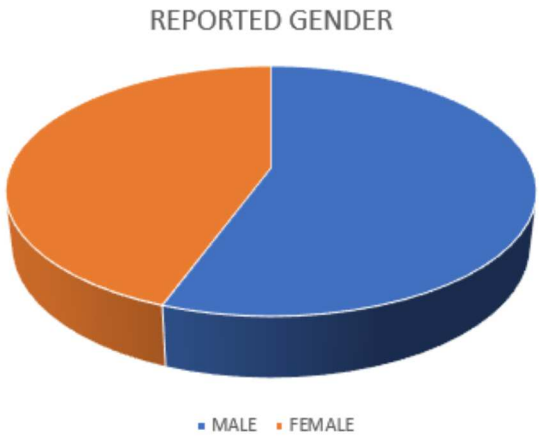



***The average farm size in 2017 was 85 acres, a 12-acre decrease from 1978 when the average farm size was 97 acres.***






# Agri-Tourism

Clatsop County's development code defines agri-tourism as *a common, farm-dependent activity that is incidental and subordinate to a working farm and that promotes successful agriculture and generates supplemental income for the owner.*

## Permissible Agri-tourism Events and Activities

- Hands-on experience such as educational camps
- Demonstration and displays such as animal husbandry and cider pressing
- Farm-to-table meals
- Seasonally-themed festivals
- Farm stands for the direct sale of fresh or value-added products
    - The sale of incidental items and fees from promotional activities shall not exceed 25% of total annual farm stand sales.

What Agri-tourism does **NOT INCLUDE:**

- Weddings
- Celebratory gatherings
- Parties
- Similar, regularly-occurring uses

Agri-tourism is a conditional use in the following zoning districts:

RA-1
RA-2
RA-5
RA-10
EFU
AF

# Frequently Asked Questions

## What is considered "farmland"?

Statewide Planning Goal 3 defines agricultural land using soil types and other factors. Land with soils capable of agricultural production are considered "agricultural land" and are protected under Goal 3 and exclusive farm use (EFU) zoning. Other lands may also be protected under Goal 3 and EFU zoning if they are suitable for grazing, used by farm and ranch operations, or necessary to permit farm practices to be undertaken on adjacent or nearby lands.

## What threats are there to farmland?

A vibrant local farm economy requires a critical mass of farmland. When too much residential development encroaches on farmland, a downward cycle of conversion can begin, in which farms experience conflicts with neighbors, such as trespass, littering, pets chasing livestock and complaints about spraying, manure application, hours of operation and other normal farming practices.

When conflicts become disruptive, farmers stop making investments in their operations and may seek to divide and sell their land for development or use it for other purposes. The division and sale of farmland for non-farm purposes drives up land prices, often putting it out of the reach of existing farms and new farmers wanting to enter the market. As farm operations scale down or leave, farm infrastructure, such as feed stores, processing facilities and irrigation districts may start to disappear, affecting the ability of the remaining farm community to be successful, and driving the cycle of conversion.

Oregon's agricultural lands protection program has reduced many of these problems relative to other parts of the country, but the threats still exist. Existing zoning, tax, and right-to-farm policies encourage continued farm use, but new challenges continue to appear and growth pressures will likely continue in many parts of the state.

## What are the primary components of Exclusive Farm Use (EFU) zoning?

Counties apply EFU zoning to agricultural lands protected under Statewide Planning Goal 3. EFU zoning is based on local comprehensive plans, which are adopted in accordance with state requirements.

EFU zoning reflects the state's agricultural land use policies by seeking to preserve agricultural land for commercial farming and ranching. This is accomplished by establishing large minimum lot sizes – typically 80 acres on farmland and 160 acres on ranchland. Large lot sizes help prevent the division of farms and ranches into smaller parcels that do not support commercial agriculture.

EFU zoning also helps prevent establishment of uses that are not compatible with agriculture. Widespread development of houses and amenities that serve urban populations on farmland can result in increased conflicts with agricultural practices. Agricultural practices like pesticide spraying, manure management, and movement of farm machinery, while critical for maintaining farm operations, are not pleasant to live with as a residential neighbor. EFU zoning helps ensure that farmers and ranchers can continue to operate by limiting the types and intensity of other uses allowed.

EFU zoning has changed over the years. In 1973, only 12 uses were allowed in EFU zones. Today the list has grown to more than 60. Although the primary use in EFU zones remains farming, the zone has been diversified to include a variety of uses such as agritourism, dog training, and destination resorts. The types of uses allowed often vary depending on the capability of soils for agricultural production. A complete list of uses allowed is provided in OAR 660-033-0120. In order to approve many uses that are not directly related to agriculture, a county must analyze whether the proposed use will significantly change or increase the cost of farming practices on surrounding lands.

The legislature has recognized that EFU zoning limits the use of agricultural land. As an incentive, land in an EFU zone that is primarily used to make a profit from farming qualifies for reduced taxes.

@ClatsopCD

https://www.co.clatsop.or.us/landuse/page/comprehensive-plan-update

# Oregon's Statewide Planning Goals & Guidelines

# GOAL 3: AGRICULTURAL LANDS

## OAR 660-015-0000(3)

**To preserve and maintain agricultural lands.**

Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

**USES**

Counties may authorize farm uses and those nonfarm uses defined by commission rule that will not have significant adverse effects on accepted farm or forest practices.

**IMPLEMENTATION**

Zoning applied to agricultural land shall limit uses which can have significant adverse effects on agricultural and forest land, farm and forest uses or accepted farming or forest practices.

Counties shall establish minimum sizes for new lots or parcels in each agricultural land designation. The minimum parcel size established for farm uses in farmland zones shall be consistent with applicable statutes. If a county proposes a minimum lot or parcel size less than 80 acres, or 160 acres for rangeland, the minimum shall be appropriate to maintain the existing commercial agricultural enterprise within the area and meet the requirements of ORS 215.243.

Counties authorized by ORS 215.316 may designate agricultural land as marginal land and allow those uses and land divisions on the designated marginal land as allowed by law.

LCDC shall review and approve plan designations and revisions to land use regulations in the manner provided by ORS Chapter 197.

**DEFINITIONS**

***Agricultural Land*** -- in western Oregon is land of predominantly Class I, II, III and IV soils and in eastern Oregon is land of predominantly Class I, II, III, IV, V and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land-use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

More detailed soil data to define agricultural land may be utilized by local governments if such data permits achievement of this goal.

Agricultural land does not include land within acknowledged urban growth boundaries or land within acknowledged exceptions to Goals 3 or 4.

**Farm Use --** is as set forth in ORS 215.203.

**High-Value Farmlands --** are areas of agricultural land defined by statute and Commission rule.

## GUIDELINES

### A. PLANNING

1. Urban growth should be separated from agricultural lands by buffer or transitional areas of open space.
2. Plans providing for the preservation and maintenance of farm land for farm use, should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

### B. IMPLEMENTATION

1. Non-farm uses permitted within farm use zones under ORS 215.213(2) and (3) and 215.283(2) and (3) should be minimized to allow for maximum agricultural productivity.
2. Extension of services, such as sewer and water supplies into rural areas should be appropriate for the needs of agriculture, farm use and non-farm uses established under ORS 215.213 and 215.283.
3. Services that need to pass through agricultural lands should not be connected with any use that is not allowed under ORS 215.203, 215.213, and 215.283, should not be assessed as part of the farm unit and should be limited in capacity to serve specific service areas and identified needs.
4. Forest and open space uses should be permitted on agricultural land that is being preserved for future agricultural growth. The interchange of such lands should not be subject to tax penalties.

# Goal 3

# CLATSOP COUNTY
# GOAL 3
# COUNTY-WIDE ELEMENT

## AGRICULTURAL LANDS

County-wide Element

Goal 3

Agricultural Lands

Adopted Ordinance 80-7, July 23, 1980
Clatsop County Board of Commissioners

Developed By
Clatsop County Department of Planning and Development

## Introduction

Farming in Clatsop County has declined in the last 15-30 years and the future does not look particularly bright.

Small farm sizes interspersed with rural tracts, difficult terrain, a wet climate, and competition from other land uses all work against the consolidation of large, efficient farm units which are characteristic of other areas of the state where agriculture is thriving. As pressure for land for other uses increases, and the off-the-farm employment becomes more attractive, it is probable that farm acreage and the number of farms will decline below the present level. However, the pattern of small farms, producing a low income stream, with the operator working in other employment for part of the year, is likely to continue. This compliments the seasonal employment cycles of some of the County's industries and provides an appealing way of life for some people.

## Findings

1. Clatsop County's total acreage in farm land continues to be a very small percentage of the State and the regional farm land. Also, the County's acreage in farm land is a small percentage (5.1%) of its own total land area.

2. The average farm size in Clatsop County as of 1974 is 122 acres.

3. The number of farms in the County has declined to about one-quarter of what existed in 1949.

4. The total acres in agriculture has declined nearly 50% since 1949.

5. Average farm size, however, has increased nearly 50% since 1949.

6. A rapid drop has occurred in the number of small farms consisting of 10-49 acres.

7. The majority of farms are owned by older, long-time residents.

8. Approximately two-thirds (2/3) of all farms are operated on a part-time basis.

9. The economic importance of farming in the County is minor compared to other sectors. Farmers here must absorb additional transportation costs to get local products to distant markets, primarily to Portland.

10. There are no agricultural processing enterprises in the County.

11. The small scale of farming also supports very few farm related businesses. This has led to increased costs to farmers for farm equipment, supplies, and services.

12. There are 79,850 acres of Class I-IV soils in the County comprising 14.8% of the total land area. There are no Class I soils due to climatic limitations. Over 90% of the total land area is forest lands including the majority of areas having Class I-VI soils.

2. New proposals shall require a zone change and an assessment of public need and impacts of establishing additional wildlife refuges or game management areas adjacent to agricultural activities.

b. The State Wildlife Commission shall be officially requested to resolve the existing adverse impacts on agricultural lands associated with elk, including but not limited to, one or more of the following measures:

1. revision of hunting laws to sustained management levels.
2. reduce the elk population in Clatsop County.
3. indemnify the owners for damage on their property resulting from elk.
4. pay for and install adequate fencing.

9 "In land use changes involving a change from Conservation-Forest Lands or Rural Agricultural Lands to Rural Lands or Development designations an Exception to the Agricultural Lands or Forest Lands Goals must be taken.*

* Amended 84-9, dated May 23, 1984.

# BACKGROUND REPORT

# GOAL 3

# AGRICULTURE IN CLATSOP COUNTY

by

John Mills, Gail Hochhalter & Janet Young
Clatsop County Department
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March 1980

Adopted July 23, 1980 by
Clatsop County Board of Commissioners

Amended March 1983

[illegible] County P.C
[illegible] 9, 1983

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# INTRODUCTION

The protection and preservation of agricultural land is primarily for the purpose of maintaining the soil resource and farm industry as a basis of food and fiber production now and in the future.

The main tools to accomplish this goal are farm zoning and land division controls. Partially through the exercise of these controls, the agriculture industry can be maintained.

As part of the County Comprehensive Plan, this report describes the history, problems and limitations of agriculture in the County. It compares agriculture in Clatsop County to the industry in the entire State and suggests that this north coast area is distinguished from the rest of the state by the small role that agriculture plays in the County.

In addition, policies are included which address the County's committment to the preservation of agricultural lands and the means to protect them. The commercial agricultural enterprises in the County are described and a minimum parcel size for farm land divisions defined.

The discussion of impacts of agriculture on air, water and land is contained in the Air, Water and Land Quality Background Report. Policies which relate to specific community concerns about agricultural practices can be found in the County Community Plans.

# FACTS AND TRENDS IN AGRICULTURE

Agriculture had a poor beginning in Clatsop County. Livestock and a variety of vegetable seeds were brought to the area by the Astor Fur Company in 1811, a few years after Lewis and Clark wintered here. Except for radishes, potatoes and turnips, the crops failed to mature. According to one party member, the turnips were huge, one measuring 33 inches around and weighing 15-1/2 pounds. But, due to mice infestation and other problems, all their crops came to nothing. The farm was abandoned in 1813.

By 1850 the increased business of ocean and river traffic caused the development of lumber mills, large livestock import for dairy and beef farms, and a fishing export industry. Agriculture grew.

Farming in the County was also strong in the 1940's to the early 1960's. There were 56 small poultry farms with from 1,000 to 10,000 hens. There were four milk processing plants, several raw milk distributors and many small 40 to 50 acre dairies. Other specialty crops and products that also experienced growth were mink, cranberries, holly and Astoria bent grass lawn seed.

Since 1949, agriculture in the County has declined to its present level. Several factors may have been responsible. Among these are:

1. The local agriculture processing industry and, consequently, a ready market for farm products gradually disappeared;

2. Farming required continuing improvement of management methods (i.e. mechanization);

3. The disappearance of very large farms (over 1,000 acres);

4. Increasing costs.

Since 1969, the amount of land in the County in farms has remained about the same, as has the average size of a farm.

Table 1. - Trends in Farm Numbers and Acreages

| Year | Acres | % Total Land Area | Total # Farms | Average Farm Size | Median Farm Size |
|---|---|---|---|---|---|
| 1949 | 57,000 | 11.1% | 837 | 68.1 acres | -- |
| 1954 | 51,000 | 9.9% | NA | NA | -- |
| 1959 | 55,082 | 10.7% | 457 | 120.5 acres | -- |
| 1964 | 39,501 | 6.6% | 486 | 81.3 acres | -- |
| 1969 | 23,745 | 4.6% | 258 | 92.0 acres | -- |
| 1974 | 26,560 | 5.1% | 217 | 122.0 acres | -- |
| 1978 | 22,681 | 4.2% | 234 | 96.9 acres | 60.5 acres |

Source: Census of Agriculture

The Census separates farms which have an income of $2500 or more from all farms in the County. Of the 234 farms in the County, only 128 reported incomes of at least $2500. Only two counties, Curry and Wheeler, had a fewer number of farms in this category in 1978. In the case of Wheeler County the average farm size was 8695 acres. Two of their farms would make up all the farm acreage in Clatsop County with incomes over $2500. Curry County had 122 farms with incomes over $2500 compared to Clatsop County's 128. Lincoln County had only slightly more, at 132. These three coastal counties appear similar in agricultural characteristics, although Tillamook and Coos counties have many more farms earning at least $2500 as well as many more total farms.

Clatsop County had the highest number of farms in which all crops failed of all coastal counties.

Farms are defined by the Census of Agriculture as including crop land and pasture land but also include wood land, waste land, and land under houses, roads and ponds. For Clatsop County:

| | |
|---|---|
| Woodland not pastured: | 5,037 acres |
| Land in house lots, roads, ponds, etc.: | 1,893 acres |
| | 6,930 acres |

Total farm acres in County: 22,681 acres

Therefore, 30.5% of farm land acreage is not used at all for crops or pasture land. This leaves 15,751 acres used as farm land in the County.

Reported farm acreage includes "all lands under the day-to-day control or supervision of one person or partnership." This includes land rented from others. For farm with incomes of over $2500 rented lands are a significant amount of farm acreage.

Table 2. - Land Rented from Others
Farms with Incomes over $2500 ONLY

| Farm Acreage | # of Farms | % of Farms Which Rent Land From Others | % of Acreage on Farm Rented From Others |
|---|---|---|---|
| 1-19 ac | 13 | 7.7% | D* |
| 20-39 ac | 15 | 13.3% | D* |
| 40-79 ac | 32 | 15.6% | 11.5% |
| 80-159ac | 35 | 31.4% | 18.3% |
| 160-319ac | 23 | 47.8% | 32.6% |
| 320 or more | 10 | 90% | 39.9% |

D*: Reported at District level only

For farms over 160 acres, an average of 1/3 or more of the acreage is rented from others.

Table 3. shows the trends in farm acreage classes since 1959. Total numbers of farms, as well as most categories, dropped from 1959 to 1974. Since 1974, though the total number of farms has increased. What is most evident from the 1978 figures is the growth of small farms and the corresponding drop in the number of large farms. It is impossible to make any conclusions from these figures on how agricultural activities are conducted in Clatsop County. In combination, though, with figures listed later in this section showing the large number of part-time farms in the County, the figures may infer the growth of small, part-time farms replacing large farms.

Table 3. - Farms by Size 1959-1978

| Size | 1978 | 1974 | 1969 | 1964 | 1959 |
|---|---|---|---|---|---|
| Under 10 acres | 19 | 11 | 25 | 46 | 42 |
| 10-49 acres | 80 | 68 | 100 | 232 | 203 |
| 50-179 acres | 105 | 98 | 100 | 154 | 164 |
| 180-499 acres | 26 | 35 | 29 | 44 | 39 |
| 500-999 acres | 4 | 6 | 3 | 9 | 6 |
| 1000-1999 acres | 0 | 1 | 1 | 1 | 1 |
| 2000+ acres | 0 | 0 | 0 | 0 | 2 |
| Total | 234 | 217 | 258 | 486 | 457 |

A Census of Agriculture breakdown of farms in other size ranges is shown in Table 4. Is is useful for finer breakdown of smaller size ranges.

Table 4. - Farms by Size - 1978 Only

| Acreage | Number of Farms |
|---|---|
| 1-19 acres | 46 |
| 20-39 | 36 |
| 40-79 | 61 |
| 80-159 | 51 |
| 160-319 | 29 |
| 320+ | 11 |
| Total | 234 |

From this table it can be determined that 61% of the farms in Clatsop County are 79 acres or less. A minimum parcel size of 40 acres in the EFU zone would require at least an 80 acre parcel before any farm use division could take place. Therefore, the majority of farms in the County would not be capable of any further division.

Table 5. compares agriculture in Clatsop County with the industry in the entire state.

In most cases, the trends for Clatsop County follow those of the state. The number of farms is one area which shows a difference - with farm numbers up almost 20% in the state but down 9% here. A drastic difference shows up in the "other cropland" category. In Clatsop County, almost 1/3 of that acreage was for crops which failed.

Table 5.

Farms, Land in Farms and Values 1969-1978

| | Clatsop County | | | | State of Oregon | | | |
|---|---|---|---|---|---|---|---|---|
| | 1978 | 1974 | 1969 | % Change 1969-1978 | 1978 | 1974 | 1969 | % Change 1969-1978 |
| Acres of Farm Lands | 22,681 | 26,560 | 23,745 | -4.5% | 18,414,484 | 18,241,455 | 18,017,850 | [illegible] |
| % of Total Area in Farm Land | 4.2% | 5.2% | 4.6% | - | 29.9% | 29.6% | 29.3% | |
| Number of Farms | 234 | 217 | 258 | -9% | 34,642 | 26,753 | 29,063 | [illegible] |
| Average Size of Farms (Acres) | 97 | 122 | 92 | +5.4% | 532 | 682 | 620 | [illegible] |
| Average Value of Land and Buildings Per Farm ($) | 127,698 | 82,326 | 40,235 | +217% | 267,149 | 170,145 | 93,134 | [illegible] |
| Acres in Crop Land - Total | 10,815 | 12,549 | 10,194 | +6.1% | 5,247,487 | 5,074,988 | 5,197,520 | [illegible] |
| Acres Harvested Crop Land | 3,799 | 4,692 | 3,684 | +3% | 3,280,005 | 3,213,399 | 2,893,632 | [illegible] |
| Acres Pasture Only | 6,187 | 7,607 | 6,455 | +4.2% | 814,484 | 815,197 | 1,077,257 | [illegible] |
| Other Crop Land* | 829 | 250 | 55 | 1407% | 1,152,998 | 1,046,392 | 1,226,631 | [illegible] |
| Acres of Woodland, Including Woodland Pasture | 7,248 | 8,618 | 8,626 | -15.9% | 1,786,919 | 1,730,245 | 2,037,077 | [illegible] |
| All Other Farm Land (Includes unimproved pasture land, barn lots, ponds, wasteland, etc.) | 4,618 | 5,393 | 4,925 | -6% | 11,380,078 | 11,436,212 | 10,790,253 | [illegible] |

*Other crop land includes crop land with cover crops or soil improvement grasses which is not harvested or pastured; crop land in summer fallow; crop land lying idle; and crop land on which all crops failed.

Findings:

1. The amount of land in the County in farms and the acreage size of a farm have stayed about the same since 1969.

2. Of coastal counties, Clatsop County had the highest number of farms in 1978 in which all crops failed.

3. In 1978, Clatsop County ranked 34th out of 36 counties in the State in the number of farms with incomes over $2500.

4. Over 30% of the 22,681 acres defined as farm land in the County are in wood land or house lots, roads, ponds, etc.

5. For farms with incomes of over $2500, lands rented from others are a significant amount of farm acreage.

6. In 1978, Clatsop County had a total of 234 farms; only 128 of these had incomes of $2500 or more.

7. Since 1974, there has been an increase of small farms (49 acres or less) and a decrease of very large farms (500 acres or more).

8. In 1978, 61% of farms in Clatsop County are 79 acres or less.

9. The average size of a farm is 97 acres. The median, or middle sized farm is 60.5 acres. Therefore, half of the farms in the County are less than 60.5 acres, half greater (1978 data).

10. Between 1969 and 1978, Clatsop County had a decrease of 9% in the total number of farms, whereas the entire State had an increase of nearly 20%.

## THE PEOPLE WHO ARE FARMING

This section is to provide some general census information on the farm operators in the County.

Table 6.
Census of Farm Operators

| Days Reported Working Off Farm | 1978 All Farms | 1978 Farms w/sales of $2500+ | 1974 All Farms | 1974 Farms w/sales of $2500+ | 1969 All Farms | 1964 All Farms | 1959 All Farms |
|---|---|---|---|---|---|---|---|
| None | 74 | 48 | 70 | 41 | n/a | n/a | n/a |
| 1-99 days | 13 | 9 | 23 | 11 | 25 | 40 | 48 |
| 100+ days | 143 | 68 | 106 | 32 | 144 | 237 | 225 |
| Total Farms | 234 | 128 | 217 | 95 | 258 | 486 | 457 |
| Principal Occupation | | | | | | | |
| Farming | 81 | 61 | 90 | 61 | n/a | n/a | n/a |
| Other | 153 | 67 | 125 | 32 | n/a | n/a | n/a |
| Average Age | 51.2 | 50.9 | 53.3 | 54.7 | 52.8 | n/a | n/a |
| Farms by Tenure | | | | | | | |
| Full Owners | 181 | 89 | 171 | 63 | 208 | n/a | n/a |
| Part Owners | 45 | 35 | 38 | 30 | 37 | n/a | n/a |
| Tenants | 8 | 4 | 8(3.7%) | 2(2.1%) | 13(5%) | n/a | n/a |

Source: Census of Agriculture

The first category of Table 6. indicates the number of days that farm operators reported working off their farms. As can be seen from the number of days worked off the farms since 1959, part-time farming has been the usual in Clatsop County for many years. This category does not include spouses who may work off the farm.

It is interesting to note the difference between 1974 and 1978 in the number of operators of farms over $2500 income per year with a principal occupation other than farming. The number of principal operators has remained the same at 61, but the number of part-time operators has increased from 32 to 67.

In the next category, "Average Age", the Table shows that farmers on an average are over 50 years old in Clatsop County, which is comparable with the rest of the State.

Table 7.
Breakdown of Principal Occupation by Type of Farm

| Principal Occupation | Dairy Farms | Intensive Animal Husbandry | Extensive Animal Grazing | Horticultural Specialities | Total All Farming 25( |
|---|---|---|---|---|---|
| Farming | 17 | 9 | 28 | 2 | 61 |
| Non-farming | 2 | 3 | 53 | 5 | 67 |

As would be expected, more operators of grazing operations have other principal occupations than in the other two major types of farming in the County. A grazing operation involves less intensive maintenance than dairying or mink ranching.

## FINDINGS

1. The majority of farms are owned by older residents.

2. Almost 2/3 of all farms are operated on a part-time basis. Even of those farms earning over $2500, over 1/2 are operated on a part-time basis.

3. Most operators of dairy farms and intensive animal husbandry farms list farming as their principal occupation. For grazing operations, only about 1/3 of the operators are principally employed by farming.

# TYPES OF AGRICULTURE IN CLATSOP COUNTY

Agriculture is not diverse in Clatsop County. Grazing, mink farming and dairying are predominant, with numerous miscellaneous crops and specialties such as cranberries, holly, small fuits and berries.

Intensive animal husbandry, a category which includes mink farming, comprises only 10.3% of the farms in the County but generates almost 1/3 of the farm income. The average parcel size of a farm in this category is 32.6 acres.

Extensive animal grazing, by contrast, constitutes 69.7% of the farms but generates less than 1/4 of the farm income. The average parcel size of a grazing operation is 81.5 acres.

Clatsop County has 19 dairies, compared to Tillamook County, our neighbor to the south, with 190. These 19 dairies constitute only 8.1% of the farms in the County but generate 42.8% of the farm income. Characteristics of climate and soils are similar for Clatsop and Tillamook counties as well as characteristics of the dairy operations themselves. Tillamook Dairy Cooperative is the market for most Clatsop County milk. It is reasonable that planning provisions which have been found to be adequate to protect the dairy industry of Tillamook County would also protect the much smaller dairy industry of Clatsop County.

In Tillamook County, the Soil and Water Conservation District and a majority of the County's citizen advisory committee members agreed that 40 or more acres are normally required for a viable dairy farm (source: Tillamook County Plan). They stated that a 40 acre minimum lot size requirement would help protect conversion of commercial agricultural land to non-farm uses.

Clatsop County's Exclusive Farm Use (EFU) zone has a 40 acre minimum parcel size, identical to the 40 acre parcel size for farms in Tillamook County.

Table 8. Breakdown of Farm Types

| | % of Total Farms | % of Farms Over $2500+ Income | % of Total Income |
|---|---|---|---|
| Extensive Animal Grazing | 69.7 | 63.3 | 24 |
| Intensive Animal Husbandry | 10.3 | 9.3 | 29.3 |
| Dairying | 8.1 | 14.8 | 42.8 |
| Horticultural Specialties | 4.7 | 5.4 | 1.5 |

## Findings

1. Predominant agricultural activities in Clatsop County are grazing, dairying and mink farming.

2. The majority of farm income in the County is derived from dairying and intensive animal husbandry (including mink farming).

3. Grazing is the agricultural activity which comprises the majority of farms (69.7%) in the County but generates less than 1/4 of the farm income.

4. A 40 acre minimum parcel size has been found to be sufficient to protect the dairying industry of Tillamook County, the County adjacent to the south with a dairy industry 10 times the size of Clatsop County.

## THE ROLE OF AGRICULTURE

Employment in the agricultural sector has steadily declined in the County from 860 people in 1960 to 550 in 1970 to an estimated 182 (Input/Output Analysis) for 1977. The 1974 Agriculture Census, however, shows a gain in hired farm workers from 1969 to 1974, from 272 to 309 workers, respectively. The Census also shows that these hired workers were working for fewer days in 1974 than in 1964 and that the total dollar payroll went from $211,000 to $247,000. The 1977 estimate of 128 workers accounts for 1.6% of the total County employment.

Oregon State University's Extension Service has conducted an Input/Output Analysis of the County's economy from which the estimated farm employment for 1977 was derived. The Analysis also shows the Agricultural sector as representing 0.6% of the total export sales (dollars into the County) of Clatsop County.

The figures above place agriculture far down on the list in comparison with the County's top three industries: forestry, fisheries, and tourism. In export sales the lumber and wood products industry is 51.9%, the marine resources industry is 18.0%, and the retail/whole products and services sector (tourism) is 9.9% of the County's total.

The lumber and wood products industry employs 2,092 people or 17.8% of the total County employment (1977). This industry constitutes 474,000 acres of the County or 90% of the total land area.

There are no agricultural processing enterprises in Clatsop County except for preliminary processing of milk and mink occurring on the site.

There are also very few supportive businesses for agriculture. For example, there are only three slaughterhouse/butchers in the County for people wanting to butcher their cattle for personal consumption. Cattle operators must ship the cattle to Portland to market adding a transportation cost to expenses. There are no tractor sales or farm equipment repair shops in the County.

There are four outlets for fertilizer and feed and seed in the County. One outlet (Mayflower Farms, Inc.) adds $13.00 freight per ton of fertilizer increasing the cost by 5-7% above the price in Portland.

### Findings

1. The economic importance of farming in the County is minor compared to other sectors. Farmers here must absorb additional transportation costs to get local products to distant markets, primarily to Portland.

2. There are no agricultural processing enterprises in the County.

3. The small scale of farming also supports very few farm related businesses. This has led to increased costs to farmers for farm equipment, supplies, and services.

## ECONOMICS OF FARMING

This section addresses the economic status and health of farming in the County in recent years and the economic importance of the agricultural sector in the County.

The gross cash sales for specific farm items in the County is shown in Table 9. The numbers have increased since 1970 but this is deceptive since inflation is not taken into account . The mainstays of agriculture in the County include hay crops, small fruits and berries, particularly cranberries, specialty products such as holly and forestry, cattle and calf operations, dairy products, and miscellaneous animal products, particularly mink. It is expected that these items will continue to be the County's predominant farm products.

Table 9. shows overall gains in total farm sales. However, in constant 1967 dollars the amounts are nearly equal. Farm expenses also increased by 3-1/2 times more than the sales rate, as shown on Table 10. The events that led to this situation of skyrocketing prices began with the grain crisis in 1973-74. The cost of grain had a dramatic impact on feed for cattle and poultry operators as shown in the "Cattle and Calves" and "Chicken Eggs" categories in Table 9. Another factor increasing expenses in those years was the price of petroleum, including fuel and fertilizers. This example is indicative of the effects and uncertainty that is caused by the lack of diversity in the County's agriculture.

Table 9. also shows the gradual disappearance of the "Grass and Legume Seeds", "Field Crops", and "Tree Fruits and Nuts" categories. Some field crops were combined into "Truck Crops". Astoria bent grass is no longer grown in this County due to a combination of climate and fluctuating market conditions.

It is not possible to directly correlate the information of Table 9. with the next chart, Table 10., which shows farm sales against farm expenses in the County. This is because Table 10. includes only the farms with sales of $1000 or more.

For total farm sales from 1969 to 1974 Table 10. shows a very small increase of 18.9% for the County compared to the State's increase of 93%. This is due, partly, because 1974 was a poor year for cattle operations in the County and the decrease in this one item by 45% that year also significantly decreased the total sales figures (by 15%).

Farm expenses are also on the rise due to fencing needed to protect crops from elk damage. Total losses due to elk on farm land have not been documented but are well known in farming communities. For example, the annual Brownsmead Corn Feed was cancelled in 1979 because the farmer lost his entire crop to the elk.

The value of agricultural products for the County in 1977 represents 10% of the Tillamook-Clatsop-Columbia region's value of agricultural products. Clatsop County ranked 34th in the State in 1977 for the total value of farm sales, 35th in the percent of land in farm land and 36th in the total number of acres in farm land. Unlike other areas, a bad year in one farm item means a significant drop in total agricultural [illegible]. These two [illegible] ments in farming, agricultural processing, and related business in the County.

Findings

1. Clatsop County does not have a diverse agricultural base.

2. While the mainstays of agriculture have experienced a slight increase in total farm sales, some products are gradually disappearing.

3. The increase in farm expenses spurred by the skyrocketing cost of feed and fuel has decreased profits and caused uncertainty in farming in the County.

4. Clatsop County ranks very low in the state in total farm sales, total amount of farm land, and percent of land in farm land.

TABLE 9.
Clatsop County--Estimated Gross Farm Sales
1969-1977 (in $1000)

| Item | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|
| Hay | 30 | 23 | 33 | 32 | 41 | 53 | 88 | 49 | 73 |
| Grass and Legume Seeds | 4 | 12 | 20 | 5 | 3 | 3 | -- | -- | -- |
| Field Crops | 2 | 2 | 4 | 3 | 5 | -- | -- | -- | -- |
| Tree Fruits and Nuts | 2 | 2 | 2 | 3 | 4 | -- | -- | -- | -- |
| Small Fruits and Berries | 66 | 35 | 37 | 42 | 58 | 32 | 58 | 58 | 5[illegible] |
| All Truck Crops | 8 | 9 | 6 | 5 | 8 | 11 | 12 | 11 | 1[illegible] |
| Specialty Crops (including forestry) | 128 | 118 | 52 | 162 | 175 | 315 | 425 | 500 | 62[illegible] |
| ALL CROPS | 240 | 201 | 154 | 252 | 294 | 414 | 583 | 618 | 77[illegible] |
| Cattle and Calves | 598 | 453 | 512 | 681 | 982 | 529 | 507 | 665 | 58[illegible] |
| Hogs and Pigs | 12 | 10 | 4 | 12 | 28 | 13 | 15 | 45 | * |
| Sheep and Lambs | 9 | 10 | 10 | 9 | 15 | 14 | 13 | 23 | * |
| Dairy Products | 667 | 387 | 411 | 517 | 617 | 620 | 621 | 949 | 91[illegible] |
| Farm Chickens | 97 | n.a. | 1 | 1 | 1 | 2 | 1 | 1 | * |
| Chicken Eggs | 121 | n.a. | 50 | 68 | 106 | 46 | 51 | 29 | 1[illegible] |
| Misc. Animals & Products | 538 | n.a. | 333 | 338 | 518 | 546 | 781 | 683 | 140[illegible] |
| ALL LIVESTOCK AND PRODUCTS | 2042 | n.a. | 1321 | 1626 | 2267 | 1770 | 1989 | 2395 | 292[illegible] |
| ALL CROPS AND LIVESTOCK | 2282 | n.a. | 1475 | 1878 | 2561 | 2184 | 2572 | 3013 | 369[illegible] |

Source: Oregon State University Extension Service

*combined into misc. animals and [illegible]

TABLE 10.
Farm Sales and Farm Expenses: 1974 and 1969

| | CLATSOP COUNTY--ALL FARMS | | | STATE OF OREGON--ALL FARMS | | |
|---|---|---|---|---|---|---|
| | 1974 | 1969 | % of Change | 1974 | 1969 | % of Change |
| Total Farm Sales ($1000) | 2540 | 2136 | +18.9% | 1,025,082 | 531,209 | +93.[illegible] |
| Average per Farm | $11,705 | $8,279 | +41.4% | $38,317 | $18,277 | +110.[illegible] |
| Sales by Category ($1000) | | | | | | |
| Crops including nursery products and hay | | | | | | |
| Farms | 65 | 56 | | 15,457 | 16,825 | |
| $1000 | 227 | 189 | +20.1% | 651,552 | 260,416 | +150.2% |
| Forest Products | | | | | | |
| Farms | 29 | 27 | | 1,485 | 1,640 | |
| $1000 | 226 | 44 | +413.6% | 13,051 | 6,827 | +91.2% |
| Livestock, Poultry, and products | | | | | | |
| Farms | 181 | 209 | | 18,417 | 19,459 | |
| $1000 | 2,086 | 1,902 | +9.7% | 360,480 | 263,966 | +36.6% |
| Total Farm Expenses ($1000) | 2,225 | 1,735 | +71.8% | 784,663 | 466,946 | +68.[illegible] |

Source: Census of Agriculture

## SOILS SUITABILITY

Clatsop County is predominantly a mountainous upland area with over 90% of the land area being forest land. Because of its topography and the resulting high precipitation and runoff experienced here the County continues to have a very high potential for erosion.

Over time the erosion of sedimentary rock areas has formed deposits of fine grained sediments that make up the soils of the alluvial floodplains and river terraces in the County. When igneous rock areas have been eroded then deposits of sand and gravel are also likely to occur in these floodplain and terrace areas.

Estuarine deposits are fine sand, silt, and clay intermixed with peaty material that occur in the estuarine tidal flats of the Columbia River. Many of these areas have been protected by dikes and drainage systems to create soils suitable for agriculture.

Finally, peat and organic materials intermixed with fine sand make up the organic soils of the Clatsop Plains area.

Together these deposits make up the soils most commonly used for agriculture in the County.

The peat soils, the estuarine deposits called the Coquille and Clatsop soils, the alluvial floodplain deposits which are usually Nehalem soils, and the river and stream terrace deposits most often being Knappa, Walluski and Chitwood soils have all been ranked by the Soil Conservation Service into "Land Capability Classifications" with the other soils of the County. Soil characteristics such as permeability, water holding capacity, depth, inherent fertility, texture, structure, wetness, acidity, overflow hazards, slope, and also climatic conditions as they influence use, management, and productivity of land are considered in the grouping of soil types into eight land capability classes which are designated by Roman numerals. The hazards and limitations of the use of the groups increase as the class number increases so that Class VIII soils have the most limitations.

Table 11. shows the number of acres in each of the classes for Clatsop County. Classes I, II, III and IV soils are considered suitable for agriculture. No Class I or Class V soils occur in Clatsop County. Each capability class is divided into subclasses that show the major cause of the limitations: "e" is for erosion hazard, "w" for wetness, "s" for root zone limitations, and "c" for climatic limitations. The definitions of each class are given below:

Class I soils have few limitations that restrict their use and are excellent for cultivated crops.

Class II soils have some limitations that reduce the choice of plants or require special conservation practices and are good for cultivated crops.

Class III soils have severe limitations that reduce the choice of plants or require special conservation practices, or both. They are fair for cultivated crops.

Class IV soils have very severe limitations that restrict the choice of plants, require very careful management or both. They are poor for cultivated crops. All four of the above classes can also be used for pasture or wood land.

Class V soils. There are no Class V soils in the County.

Class VI soils have severe limitations that make them generally unsuited for cultivation and limit their use largely to pasture and wood land. Physical conditions are such that pasture and wood land improvements can be made if needed. These soils are often on steep slopes.

Class VII soils have very severe limitations that make them unsuited for cultivation and that restrict their use largely to grazing, wood land or wildlife. Physical conditions are such that it is impractical to apply improvements.

Class VIII soils have limitations that prohibit their use for commercial plant production and restrict their use to recreation, wildlife, water supply, and aesthetic purposes.

The mapping of soils for EFU designations are based on detailed soils maps completed by the Soil Conservation Service. These maps were surveyed primarily from 1964 to 1976 although earlier surveys from 1939 to 1950 were done for the Necanicum River and Clatsop Plains areas. Not all of the County has been surveyed.

Beginning in November 1978, the Soil Conservation Service began examining the unsurveyed areas of the County and correlating them with past surveys to provide a complete detailed soils mapping of the County. Based on these revisions the acreage estimates in Table 11. may change.

The 1978 Agricultural Census shows a total of 22,681 acres in Clatsop County in farms. Some small percentage of these are probably in Classes VI-VIII, but most are on Class I-IV soils. Since there are almost 80,000 acres of Class I-IV soils in the County, and only about 1/4 are in farm use, the remainder are in either "built or committed" to residential development or in forest use.

Findings

1. There are 79,850 acres of Class I-IV soils in the County comprising 14.8% of the total land area. There are no Class I soils due to climatic limitations. Over 90% of the total land area is forest lands including the majority of the areas having Class II-IV soils.

2. Over 3/4 of the land in the County is in soil Class VIe which has severe limitations for agricultural use and is subject to wind and water erosion.

TABLE 11.
Inventory of Acreage
by Soil Conservation Service Capability Class and Subclass
Clatsop County, 1973

| Class & Subclass | Acreage | % of Total |
|---|---|---|
| I | None | -- |
| II | 45,170 | 8.4% |
| --e | --17,445 | |
| --w | --16,657 | |
| --c | --11,070 | |
| III | 27,130 | 5.0% |
| --e | -- 6,150 | |
| --w | --20,978 | |
| IV | 7,550 | 1.4% |
| --e | -- 1,080 | |
| --w | -- 6,470 | |
| Class I-IV Soils | 79,850 | 14.8% |
| V | None | -- |
| VI | 417,620 | 77.7% |
| --e | --417,620 | |
| VII | 16,945 | 3.2% |
| --e | -- 3,640 | |
| --w | -- 1,520 | |
| --s | -- 11,785 | |
| VIII | 23,085 | 4.3% |
| --w | -- 3,855 | |
| --s | -- 19,228 | |
| TOTAL | 537,500 | 100.0% |

Source: U.S. Soil Conservation Service

## CLIMATE

Climatic conditions in the County have significantly limited the potential and diversity of agriculture in the County. This limitation is reflected in the soils ratings described above. There are no Class I soils in the County because of a soil temperature factor which is directly related to the climate.

On the other hand the mild climate is beneficial for dairying, and for peas, lettuce, and other cool weather crops providing the excess precipatation can be drained.

The two climatic limitations are the heavy precipation, which greatly shortens the growing season and invariably ruins hay crops each year, and also the lack of sunshine which contributes to an adverse soil temperature factor.

The heavy precipitation does substantially reduce a need for irrigation in the County whereas it is a necessary expense for other areas. However, the lack of sunshine is a limitation that will always plague farmers and gardeners here as anyone who has tried to grow tomatoes in the County can attest.

Table 12. shows the cloud cover on an average day for different areas of the State over the summer months and indicates that Astoria remains in the cloudy category for the entire summer unlike any of the other areas shown. The year 1977 was used because it was a typical year. Since 1953, the month of May has averaged 3.3 clear days; July averaged 6.0 clear days; August averaged 6.6 clear days; and September averaged 8.7 clear days.

The difference in Astoria's amount of sunshine compared to other areas is significant when it is related to soil temperature and to the advantage of other areas that have successive days of sunshine. Also, it is significant that the difference in Astoria's 7.1 to Portland's 6.1 average cloud cover (on a scale of 0-10) for the month of July is the result of 6 clear, 8 partly cloudy, and 17 cloudy days in Astoria compared to 14 clear, 8 partly cloudy, and 9 cloudy days in Portland.

A favorable climatic factor for agriculture is the mild temperature in Astoria which is very seldom cold enough to cause a concern about frost. The average duration of days with temperatures above 32 since 1953 is 207 days per year. These days generally occur between mid-April to mid-November. This factor can be advantageous, such as when local sweet corn reaches the Portland fresh market after other areas have finished, or when livestock require a mild climate. However, it is not an indication of a long growing season because the ground is usually too wet due to the precipitation.

Table 13. shows the amount of rain that is stopped by the mountains when a front passes from the Coast to the Willamette Valley. Generally there is almost twice as much precipitation at Astoria than in the Willamette Valley.

Findings

1. A combined climatic condition of heavy precipitation and a lack of sunshine in the County seriously hampers farming because it limits the diversity of agriculture in the County and shortens the growing season.

Table 12.
Average Daily Cloud Cover (in tenths) From Sunrise to Sunset--1977

| | May | June | July | August | September | October |
|---|---|---|---|---|---|---|
| Astoria | 8.1 | 7.7 | 7.1 | 7.3 | 7.2 | 7.0 |
| Burns | 7.6 | 5.4 | 3.1 | 5.3 | 5.0 | 4.6 |
| Eugene | 8.3 | 6.6 | 5.2 | 5.6 | 7.0 | 8.1 |
| Medford | 7.5 | 5.1 | 1.8 | 4.4 | 4.3 | 5.9 |
| Pendleton | 7.6 | 5.6 | 4.2 | 4.4 | 5.8 | 5.5 |
| Portland | 8.3 | 6.2 | 6.1 | 5.1 | 6.7 | 7.3 |
| Salem | 8.0 | 6.1 | 5.2 | 4.4 | 6.5 | 7.1 |

Clear: 0-3 Cloudy: 8-10 Partly: 4-7.

Source: National Weather Service

Table 13.
Rainfall in Inches for 1977
January through December

| | Astoria | Portland | Newport | Salem | Eugene |
|---|---|---|---|---|---|
| January | 3.20 | 1.07 | 2.31 | .88 | 1.11 |
| February | 5.22 | 2.49 | 7.09 | 2.83 | 5.05 |
| March | 9.74 | 3.50 | 8.82 | 3.33 | 4.66 |
| April | 1.65 | 1.04 | 1.20 | .62 | 1.47 |
| May | 6.00 | 4.30 | 6.21 | 3.76 | 2.84 |
| June | 1.36 | .83 | 1.15 | .73 | .97 |
| July | .44 | .39 | .25 | .26 | .11 |
| August | 3.85 | 3.26 | 3.07 | 1.70 | 1.70 |
| September | 5.44 | 3.33 | 5.38 | 2.36 | 2.39 |
| October | 4.38 | 2.28 | 4.18 | 2.37 | 2.87 |
| November | 12.37 | 5.56 | 11.94 | 6.19 | 9.14 |
| December | 14.34 | 8.98 | 15.55 | 8.73 | 14.60 |
| Total | 67.99 | 37.03 | 67.15 | 33.76 | 46.91 |

Source: National Weather Service

## STATE AGRICULTURAL LAND USE POLICY

As part of ORS 215 the State Legislature adopted a policy on agricultural lands. The County's Agricultural Plan element and Exclusive Farm Use zone must be consistent with this policy.

> 215.243 Agricultural Land Use Policy,
> The Legislative Assemby finds and declares that:
>
> (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. (1973 c.503 §1).

The following section discusses minimum parcel size in the EFU zone. The 40 acre minimum parcel size for EFU lands in Clatsop County complies with the State Agricultural Land Use Policy by conserving land in large enough blocks to maintain the commercial agricultural economy of the County.

Since 50% of the farms in the County are under 60.5 acres and 61% are under 79 acres, these farms would not be capable of any further division, except under the very limited criteria for non/farm developments. Only 39% of farms would normally be capable of any land divisions. Many of the larger farms in the County are in long-time family ownership with no intentions of dividing up the commercial enterprise. Large enough parcel sizes to maintain the four major types of commercial agriculture in the County will continue to exist. The following section further discusses the minimum parcel size of 40 acres.

## MINIMUM PARCEL SIZE

Goal 3 requires that "such minimum lot sizes as are utilized for any farm use zones shall be appropriate for the continuation of the existing commercial agricultural enterprise in the area."

This standard is further explained in the Agricultural Lands Administrative Rule (OAR 660-05-015). The size needed to maintain the existing commercial agricultural enterprise shall be determined by identifying the types and sizes of commercial farm units in the area. Any divisions smaller than that minimum parcel size are considered non-farm divisions and are evaluated by the criteria in ORS 215.21(3)(3). Non-farm divisions are discouraged and the criteria will be strictly interpreted by the County. The minimum parcel size being discussed in this section is for farm land divisions, not non-farm. All divisions of EFU land for farm purposes must meet the minimum parcel size of 40 acres which is consistent with the State Agricultural Land Use Policy. Dwellings must be necessary to carry out the Agricultural activity on the parcel. Dwellings on parcels less than 40 acres must meet the same criteria as creation of a parcel less than 80 acres.

The Census of Agriculture describes certain agricultural characteristics on a county-wide basis. No analysis of agriculture in subareas of the County has been done. This is because agriculture is such a minor portion of Clatsop County's employment (1.6% - see Economic of Farming above) and total land area (1.2% - see Facts and Trends in Agriculture above) that examining it on a county-wide basis makes more sense than further dividing up an already small industry.

The Administrative Rule states that types and values of products produced and how they are marketed are more important in determing a minimum lot size than characteristics of part-time and full-time farming. Part-time farming is presently, and has been for some time, a major factor in Clatsop County agriculture. Figures listed above show that this category is a growing one.

The activities which constitute the commercial agricultural activities in Clatsop County are primarily:

(1) Extensive animal grazing
(2) Intensive animal husbandry
(3) Dairying
(4) Horticultural specialties

The average size of a farm in this County is 97 acres. Statistics above show that this figure commonly includes land rented from others. Farm acreage also includes non-contiguous parcels, often fields managed by one operator may be in different locations in a part of the County. The average size, then, of a farm which is in one contiguous block must be less than 97 acres. The median, or middle sized, farm in Clatsop County is 60.5 acres.

A minimum lot size of 40 acres in the EFU zone would require at least an 80 acre parcel to be eligible for division. 61% of the farms in the County are 79 acres or less. Median parcel size of 60.5 acres shows that well over half of Clatsop County farms would not even be eligible to request a farm land division.

| | Average Parcel Size |
|---|---|
| Extensive Animal Grazing | 81.5 acres |
| Intensive Animal Husbandry | 32.6 acres |
| Dairying | 170.0 acres |
| Horticultural Specialties | 93.4 Acres* |

*This figure is very skewed by one large farm. The median parcel size in this category is about 20 acres.

| | Median Parcel Size |
|---|---|
| All Farms in the County | 60.5 acres |

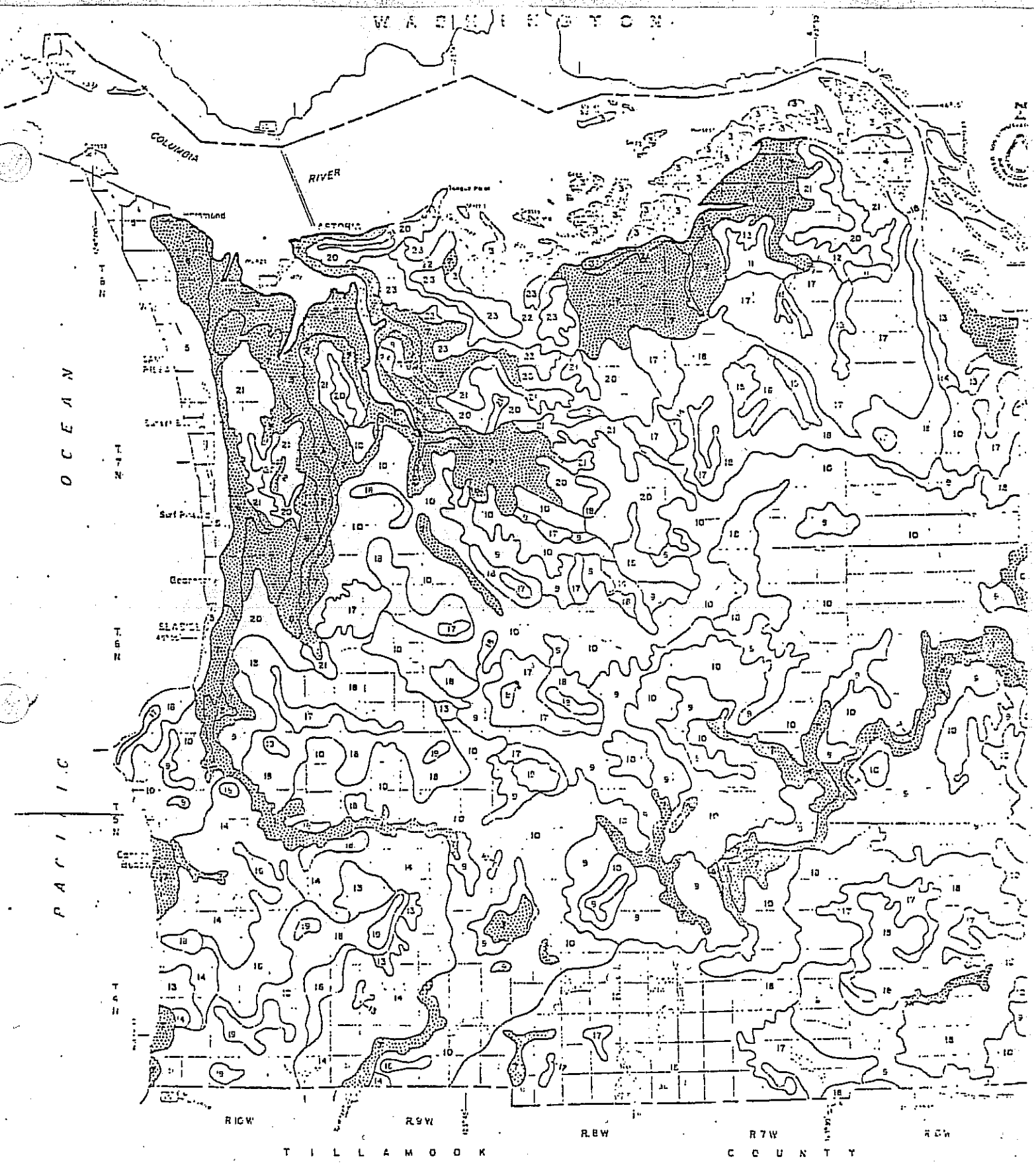
Under Types of Agriculture (page 8), the relative values of the different major agricultural enterprises are discussed. Dairying is the largest percentage of total farm income with 42%. As discussed earlier, 40 acres has been found to be a reasonable minimum parcel size to protect the much larger dairy industry of Tillamook County. Although Tillamook has 10 times the number of dairies of Clatsop County, the other characteristics of the industries are similar. The average size of dairies is somewhat smaller in Clatsop County than Tillamook. In both counties farm acreage is often rented from others and farms commonly include non-contiguous parcels.

In Clatsop County most dairies are farms that have been operated by one family for quite some time. Some processing of milk occurs here but most is marketed through Tillamook County dairy cooperative. That Co-op has limitations on new dairies and on numbers of cows per dairy. This type of limited entry would make it difficult for a new dairy to become established.

Another limitation to dairies is the availability of adjacent land for expansion. The configuration of narrow river valleys with timbered uplands requires that, if more land is needed, it generally must be acquired a distance away from the main farm. A 40 acre parcel size preserves fields of a size necessary to maintain the dairying industry.

For Extensive Animal Grazing, Intensive Animal Husbandry and Horticultural Specialities, most of the farms would not be capable of further division for farm purposes with a 40 acre minimum parcel size. This parcel size will protect those agricultural enterprises.

For certain agricultural lands in the County where a block of parcels all less than 80 acres exist, there is a limited amount of Agriculture-Forestry 20 zoning. Since this zoning category often exists in forest lands or areas of mixed agricultural and forest uses, a discussion of the zone is found in the Forestry Element of the Plan.




SOIL SUITABILITY FOR FARM CROPS

Legend on Next Page

# SOIL SUITABILITY FOR FARM CROPS

## CLATSOP COUNTY, OREGON

### JANUARY 1973

Good soil suitability for farm crops. These soil associations have over 50 percent of their areas occupied by detailed soil mapping units that are in land capability classes I or II, and less than 50 percent of their areas in classes IV, VI or VII. The soils have slopes of less than 12 percent, good or moderately good drainage, or, if somewhat poor or poor drainage, good response to underground drainage systems, not more than occasional winter overflow, surface layer texture of sandy loam to silty clay loam, and depth to hard bedrock of over 40 inches.

Fair soil suitability for farm crops. (1) These soil associations have less than 50 percent of their areas occupied by detailed soil mapping units that are in land capability classes I or II, and less than 50 percent of their areas in classes IV, VI or VII. Up to 100 percent of their areas may be land capability class III. The soils may have slopes of 12 to 20 percent, good to poor drainage, moderately good response to open ditch or underground drainage systems, occasional to frequent winter overflow, surface texture of silty clay or clay, or depth to hard bedrock of 20 to 40 inches.

Poor soil suitability for farm crops. These soil associations have more than 50 percent of their areas occupied by detailed soil mapping units that are in land capability classes IV, VI or VII. The soils may have slopes steeper than 20 percent, good to poor drainage, with poor response to a drainage system, frequent winter overflow, or depth to hard bedrock of less than 20 inches.

(1) Only soils in soil association 3 that are protected by dikes have fair suitability. Unprotected areas have poor suitability.

CLATSOP COUNTY GENERAL SOIL MAP LEGEND

AREAS DOMINATED BY NEARLY LEVEL, WELL TO POORLY DRAINED SOILS ON STREAM BOTTOM, AND MODERATELY WELL TO VERY POORLY DRAINED SOILS ON TIDE LANDS.

1. Nehalem association
2. Brenner-Nestucca association
3. Coquille-Tidal marsh (fresh)-Clatsop association
4. Sauvie-Peat association

AREAS DOMINATED BY EXCESSIVELY TO VERY POORLY DRAINED SOILS ON THE COASTAL PLAIN.

5. Westport-Gearhart-Dune land association
6. Brallier-Warrenton association

AREAS DOMINATED BY WELL TO POORLY DRAINED, NEARLY LEVEL TO MODERATELY STEEP SOILS ON TERRACES.

7. Walluski-Knappa association
8. Chitwood-Hebo association

AREAS DOMINATED BY WELL DRAINED, GENTLY SLOPING TO VERY STEEP SOI THE COAST RANGE.

9. Astoria-Winema association, 3 to 30 percent slopes
10. Astoria-Winema association, 30 to 60 percent slopes
11. Svensen association, 0 to 30 percent slopes
12. Svensen association, 30 to 60 percent slopes
13. Astoria-Hembre-Klickitat association, 3 to 30 percer slopes
14. Astoria-Hembre-Klickitat association, 30 to 60 perc slopes
15. Hembre association, 3 to 30 percent slopes
16. Hembre association, 30 to 60 percent slopes
17. Hembre-Klickitat association, 3 to 30 percent slopes
18. Hembre-Klickitat association, 30 to 60 percent slope
19. Rock outcrop-Kilchis-Klickitat association, 60 to 9C percent slopes
20. Tolovana association, 3 to 30 percent slopes
21. Tolovana association, 30 to 60 percent slopes
22. Tolovana association, sandstone substratum, 3 to 30 percent slopes
23. Tolovana association, sandstone substratum, 30 to 60 percent slopes

Svensen, Tolovana, and Walluski are tentative names subject to change in correlation.

# 2016 - 2017 OREGON FARM & FOREST REPORT

Source: Carney, S.

OREGON
Department of
Land Conservation
& Development

**January 25, 2019**

# 2016 - 2017 OREGON FARM & FOREST REPORT

January 1, 2016 through December 31, 2017

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# Introduction

Oregon Revised Statutes (ORS) 197.065 requires the Oregon Land Conservation and Development Commission (LCDC) to submit a report every two years to the Legislature "analyzing applications approved and denied" for certain land uses in exclusive farm use (EFU) and forest zones and "such other matters pertaining to protection of agricultural or forest land as the commission deems appropriate."

### County Reporting of Land Use Decisions

The Department of Land Conservation and Development (DLCD or department) receives county land use decisions in EFU, forest and mixed farm-forest zones. This report summarizes the information provided by the counties for the two-year period from January 1, 2016 through December 31, 2017. For each of the two years, tables and graphs include information on dwelling and land division approvals as well as other approved uses on farm and forest land. In addition, the report provides information on the acreage rezoned out of farm and forest zones to urban and rural zones in this time period. Additional graphs, tables, and maps provide historic data on development trends and land conversion of farm and forest land to other uses. Finally, this report also includes data on county land use decisions that are based on waivers to state and local land use regulations under Ballot Measures 37 and 49. Most of these decisions were in farm and forest zones.

### Use of this Report

The department uses the collected information to evaluate the extent and location of development, partitions, and zone changes on farm and forest lands. This information is used to continually assess the effectiveness of farm and forest zones in implementing Statewide Planning Goal 3 (Agricultural Lands) and Goal 4 (Forest Lands). The data may also be used by LCDC and the Legislature to shape statutory and rule changes to enhance or clarify protections for farm and forest lands.

# Oregon's Agricultural Land Protection Program

The preservation of agricultural land is one of the primary objectives of Oregon's statewide planning program. Oregon has determined that it is in the state's interest to protect the land resource foundation of one of its leading industries – agriculture.

**The Land**

Roughly 26 percent of Oregon's land base – 16.3 million acres – is in non-federal farm use, according to the 2012 USDA Census of Agriculture. This includes all places from which $1,000 or more is earned annually from the sale of agricultural products. Farm acres have decreased by approximately five percent (778,844 acres) since the 2002 Census of Agriculture while the number of farms has decreased by 11 percent (4,594 farms). The average size of Oregon farms increased by 33 acres from 2002 to 2012.

**The Economy**

In 2015, Oregon's agricultural sector produced a farm gate value of $5.7 billion or approximately 11 percent of the net state product (Sorte & Rahe, 2015). Agriculture is linked economically to approximately 13 percent of all Oregon sales and 11 percent of the state's economy (Sorte & Rahe, 2015). Oregon agriculture has created 326,617 full and part time jobs or 14 percent of all employment in Oregon (Sorte & Rahe, 2015). Over 98 percent of Oregon's farm sales are generated by farms generating more than $10,000 in annual gross sales (USDA, 2012). These farms comprise 37 percent of all Oregon farms and make up 89 percent of the state's agricultural land base (USDA, 2012).

**Crops and Livestock**

Oregon is one of the most agriculturally diverse states in the nation, boasting the production of more than 225 different types of crops and livestock, and leading the nation in the production of 12 crops (ODA, 2017, 2018). Oregon agriculture continues to diversify as crop types and farming practices change. Increases in the production of hazelnuts, hemp, and marijuana are changing the agricultural landscape as are trends toward implementing organic and sustainable farm practices.

There is growing interest in purchasing locally grown food. Farm income from the direct sales of local food increased by 106 percent from 2002 to 2012 (USDA, 2002, 2012). Farmers markets, community supported agriculture, u-picks, and agritourism provide opportunities for farmers to market their products to local consumers. Locally grown food presents opportunities to combat hunger and nutrition issues in Oregon communities. The Oregon Community Food Systems Network has prepared a series of county food system assessments highlighting local needs (OCFSN, 2018).

House Bill 3400 (2015) designated marijuana as a crop for the purposes of "farm use," effectively granting marijuana production the same protections provided to other crops grown in an EFU zone. Unlike other crops, counties are allowed to adopt reasonable regulations regarding the time, place, and manner of marijuana production. Regulations vary from county to county but typically include odor and light control with a few counties limiting the size of marijuana grows. The comparatively high value of marijuana crops to other farm products has resulted in conversion of existing farmland to marijuana cultivation and has led to the establishment of marijuana grow sites in forest or rural residential areas that traditionally have not been used for agricultural purposes.

**Farm Ownership**

Approximately 97 percent of Oregon's farms are family owned and operated (USDA, 2012). This may be changing. 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 (Horst, 2018). The average age of Oregon farmers is 60 years old which presents challenges in conveying land to the next generation of farmers and highlights the need for farm succession planning (USDA, 2012). Retirements over the next several decades will require the conveyance of over 10 million acres (64 percent) of Oregon's agricultural land (Brekken et al, 2016).

## Agricultural Land Use Policy

Oregon's agricultural lands protection program is based on statute and administrative rules as interpreted by the Land Use Board of Appeals (LUBA) and the courts. Statewide Planning Goal 3, "Agricultural Lands," requires identification of agricultural land, use of statutory EFU zones (ORS Chapter 215), and review of farm and non-farm uses according to statute and administrative rule (OAR chapter 660, division 33) provisions. These provisions also incorporate statutory minimum lot sizes and standards for all land divisions.

Oregon's "Agricultural Land Use Policy" was first established by the Oregon Legislature in 1973 and is codified at ORS 215.243. There are four basic elements to this policy:

1. Agricultural land is a vital, natural and economic asset for all the people of this state;
2. Preservation of a maximum amount of agricultural land in large blocks, is necessary to maintain the agricultural economy of the state;
3. Expansion of urban development in rural areas is a public concern because of conflicts between farm and urban activities;
4. Incentives and privileges are justified to owners of land in EFU zones because such zoning substantially limits alternatives to the use of rural lands.

In 1993, the Oregon Legislature added two more important elements to this policy (ORS 215.700):

1. Provide certain owners of less productive land an opportunity to build a dwelling on their land; and
2. Limit the future division of and the siting of dwellings on the state's more productive resource land.

Goal 3 reinforces these policies as follows:

> *"Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and the state's agricultural land use policy expressed in ORS 215.243 and 215.700."*

These policy statements clearly set forth the state's interest in the preservation of agricultural lands and the means for their protection (EFU zoning), and establish that incentives and privileges (e.g. tax deferrals) are justified because of limitations placed upon the use of the land.

## Exclusive Farm Use Zones

In Oregon, agricultural lands are protected from conversion to rural or urban uses and other conflicting non-farm uses through the application of EFU zones. At present, about 16.1 million acres in Oregon are in EFU zones. The EFU zone was developed by the Legislature in 1961 along with the farm tax assessment program. Farm use is encouraged and protected within the EFU zone. A variety of nonfarm uses are also allowed provided they are compatible with agriculture. Large minimum lot sizes and dwelling approval standards limit the conversion of farmland to other uses.

# Land Use Approvals on Agricultural Land

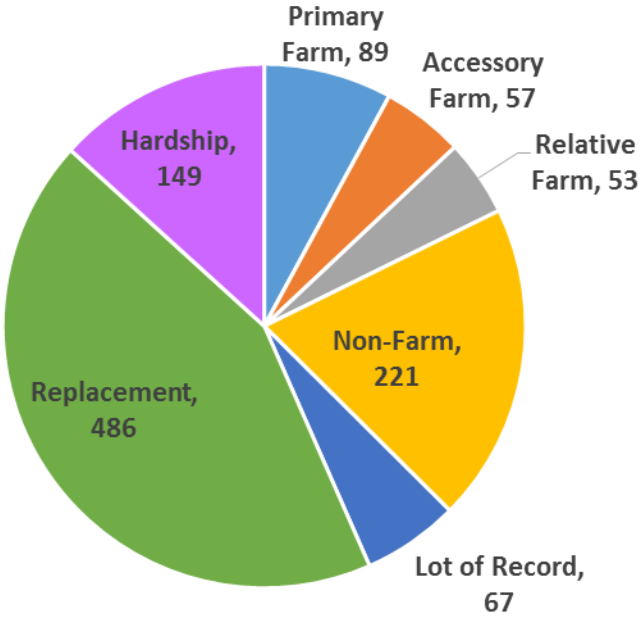
The data in this report are for all local land use decisions on farmland, whether in EFU or mixed farm-forest zones.

## Dwellings

In EFU zones and agricultural portions of mixed farm-forest zones, dwellings are allowed in seven different circumstances: primary farm dwellings, accessory farm dwellings, relative farm help dwellings, nonfarm dwellings, lot of record dwellings, replacement dwellings, and temporary hardship dwellings. Counties approved 557 dwellings on farmland in 2016 and 565 dwellings in 2017 (see Table 1). For comparison, 473 and 522 dwellings were approved in 2014 and 2015.

As shown in Figure 1 and Table 1, 43 percent of the dwelling approvals in the two year period were for replacement dwellings, 20 percent were for nonfarm dwellings, 13 percent were for temporary hardship dwellings, eight percent were for farm dwellings, six percent for lot of record dwellings, and five percent each for accessory farmworker dwellings and relative farm help dwellings.

**Figure 1. Types of dwelling approvals on Farmland, 2016-2017**




**Primary Farm Dwellings**

There are four ways in which primary farm dwellings may be approved. On high-value farmland, the farm operator must have earned $80,000 from the sale of farm products in the last two years or three of the last five years. Farm dwellings on non-high-value farmland must either meet a $40,000 income standard, be located on a parcel of 160 acres, or meet a potential gross farm sales (capability) test. This latter test involves prior approval by DLCD.

The total number of primary farm dwelling approvals statewide was 40 in 2016 and 49 in 2017 for a total of 89 dwelling approvals. This is a slight decrease from 2014-2015 when 96 primary farm dwellings were approved. Table 2 shows what option was used to approve primary farm dwellings. Fifty-one percent of the 2016-2017 approvals were based on the parcel size test, 38 percent were based on the high-value income test, nine percent on the non-high-value income test, and two percent using the capability test. Fifty primary farm dwellings were approved in eastern Oregon with 39 approvals in western Oregon, primarily occurring in the Willamette Valley. Total statewide approvals of primary farm dwellings have remained relatively stable since the decline in approvals from 2006–2010 (see Figure 2).

As shown in Table 3, 66 percent of all farm dwelling approvals were on parcels of 80 acres or more and 55 percent were on parcels of 160 acres or more. In some instances, primary farm dwellings have been approved on parcels smaller than 20 acres based on income from high-value farm operations such as nurseries and orchards.

**Accessory farm dwellings**

Accessory farm dwellings must be sited on a farm operation that earns the same gross income required for a primary farm dwelling ($80,000 or $40,000). These approvals occasionally involve more than one dwelling unit. Counties approved 26 accessory farm dwellings in 2016 and 31 in 2017 for a total of 57 dwelling approvals. A total of 231 housing units were approved in the 57 dwellings. Two-thirds of the units approved were related to a large cherry operation in Wasco County.

Accessory farm dwelling approvals increased from 2014-2015 when 47 accessory farm dwellings were approved. Over 60 percent of the 2016-2017 approvals were on parcels of 80 acres or more.

**Relative farm help dwellings**

The number of dwellings approved for relatives whose assistance is needed on the farm was 24 in 2016 and 29 in 2017 for a total of 53 dwelling approvals. This is a slight decrease from 2014-2015 when 66 dwellings were approved. A concern with this dwelling type is that, once built, there is no requirement that it continue to be occupied by a relative or even that it will continue to be used in conjunction with farm use.

**Table 1. Dwelling approvals on Farmland, type and county, 2016–2017**

| County | Primary Farm | | Accessory Farm | | Relative Farm | | Non-Farm | | Lot of Record | | Replace-ment | | Temporary Hardship | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| Baker | 1 | 2 | | | 1 | 1 | | 1 | 4 | 4 | 7 | 3 | 2 | | **15** | **11** |
| Benton | 1 | | | 1 | 2 | | | | | | 2 | 1 | 1 | 2 | **6** | **4** |
| Clackamas | 5 | 2 | 1 | 1 | 1 | 1 | | | 1 | 1 | | | 18 | 18 | **26** | **23** |
| Clatsop | | | | | | | | 1 | | | 6 | | | | **6** | **1** |
| Columbia | | | | | | | | | | | | | | | **0** | **0** |
| Coos | | 1 | | | 1 | | | | | | 1 | 1 | | | **2** | **2** |
| Crook | 6 | 5 | | 5 | | 1 | 6 | 10 | | 2 | 4 | 12 | | 2 | **16** | **37** |
| Curry | | | | | | 1 | | | | | | | | | **0** | **1** |
| Deschutes | | | | 2 | 1 | | 19 | 17 | 1 | | 20 | 22 | 7 | 5 | **48** | **46** |
| Douglas | 1 | 2 | | | 2 | 9 | 5 | 18 | 4 | 2 | 22 | 25 | 1 | 5 | **35** | **61** |
| Gilliam | | 1 | | | | | | 1 | | | 1 | 1 | | | **1** | **3** |
| Grant | | | 1 | | | 1 | 1 | 1 | 4 | | 6 | 3 | | | **12** | **5** |
| Harney | 4 | 4 | 1 | | 1 | | 2 | 2 | | | 8 | 1 | | | **16** | **7** |
| Hood River | | 5 | 5 | 6 | | 1 | 2 | | | 1 | 14 | 12 | 1 | 1 | **22** | **26** |
| Jackson | 1 | | | 1 | 1 | 1 | 11 | 3 | 9 | 4 | 1 | 2 | 2 | 2 | **25** | **13** |
| Jefferson | 2 | 2 | 1 | | 1 | 1 | | 1 | 1 | 4 | 3 | 6 | 3 | | **11** | **14** |
| Josephine | | | 2 | 1 | | 1 | | | 1 | | | | | 1 | **3** | **3** |
| Klamath | 1 | | | 1 | | | 4 | 9 | 3 | | | | | | **8** | **10** |
| Lake | | 4 | 1 | 1 | | 1 | 21 | 17 | 2 | 1 | 6 | 8 | | | **30** | **32** |
| Lane | | 2 | | | 3 | 2 | 7 | 4 | | | 2 | 13 | 4 | 1 | **16** | **22** |
| Lincoln | | | | | | | | | | 1 | | | | | **0** | **1** |
| Linn | 2 | 3 | | 1 | | 5 | 4 | | | | 24 | 22 | 7 | 13 | **37** | **44** |
| Malheur | 1 | 1 | | | | 1 | 2 | 3 | | | 1 | 13 | | 3 | **4** | **21** |
| Marion | 2 | 2 | 4 | 2 | 1 | | | 1 | | 2 | 15 | 9 | 5 | 4 | **27** | **20** |
| Morrow | 1 | | 2 | 1 | | | 3 | 2 | | | 2 | 4 | | | **8** | **7** |
| Multnomah | | | | | 1 | | | 1 | | | 1 | | | 1 | **2** | **2** |
| Polk | 2 | | | 1 | 1 | 1 | | | | 3 | 13 | 12 | 2 | 5 | **18** | **22** |
| Sherman | | | | | | | 3 | 5 | | | | | | | **3** | **5** |
| Tillamook | | | | | | 1 | | | | | 1 | 5 | | 1 | **1** | **7** |
| Umatilla | 2 | 1 | 3 | | 2 | | 10 | 2 | 3 | | 11 | 5 | 1 | 1 | **32** | **9** |
| Union | 1 | 2 | | 3 | | | | 1 | | | 7 | 8 | 1 | | **9** | **14** |
| Wallowa | 3 | 3 | | 2 | 1 | | | | 3 | 1 | 2 | 3 | 1 | | **10** | **9** |
| Wasco | 1 | | 2 | | 1 | | 2 | 4 | | 2 | 1 | 1 | | | **7** | **7** |
| Washington | 1 | 1 | | | 2 | | 10 | 5 | 3 | | 32 | 17 | 1 | 9 | **49** | **32** |
| Wheeler | | 2 | | | | | | | | | 2 | 2 | | | **2** | **4** |
| Yamhill | 2 | 4 | 3 | 2 | 1 | | | | | | 37 | 23 | 7 | 11 | **50** | **40** |
| **Total** | **40** | **49** | **26** | **31** | **24** | **29** | **112** | **109** | **39** | **28** | **252** | **234** | **64** | **85** | **557** | **565** |

**Table 2. Primary farm dwelling approvals, option and county, 2016-2017**

| County | HV Income | | Non-HV Income | | Non-HV Size | | Non-HV Capability | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| Baker | | | 1 | | | 2 | | | **1** | **2** |
| Benton | 1 | | | | | | | | **1** | **0** |
| Clackamas | 5 | 2 | | | | | | | **5** | **2** |
| Clatsop | | | | | | | | | **0** | **0** |
| Columbia | | | | | | | | | **0** | **0** |
| Coos | | | | | | 1 | | | **0** | **1** |
| Crook | | | | 1 | 6 | 4 | | | **6** | **5** |
| Curry | | | | | | | | | **0** | **0** |
| Deschutes | | | | | | | | | **0** | **0** |
| Douglas | | | | | | 2 | 1 | | **1** | **2** |
| Gilliam | | | | | | 1 | | | **0** | **1** |
| Grant | | | | | | | | | **0** | **0** |
| Harney | | | | | 4 | 4 | | | **4** | **4** |
| Hood River | | 5 | | | | | | | **0** | **5** |
| Jackson | | | | | | | 1 | | **1** | **0** |
| Jefferson | | | | 1 | 2 | 1 | | | **2** | **2** |
| Josephine | | | | | | | | | **0** | **0** |
| Klamath | | | | | 1 | | | | **1** | **0** |
| Lake | | | | | | 4 | | | **0** | **4** |
| Lane | | 1 | | | | 1 | | | **0** | **2** |
| Lincoln | | | | | | | | | **0** | **0** |
| Linn | 2 | 3 | | | | | | | **2** | **3** |
| Malheur | | | | | 1 | 1 | | | **1** | **1** |
| Marion | 2 | 2 | | | | | | | **2** | **2** |
| Morrow | | | | | 1 | | | | **1** | **0** |
| Multnomah | | | | | | | | | **0** | **0** |
| Polk | 2 | | | | | | | | **2** | **0** |
| Sherman | | | | | | | | | **0** | **0** |
| Tillamook | | | | | | | | | **0** | **0** |
| Umatilla | 2 | | | | | 1 | | | **2** | **1** |
| Union | 1 | 1 | | | | 1 | | | **1** | **2** |
| Wallowa | | | | | 3 | 3 | | | **3** | **3** |
| Wasco | | | | | 1 | | | | **1** | **0** |
| Washington | 1 | 1 | | | | | | | **1** | **1** |
| Wheeler | | | | 2 | | | | | **0** | **2** |
| Yamhill | 2 | 1 | | 3 | | | | | **2** | **4** |
| **Total** | **18** | **16** | **1** | **7** | **19** | **26** | **2** | **0** | **40** | **49** |

**Table 3. Primary farm dwelling approvals on Farmland, parcel size and county, 2016-2017**

| County | 0 to 10 acres | | 11 to 20 acres | | 21 to 40 acres | | 41 to 79 acres | | 80 to 159 acres | | 160+ acres | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| Baker | | | | | | | | | | 1 | 1 | 1 | **1** | **2** |
| Benton | | | | | | | 1 | | | | | | **1** | **0** |
| Clackamas | 1 | | | 1 | 2 | 1 | | | 2 | | | | **5** | **2** |
| Clatsop | | | | | | | | | | | | | **0** | **0** |
| Columbia | | | | | | | | | | | | | **0** | **0** |
| Coos | | | | | | | | | | | | 1 | **0** | **1** |
| Crook | | | | | | | | | | 2 | 6 | 3 | **6** | **5** |
| Curry | | | | | | | | | | | | | **0** | **0** |
| Deschutes | | | | | | | | | | | | | **0** | **0** |
| Douglas | | | | | | | | | 1 | | | 2 | **1** | **2** |
| Gilliam | | | | | | | | | | | | 1 | **0** | **1** |
| Grant | | | | | | | | | | | | | **0** | **0** |
| Harney | | | | | | | | | | | 4 | 4 | **4** | **4** |
| Hood River | | | | | | 4 | | 1 | | | | | **0** | **5** |
| Jackson | | | | | | | 1 | | | | | | **1** | **0** |
| Jefferson | | | | | | | | 1 | | | 2 | 1 | **2** | **2** |
| Josephine | | | | | | | | | | | | | **0** | **0** |
| Klamath | | | | | | | | | | | 1 | | **1** | **0** |
| Lake | | | | | | | | | | | | 4 | **0** | **4** |
| Lane | | | | | | | | 2 | | | | | **0** | **2** |
| Lincoln | | | | | | | | | | | | | **0** | **0** |
| Linn | | | | | | 1 | | 1 | 1 | | 1 | 1 | **2** | **3** |
| Malheur | | | | | | | | | 1 | 1 | | | **1** | **1** |
| Marion | | | | 1 | | | 2 | | | 1 | | | **2** | **2** |
| Morrow | | | | | | | | | | | 1 | | **1** | **0** |
| Multnomah | | | | | | | | | | | | | **0** | **0** |
| Polk | | | | | 2 | | | | | | | | **2** | **0** |
| Sherman | | | | | | | | | | | | | **0** | **0** |
| Tillamook | | | | | | | | | | | | | **0** | **0** |
| Umatilla | | | | | | | | | | | 2 | 1 | **2** | **1** |
| Union | | | | | | | | | | | 1 | 2 | **1** | **2** |
| Wallowa | | | | | | | | | | | 3 | 3 | **3** | **3** |
| Wasco | | | | | | | | | | | 1 | | **1** | **0** |
| Washington | | 1 | | | 1 | | | | | | | | **1** | **1** |
| Wheeler | | | | | | | | | | | | 2 | **0** | **2** |
| Yamhill | | | 1 | | | 2 | 1 | 2 | | | | | **2** | **4** |
| **Total** | **1** | **1** | **1** | **2** | **5** | **8** | **5** | **7** | **5** | **5** | **23** | **26** | **40** | **49** |

**Nonfarm dwellings**
Nonfarm dwellings may be approved on parcels or portions of parcels that are unsuitable for farm use. There were 112 non-farm dwelling approvals in 2016 and 109 in 2017 for a total of 221 dwelling approvals. This is a significant increase from 2014-2015 when 150 nonfarm dwellings were approved.

Seventy-two percent of nonfarm dwellings were approved east of the Cascades. This distribution continues the trend begun in 1993 by House Bill 661 that shifted the number of non-farm dwelling approvals away from the Willamette Valley to eastern and southern Oregon. Counties with the most nonfarm dwelling approvals include Lake (38 dwellings), Deschutes (36 dwellings), and Douglas (23).

As shown in Figure 2, nonfarm dwelling approvals have been on the rise since 2015. The increase follows a sharp decline from 2007-2014. The 112 nonfarm dwelling approvals in 2016 were the most since 2009, when 111 nonfarm dwellings were approved.

Table 4 shows the size of parcels on which nonfarm dwellings were approved. Nearly half of all nonfarm dwellings were approved on parcels containing less than five acres and 71 percent were on parcels less than 10 acres. Sixty-four new parcels were created for nonfarm dwellings in 2016-2017. Nonfarm dwellings on larger parcels are often approved if a portion of the parcel is found to be unsuitable for farm use (e.g. shallow soil depth to bedrock).

In 2010, the Legislature passed House Bill 3647 which required DLCD review of soil assessments prepared by a private soil consultant. Soil assessments prepared by private consultants may be used to provide more detailed information than is shown on the USDA Natural Resources Conservation Service's soil mapping. Private soil assessments can be used to support nonfarm dwelling approval. In 2016-2017, DLCD reviewed 30 soil assessments related to nonfarm dwellings. Eighteen of those reviews were involved parcels in Douglas County.

Table 4 shows 15 nonfarm dwelling approvals in Washington County and 11 approvals in Lane County. Lane and Washington counties are subject to slightly different land use regulations than the rest of the state as they adopted marginal land provisions prior to 1991. Most of the nonfarm dwellings in Lane and Washington were approved using options only available in those counties.

**Lot of record dwellings**
Lot of record dwellings may be approved on parcels that have been in the same ownership since 1985 and, with some exceptions, are not on high-value farmland. In 2016-2017, 67 lot of record dwellings were approved (39 approvals in 2016 and 28 approvals in 2017). This is an increase from 2014-2015 when 49 lot of record dwellings were approved. Jackson County had the most approvals with 13. Only two lot of record dwellings were approved on high-value farmland statewide. Despite the increase in 2016-2017, it is anticipated that lot of record approvals will decline over time as existing parcels are built out or conveyed to separate ownership.

**Temporary hardship dwellings**
These dwellings are permitted for relatives with a medical hardship and must be removed at the end of the hardship. A temporary hardship dwelling must be sited in conjunction with an existing dwelling. DLCD does not track the removal of these dwellings when they are no longer needed.

In 2016-2017, 149 temporary hardship dwellings were approved (64 approvals in 2016 and 85 approvals in 2017). This is a sharp increase from 2014-2015 when 111 hardship dwellings were approved. The 85 temporary hardship dwelling approved in 2017 were the most since 89 hardship dwellings were approved in 2005. Clackamas County (36 approvals) had the most approvals in 2016-2017.

**Replacement dwellings**
A replacement dwelling is a new home that replaces an older dwelling on a parcel. New provisions were added to statute in 2013 which allow owners to obtain a replacement dwelling when the original dwelling no longer exists.

There were 252 replacement dwellings approvals in 2016 and 234 in 2017 for a total of 486 dwelling approvals. This is similar to 2012-2013 when 476 replacement dwellings were approved. Yamhill County had the most approvals in 2016-2017 with 60 approvals followed by Washington (49), Douglas (47), Linn (46), and Deschutes (42) counties.

Established dwellings that are replaced must be removed, demolished or converted to another allowed use within one year of completion of the replacement dwelling. Forty-eight percent of dwellings approved for replacement were removed, 31 percent were demolished, and nine percent were converted to non-residential use with 12 percent not specified.

**Cumulative Dwelling Approvals**
Between 1994 and 2017, nearly 18,000 dwellings of all types were approved on farmland across the state. Figures 2 and 3 below illustrate the number of dwelling unit approvals for each year since 1994 for the different dwelling types. The total dwellings approved over this timeframe are provided in Table 5. Thirty-six percent of all dwelling approvals were replacement dwellings, 24 percent were nonfarm dwellings, and 11 percent were temporary hardship dwellings. The three types of farm dwellings (primary, accessory, and relative) combined constitute 20 percent of all dwelling approvals on farmland from 1994-2017. Douglas County had the most dwelling approvals over this timeframe with 2,286 approvals, fifty percent of which were replacement dwellings. Deschutes County had the most nonfarm dwelling approvals with 830 approvals. Crook County approved 149 primary farm dwellings, the most in the state from 1994-2017.

The map in Figure 4 shows dwellings approvals on farmland from 2008-2017. More detailed mapping of land use approvals on farmland in the northern Willamette Valley is available through a Portland State University thesis available through Metroscape (Chun, 2017). The thesis maps land use approvals submitted to DLCD by tax parcel and identifies areas with higher numbers of approvals.

**Table 4. Nonfarm dwelling approvals on Farmland, parcel size and county, 2016-2017**

| County | 0 to 10 acres | | 11 to 20 acres | | 21 to 40 acres | | 41 to 79 acres | | 80+ acres | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| Baker | | | | | | 1 | | | | | **0** | **1** |
| Benton | | | | | | | | | | | **0** | **0** |
| Clackamas | | | | | | | | | | | **0** | **0** |
| Clatsop | | 1 | | | | | | | | | **0** | **1** |
| Columbia | | | | | | | | | | | **0** | **0** |
| Coos | | | | | | | | | | | **0** | **0** |
| Crook | | | 2 | 1 | 2 | 5 | | 2 | 2 | 2 | **6** | **10** |
| Curry | | | | | | | | | | | **0** | **0** |
| Deschutes | 6 | 5 | 7 | 6 | 5 | 5 | | | 1 | 1 | **19** | **17** |
| Douglas | 3 | 16 | 1 | 2 | | | | | 1 | | **5** | **18** |
| Gilliam | | | | 1 | | | | | | | **0** | **1** |
| Grant | 1 | 1 | | | | | | | | | **1** | **1** |
| Harney | | | | 1 | 1 | 1 | | | 1 | | **2** | **2** |
| Hood River | 1 | | 1 | | | | | | | | **2** | **0** |
| Jackson | 8 | 1 | 1 | | 2 | 1 | | | | 1 | **11** | **3** |
| Jefferson | | | | | | 1 | | | | | **0** | **1** |
| Josephine | | | | | | | | | | | **0** | **0** |
| Klamath | 2 | 1 | 1 | | | 3 | | | 1 | 5 | **4** | **9** |
| Lake | 10 | 9 | 8 | 5 | 1 | 1 | 2 | 2 | | | **21** | **17** |
| Lane | 1 | 1 | 4 | 1 | | 1 | 1 | 1 | 1 | | **7** | **4** |
| Lincoln | | | | | | | | | | | **0** | **0** |
| Linn | 1 | | | | 3 | | | | | | **4** | **0** |
| Malheur | 1 | 3 | | | 1 | | | | | | **2** | **3** |
| Marion | | | | 1 | | | | | | | **0** | **1** |
| Morrow | 1 | 2 | 2 | | | | | | | | **3** | **2** |
| Multnomah | | | | 1 | | | | | | | **0** | **1** |
| Polk | | | | | | | | | | | **0** | **0** |
| Sherman | 2 | 5 | 1 | | | | | | | | **3** | **5** |
| Tillamook | | | | | | | | | | | **0** | **0** |
| Umatilla | 8 | 1 | | 1 | | | | | 2 | | **10** | **2** |
| Union | | | | 1 | | | | | | | **0** | **1** |
| Wallowa | | | | | | | | | | | **0** | **0** |
| Wasco | 1 | 1 | 1 | 2 | | | | | | 1 | **2** | **4** |
| Washington | 4 | 1 | 3 | 4 | 3 | | | | | | **10** | **5** |
| Wheeler | | | | | | | | | | | **0** | **0** |
| Yamhill | | | | | | | | | | | **0** | **0** |
| **Total** | **50** | **48** | **32** | **27** | **18** | **19** | **3** | **5** | **9** | **10** | **112** | **109** |

**Figure 2. Dwelling approvals on Farmland, type and year, all counties, 1994-2017**

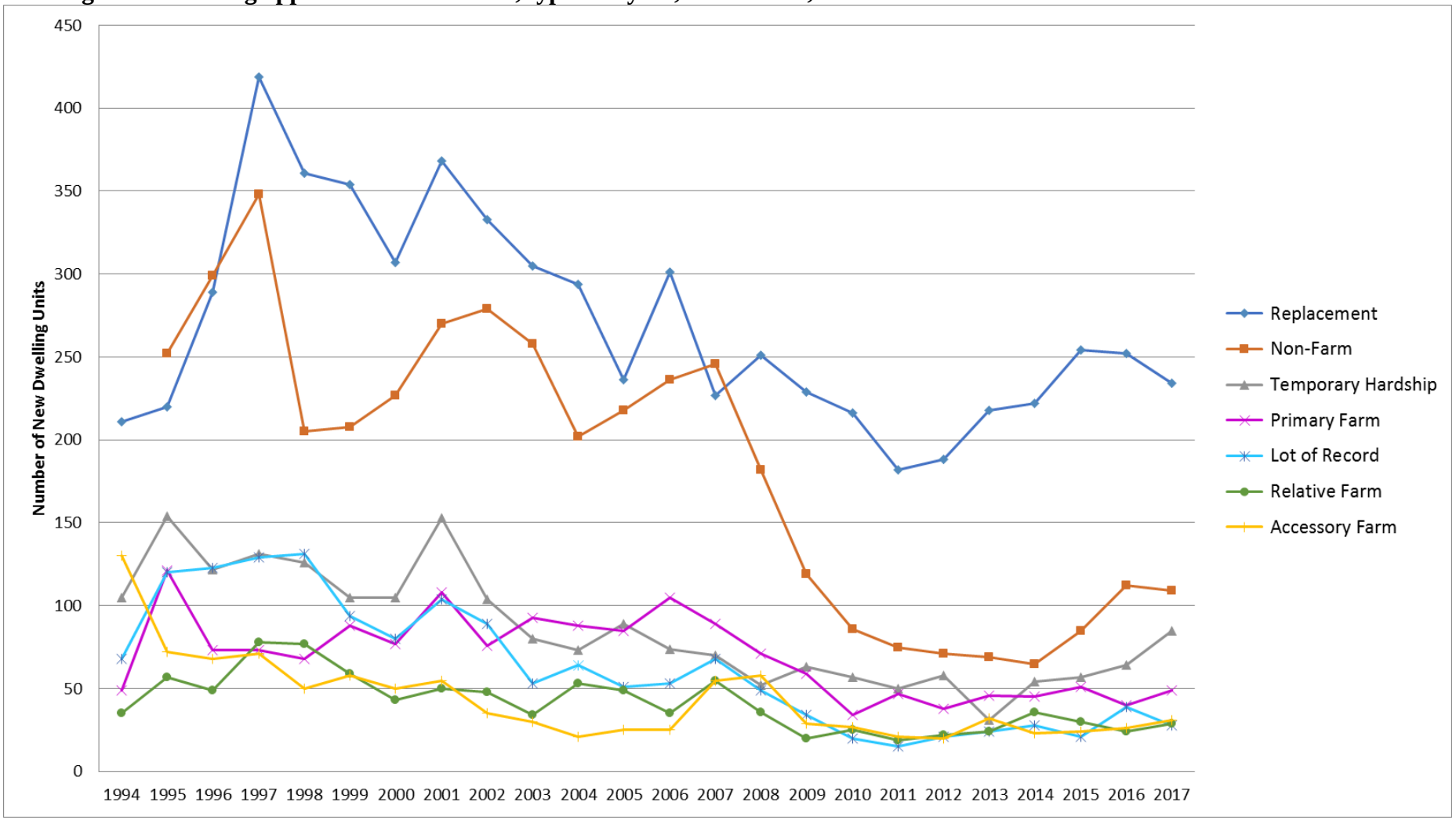


**Figure 3. Total dwelling approvals on Farmland, all counties, 1994-2017**

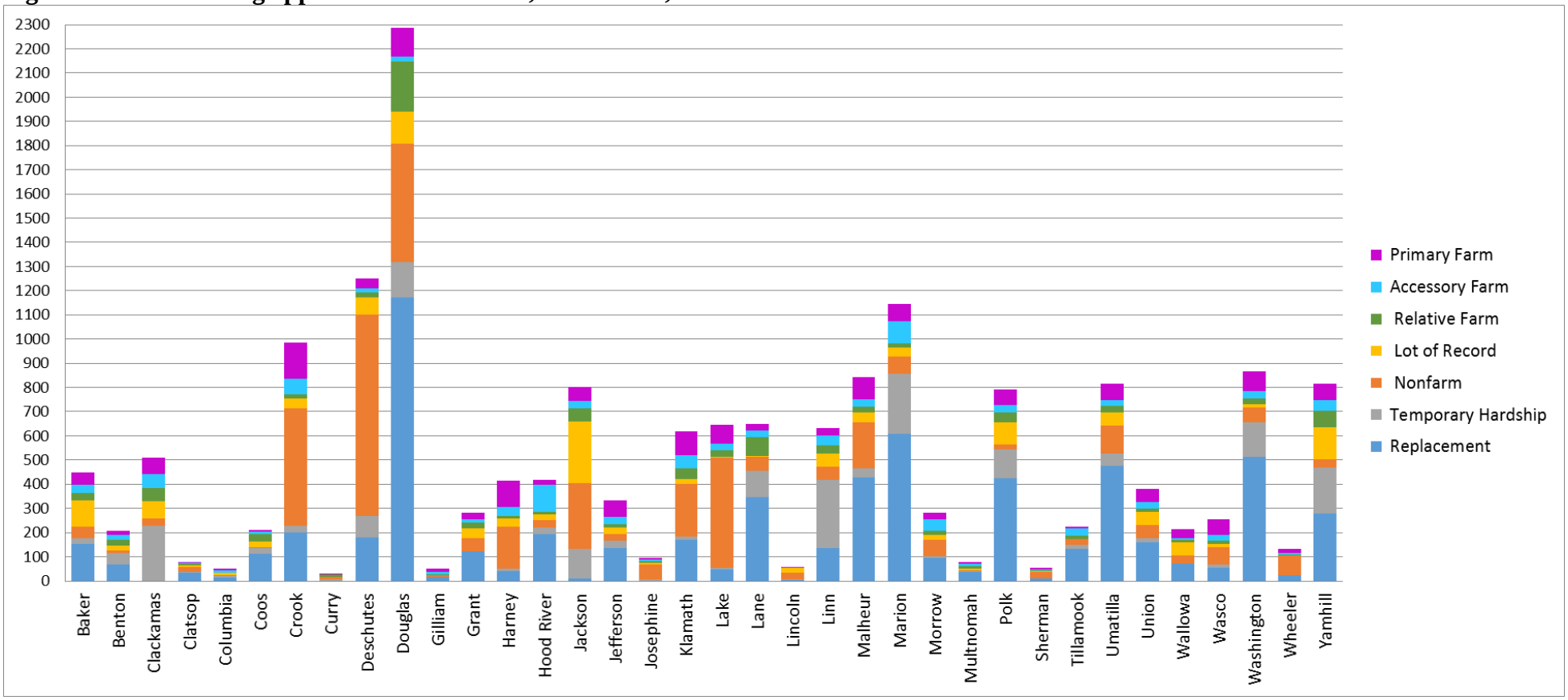
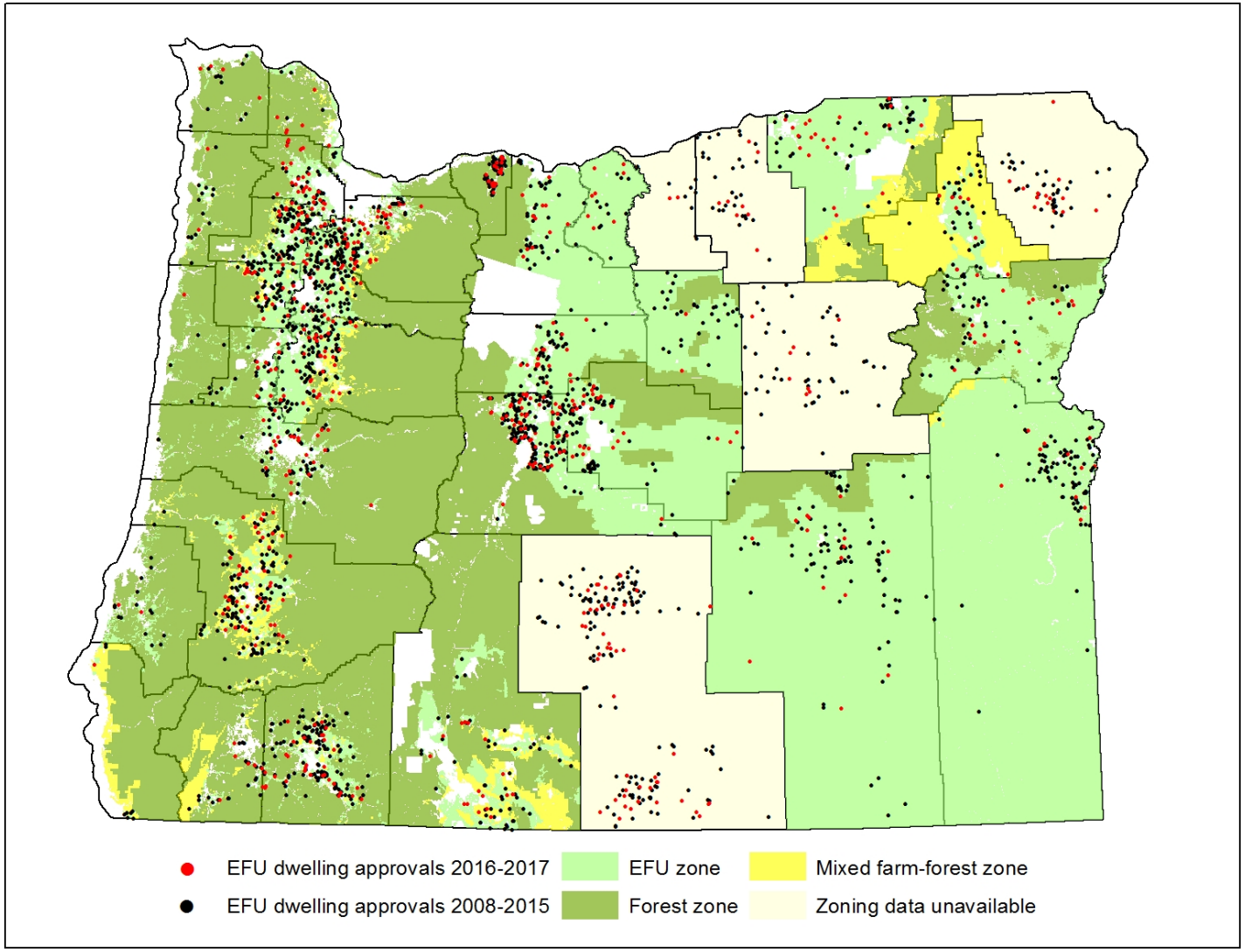


**Table 5: Dwellings approvals on Farmland, by county, 1994-2017**

| County | Primary Farm | Accessory Farm | Relative Farm | Nonfarm | Lot of Record | Replacement | Temporary Hardship | Total |
|---|---|---|---|---|---|---|---|---|
| Baker | 52 | 33 | 32 | 48 | 107 | 153 | 24 | **449** |
| Benton | 16 | 23 | 22 | 11 | 21 | 68 | 47 | **208** |
| Clackamas | 68 | 59 | 55 | 29 | 72 | 1 | 227 | **511** |
| Clatsop | 4 | 4 | 5 | 21 | 7 | 35 | 2 | **78** |
| Columbia | 8 | 8 | 1 | 6 | 9 | 14 | 5 | **51** |
| Coos | 9 | 9 | 30 | 4 | 25 | 111 | 24 | **212** |
| Crook | 149 | 65 | 14 | 483 | 44 | 201 | 28 | **984** |
| Curry | 5 | 1 | 8 | 11 | 1 | 0 | 6 | **32** |
| Deschutes | 44 | 17 | 19 | 830 | 72 | 181 | 89 | **1,252** |
| Douglas | 117 | 21 | 209 | 488 | 132 | 1,171 | 148 | **2,286** |
| Gilliam | 11 | 11 | 4 | 6 | 1 | 16 | 1 | **50** |
| Grant | 26 | 15 | 22 | 55 | 40 | 121 | 2 | **281** |
| Harney | 110 | 37 | 12 | 174 | 33 | 40 | 10 | **416** |
| Hood River | 22 | 111 | 11 | 30 | 25 | 194 | 26 | **419** |
| Jackson | 57 | 31 | 54 | 272 | 255 | 11 | 122 | **802** |
| Jefferson | 68 | 31 | 11 | 27 | 28 | 135 | 32 | **332** |
| Josephine | 7 | 7 | 5 | 60 | 9 | 1 | 6 | **95** |
| Klamath | 98 | 55 | 42 | 216 | 23 | 171 | 13 | **618** |
| Lake | 78 | 28 | 26 | 456 | 3 | 48 | 7 | **646** |
| Lane | 26 | 28 | 76 | 58 | 5 | 348 | 107 | **648** |
| Lincoln | 2 | 0 | 0 | 25 | 21 | 3 | 5 | **56** |
| Linn | 29 | 40 | 34 | 55 | 54 | 136 | 283 | **631** |
| Malheur | 89 | 32 | 25 | 190 | 39 | 429 | 37 | **841** |
| Marion | 74 | 89 | 19 | 74 | 35 | 607 | 248 | **1,146** |
| Morrow | 28 | 46 | 17 | 68 | 22 | 94 | 8 | **283** |
| Multnomah | 7 | 9 | 11 | 3 | 5 | 39 | 3 | **77** |
| Polk | 65 | 32 | 39 | 22 | 92 | 425 | 118 | **793** |
| Sherman | 9 | 2 | 3 | 29 | 3 | 9 | | **55** |
| Tillamook | 7 | 30 | 15 | 23 | 1 | 131 | 18 | **225** |
| Umatilla | 67 | 23 | 29 | 114 | 55 | 476 | 51 | **815** |
| Union | 56 | 25 | 16 | 55 | 52 | 161 | 16 | **381** |
| Wallowa | 37 | 8 | 11 | 32 | 55 | 70 | 2 | **215** |
| Wasco | 66 | 24 | 14 | 69 | 14 | 53 | 16 | **256** |
| Washington | 82 | 28 | 27 | 63 | 11 | 514 | 141 | **866** |
| Wheeler | 15 | 8 | 2 | 79 | 3 | 24 | 1 | **132** |
| Yamhill | 65 | 46 | 67 | 35 | 132 | 280 | 189 | **814** |
| **Total** | **1,673** | **1,036** | **987** | **4,221** | **1,506** | **6,471** | **2,062** | **17,956** |

**Figure 4. Map of new dwellings approvals on Farmland, 2008-2017**



## Nonresidential uses

The Legislature has recognized that some farm-related and non-farm uses are appropriate in EFU and mixed farm-forest zones. Some examples are farm-related commercial activities, utilities necessary for public service and home occupations. In 1963, the first statutory EFU zone included just six nonfarm uses. Today over 60 uses other than farm use are allowed in an EFU zone.

Nonfarm uses are subject to local land use approval and must demonstrate that they will not force a significant change in or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest uses (ORS 215.296). Allowing some nonfarm uses and dwellings assumes that farm zones can accommodate a nonfarm use or dwelling without affecting an area's overall agricultural stability. Small lots with such nonfarm uses and dwellings do not qualify for farm use tax assessment.

As shown in Table 6, the most commonly approved nonresidential uses in 2016-2017 were solar power generation facilities (57 approvals), home occupations (55 approvals), and farm processing facilities (54 approvals). Renewable energy and agritourism related uses are discussed further below. In 2014-2015, only nine farm processing facilities were approved statewide. The increase in 2016-2017 is largely related to marijuana processing facilities.

**Table 6. Nonresidential use approvals on Farmland, 2016-2017**

| Use | 2016 | 2017 | Total | Approvals by County |
|---|---|---|---|---|
| Aggregate processing into asphalt/cement | 3 | | **3** | Baker (1), Morrow (1), Umatilla (1) |
| Agritourism events | 12 | 4 | **16** | Clatsop (1), Deschutes (1), Hood River (1), Lane (1), Umatilla (2), Yamhill (10) |
| Aquatic species/insect propagation | | 1 | **1** | Klamath (1) |
| Church | 1 | 1 | **2** | Deschutes (2) |
| Commercial activities with farm use | 14 | 16 | **30** | Crook (1), Deschutes (1), Douglas (3), Grant (1), Hood River (1), Jackson (3), Jefferson (1), Linn (2), Marion (3), Polk (3), Tillamook (1), Umatilla (1), Union (1), Wasco (1), Washington (2), Yamhill (5) |
| Dog boarding kennel | 2 | 2 | **4** | Deschutes (1), Jefferson (1), Lane (1), Polk (1) |
| Communication facility | 9 | 9 | **18** | Baker (1), Deschutes (1), Douglas (1), Hood River (1), Jackson (2), Linn (1), Polk (2), Sherman (1), Umatilla (3), Wasco (1), Washington (3), Yamhill (1) |
| Community center | 1 | | **1** | Benton (1) |
| Dog training class/testing trial | 1 | | **1** | Deschutes (1) |
| Farm processing facility | 20 | 34 | **54** | Benton (2), Clackamas (2), Deschutes (4), Hood River (1), Jackson (13), Josephine (5), Lane (7), Linn (1), Polk (5), Umatilla (1), Wasco (2), Washington (3), Yamhill (8) |
| Farm stand | 3 | 1 | **4** | Crook (1), Douglas (1), Marion (1), Yamhill (1) |

**Table 6. Nonresidential use approvals on Farmland, 2016-2017**

| Use | 2016 | 2017 | Total | Approvals by County |
|---|---|---|---|---|
| Fire service facility | 1 | 1 | **2** | Deschutes (1), Union (1) |
| Golf course | 1 | | **1** | Linn (1) |
| Home occupation | 25 | 30 | **55** | Baker (1), Benton (5), Clackamas (1), Clatsop (1), Crook (3), Deschutes (3), Douglas (1), Hood River (5), Jackson (8), Jefferson (1), Lake (1), Lane (3), Marion (8), Morrow (1), Polk (2), Tillamook (1), Umatilla (1), Union (1), Wallowa (2), Wasco (1), Washington (2), Yamhill (3) |
| Land application of reclaimed water | 1 | | **1** | Umatilla (1) |
| Landscape contracting business | 1 | 2 | **3** | Jackson (2), Marion (1) |
| Log truck parking | 1 | | **1** | Marion (1) |
| Mineral and aggregate mining | 8 | 2 | **10** | Clatsop (1), Crook (1), Grant (1), Harney (1), Klamath (1), Tillamook (1), Umatilla (1), Union (1), Wallowa (1), Washington (1) |
| Outdoor gathering | 1 | 3 | **4** | Deschutes (1), Jackson (1), Washington (2) |
| Personal-use airport | 4 | 2 | **6** | Crook (2), Lake (1), Linn (1), Umatilla (1), Washington (1) |
| Private park/campground | 10 | 8 | **18** | Gilliam (1), Grant (1), Harney (2), Jackson (1), Jefferson (1), Klamath (1), Lake (6), Morrow (1), Umatilla (4) |
| Public park | 3 | 1 | **4** | Lincoln (1), Washington (2), Yamhill (1) |
| Roads improvements, conditional | 3 | | **3** | Benton (1), Umatilla (1), Yamhill (1) |
| Roads improvements, outright | 2 | 4 | **6** | Jackson (1), Umatilla (1), Washington (4) |
| School | 1 | 4 | **5** | Deschutes (1), Harney (1), Hood River (1), Marion (2) |
| Solar power generating facility | 20 | 37 | **57** | Baker (1), Clackamas (14), Crook (4), Deschutes (2), Harney (2), Klamath (7), Lake (4), Marion (15), Polk (1), Sherman (1), Yamhill (6) |
| Solid waste disposal site | 1 | | **1** | Lake (1) |
| Utility facility | 11 | 5 | **16** | Baker (1), Benton (1), Hood River (1), Jackson (1), Klamath (1), Lake (1), Lane (1), Linn (1), Umatilla (3), Washington (3), Wheeler (1), Yamhill (1) |
| Water extraction/bottling | 1 | | **1** | Lake (1) |
| Wetland creation/restoration | | 2 | **2** | Washington (2) |
| Wind power generating facility | 1 | 1 | **2** | Morrow (1), Umatilla (1) |
| Winery | 7 | 16 | **23** | Jackson (2), Josephine (1), Polk (4), Umatilla (1), Yamhill (15) |
| **Total** | **169** | **186** | **355** | |

**Agritourism**

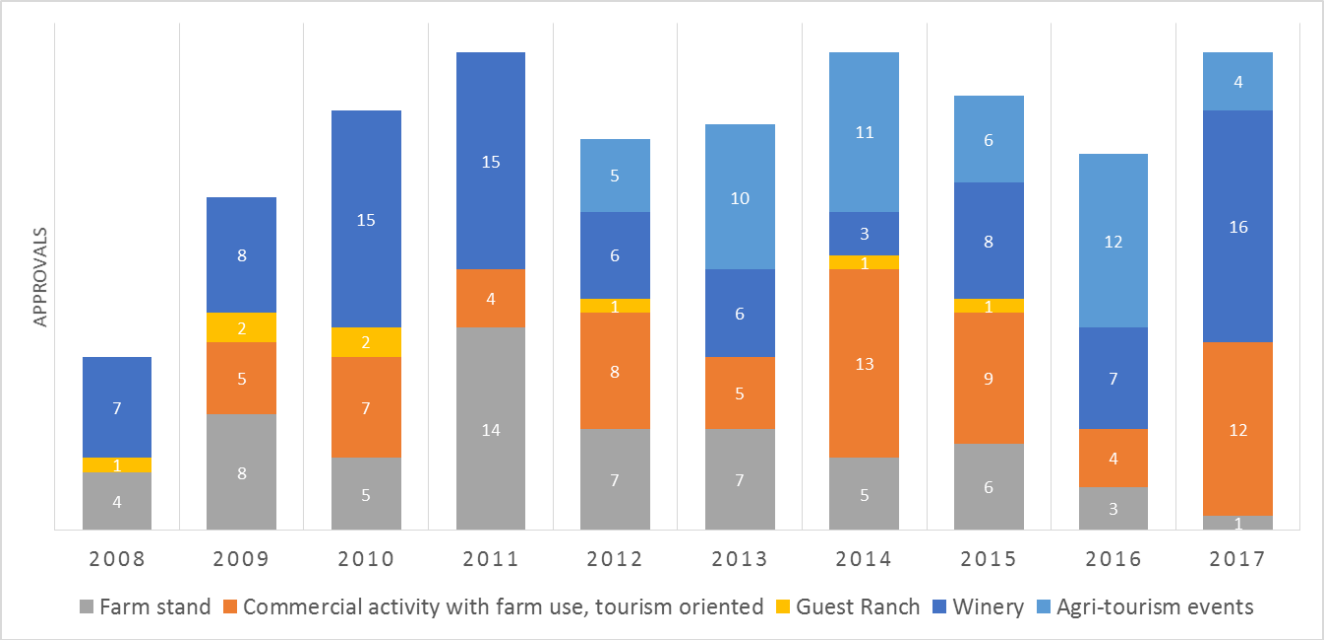
Agritourism can provide an alternate stream of income that helps farmers maintain agricultural operations and promotes awareness of locally produced food. A variety of agritourism options are allowed in EFU zones, including: u-picks, farm stands, wineries, cider businesses, guest ranches, and events that are supportive of local agriculture.

Oregon has experienced substantial growth in its wine grape industry over the last 50 years. As of 2017, Oregon has 1,144 vineyards and 769 wineries (University of Oregon, 2018). Many vineyards are sited on lands that appear to be less capable for agriculture based on Natural Resources Conservation Service (NRCS) ratings but are well suited for growing grapes. These lands were protected for agricultural use under Statewide Planning Goal 3 and are major contributors to Oregon's agricultural economy. Wineries are permitted to hold winery related events, have cooking facilities, and conduct other commercial events not related to agriculture such as weddings and concerts. In 2016, the Legislature added cider businesses as a use allowed in an EFU zone with many of the same permissions and requirements as wineries.

Agritourism also presents opportunities for conflict with neighboring agricultural operations. There have been some concerns about the effect of events and the cumulative impact of multiple agritourism operations on farm practices, such as moving machinery on public roads or altering spray schedules. Many agritourism uses are not required to address changes to farm practices or cost increases as part of the land use approval process. Events allowed on farmland that are permitted as an outdoor gathering or home occupation may not have a connection to local agriculture (e.g. festivals, weddings). Providing agritourism opportunities for farmers and ranchers while helping to mitigate impacts to neighbors is a challenge that should be considered when changing land use regulations or approving land use applications.

Figure 5 shows approvals of agritourism related uses from 2008 to 2017. Approvals of "commercial activities in conjunction with farm use" can vary from agricultural trucking and processing operations to wine tasting rooms. Figure 5 only includes "commercial activities in conjunction with farm use" that are tourism oriented, such as tasting rooms. Agritourism events were added to the list of uses allowed on farmland following the passage of Senate Bill 960 in 2011.

**Figure 5. Agritourism related approvals, by year, 2008-2017**




Overnight accommodation options on farmland include room and board arrangements, home occupations (e.g. bed and breakfasts), bed and breakfasts at wineries and cider businesses, and public and private campgrounds. In 2016-2017, there were 14 approvals reported statewide for overnight indoor accommodations and 14 approvals for campgrounds on farmland.

Figure 7 shows the location of reported agritourism, lodging, and recreation uses on farmland from 2008-2017. The concentration of approvals in Yamhill County is largely due to wineries.

**Renewable Energy**

Oregon has more than 3,000 megawatts (MW) of wind energy generation capacity, ranking eighth in the nation in installed wind energy capability (American Wind Energy Association, 2018). Many wind energy installations are located on farmland and are clustered along Columbia Gorge. Part of the attraction of wind energy to the state are the large open farm landscapes free from conflicting uses that are made possible by EFU zoning.

Solar energy development is rapidly growing in Oregon. In 2017, Oregon's installed solar capacity was 462 MW with 220 MW added in 2017 alone (Solar Energy Industries Association, 2018). Utility scale solar facilities are the leading cause of growth. Many utility scale solar facilities are opting to locate on land zoned EFU due to proximity to infrastructure (e.g.

substations), lower acquisition costs, availability of unobstructed sunlight, and ease of development due to flatter slopes.

Source: Manvel, E.

LCDC has limited the size of solar facilities on EFU with the goal of encouraging solar development on land that is the lowest capability for agricultural use rather than high-value farmland. Solar development in eastern Oregon tends to occur on larger parcels with less potential for agricultural use. There has been a sharp increase in the number of 12 acre solar projects approved in the Willamette Valley on high-value farmland, specifically in Clackamas, Marion, and Yamhill counties. Several large solar facilities (80+ acres) have been approved on more productive agricultural lands in Clackamas and Jackson counties by taking an exception to exceed LCDC's adopted solar facility size limits. As shown in Figure 6, commercial solar approvals have been rising quickly compared to wind power approvals. Figure 8 provides the locations and sizes of approved solar projects.

The rise in renewable energy production on farmland, together with new major transmission line corridors to bring energy to market, has raised questions and concerns about potential impacts to farm operations, wildlife habitat, scenic viewsheds, and tourism. Other concerns have been raised about the need for a state energy policy and more proactive state and regional roles in the siting of major transmission line corridors and energy facilities that may have regional impacts.

**Figure 6. Renewable energy approvals, by year, 2008-2017**

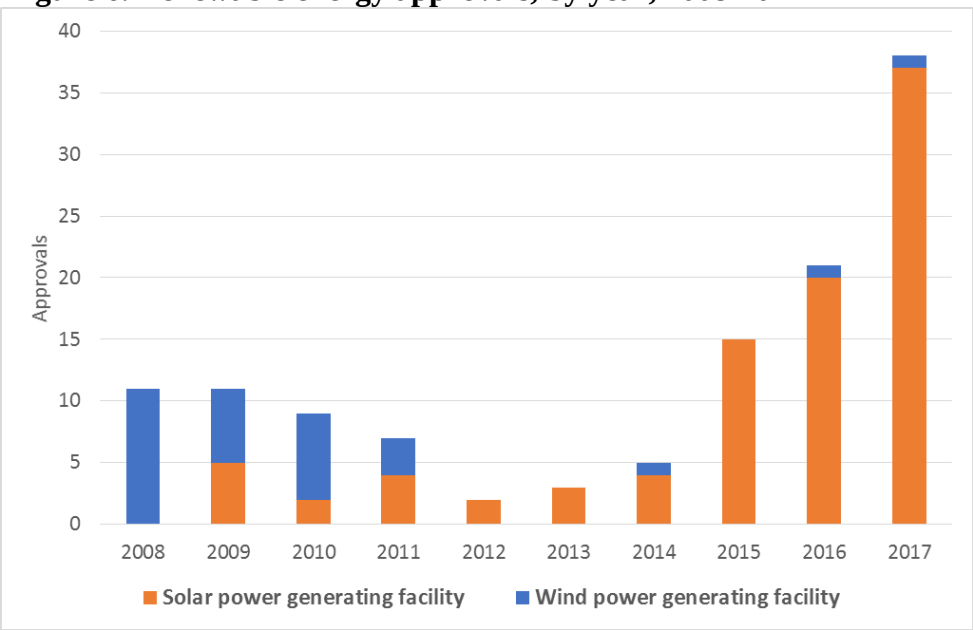


**Figure 7. Map of agritourism, lodging, and recreation use approvals on Farmland, 2008-2017**

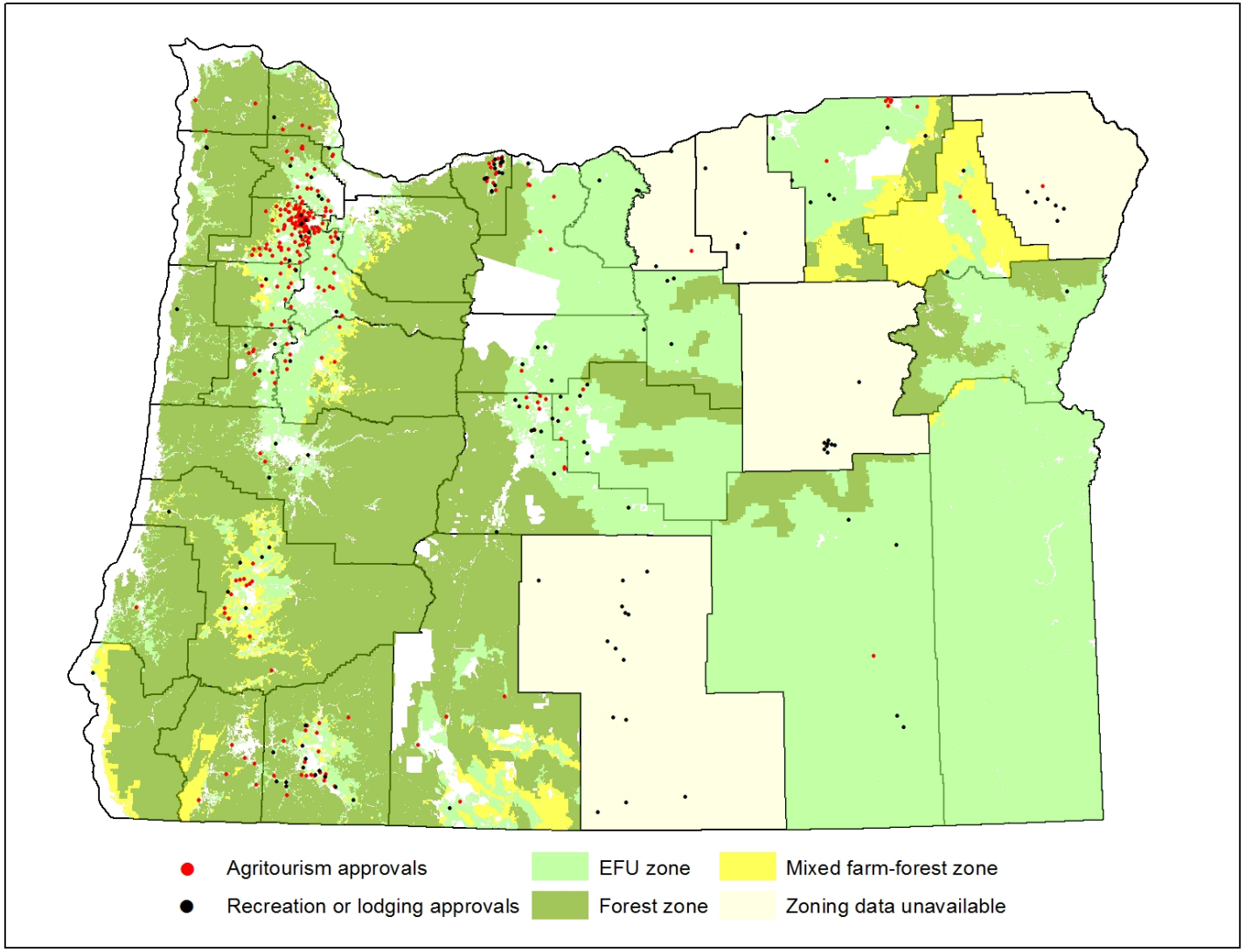
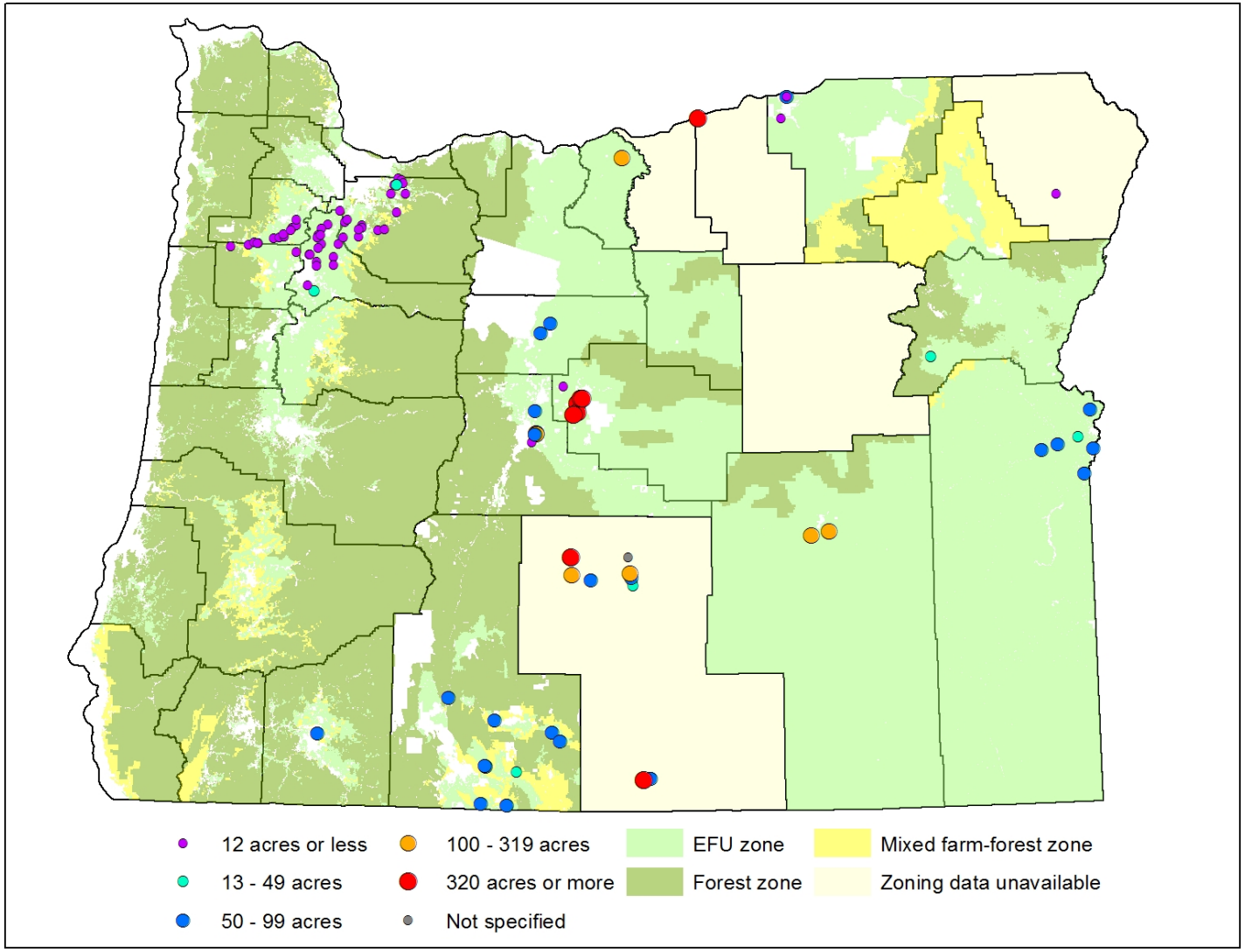


**Figure 8. Size of solar projects approved on Farm and Forest Land, 2008-2017**



## Land Divisions and Property Line Adjustments

Ninety-one new parcels were approved on farmland in 2016 with 81 new parcels in 2017 for a total of 172 new parcels. These numbers are consistent with 2014-2015 when 173 new parcels were created. New parcels created in each county are shown in Table 7. Figure 9 shows land divisions on farmland from 2008-2017.

### Farm Divisions

Land divisions on farmland must meet the statutory minimum parcel size of 80 acres (160 acres for rangeland) or be in counties that have approved "go-below" parcel minimums below these sizes. A "go-below" is a parcel size below 80 or 160 acres that has been approved by LCDC as adequate to protect existing commercial agriculture in an area. In 2016-2017, 47 percent of new parcels created on farmland were over 80 acres. This is similar to 2014-2015 when 53 percent of new parcels were over 80 acres. Over 60 percent of new parcels 80 acres or larger were created east of the Cascades with the most approvals in Crook (11 approvals) and Umatilla (10 approvals) counties.

### Non-Farm Divisions

State statute provides several options for creating new parcels smaller than the required minimum parcel size. Up to two new nonfarm parcels (each containing a dwelling) may be created if the new parcels are predominantly comprised of non-agricultural soils. In addition, nonfarm land divisions are allowed for conditional uses that are approved on farmland.

In 2016-2017, 92 new parcels were created that contained less than 80 acres. This is a slight increase from 2014-2015 when 82 parcels less than 80 acres were created. Some of these parcels were created for farm use in counties with reduced "go-below" minimum parcel sizes. Seventy percent of new parcels less than 80 acres were created east of the Cascades. Douglas County approved 17 new parcels less than 80 acres followed by Klamath County with 14 approvals. The most common reason for partitions in 2016-2017 was to create a new parcel for a nonfarm dwelling (64 approvals).

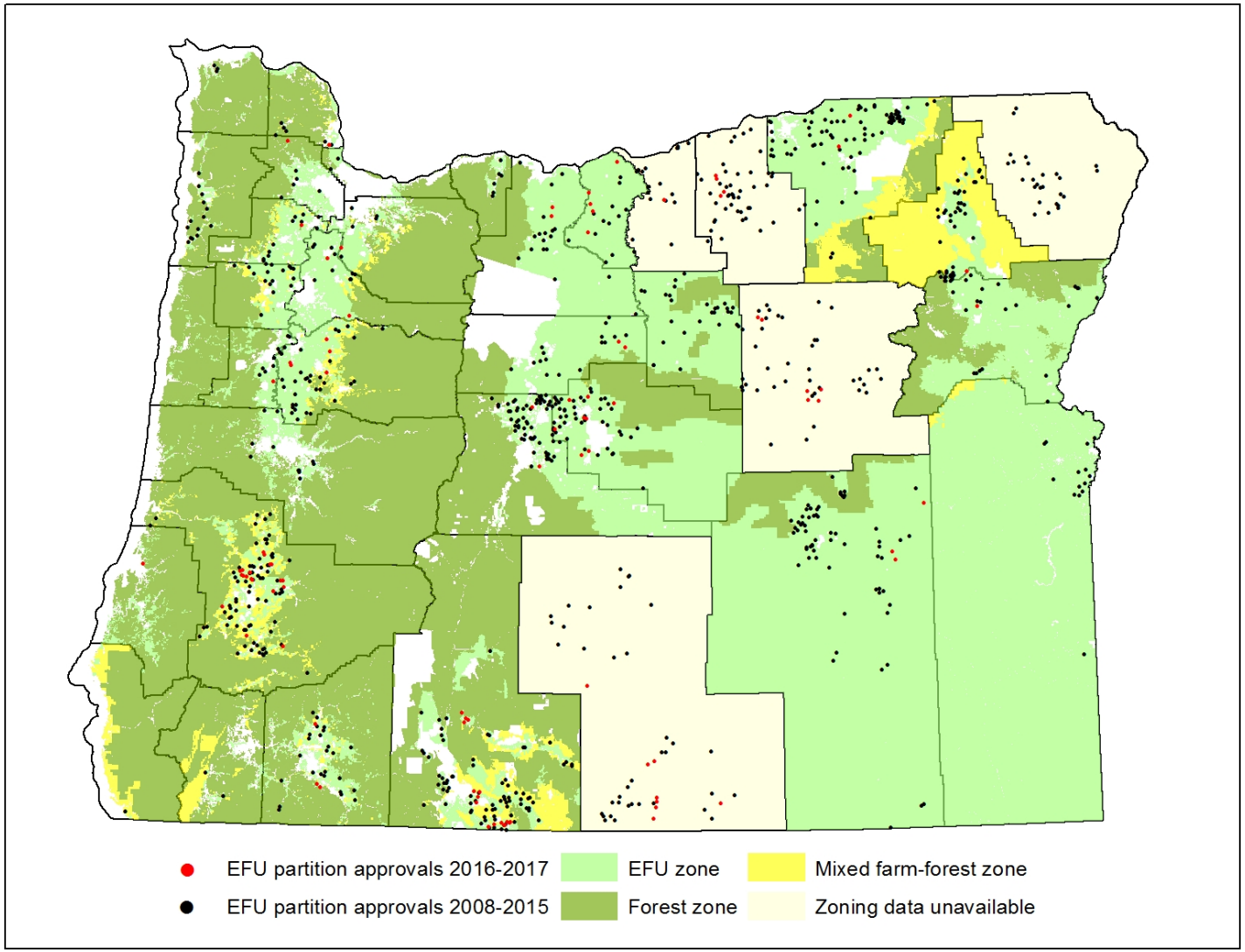
### Property line adjustments

Property line adjustments are commonly employed for a variety of reasons. However, they may not be used to allow the approval of dwellings that would not otherwise be allowed. Property line adjustments are sometimes used in serial fashion on a single tract to effectively move an existing parcel to another location. Many of the reported property line adjustments involve more than two tax lots. In 2016, 357 property line adjustments were approved and 275 were approved in 2017 for total of 632 property line adjustments. During 2014-2015, 593 property line adjustments were approved.

**Table 7. New parcel approvals on Farmland, parcel size and county, 2016–2017**

| County | 0 to 5 acres | | 6 to 10 acres | | 11 to 20 acres | | 21 to 40 acres | | 41 to 79 acres | | 80 to 159 acres | | 160 to 319 acres | | 320+ acres | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | **2016** | **2017** |
| Baker | 1 | | | | | | | | | | | 1 | | | | | **1** | **1** |
| Benton | | | | | | | | | | | | 1 | | | | | **0** | **1** |
| Clackamas | | | | | | | | | | | | | | | | | **0** | **0** |
| Clatsop | | | | | | | | | | | | | | | | | **0** | **0** |
| Columbia | | | | | | | | | | | | | | | | | **0** | **0** |
| Coos | | 1 | | | | | | | | | | | | | | | **0** | **1** |
| Crook | 1 | | | | | | | 3 | | | 4 | 1 | 2 | 1 | | 3 | **7** | **8** |
| Curry | | | | | | | | | | | | | | | | | **0** | **0** |
| Deschutes | 1 | | | | | 2 | 2 | | | | | | | | | | **3** | **2** |
| Douglas | 1 | 14 | | 2 | | | | | | | 2 | 3 | 1 | 1 | | 1 | **4** | **21** |
| Gilliam | | | | | | 1 | | | | | | | | | 1 | | **1** | **1** |
| Grant | 2 | 4 | | | 1 | | | | | | | | 1 | 2 | 3 | | **7** | **6** |
| Harney | | | | | | | | | | | | | | 2 | | 1 | **0** | **3** |
| Hood River | 2 | | | | | | 1 | | | | 1 | | | | | | **4** | **0** |
| Jackson | 2 | | | | | | | | | | | 1 | | 2 | | | **2** | **3** |
| Jefferson | | | | | | | | | | | | | | | 2 | 2 | **2** | **2** |
| Josephine | | | | | | | | | | | | | | | | | **0** | **0** |
| Klamath | 5 | 4 | 1 | | 1 | | 2 | | 1 | | 2 | 3 | | | 1 | | **13** | **7** |
| Lake | | 1 | 2 | | | | | | | | 1 | | 1 | | 2 | | **6** | **1** |
| Lane | | | | | | | | | | | | | | | | | **0** | **0** |
| Lincoln | | | | | | | | | | | | | | | | | **0** | **0** |
| Linn | | 1 | | | | | | | | | 4 | 4 | | | | | **4** | **5** |
| Malheur | | | | | | | | | | | | | | | | | **0** | **0** |
| Marion | | | | | | | | | | 1 | | 2 | | | | | **0** | **3** |
| Morrow | | 2 | | 1 | | | | | | | | | 1 | | | 1 | **1** | **4** |
| Multnomah | 1 | | | | | | | | | | | | | | | | **1** | **0** |
| Polk | 1 | | | | | | | | | | 2 | | | | | | **3** | **0** |
| Sherman | 2 | 1 | | 4 | | | | | | | | | | | | | **2** | **5** |
| Tillamook | | | | | | | | | | | | | | | | | **0** | **0** |
| Umatilla | 5 | | 2 | 1 | | | | | | | 4 | 1 | 3 | | 2 | | **16** | **2** |
| Union | 4 | 1 | | | | | | | | | | | 1 | | | | **5** | **1** |
| Wallowa | | | | | | | | | | | | | | | | | **0** | **0** |
| Wasco | 1 | | 1 | | 2 | 2 | | | | | | | 1 | | | | **5** | **2** |
| Washington | | | | | | | | | | | | | | | | | **0** | **0** |
| Wheeler | | | | | | | | | | | | | | | | | **0** | **0** |
| Yamhill | 1 | | | | | | | | | | 2 | 2 | 1 | | | | **4** | **2** |
| **Total** | **30** | **29** | **6** | **8** | **4** | **5** | **5** | **3** | **1** | **1** | **22** | **19** | **12** | **8** | **11** | **8** | **91** | **81** |

**Figure 9. Map of Land Divisions on Farmland, 2008-2017**



# Oregon's Forestland Protection Program

The conservation of forest land is one of the primary objectives of Oregon's statewide planning program. Oregon has determined that it is in the state's interest to protect the land resource foundation of one of its largest industries – forestry – as well as to protect other forest values, including soil, air, water and fish and wildlife resources.

**The Land**

Approximately 19 percent of Oregon's land base – 11.9 million acres – is in non-federal forest use according to the Oregon Forest Resources Institute (OFRI, 2017). Oregon retains 98 percent of the non-federal acreage that was in forest or mixed farm-forest land cover in 1984 (Gray et al, 2016). All counties had adopted comprehensive plans implementing Statewide Planning Goal 4 (Forest Lands) in 1984.

**The Economy**

Forestry products and services employ nearly 61,000 people directly in Oregon and are critical to Oregon's rural communities (OFRI, 2017). Global competition, environmental controls and rising forest management costs have created serious challenges to the continued economic viability of Oregon's working forests. Large areas of industrial forestland have changed hands in recent years and there is growing pressure to divide and convert forestland to residential and other developed land uses. Many mills across the state have closed. As less federal and industrial forestland is available to harvest, more privately owned woodlots are being harvested.

Oregon is the nation's top producer of softwood lumber and plywood (OFRI, 2017). Development of advanced wood products, such as cross-laminated timber, are opening new market opportunities for use of wood in large commercial and multifamily residential buildings.

**Wildfire**

Oregon's 2017 wildfire season was a challenge for emergency responders, landowners, businesses, wildlife, and many other individuals who suffered negative health impacts. 665,000 acres of forest and rangeland burned, which is approximately the size of Tillamook County (OFRI, 2017). The total cost of fire suppression was $454 million which does not include negative economic impacts such as business closures, event cancellations, and highway closures (OFRI, 2017). Large fires such as the Chetco Bar Fire in southwestern Oregon and the Eagle Creek Fire in the Columbia Gorge were particularly damaging.

Source: Wonderlane

Trends suggest that wildfires in Oregon are becoming more severe. The amount of acres burned in three of the past four years have exceeded the 10-year average (Northwest Interagency Coordination Center, 2017). A combination of high fuel loads, declining forest health, and a warmer climatic outlook suggest an unusually high level of fire risk in the future (ODF, 2017).

Oregon requires residential and other developed uses in forest zones to incorporate fire safety measures, such as fuel-free breaks around buildings. Development in forest zones is still prone to wildfire damage and increases the cost of emergency wildfire protection. The existence of structures, particularly dwellings, can significantly alter fire control strategies and can increase the cost of wildfire protection by 50 to 95 percent (Gorte, 2013). Isolated forest dwellings particularly increase suppression costs. The cost of protecting two homes instead of one within six miles of wildfire is over estimated to be over $31,000 (Gude et al, 2012). For comparison, the additional cost of protecting 100 homes instead of 99 homes within six miles of wildfire is estimated at $319 (Gude et al, 2012).

**Recreation and tourism**

Both public and private forest lands have long provided a variety of recreational opportunities. Interest in outdoor activities continues to grow across the state. Recreation and tourism in and around forest areas provides personal and societal benefits and generates significant economic activity. Many locations within Oregon, including those near forests, serve as appealing day and overnight destinations for both Oregon residents and out-of-state visitors who participate in outdoor activities. Forest zones allow a variety of recreation and tourism pursuits appropriate to a forest environment. Recreation and tourism opportunities in and near forest areas can be expected to continue to grow in the future.

**Carbon sequestration**

Oregon's forests make an enormous contribution to carbon sequestration. Landowners participating in established carbon markets may receive additional income by adopting practices designed to increase carbon sequestration (e.g. delaying forest harvests). The Oregon Department of Forestry is currently working with the U.S. Forest Service to provide a report on the storage and flux of carbon in forest ecosystems for carbon accounting purposes.

## Forest Land Use Policy

Statewide Planning Goal 4, "Forest Lands", seeks to maintain Oregon's forests to allow for tree harvesting that is consistent with sound management of soil, air, water, fish, and wildlife resources. Recreational opportunities and agriculture are also encouraged on forestland. Other uses allowed on forestland (e.g. dwellings) are limited and subject to standards that make them more compatible with forestry, agriculture, and preservation of natural resources. Large minimum lot sizes are prescribed to help ensure land is used in accordance with the purposes of Goal 4.

## Forest and Mixed Farm-Forest Zones

Lands that are subject to Goal 4 are zoned forest or mixed farm-forest by counties. Approximately 11.7 million acres in Oregon are included in forest or mixed farm-forest zones. Mixed farm-forest zones must comply with Goal 3 (Agricultural Lands) and Goal 4 requirements.

Source: US Forest Service

A variety of uses are allowed in forest and mixed farm-forest zones. Some activities allowed under the Forest Practices Act (e.g. logging, reforestation) do not require county land use approval. Dwellings may be allowed under certain circumstances. Counties may also permit nonresidential uses that are compatible with farm and forest practices. Minimum lot sizes are typically 80 acres in order to prevent conversion of forestland.

Minimizing fire risk is a major concern in forest zones. New dwellings and structures are required to have defensible fuel-free space around them. Dwellings must be in a fire protection district or have other sufficient means of suppressing fire such as an onsite lake and sprinklers. Fire retardant roofs and spark arrestors are required for dwellings. County road design requirements for firefighting equipment also need to be met.

Forest zoning has been instrumental in maintaining working forests in Oregon. The Oregon Department of Forestry reports that Washington's loss of wildland forest between 1974 and 2014 was nearly three times the amount of wildland forest lost in Oregon (Gray et al, 2018).

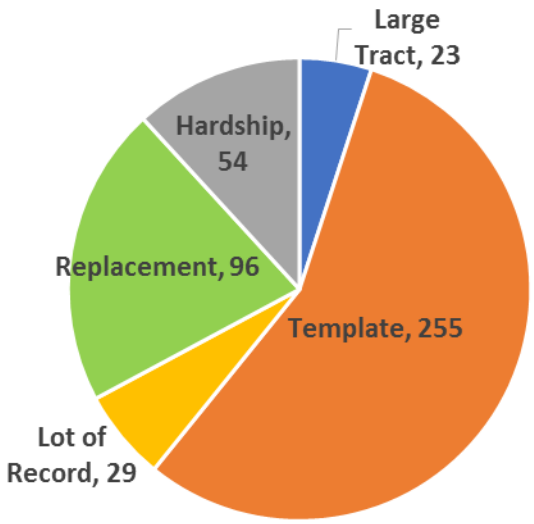
# Land Use Decisions on Forestland

## Dwellings

Five types of dwellings may be approved on forestland: large tract forest dwellings, lot of record dwellings, template dwellings, replacement dwellings and temporary hardship dwellings. In 2016, 216 dwellings were approved in forest zones with 241 approvals in 2017 for a total of 457 dwelling approvals (see Table 8). This is similar to 2014-2015 when 447 dwellings were approved.

As shown in Figure 10, 56 percent of the 2016-2017 dwelling approvals were for template dwellings, 21 percent were replacement dwellings, 12 percent temporary hardship dwellings, and less than 10 percent of approvals were for lot of record and large tract dwellings.

**Figure 10. Dwelling types on Forestland, 2016-2017**




### Template Dwellings

Template dwellings are allowed on forestland that has already been altered by existing dwellings and parcelization. Template dwellings may be approved where there is a certain amount of pre-1993 dwellings and parcels established within a 160 acre "template" centered on the parcel. Locating multiple dwellings in the same area provides greater opportunity for fire protection than isolated forest dwellings.

In 2016-2017, 255 template dwellings were approved statewide (121 approvals in 2016 and 134 approvals in 2017). This is a decrease from 2014–2015 when 278 template dwellings were approved. Lane County approved the most template dwellings in 2016–2017 with 39 approvals. Other counties with at least 20 template dwelling approvals include: Coos (33 approvals), Jackson (28), Clackamas (27), and Columbia (23). Eighty-five percent of the template dwellings approved in 2016-2017 were on the most productive forest soils. As shown in Table 9, 66 percent of the template dwelling approvals occurred on parcels containing 20 acres or less.

Template dwellings have historically had the highest number of approvals in forest zones. Since 1994, 58 percent of all forest zone dwelling approvals were approved the template dwelling option. As shown on Figure 11, template dwelling approvals have increased since the sharp decline from 2008-2010.

There have been some concerns regarding the number of template dwellings approved. Statute allows for one template dwelling per "tract" which is defined as "one or more contiguous lots or parcels under the same ownership." When a tract consists of multiple parcels, an owner may sell

one of the parcels to a new owner which allows two template dwellings to be approved instead of one. There have also been cases where a series of property line adjustments are used to relocate forest parcels into areas where a template dwelling may be approved. These issues could be addressed by requiring tracts and parcels to be created by a specific date in order to be eligible for template dwellings. Fire risk is also a concern. Although template dwellings are limited to areas that have existing residential development, the approval of new dwellings presents additional fire risks and increase structural protection responsibilities.

**Large Tract Dwellings**

Landowners with large amounts of forest land may construct a dwelling in a forest zone based on the acreage owned. In western Oregon, large tract dwellings must be on ownerships of at least 160 contiguous acres or 200 noncontiguous acres. In eastern Oregon, they must be on ownerships of 240 or more contiguous or 320 or more noncontiguous acres.

In 2016-2017, 23 large tract dwellings were approved statewide (8 approvals in 2016 and 15 approvals in 2017). This is a slight increase from 2014-2015 when 18 large tract dwellings were approved. Nine of the approvals occurred in Jackson County.

**Lot of Record Dwellings**

Forest landowners and families who have owned the same property since 1985 may be eligible for a lot of record dwelling. The property must have a low capability for growing merchantable tree species and be located near a public road.

Twenty-nine lot of record dwellings were approved in 2016-2017 (21 approvals in 2016 and 8 approvals in 2017). This is an increase from 2014-2015 when 19 lot of record dwellings were approved. Lot of record dwelling approvals are spread fairly evenly across the state and are on a variety of parcel sizes.

**Temporary Hardship Dwellings**

Temporary hardship dwellings are approved for relatives with a medical hardship and must be removed at the end of the hardship. A temporary hardship dwelling must be sited in conjunction with an existing dwelling. DLCD does not track the removal of these dwellings when they are no longer needed.

Nineteen hardship dwellings were approved in 2016 with 35 approvals in 2017 for a total of 54 approvals. This is a significant increase from 2014-2015 when 23 temporary hardship dwellings were approved on forestland. Clackamas County had over half of the hardship dwelling

approvals on forestland in 2016-2017. The 35 approvals in 2017 were the most since 41 hardship dwellings were approved in 2002.

**Replacement Dwellings**

A replacement dwelling is a new home that replaces an older dwelling on a parcel. A total of 96 replacement dwellings were approved in 2016-2017 (47 approvals in 2016 and 49 approvals in 2017). This is a slight decrease from 2014-2015 when 109 replacement dwellings were approved. Established dwellings that are being replaced must be removed, demolished or converted to another allowed use within three months of completion of the replacement dwelling. Thirty-five percent of dwellings approved for replacement were removed, 35 percent were demolished, and 16 percent were converted to non-residential use with 14 percent not specified.

**Cumulative Dwelling Approvals**

Between 1994 and 2017, over 9,000 dwellings of all types were approved on forestland across the state. Figures 11 and 12 below illustrate the number of dwelling unit approvals for each year since 1994 for the different dwelling types. The total dwellings approved over this timeframe are provided in Table 10. Fifty-eight percent of all dwelling approvals from 1994-2017 were template dwellings, 21 percent were replacement dwellings, nine percent were lot of record, seven percent temporary hardship, and five percent large tract dwellings. Lane County had the most approvals during this timeframe with 1,414 dwellings approvals, 942 of which were template dwellings. The map in Figure 13 shows dwellings approvals on forestland from 2008-2017.

**Table 8. Dwelling approvals on Forestland by type and county, 2016–2017**

| County | Large Tract | | Template | | Lot of Record | | Temporary Hardship | | Replacement | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | **2016** | **2017** |
| Baker | | | | 1 | 3 | | | | | 2 | **3** | **3** |
| Benton | | | 1 | 2 | | | 2 | 2 | | | **3** | **4** |
| Clackamas | | 1 | 13 | 14 | 3 | 2 | 8 | 23 | | | **24** | **40** |
| Clatsop | | | 2 | 5 | | | | | | | **2** | **5** |
| Columbia | | | 13 | 10 | 2 | | | | | | **15** | **10** |
| Coos | | 1 | 17 | 16 | | | 1 | | | | **18** | **17** |
| Crook | 2 | | | | | | | | | 1 | **2** | **1** |
| Curry | 1 | 1 | 3 | 2 | 1 | | | | | | **5** | **3** |
| Deschutes | | 1 | 2 | | | 1 | | 2 | 2 | | **4** | **4** |
| Douglas | | 2 | 3 | 4 | | | | | 8 | 3 | **11** | **9** |
| Gilliam | | | | | | | | | | | **0** | **0** |
| Grant | | 1 | | | | | | | 2 | | **2** | **1** |
| Harney | | | | | | | | | | | **0** | **0** |
| Hood River | | | 1 | 4 | | | | | 1 | 1 | **2** | **5** |
| Jackson | 5 | 4 | 10 | 18 | 3 | | 3 | | | 1 | **21** | **23** |
| Jefferson | | | | | | | | | | | **0** | **0** |
| Josephine | | | 3 | 9 | 1 | | | | | 2 | **4** | **11** |
| Klamath | | | | 4 | | 2 | | | | | **0** | **6** |
| Lake | | | | | | | | | | | **0** | **0** |
| Lane | | | 24 | 15 | 2 | 1 | 2 | | 2 | 5 | **30** | **21** |
| Lincoln | | | 5 | 3 | | | | | | | **5** | **3** |
| Linn | | | | 1 | | | | 1 | 3 | 4 | **3** | **6** |
| Malheur | | | | | | | | | | | **0** | **0** |
| Marion | | | 2 | 2 | 1 | | | | 1 | 2 | **4** | **4** |
| Morrow | | | 2 | 1 | | | | | 1 | | **3** | **1** |
| Multnomah | | | 1 | 1 | | | | | 3 | 1 | **4** | **2** |
| Polk | | 2 | 7 | 7 | | | 1 | 3 | 9 | 9 | **17** | **21** |
| Sherman | | | | | | | | | | | **0** | **0** |
| Tillamook | | | 1 | 2 | 1 | | 1 | | 1 | 1 | **4** | **3** |
| Umatilla | | | | | | | | | | | **0** | **0** |
| Union | | 2 | | | | | | | 3 | 6 | **3** | **8** |
| Wallowa | | | 4 | | 3 | 1 | | | 2 | 1 | **9** | **2** |
| Wasco | | | | | 1 | | | 1 | | 1 | **1** | **2** |
| Washington | | | 5 | 7 | | 1 | 1 | 1 | 6 | 3 | **12** | **12** |
| Wheeler | | | | | | | | | | 1 | **0** | **1** |
| Yamhill | | | 2 | 6 | | | | 2 | 3 | 5 | **5** | **13** |
| **Total** | **8** | **15** | **121** | **134** | **21** | **8** | **19** | **35** | **47** | **49** | **216** | **241** |

**Table 9. Template dwelling approvals on Forestland, parcel size and county, 2016–2017**

| County | 0 to 5 acres | | 6 to 10 acres | | 11 to 20 acres | | 21 to 40 acres | | 41 to 79 ac. | | 80+ acres | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | **2016** | **2017** |
| Baker | | | | | | | | | | | | 1 | **0** | **1** |
| Benton | 1 | | | | | 1 | | 1 | | | | | **1** | **2** |
| Clackamas | 4 | 3 | 3 | | 3 | 3 | 3 | 2 | | 6 | | | **13** | **14** |
| Clatsop | | 1 | 1 | 1 | | | | 1 | | 2 | 1 | | **2** | **5** |
| Columbia | 2 | 1 | 3 | 4 | 6 | 2 | 1 | 3 | 1 | | | | **13** | **10** |
| Coos | 5 | 3 | 1 | 4 | 5 | 5 | 4 | 2 | 2 | 1 | | 1 | **17** | **16** |
| Crook | | | | | | | | | | | | | **0** | **0** |
| Curry | 1 | 1 | 1 | 1 | 1 | | | | | | | | **3** | **2** |
| Deschutes | | | 1 | | 1 | | | | | | | | **2** | **0** |
| Douglas | | | 2 | | | 1 | 1 | 3 | | | | | **3** | **4** |
| Gilliam | | | | | | | | | | | | | **0** | **0** |
| Grant | | | | | | | | | | | | | **0** | **0** |
| Harney | | | | | | | | | | | | | **0** | **0** |
| Hood River | | | 1 | 1 | | 1 | | 2 | | | | | **1** | **4** |
| Jackson | 2 | 6 | | 3 | 2 | 5 | 2 | 2 | 4 | 1 | | 1 | **10** | **18** |
| Jefferson | | | | | | | | | | | | | **0** | **0** |
| Josephine | | 1 | 1 | 1 | | 1 | | 3 | 1 | 1 | 1 | 2 | **3** | **9** |
| Klamath | | | | 1 | | | | 1 | | | | 2 | **0** | **4** |
| Lake | | | | | | | | | | | | | **0** | **0** |
| Lane | 7 | 4 | 5 | 4 | 6 | 4 | 4 | 3 | 2 | | | | **24** | **15** |
| Lincoln | 1 | 1 | | 1 | 1 | 1 | 3 | | | | | | **5** | **3** |
| Linn | | 1 | | | | | | | | | | | **0** | **1** |
| Malheur | | | | | | | | | | | | | **0** | **0** |
| Marion | | 1 | 1 | | 1 | | | 1 | | | | | **2** | **2** |
| Morrow | | | 2 | 1 | | | | | | | | | **2** | **1** |
| Multnomah | | | | | 1 | | | 1 | | | | | **1** | **1** |
| Polk | 2 | 1 | 2 | 3 | | 1 | 1 | 2 | 1 | | 1 | | **7** | **7** |
| Sherman | | | | | | | | | | | | | **0** | **0** |
| Tillamook | 1 | | | | | 1 | | | | 1 | | | **1** | **2** |
| Umatilla | | | | | | | | | | | | | **0** | **0** |
| Union | | | | | | | | | | | | | **0** | **0** |
| Wallowa | 2 | | | | | | 1 | | | | 1 | | **4** | **0** |
| Wasco | | | | | | | | | | | | | **0** | **0** |
| Washington | 1 | 2 | 2 | | 1 | | 1 | 3 | | | | 2 | **5** | **7** |
| Wheeler | | | | | | | | | | | | | **0** | **0** |
| Yamhill | 1 | 1 | 1 | | | 3 | | 2 | | | | | **2** | **6** |
| **Total** | **30** | **27** | **27** | **25** | **28** | **29** | **21** | **32** | **11** | **12** | **4** | **9** | **121** | **134** |

**Figure 11. Dwelling approvals on Forestland by year, all counties, 1994–2017**

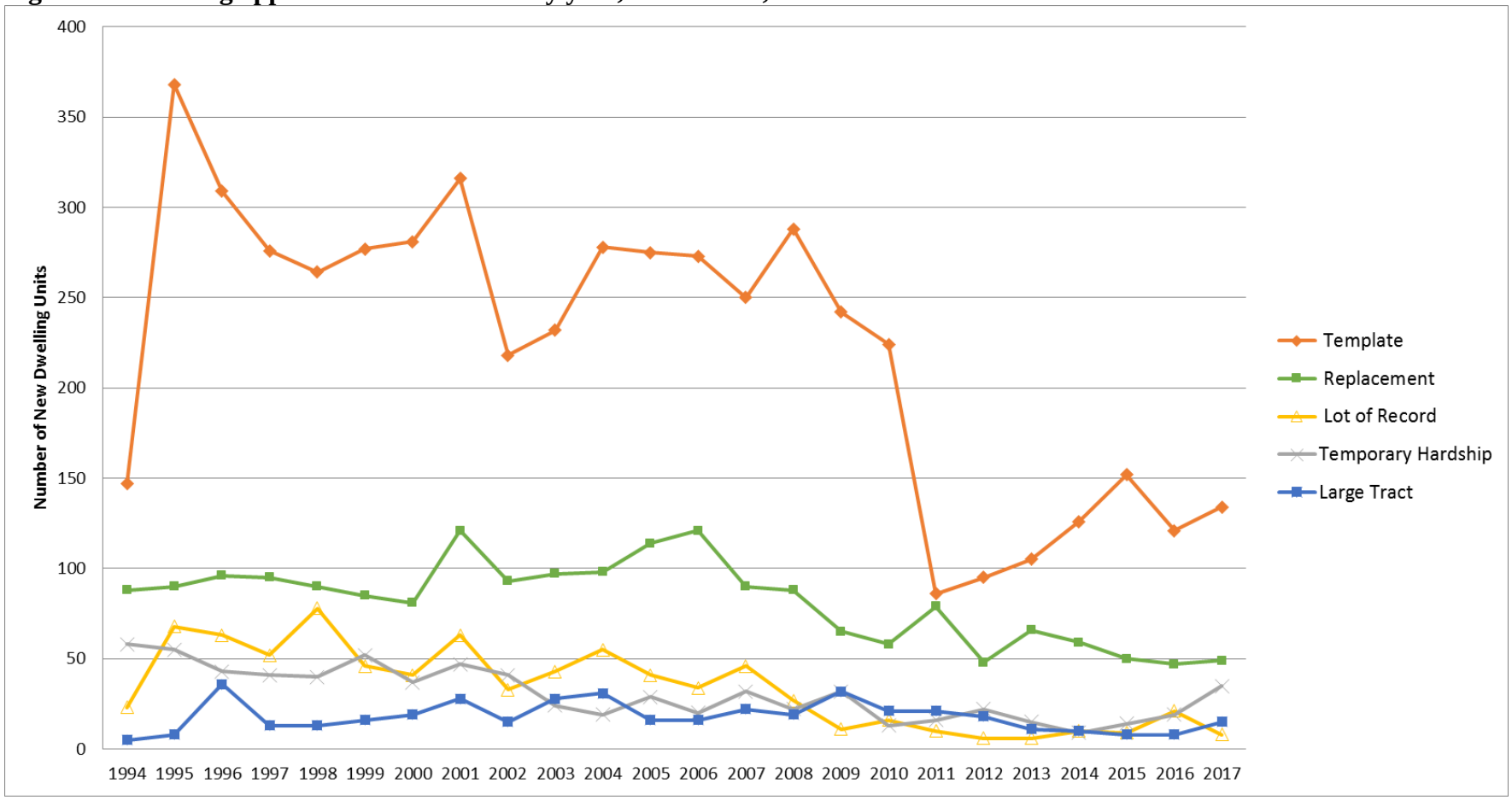


**Figure 12. Total dwelling approvals on Forestland, by county, 1994–2017**

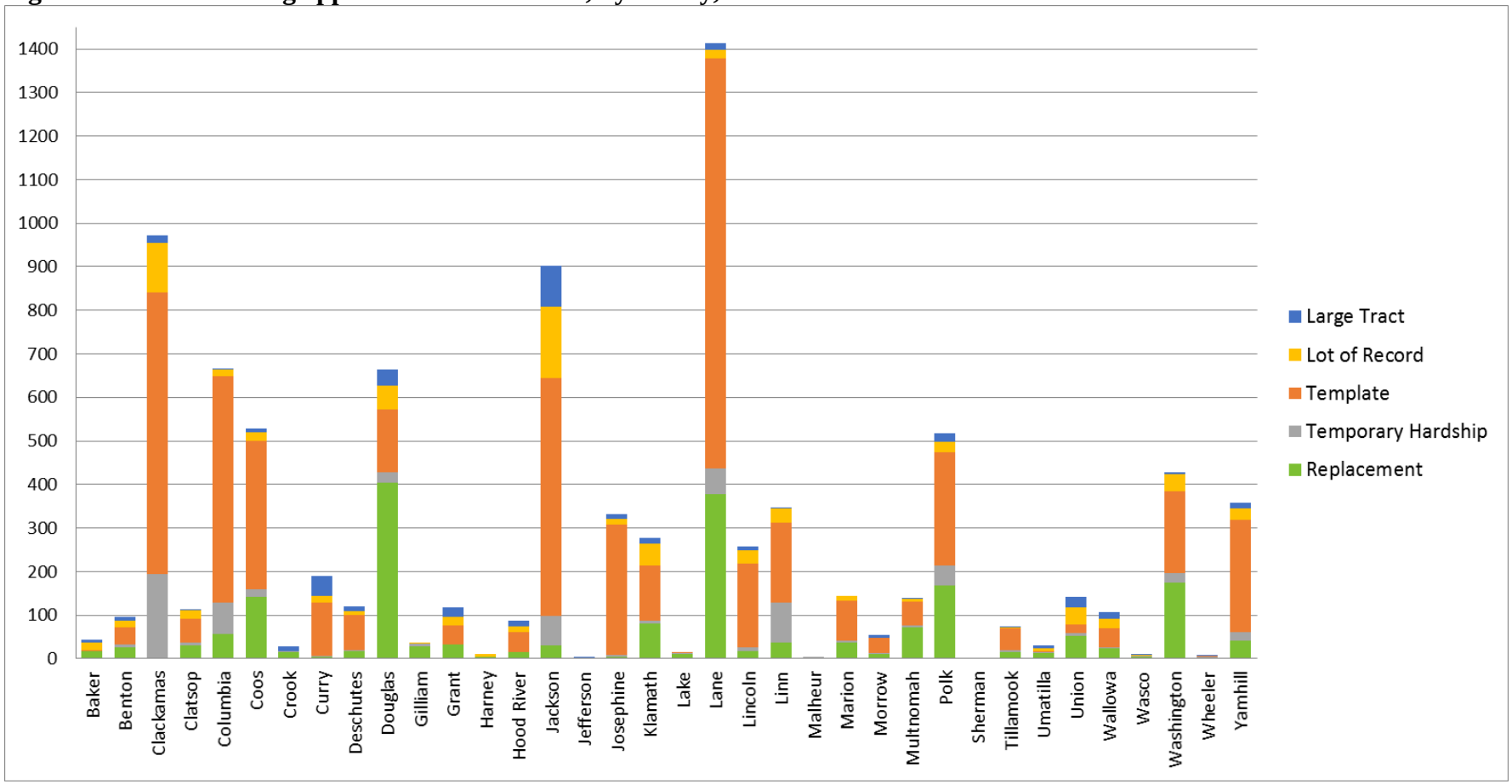
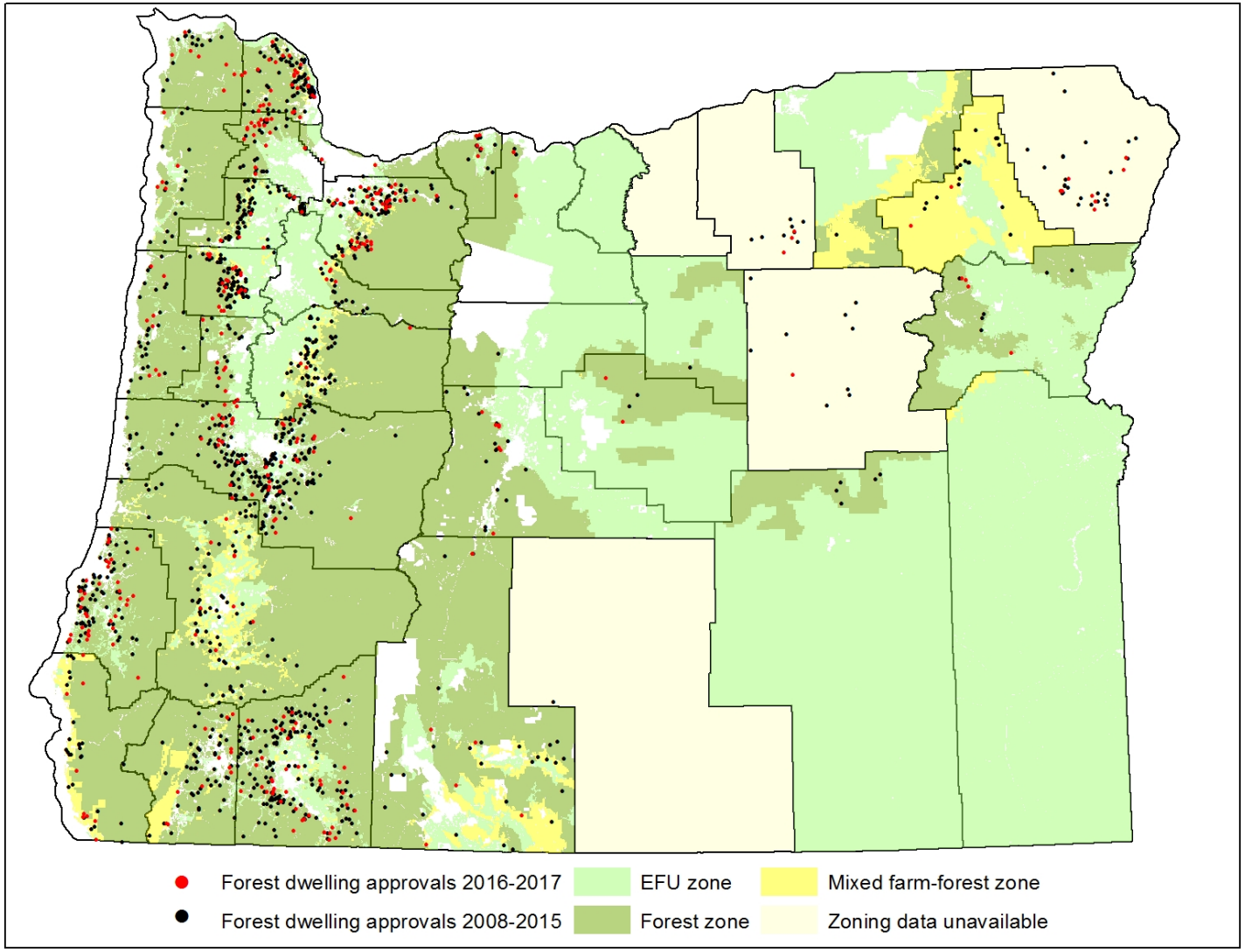


**Table 10. Dwellings approvals on Forestland, by county, 1994-2017**

| County | Template | Large Tract | Lot of Record | Temporary Hardship | Replacement | Total |
|---|---|---|---|---|---|---|
| Baker | 2 | 8 | 17 | 0 | 17 | **44** |
| Benton | 39 | 8 | 17 | 7 | 25 | **96** |
| Clackamas | 647 | 18 | 112 | 195 | 0 | **972** |
| Clatsop | 54 | 2 | 20 | 6 | 31 | **113** |
| Columbia | 520 | 1 | 15 | 72 | 56 | **664** |
| Coos | 341 | 8 | 20 | 17 | 142 | **528** |
| Crook | 0 | 11 | 1 | 1 | 16 | **29** |
| Curry | 122 | 45 | 17 | 1 | 5 | **190** |
| Deschutes | 82 | 10 | 8 | 2 | 17 | **119** |
| Douglas | 146 | 39 | 53 | 24 | 403 | **665** |
| Gilliam | 0 | 0 | 1 | 6 | 29 | **36** |
| Grant | 44 | 20 | 21 | 0 | 32 | **117** |
| Harney | 0 | 0 | 5 | 0 | 5 | **10** |
| Hood River | 47 | 12 | 13 | 0 | 15 | **87** |
| Jackson | 547 | 94 | 164 | 68 | 30 | **903** |
| Jefferson | 0 | 3 | 0 | 0 | 1 | **4** |
| Josephine | 301 | 12 | 12 | 3 | 5 | **333** |
| Klamath | 126 | 14 | 50 | 8 | 80 | **278** |
| Lake | 1 | 0 | 0 | 1 | 11 | **13** |
| Lane | 942 | 15 | 20 | 59 | 378 | **1,414** |
| Lincoln | 192 | 7 | 32 | 8 | 18 | **257** |
| Linn | 184 | 4 | 32 | 91 | 37 | **348** |
| Malheur | 0 | 0 | 0 | 4 | 0 | **4** |
| Marion | 91 | 0 | 12 | 5 | 37 | **145** |
| Morrow | 33 | 6 | 1 | 3 | 11 | **54** |
| Multnomah | 55 | 1 | 6 | 6 | 71 | **139** |
| Polk | 258 | 20 | 25 | 46 | 169 | **518** |
| Sherman | 0 | 0 | 0 | 0 | 0 | **0** |
| Tillamook | 49 | 2 | 4 | 5 | 15 | **75** |
| Umatilla | 3 | 8 | 5 | 1 | 14 | **31** |
| Union | 20 | 24 | 39 | 6 | 52 | **141** |
| Wallowa | 42 | 15 | 22 | 4 | 23 | **106** |
| Wasco | 1 | 2 | 2 | 2 | 4 | **11** |
| Washington | 189 | 4 | 39 | 22 | 174 | **428** |
| Wheeler | 1 | 1 | 0 | 2 | 3 | **7** |
| Yamhill | 258 | 15 | 25 | 19 | 42 | **359** |
| **Total** | **5,337** | **429** | **810** | **694** | **1,968** | **9,238** |

**Figure 13. Map of new dwellings on Forestland, 2008-2017**



## Nonresidential uses

In addition to a range of traditional forest-related uses, the commission has recognized that some nonforest uses are acceptable in forest areas. These uses are set forth in OAR 660-006-0025. Nonforest uses are subject to local land use approval and must demonstrate that they will not force a significant change in or significantly increase the cost of accepted farm or forest practices on farm or forest land.

Table 11 shows nonresidential uses approved on forestland in 2016-2017. The most commonly approved use in 2016-2017 was home occupations (14 approvals). There were 17 approvals for utility related uses, 10 approvals for recreation related uses, and nine approvals for mineral and aggregate uses.

**Table 11. Nonresidential use approvals on Forestland, 2016-2017**

| Type of use | 2016 | 2017 | Total | County approvals |
|---|---|---|---|---|
| Commercial power generating facility | 3 | | **3** | Clackamas (2), Polk (1) |
| Communication facilities | 5 | 3 | **8** | Clatsop (1), Douglas (1), Hood River (1), Lincoln (2), Linn (1), Tillamook (1), Washington (1) |
| Exploration for minerals/aggregate | | 2 | **2** | Lake (2) |
| Fire station | | 2 | **2** | Lane (1), Wheeler (1) |
| Home occupation | 10 | 4 | **14** | Benton (1), Clatsop (1), Coos (1), Jackson (2), Lincoln (1), Polk (4), Union (1), Wallowa (3) |
| Logging equipment repair/storage | 2 | 1 | **3** | Jackson (1), Tillamook (2) |
| Mineral & aggregate | 4 | 2 | **6** | Jackson (1), Klamath (2), Lincoln (2), Wallowa (1) |
| Private hunting & fishing without lodging | | 1 | **1** | Wheeler (1) |
| Private park/campground | 3 | 3 | **6** | Clackamas (2), Jackson (2), Klamath (1), Marion (1) |
| Public park | 1 | 1 | **2** | Benton (1), Multnomah (1) |
| Reservoirs/water impoundment | 1 | 1 | **2** | Clackamas (1), Tillamook (1) |
| Road improvements, conditional | 1 | 1 | **2** | Jackson (1), Washington (1) |
| Road improvements, outright | | 3 | **3** | Coos (1), Umatilla (1), Washington (1) |
| Temporary batch plant | 1 | | **1** | Klamath (1) |
| Water intake facilities | 3 | 1 | **4** | Clackamas (1), Clatsop (1), Polk (2) |
| Youth camp | | 1 | **1** | Clackamas (1) |
| **Total** | **34** | **26** | **60** | |

## Land Divisions and Property Line Adjustments

Twenty-six new parcels were approved in 2016 with 22 new parcels in 2017 for a total of 48 new parcels (see Table 12). These numbers decreased from 2014-2015 when 63 new parcels were created. Figure 14 shows land divisions on forestland from 2008-2017.

### Forestland divisions

In 2016-2017, 24 parcels met the minimum parcel size of 80 acres. This is similar to 2014-2015 when 25 parcels met the minimum parcel size. In 2016-2017, forest land divisions occurred fairly evenly across the state with highest number of approvals in Grant County (six new parcels).

### Nonforest land divisions

Nonforest land divisions are allowed in only a few circumstances, including the creation of a parcel or parcels to separate one or more existing dwellings on a property. In 2016-2017, 24 new nonforest parcels were approved, a decrease from the 38 non-forest parcels created in 2014-2015. The majority of these parcels are five acres or smaller. The most common reason for creating smaller parcels in 2016-2017 was to divide a parcel that has multiple dwellings (11 approvals).

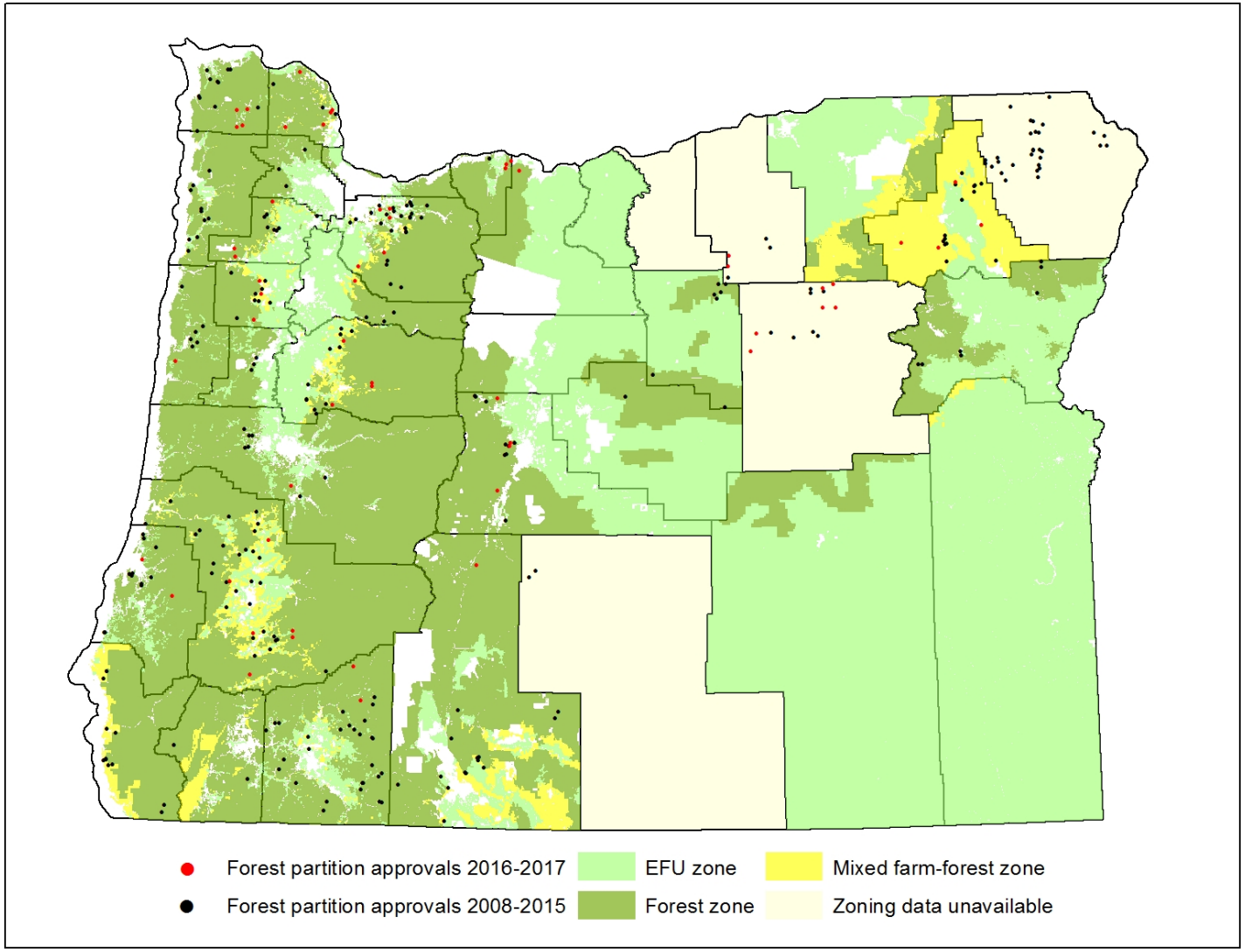
### Property line adjustments

Property line adjustments on forest land may occur for a variety of reasons. Occasionally they are used to adjust parcels to areas where they can be approved for dwellings. Many of the reported property line adjustments involve more than two tax lots. In 2016, 107 property line adjustments were approved and 114 were approved in 2017 for total of 221 adjustments on forest land. This is an increase from 2014-2015 when 175 property line adjustments were approved on forest land.

**Table 12. New parcel approvals on Forestland, parcel size and county, 2016–2017**

| County | 0 to 5 acres | | 6 to 10 acres | | 11 to 20 acres | | 21 to 40 acres | | 41 to 79 acres | | 80 to 159 acres | | 160 to 319 ac. | | 320+ acres | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | **2016** | **2017** |
| Baker | | | | | | | | | | | | | | | | | **0** | **0** |
| Benton | | | | | | | | | | | | | | | | | **0** | **0** |
| Clackamas | 4 | 1 | | | | | | | | | | 2 | | | | | **4** | **3** |
| Clatsop | | | | | | | | | | | | | | | | | **0** | **0** |
| Columbia | 1 | | | 1 | | | | | | | 1 | | | | | | **2** | **1** |
| Coos | | | | | | 1 | | | | | | | | | | | **0** | **1** |
| Crook | | | | | | | | | | | | | | | | | **0** | **0** |
| Curry | | | | | | | | | | | | | | | | | **0** | **0** |
| Deschutes | | | | | | | 2 | | | | | | 2 | | | | **4** | **0** |
| Douglas | 1 | 3 | | | | | | | | | | | | 2 | | | **1** | **5** |
| Gilliam | | | | | | | | | | | | | | | | | **0** | **0** |
| Grant | | | | | | | | | | | 1 | 2 | | 2 | 1 | | **2** | **4** |
| Harney | | | | | | | | | | | | | | | | | **0** | **0** |
| Hood River | | | | | | | | | | | | | | | | | **0** | **0** |
| Jackson | | | | | | | | | | | | | 1 | 1 | | | **1** | **1** |
| Jefferson | | | | | | | | | | | | | | | | | **0** | **0** |
| Josephine | | | | | | | | | | | | | | | | | **0** | **0** |
| Klamath | | | | | | | | | | | | | | | | | **0** | **0** |
| Lake | | | | | | | | | | | | | | | | | **0** | **0** |
| Lane | 1 | 1 | | | | | | | | | | | | | | | **1** | **1** |
| Lincoln | | | | | | | | | | 1 | | | | | | | **0** | **1** |
| Linn | 1 | | | | | 1 | | | | | 1 | | | | | | **2** | **1** |
| Malheur | | | | | | | | | | | | | | | | | **0** | **0** |
| Marion | | | | | | | | | | | 1 | | | | | | **1** | **0** |
| Morrow | | | | | | | | | | | | | 2 | | | | **2** | **0** |
| Multnomah | | | | | | | | | | | | | | | | | **0** | **0** |
| Polk | 2 | | | | | | | | | | 1 | | | | | | **3** | **0** |
| Sherman | | | | | | | | | | | | | | | | | **0** | **0** |
| Tillamook | | | | | | | | | | | | | | | | | **0** | **0** |
| Umatilla | | | | | | | | | | | | | | | | | **0** | **0** |
| Union | | | | | | | | | | | | | | | | 2 | **0** | **2** |
| Wallowa | | | | | | | | | | | | | | | | | **0** | **0** |
| Wasco | | | | | | | 1 | | | 1 | 1 | | 1 | | | | **3** | **1** |
| Washington | | | | | | | | | | | | | | | | | **0** | **0** |
| Wheeler | | | | | | | | | | | | | | | | | **0** | **0** |
| Yamhill | | 1 | | | | | | | | | | | | | | | **0** | **1** |
| **Total** | **10** | **6** | **0** | **1** | **0** | **2** | **3** | **0** | **0** | **2** | **6** | **4** | **6** | **5** | **1** | **2** | **26** | **22** |

**Figure 14. Map of land divisions on Forestland, 2008-2017**



# Ballot Measures 37 and 49

If a state or local government enacts a land use regulation that restricts a residential use or a farm or forest practice, and reduces the fair market value of a property, then the landowner may qualify for compensation under Ballot Measure 49. Oregon voters initially passed Ballot Measure 37 in 2004, which was later modified by the Oregon legislature and approved by the voters in 2007 as Ballot Measure 49. Enactment of Measure 49 retroactively voided some Measure 37 claims.

Measure 49 relief for former Measure 37 claims ended in 2011. DLCD received 4,960 Measure 49 claims and authorized 3,542 claims for residential development (Table 13). The difference between claims received and authorizations issued is partly due to multiple claims being filed for contiguous properties. Under Measure 49, contiguous properties were combined into single claims.

Table 13 shows the number of new dwellings and new parcels authorized under Measure 49 for each county. A total of 6,238 new dwellings and 3,953 new parcels were authorized. Approximately 90 percent of Measure 49 approvals are on land in farm and forest zones.

Property owners who desire to construct new dwellings or create new parcels must apply to the county for approval subject to the terms of their Measure 49 order. For the first time, this report contains information on county land use approvals for new dwellings and parcels authorized by Measure 49 claims. However, the number of Measure 49 dwellings approved by counties is underrepresented. While statute requires counties to send notice of Measure 49 land use decisions to DLCD, some counties only require a building permit to place a Measure 49 dwelling on an existing parcel. Counties are not required to send notice of building permits.

On farmland, counties sent approvals for 115 Measure 49 dwellings and 94 new Measure 49 parcels in 2016-2017. For comparison, counties approved 221 nonfarm dwellings and 172 non-Measure 49 parcels in the same period on farmland. On forestland, counties reported approvals for 58 Measure 49 dwellings and 53 new Measure 49 parcels in 2016-2017. For comparison, counties approved 255 template dwellings in the same period and 48 new non-Measure 49 parcels on forestland.

Due to the variability in receiving notice of Measure 49 development from counties, DLCD periodically estimates the total numbers of Measure 49 dwellings built and parcels created since 2009, when the first authorizations were issued. This is accomplished by analyzing county tax assessor's data for counties that share this data. DLCD estimated that by 2016, 12 percent of new dwellings and 28 percent of new parcels authorized by Measure 49 had been completed.

Measure 49 authorizations are tied to a specific property and may be conveyed to a new owner when the property is sold. Unless the new owner is a spouse or revocable trust, all authorized Measure 49 development must be completed within ten years of the property conveyance. DLCD anticipates that Measure 49 development will increase in the coming years as properties conveyed in 2009 and 2010 near the ten year deadline.

Many claimants who had completed development or who were vested in their Measure 37 projects on the date Measure 49 was enacted did not file a Measure 49 election. County approvals of Measure 37 developments are not included in this report. DLCD is working on tracking these developments and intends to provide that information in future reports.

**Table 13. Total Measure 49 authorizations, by county**

| County | Claims | Claims Authorized | Authorized New Dwellings | Authorized New Parcels |
|---|---|---|---|---|
| Baker | 97 | 66 | 112 | 54 |
| Benton | 80 | 57 | 91 | 53 |
| Clackamas | 863 | 673 | 1,158 | 810 |
| Clatsop | 52 | 29 | 45 | 27 |
| Columbia | 79 | 50 | 90 | 62 |
| Coos | 135 | 96 | 182 | 104 |
| Crook | 33 | 21 | 44 | 27 |
| Curry | 75 | 48 | 99 | 48 |
| Deschutes | 116 | 83 | 130 | 93 |
| Douglas | 168 | 124 | 208 | 148 |
| Gilliam | 1 | 0 | 0 | 0 |
| Grant | 5 | 3 | 5 | 5 |
| Harney | 0 | 0 | 0 | 0 |
| Hood River | 160 | 117 | 168 | 113 |
| Jackson | 349 | 265 | 445 | 306 |
| Jefferson | 142 | 86 | 185 | 113 |
| Josephine | 124 | 82 | 142 | 106 |
| Klamath | 139 | 92 | 195 | 78 |
| Lake | 1 | 1 | 1 | 1 |
| Lane | 327 | 237 | 466 | 292 |
| Lincoln | 78 | 62 | 110 | 49 |
| Linn | 270 | 182 | 331 | 222 |
| Malheur | 19 | 11 | 16 | 10 |
| Marion | 322 | 211 | 361 | 223 |
| Morrow | 0 | 0 | 0 | 0 |
| Multnomah | 72 | 50 | 84 | 39 |
| Polk | 247 | 168 | 302 | 184 |
| Sherman | 0 | 0 | 0 | 0 |
| Tillamook | 67 | 40 | 78 | 46 |
| Umatilla | 34 | 25 | 55 | 30 |
| Union | 31 | 19 | 28 | 20 |
| Wallowa | 38 | 29 | 63 | 37 |
| Wasco | 31 | 26 | 44 | 21 |
| Washington | 485 | 360 | 607 | 390 |
| Wheeler | 2 | 0 | 0 | 0 |
| Yamhill | 318 | 229 | 393 | 242 |
| **Total** | **4,960** | **3,542** | **6,238** | **3,953** |

# Urban Growth Boundary Expansions and Zone Changes

Urban growth boundaries (UGBs) help prevent conversion of irreplaceable farm and forest lands, while limiting the cost of services associated with expansion of urban infrastructure into rural areas. Cities must have a 20 year supply of land within UGBs to meet their residential, commercial, and industrial needs. Periodically it is necessary to expand UGBs onto rural lands to meet those needs. Lands zoned EFU, forest, and mixed farm-forest are given lower priority for inclusion in UGBs than lands already zoned for rural development or nonresource lands.

Rural zone changes are usually approved in order to allow land uses that otherwise would not permitted in an EFU, forest, or mixed farm-forest zone. Examples include clustered rural residential parcels, mineral and aggregate quarries, and institutional uses such as schools serving an urban population. A zone change typically includes an exception to Statewide Planning Goals 3 or 4 based on existing development, development patterns on surrounding lands, or other reasons. A goal exception is not required if it can be demonstrated that a parcel does not qualify as agricultural or forest land and is nonresource land.

**2016-2017 approvals**

Table 14 shows that 1,417 acres brought into UGBs in 2016-2017 were formerly zoned EFU and 135 acres were zoned forest or mixed farm-forest. A total of 4,450 acres were added to UGBs in 2016-2017 (see Table 15). Lands zoned EFU accounted for 32 percent of the total acreage while forestland was only 3 percent. This demonstrates that state rules prioritizing the inclusion of Goal 3 and 4 exception areas and nonresource lands in UGBs continue to be effective.

The largest UGB expansions were for the cities of Bend, Eugene and Sandy. Bend's 2,380 acre UGB expansion did not include any land zoned EFU, forest, or mixed farm-forest. The City of Eugene's expansion included 939 acres of EFU for employment land. Less than half of Sandy's 652 acre expansion was zoned EFU or forest.

Table 14 also shows acres rezoned for rural development. In 2016-2017, 825 acres of EFU land and 336 acres of forest and mixed farm-forest land were rezoned for rural development. Mineral and aggregate uses led to rezoning of 276 acres. Solar development accounted for the rezoning of 167 acres. Over 50 percent of the 470 acres rezoned in Lane County for rural development occurred as a result of a marginal lands designation, which is process allowed only in Lane and Washington counties. Five zone changes encompassing 128 acres were approved based on nonresource land findings rather than a goal exception (see Table 18).

In 2016-2017, 432 acres of EFU land were rezoned to forest or mixed farm-forest zones and 76 acres were rezoned from forest to EFU. A zone change from EFU to forest or vice versa does not require a goal exception. These zone changes are often pursued to facilitate development that is allowed in one rural zone but not another. As an example, it is easier to get template dwelling approval than nonfarm dwelling approval in the Willamette Valley, prompting rezonings to forest use in this area. Outside the Willamette Valley it can be easier to get nonfarm dwelling approvals instead of forest zone template dwelling approvals.

**Table 14. UGB expansions and zone changes on Farm and Forest Land, by county, 2016–2017**

| County | Exclusive Farm Use | | | | | Forest & Farm-Forest | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | To Forest | To other Rural Zone | To UGB | Other zone to EFU | Net Total | To EFU | To other Rural Zone | To UGB | Other zone to Forest | Net Total |
| Baker | | | | | **0** | | | | | **0** |
| Benton | | 8 | | | **8** | | | | | **0** |
| Clackamas | | 5 | 202 | | **207** | | | 4 | | **4** |
| Clatsop | | | | | **0** | | | 49 | | **49** |
| Columbia | | | | | **0** | | | | | **0** |
| Coos | 71 | | | | **71** | | | | 71 | **-71** |
| Crook | | | 160 | | **160** | | | | | **0** |
| Curry | | | | | **0** | | | | | **0** |
| Deschutes | | 58 | | | **58** | | | | | **0** |
| Douglas | | | | | **0** | | 32 | | | **32** |
| Gilliam | | | | | **0** | | | | | **0** |
| Grant | 279 | | | | **279** | | | | 279 | **-279** |
| Harney | | | | | **0** | | | | | **0** |
| Hood River | | | | | **0** | | | | | **0** |
| Jackson | | 77 | | | **77** | | 20 | | | **20** |
| Jefferson | | | 2 | | **2** | | | | | **0** |
| Josephine | | | | | **0** | | 39 | | | **39** |
| Klamath | | 107 | | 13 | **94** | | | | | **0** |
| Lake | | | 61 | 58 | **3** | | | | | **0** |
| Lane | 82 | 258 | 939 | | **1,280** | | 212 | | 82 | **130** |
| Lincoln | | | | | **0** | | | | | **0** |
| Linn | | | | | **0** | | 1 | | | **1** |
| Malheur | | | | | **0** | | | | | **0** |
| Marion | | 12 | | | **12** | | | | | **0** |
| Morrow | | 13 | 9 | | **22** | | | | | **0** |
| Multnomah | | | | | **0** | | | | | **0** |
| Polk | | | 42 | | **42** | | | | | **0** |
| Sherman | | 100 | | | **100** | | | | | **0** |
| Tillamook | | | | | **0** | | | | | **0** |
| Umatilla | | 184 | | | **184** | | 16 | | | **16** |
| Union | | | | | **0** | | 16 | | | **16** |
| Wallowa | | | | | **0** | | | | | **0** |
| Wasco | | | | | **0** | | | | | **0** |
| Washington | | | | | **0** | | | 82 | | **82** |
| Wheeler | | | 2 | | **2** | | | | | **0** |
| Yamhill | | | | 76 | **-76** | 76 | | | | **76** |
| **Total** | **432** | **825** | **1,417** | **147** | **2,527** | **76** | **336** | **135** | **432** | **116** |

**Cumulative UGB expansions and zone changes**

Between 1989 and 2017, a total of 50,570 acres of EFU land has been added to UGBs or rezoned for rural development. In forest and mixed farm-forest zones, 17,016 acres were removed due to UGB expansions and zone changes to allow rural development during this timeframe. As shown in Figure 15, UGB expansions on EFU account for nearly the same acreage as zone changes to rural development. On forestland, rural zone changes have accounted for more than double the acreage added to UGBs.

**Figure 15. Farm and Forest Land rezoned or added to UGBs, 1989–2017**

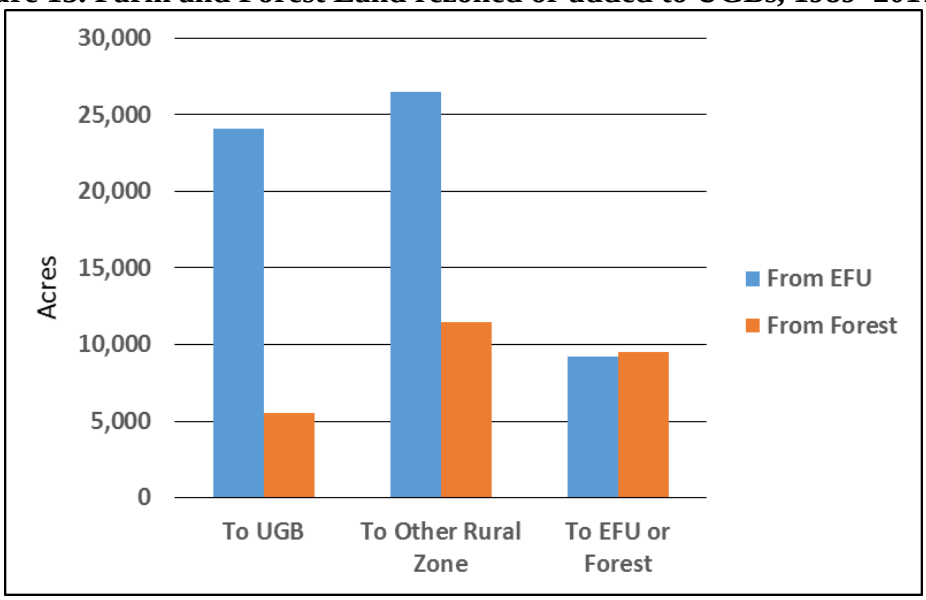



Table 15 shows UGB expansions from 1989 to 2017. Over 66,000 acres of land were added to UGBs statewide during this timeframe. Forty-one percent (27,300 acres) of the acres added was for the Portland-area Metro UGB. More than one-third of the new acreage added to UGBs in this period originated from farm zones, while eight percent was from forest or mixed farm-forest zones. As UGBs continue to expand fewer non-resource lands will be available to be brought into the boundaries, and more farm and forest land will come under pressure to be added to UGBs.

Tables 16 and 17 show rural zone changes from 1989-2017. Nearly 38,000 acres were rezoned from EFU, forest, or mixed farm-forest zones to other rural zones during this timeframe. A net of 21,034 acres were rezoned from EFU during 2001-2017. On forestland, a net of 6,541 acres were rezoned during 2001-2017.

**Table 15. Farm and Forest Land included in UGBs by Year, 1989 – 2017**

| Year | Number | Acres | Acres from EFU Zones | Acres from Forest Zones |
|---|---|---|---|---|
| 1989 | 25 | 1,445 | 259 | 100 |
| 1990 | 9 | 2,737 | 1,734 | 17 |
| 1991 | 21 | 1,480 | 177 | 70 |
| 1992 | 15 | 970 | 297 | 120 |
| 1993 | 22 | 2,277 | 1,390 | 448 |
| 1994 | 20 | 1,747 | 201 | 20 |
| 1995 | 15 | 624 | 219 | 143 |
| 1996 | 19 | 3,816 | 2,466 | 16 |
| 1997 | 12 | 668 | 508 | 40 |
| 1998 | 21 | 2,726 | 493 | 2 |
| 1999 | 10 | 927 | 587 | 72 |
| 2000 | 8 | 624 | 0 | 0 |
| 2001 | 4 | 140 | 11 | 0 |
| 2002 | 55 | 17,962 | 3,281 | 1,659 |
| 2003 | 10 | 385 | 124 | 85 |
| 2004 | 7 | 3,391 | 2,090 | 176 |
| 2005 | 10 | 739 | 70 | 8 |
| 2006 | 15 | 3,231 | 670 | 27 |
| 2007 | 19 | 292 | 105 | 65 |
| 2008 | 6 | 972 | 949 | 0 |
| 2009 | 7 | 782 | 686 | 4 |
| 2010 | 5 | 58 | 37 | 2 |
| 2011 | 6 | 2,738 | 1,662 | 699 |
| 2012 | 6 | 4,941 | 757 | 1,272 |
| 2013 | 7 | 894 | 559 | 0 |
| 2014 | 8 | 4,188 | 3,262 | 350 |
| 2015 | 7 | 1,028 | 79 | 1 |
| 2016 | 5 | 2,605 | 225 | 0 |
| 2017 | 10 | 1,845 | 1,192 | 135 |
| **Totals** | **384** | **66,232** | **24,090 (36%)** | **5,531 (8%)** |

**Table 16. Farmland zone changes, 1989–2017**

| From EFU | To Commercial* | To Industrial** | To Residential | Subtotal | To Forest | Other zone to EFU | Net total change from EFU |
|---|---|---|---|---|---|---|---|
| **1989 - 2000** | 614 | 1,370 | 5,986 | 7,970 | 2,410 | 944,670 | **934,290** |
| 2001 | 11 | 31 | 283 | 325 | 67 | 148 | **-244** |
| 2002 | 18 | 69 | 147 | 234 | 202 | 10 | **-426** |
| 2003 | 21 | 2 | 283 | 306 | 90 | 77 | **-319** |
| 2004 | 25 | 1,681 | 220 | 1,926 | 269 | 52 | **-2,143** |
| 2005 | 479 | 772 | 414 | 1,665 | 988 | 21 | **-2,632** |
| 2006 | 31 | 539 | 1,468 | 2,038 | 311 | 777 | **-1,572** |
| 2007 | 2 | 342 | 1,704 | 2,048 | 1,115 | 2,020 | **-1,143** |
| 2008 | 79 | 10 | 1,011 | 1,100 | 73 | | **-1,173** |
| 2009 | 6 | 375 | 396 | 777 | 459 | 53 | **-1,183** |
| 2010 | 30 | 439 | 402 | 871 | 546 | 41 | **-1,376** |
| 2011 | | 288 | 270 | 558 | 199 | | **-757** |
| 2012 | 57 | 1,075 | 42 | 1,174 | 517 | | **-1,691** |
| 2013 | | | 380 | 380 | 1,316 | | **-1,696** |
| 2014 | 22 | 55 | 2,987 | 3,064 | 6 | 916 | **-2,154** |
| 2015 | 640 | 569 | 10 | 1,219 | 204 | 8 | **-1,415** |
| 2016 | 103 | 167 | 206 | 476 | | 93 | **-383** |
| 2017 | 8 | 157 | 184 | 349 | 432 | 54 | **-727** |
| **Total** | **2,146** | **7,941** | **16,393** | **26,480** | **9,204** | **948,940** | **913,256** |

*Public zones are counted as commercial; **Mineral and aggregate zones are counted as industrial

**Table 17. Forest and mixed farm-forest zone changes, 1989–2017**

| From Forest | To Commercial* | To Industrial** | To Residential | Subtotal | To EFU | Other zone to Forest | Net total change from Forest |
|---|---|---|---|---|---|---|---|
| **1989 - 2000** | 16 | 275 | 3,692 | 3,983 | 8,517 | 36,854 | **24,354** |
| 2001 | | | 232 | 232 | | | **-232** |
| 2002 | | | 113 | 113 | 109 | | **-222** |
| 2003 | | | 520 | 520 | 113 | | **-633** |
| 2004 | | 82 | 95 | 177 | 50 | | **-227** |
| 2005 | | 31 | 101 | 132 | 44 | 50 | **-126** |
| 2006 | | 3 | 292 | 295 | | 163 | **-132** |
| 2007 | 2 | 5 | 1,269 | 1,276 | | 90 | **-1,186** |
| 2008 | 3 | 212 | 5 | 220 | 131 | 509 | **158** |
| 2009 | | 56 | 2,451 | 2,507 | | 27 | **-2,480** |
| 2010 | 215 | 185 | 489 | 889 | 10 | 378 | **-521** |
| 2011 | 2 | | 53 | 55 | 162 | | **-217** |
| 2012 | | 5 | 74 | 79 | | 80 | **1** |
| 2013 | 18 | 129 | | 147 | 288 | | **-435** |
| 2014 | 4 | | 159 | 163 | | 11 | **-152** |
| 2015 | | 197 | 164 | 361 | | 204 | **-157** |
| 2016 | | 32 | 120 | 152 | 35 | | **-187** |
| 2017 | 16 | 136 | 32 | 184 | 41 | 432 | **207** |
| **Total** | **276** | **1,348** | **9,861** | **11,485** | **9,500** | **38,798** | **17,813** |

*Public zones are counted as commercial; **Mineral and aggregate zones are counted as industrial

Table 18 shows acres rezoned using a nonresource lands process**.** Rural resource lands (commonly referred to as nonresource lands) are rural lands that do not meet the state's definition of agricultural or forest lands. Rural resource lands are not subject to Statewide Planning Goals 3 and 4 and may be zoned by counties for other uses. These lands are commonly rezoned for rural residential development with minimum parcel sizes of 10 acres or less.

In 2009, the Legislature adopted provisions that allow counties to designate land for nonresource use (see ORS 215.788 – 794). This process requires coordination with state agencies to ensure such lands are truly nonresource and that future development would not conflict with wildlife, water quality, or increase the costs of public facilities and services. Counties and landowners have not used this process but rather continue to designate rural resource lands on a case by case basis through comprehensive plan amendments.

Ten counties have designated rural resource lands as shown in Table 18. Several counties have recently expressed interest conducting countywide evaluations of land that could be rezoned for nonresource use.

**Table 18. Acres of nonresource designations, by county**

| County | Acres designated | Acres designated in 2016-2017 |
|---|---|---|
| Clatsop | 2,351 | |
| Crook | 23,261 | |
| Deschutes | 416 | 36 |
| Douglas | 3,341 | |
| Jackson | 525 | 20 |
| Josephine | 15,534 | 39 |
| Klamath | 34,797 | |
| Linn | 121 | 1 |
| Lane | 527 | 32 |
| Wasco | 7,047 | |
| **Total** | **87,920** | **128** |

# 2016 - 2017 Statutory and Rule Changes for Farm and Forest Lands

## *Statutory amendments*

- SB 1517 (2016) – Makes wetland creation and restoration a conditional use in Tillamook County.
- SB 1598 (2016) – Clarifies that both recreational and medical marijuana are a crop as used in the definition of "farm use."
- HB 2179 (2017) – Allows onsite treatment of septage prior to land application of biosolids
- HB 2730 (2017) – Allows golf courses west of Highway 101 to be permitted on high-value farmland when the land is only considered to be high-value based on water rights for irrigation or location within an irrigation or diking district.
- HB 3456 (2017) – Allows photovoltaic solar facilities to be located on high-value farmland in the Columbia Valley American Viticultural Area under certain circumstances.
- SB 644 (2017) – Mining of significant non-aggregate resources is exempt from compliance with certain EFU regulations in seven eastern Oregon counties.
- SB 677 (2017) – Allows cider businesses to be established on agricultural land.

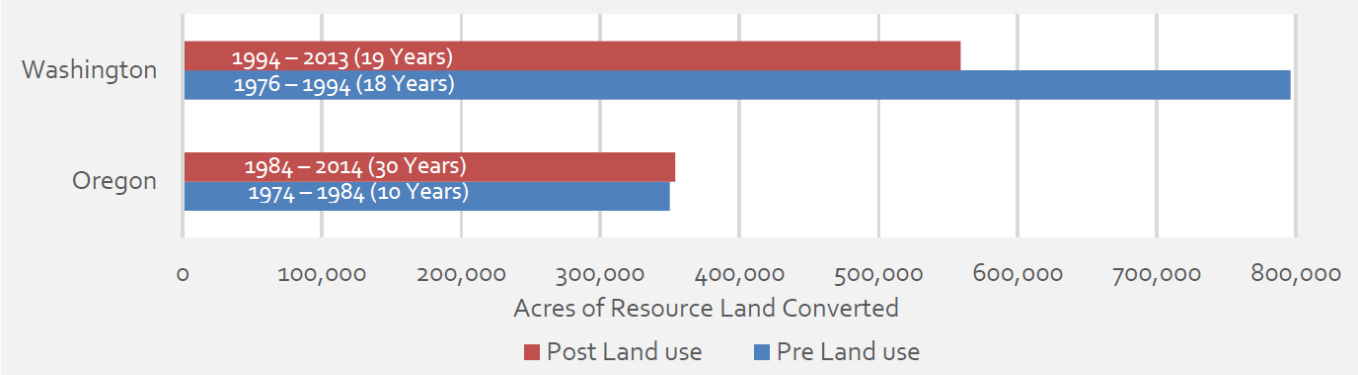
## *Rule amendments*

- OAR 660-006-0005 (2016) – Clarifies that the definition of "forest land" includes forested areas that maintain soil, air, water and fish and wildlife resources.
- OAR 660-006-0026 and 660-033-0100 (2016) – Clarifies that a property line adjustment may not be used to separate uses where land divisions are prohibited.

# Conclusion

Oregon's farm and forest land protection program has provided a significant level of protection to the state's working landscapes over the last several decades. As shown in Figure 16, the acres of farm and forest lands converted to low density residential and urban uses in Oregon has slowed considerably since the adoption of county comprehensive plans in 1984.

**Figure 16. Acres of Farm and Forest Lands Converted to Low Density Residential and Urban (Gray et al, 2018)**




Over the years, the Legislature and LCDC have continued to refine the state's agricultural and forest land protections to accommodate changing needs and regional variation. As Oregon continues to change, it is important to remember the valuable role that agricultural and forest lands provide to the food needs and health of all Oregonians. Agricultural and forest lands are also critical for the various industries that depend on Oregon produced farm and forest products and businesses that thrive on recreation and tourism opportunities. Maintaining the land base necessary to support agricultural and forestry operations is a critical component of a prosperous Oregon.

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# Rural Resource Lands

## Research Report

Prepared by Stephanie Campbell, Rural Lands Research Fellow

OREGON
Department of
Land Conservation
& Development

**May 16, 2019**

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This report was prepared by Hatfield Resident Fellow Stephanie Campbell. The Hatfield Resident Fellowship, a program of Portland State University, is a rigorous, project-oriented, professional and educational experience for recent graduates designed to provide each Fellow with an opportunity to acquire leadership skills with a public service agency in Oregon.

# Introduction

## Problem Statement

The preservation of agricultural and forest land is a primary objective of Oregon's land use planning system. However, since the inception of Oregon's statewide land use planning program in 1973, there has been concern that there are lands currently protected for exclusive farm use (EFU), forest, or mixed farm-forest under Statewide Goal 3 (Agricultural Lands) and Goal 4 (Forest Lands) which have actually been mis-zoned due to low quality soils and limited potential for agricultural or forestry use. The rural resource land issue has been approached in several iterations over the years through extensive public review, work sessions, and pilot studies by the Oregon State Legislature and the Land Conservation and Development Commission (LCDC or the commission). These lands have been difficult to define and identify due to policy, technical, and jurisdictional issues.

Historically, these lands have been termed "marginal," "secondary," "small-scale resource," "nonresource," and "rural resource" in an attempt to describe their rural nature and lower production value. Most recently "nonresource" has been replaced by "rural resource" to underscore the land's function as a resource in some capacity. Rural resource land will be used within this document to refer to this grouping of less productive resource lands. It should be noted that rural resource lands do not require a goal exception from Statewide Planning Goals 3 or 4 and thus are not considered to be "exception" lands. Exception lands are typically designated due to the existing development patterns (e.g., platted subdivisions) that preclude viable farm and forest use while rural resource lands could be hundreds or even thousands of acres with no existing settlement pattern.

As Oregon faces continued growth, how to approach land development in an intentional and proactive manner while balancing resource protection has become an increasingly critical and challenging question. There is existing concern that Oregon's agricultural and forest economies are under threat from expanding development which can cause fragmentation of large parcels, conversion of land use and land cover, and degradation of critical habitat.[1] Furthermore, there is concern that other resource values such as protecting open space to maintain soil, air, water, and fish and wildlife resources and for recreational opportunities are not given adequate consideration. Concerns about preserving private property rights and bolstering local revenue has created political pressure to continue land conversion.[2] This report seeks to create a fact-based foundation to inform future productive discussion of the issues surrounding rural resource lands. With the current collection of new and evolving issues in land use planning, now is a critical time to move forward in addressing the rural resource lands issue.

This document synthesizes the rural resource lands issue by providing a synopsis of the history of the problem, outlining the best available scientific and technical data that can inform related policy and planning efforts, and summarizing options to further address the issue. Efforts to address the rural resource lands issue should be integrated with other resource lands protection strategies by creating standards which will serve to guide counties in identifying and zoning rural

[1] MacLaren, C.; Kimball, K.; Holmes, G.; and Eisenbeis, D., 1000 Friends of Oregon. (undated). *Too Many Homes on the Range*. <http://www.friends.org/sites/friends.org/files/reports/too_many_homes.pdf>.
[2] Hansen, T. M.; Francis, C.; Esseks, J. D.; and Williams, J. A. Jr., "Multifunctional Rural Landscapes: Economic, Environmental, Policy, and Social Impacts of Land Use Changes in Nebraska," (2007). *Theses, Dissertations, and Student Research in Agronomy and Horticulture*. 45.

lands which do not meet the definition of agricultural or forest resource lands and do not warrant protection under other Statewide Planning Goals.

**Impetus for Project**

A strategy identified in the Oregon Department of Land Conservation and Development's (DLCD or the department) 2014-2022 Strategic Plan is development of a "nonresource/rural resource lands" policy. LCDC's 2017-2019 Policy Agenda also includes "nonresource/other resource lands" and specifies a need for additional research and possible rulemaking:

> "Consider development of a "nonresource/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."

DLCD is approaching the project by first researching the issue to provide an overview of past efforts and current interests as well as what and how data can best inform rural resource designations. The department may utilize information and data gathered during the research phase to conduct additional research or to make policy recommendations during a future rulemaking phase or it may be determined that rulemaking is unnecessary. All policy decisions will be based on best available scientific and technical data and information while being balanced with the state's goals for resource land protection. This report is the result of the research phase of the project.

**Sources of Information**

This report synthesizes current available information regarding rural resource lands from DLCD internal documentation and reports. Additionally, GIS data and information was collected along with accompanying relevant technical and policy context. Geospatial data collection focused on coordinating with state agencies which house information and data most pertinent to addressing rural resource land designation and carrying capacity considerations. Data provided herein was obtained primarily from DLCD, Oregon Department of Agriculture (ODA), Oregon Department of Forestry (ODF), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of State Lands (ODSL), Oregon Department of Environmental Quality (ODEQ), and Oregon Water Resources Department (OWRD).

**Data Gaps and Limitations**

The level of accurate and applicable technical and scientific data and information available is a factor in determining the scope of department and commission efforts to protect Oregon's resource lands. This document provides a foundational rather than exhaustive list of data and information which the department and commission could apply to the rural resource lands issue.

DLCD focused on gathering statewide GIS datasets which are primarily coarse scale. Attempts were made to identify data that can be used at finer, parcel-level scales, but this data was not always available or did not exist at a consistent scale across the state, with data gaps being a common occurrence. The availability of finer scale or parcel-level data often coincides with funding associated with interest and necessity for program-based goals. Due to inherent gaps

and limitations, the datasets listed herein should serve as a basis for LCDC to make informed decisions on if and how to proceed with rural resource land policy. In many cases, qualified practitioners may need to make site specific investigations to establish accurate conditions at the parcel level.

# Background

### History of Issue

This section outlines an abbreviated history of the rural resource lands issue to establish the historical context for this report's analysis as well as subsequent options and recommendations.

Establishment of the Oregon Land Use Planning System

1973 SB 100 is passed, establishing the statewide Oregon land use planning program through the creation of LCDC, and its administrative branch, DLCD. Additionally, SB 101 is passed, creating statewide protections for farmland through further amendments to the EFU zone (ORS Chapter 215). One of the Oregon land use planning system's primary goals has been to protect Oregon's agricultural and timber economy and accompanying farm and forest land base through a combined strategy of tax incentives and development restrictions. From the passage of this bill came 19 Statewide Planning Goals, of which Goals 3 and 4 are most pertinent to the concept of rural resource lands. Goals 3 and 4 refer to agricultural and forest lands respectively, often referred to collectively as "Resource Lands." Oregon's resource lands protection is based on statute and administrative rules as interpreted by the Land Use Board of Appeals (LUBA) and the courts.

Statewide Planning Goal 3, "Agricultural Lands," requires identification of agricultural land, use of statutory EFU zones (ORS Chapter 215), and review of farm and non-farm uses according to statute and administrative rule (OAR chapter 660, division 33) provisions. These provisions also incorporate statutory minimum lot sizes and standards for all land divisions.

Statewide Planning Goal 4, "Forest Lands," seeks to maintain Oregon's forests to allow for tree harvesting that is consistent with sound management of soil, air, water, fish, and wildlife resources.

Marginal Lands

1983 Legislature adopts the Marginal Lands Act that established trade-off between less regulation of lower quality marginal lands and improved protection for the best or primary resource lands. Only Lane and Washington counties adopt the system.

1985 Legislature does not adopt a proposed trade-off to restrict nonfarm dwellings in return for expanded lot-of-record provisions in EFU zones. Instead, the Legislature directs the Commission to "[c]onsider adoption of rules, amendments of the goals and recommendations for legislation that will provide a practical means of identifying secondary resource land and allow specified uses of those lands."

April 1985 Commission establishes Rural Lands Advisory Committee to "review whether the application of the EFU, marginal lands and lot-of-record statutes are effective in achieving the purpose of Statewide Goal 3, to 'preserve and maintain agricultural lands.'"

Secondary Lands

1987 Legislature requires Commission to "[a]dopt and submit a definition of secondary resource lands and uses permitted on secondary resource lands."

July 1988 LCDC adopts definition of "Secondary Lands" and draft proposal for the identification and the uses and densities allowed for primary and secondary resource lands.

Oct 1988 LCDC begins process to amend Statewide Goals 3 and 4 to designate "primary" and "secondary" agricultural and forest lands and establish appropriate uses and densities for such lands.

1989 Legislature directs DLCD through budget notes to fund a Pilot Program for the testing of criteria to identify "secondary lands." Part of the notes requires that the Commission will not adopt any proposed rules as part of this program until after they are presented to the "appropriate legislative review agency."

1990 Statewide Goal 4 is amended after many public meetings, workshops, and hearings that began in October 1988. Work on Goal 3 is postponed pending completion of the "Farm and Forest Research Study." The Study will be an independent analysis of Oregon's productive farm and forest lands and will determine what actions or conditions may diminish the quality and quantity of these farm and forest lands.

1991 LCDC transmits to the Legislative Assembly the "Farm and Forest Research Study" that concluded that Oregon's current system of land use planning was failing to provide adequate protection for farm and forest lands.

1992 LCDC amends Goals 3 and 4 to distinguish between small-scale resource lands, high-value and important farm land, and forest land. LCDC adopts new administrative rules for the identification of small-scale resource lands, high-value and important farm land and forest land as well as the specific uses allowed on such lands.

1993 Legislature adopts HB 3661 establishing new lot-of-record provisions for farm and forest zones and directs LCDC to repeal goal and rule provisions regarding small-scale resource lands, closing the option for designation of marginal lands by any county other than Lane and Washington.

The Big Look and Regional Problem Solving

2005 The Big Look Task Force was created as a result of Senate Bill 82 to review the state's land use planning program. Primary conclusions included the need for a more flexible system, more responsiveness to regional variations, greater regional cooperation, a move toward a more adaptive planning model, and greater simplicity.

2009 The Big Look Task Force Report was released to the 2009 Oregon Legislature. Chapter 3 of the Report focuses on issues related to appropriate zoning of non-productive farm and forest land as well as the re-designation of these lands for other rural uses. The Big Look Task Force brought attention to the need to better define and set quantifiable limits for carrying capacity. As a result of The Big Look, the 2009 Legislature passed House Bill 2229. HB 2229 provided counties with a process for corrective remapping of rural land zoning to ensure sustainable development of rezoned lands and for prompting updates of natural resource protections. The bill created the structure for a regional problem-solving process that allowed counties to remap rural lands based on the results of regional problem solving. See ORS 215.788—794.

2012 Governor Kitzhaber signed Executive Order 12-07, known as the Southern Oregon Regional Pilot Project (SORPP), establishing a Pilot Program for Regional Farm and Forest Land Conservation. Douglas, Jackson, and Josephine counties began a regional process to develop a plan that allowed for regional variation in what lands must be planned and zoned for farm and forest use. The executive order focused specifically on the parameters and measures that should be used in determining what was, and was not, "nonresource land."

2016 Final SORPP reports were submitted to LCDC. Ultimately, participating counties were unable to reach consensus on the difficult topics included in the scope of the executive order, and were not able to establish a regional planning framework to address them.

**Existing Regulatory Framework**

Agricultural Land

Statewide Planning Goal 3, “Agricultural Lands,” requires identification of agricultural land, use of statutory EFU zones, and review of land uses according to statute and administrative rule (OAR chapter 660, division 33) requirements.

Agricultural lands are defined in OAR 660-033-0020(1):

> (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.

The agricultural land definition includes land based on soil capability but also requires an in-depth analysis of whether the land is suitable for farm use, which typically requires the use of discretion by local decision makers. OAR 660-033-0030 provides additional guidance on identifying agricultural land and provides an option for the use of soil assessments that are more detailed than NRCS mapping. In addition, there is substantial case law which has served to further refine how suitability for farm use should be addressed.

Forest Land

Statewide Planning Goal 4, “Forest Lands,” seeks to maintain Oregon’s forests for tree harvesting that is consistent with sound management of soil, air, water, fish, and wildlife resources.

OAR 660-006-0005(7) defines forest lands as:

(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.

OAR 660-006-0010 provides additional requirements for identifying forest land for a comprehensive plan and zone change amendments. NRCS is the primary source for wood production capability data. If NRCS mapping is unavailable or proven to be inaccurate, alternate data sources may be considered in the following order:

1. Oregon Department of Revenue (DOR) site class maps for Western Oregon

2. USDA Forest Service plant association guides

3. Other information determined by the State Forester to be of comparable quality.

The rule does not establish a minimum threshold for wood production capability that constitutes commercial forest use. In Just v. Linn County (60 Or LUBA 74 (2009)), the Land Use Board of Appeals (LUBA) found:

“Our cases suggest that land with a productivity of less than 20 cf/ac/yr may be unsuitable for commercial forest use unless there are factors that compensate for the land’s relatively low productivity. But land in a middle range from a low of approximately 40 cf/ac/yr to a high of approximately 80 cf/ac/yr is unlikely to be unsuitable for commercial forest use unless there are additional factors that render those moderately productive soils unsuitable for commercial forest use. Rural land with a wood fiber productivity of over 80 cf/ac/yr is almost certainly suitable for commercial forest use, even if there are limiting factors.”

The portion of the forest lands definition that addresses maintaining “soil, air, water and fish and wildlife resources” has not been further defined in rule. LUBA has determined that a lack of Goal 5 resources in a county comprehensive plan is not adequate justification, if such lands are needed to maintain soil, air, fish and wildlife resources (DLCD v. Curry County, 33 Or LUBA 728 (1997)).

Rural Resource Land

Found in ORS 215.788, the current definition for rural resource lands exists in statute by the term, “nonresource land,” and is defined by what it is not:

> 215.788 Legislative review of lands zoned for farm and forest use; criteria.
>
> (4) A county must plan and zone land reviewed under this section:
>
> (a) For farm use if the land meets the definition of “agricultural land” in a goal relating to agricultural lands;
>
> (b) For forest use if the land meets the definition of “forest land” used for comprehensive plan amendments in the goal relating to forestlands;
>
> (c) For mixed farm and forest use if the land meets both definitions;
>
> (d) For nonresource use, consistent with ORS 215.794, if the land does not meet either definition; or
>
> (e) For a use other than farm use or forest use as provided in a goal relating to land use planning process and policy framework and subject to an exception to the appropriate goals under ORS 197.732 (2).

Presently, counties may designate rural resource lands through two methods. The first, and to date only process utilized, is by identifying land that does not meet the definition of “Agricultural Land” or “Forest Land” and thus is not subject to Goal 3 or 4 protection. These lands are typically designated in the county comprehensive plan as “nonresource lands” and may be developed for residential or other uses not allowed in farm and forest zones. Counties permit creation of new parcels in nonresource land zones that are smaller than typically is allowed in EFU or forest zones. Rural resource lands are still subject to the other Statewide Planning Goals which, among other matters, preclude the establishment or extension of public sewer systems and urbanization. Uses allowed on rural resource lands must also be compliant with county adopted Goal 5 inventories (e.g. wildlife habitat, wetlands, riparian corridors).

Ten Oregon counties have utilized this method to rezone land from EFU and forest. The primary purpose for nonresource designations appears to be the creation of rural residential parcels. [3] Between 2008 and 2018, DLCD identified 24 zone changes associated with nonresource designations. These zone changes did not require an exception from Statewide Planning Goals 3 or 4. Two zone changes were to rural commercial zones. Twenty-two zone changes were from EFU or forest zones to zones that list single-family residential dwellings as an outright allowed use. Residential minimum parcel sizes varied between 5, 10, and 20 acres.

[3] Clatsop, Crook, Deschutes, Douglas, Jackson, Josephine, Klamath, Linn, Lane, Wasco

The second path to rural resource land designation, which has not been used by counties, requires a more comprehensive evaluation and direct DLCD participation. Found in ORS 215.788 – 794, this option was created in 2009 as a result of the "Big Look." If used, this process would provide counties with an opportunity for corrective remapping of rural lands while considering the carrying capacity of those lands for development.

To begin the Big Look process, a scope of work for the reacknowledgement must be approved by DLCD. The process would then proceed as a legislative review of county lands to determine whether lands currently zoned farm and/or forest are consistent with the definitions of "agricultural lands" or "forest lands" as stated in the respective goals. Lands which are subject to a goal exception under ORS 197.732 must also be reviewed. After making determinations regarding what farm and/or forest lands do and do not meet the definition and analyzing carrying capacity, counties must submit findings to DLCD which will then be reviewed by LCDC in coordination with ODA and ODF.

Rural resource land designations do not require a goal exception from Statewide Planning Goals 3 or 4. However, the land is still subject to compliance with the other Statewide Planning Goals unless an exception is taken. For example, Goal 11 (Public Facilities and Services) prohibits extension of sewer service to rural areas, including rural resource lands, without an exception.

## Analysis and Findings

A robust rural resource lands policy will consider: capability, suitability, and carrying capacity. Capability refers to the ability of the land to produce an agricultural or forest product. This factor is primarily governed by soils and water availability. [4] Agricultural land capability class and forest productivity thresholds are useful tools for determining at what level of capability an agricultural or forest operation is deemed feasible. Suitability, another significant factor, refers to the ability to conduct viable farm or forest operations and is intimately related to the size and position of the operation's land base in relation to surrounding uses as well as accompanying infrastructure.[5] Carrying capacity refers to the level of use which can be accommodated and continued without impairment of natural resources productivity, the ecosystem and the quality of air, land, and water resources.[6] Additionally, carrying capacity, in relation to rural resource lands, should account for impacts to water supply, energy use, transportation facilities, risk and cost of wildfire, cost of public facilities and services, and the fiscal health of local government as outlined in ORS 215.791. Finally, state land use policy ensures that rural lands remain sparsely settled and are not utilized for urban levels of development and services consistent with Goals 11 (Public Facilities and Services), 12 (Transportation), and 14 (Urbanization).

The following section of the report will address the above considerations through a (1) Farm and Forest Resource Evaluation and (2) Carrying Capacity Evaluation. To begin, the Farm and Forest Resource Evaluation considers what lands might qualify as rural resource lands based upon the land's potential agricultural capability and woody biomass productivity. The Carrying

[4] Johnson, J. Oregon Department of Agriculture. (2007). *Identification and Assessment of the Long-Term Commercial Viability of Metro Region Agricultural Lands.* < https://multco.us/file/27992/download>.
[5] Ibid.
[6] Department of Land Conservation and Development, *Statewide Planning Goals: Definitions*.

Capacity Evaluation considers how available geospatial data can inform questions of if or how to proceed with development on rural resource lands.

Two basic methodological frameworks exist for using the carrying capacity analysis. One framework would use this analysis to exclude lands from rural resource redesignation so that they would remain as farm and forest lands. The other framework would use this analysis not to exclude lands from rural resource designation but instead to limit the resulting increases in non-farm and non-forest development activity that local governments could approve on such lands. It is possible that these two methodological frameworks might be used in conjunction as well—for example, using location within an urban reserve to exclude lands, while using existence of a wildlife habitat overlay to allow less development on designated rural resource lands than on similarly-designated lands not within the wildlife habitat overlay.

Regional differences were taken into consideration due to the substantial climatic differences in lands east versus west of the Cascades. For this report, Eastern Oregon includes all the counties east of the Cascades: Baker, Crook, Deschutes, Gilliam, Grant, Harney, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler. All other counties are considered to be in Western Oregon.

Consulting with state agencies has been and will continue to be a critical part of the process in creating a robust rural resource lands policy. Additional stakeholder conversations will be necessary to round out an informed discussion.

## Farm and Forest Resource Evaluation

As rural resource lands are primarily defined by their exclusion from definitions in Statewide Planning Goals 3 and 4, analysis was first conducted to determine which lands are agricultural or forest lands.

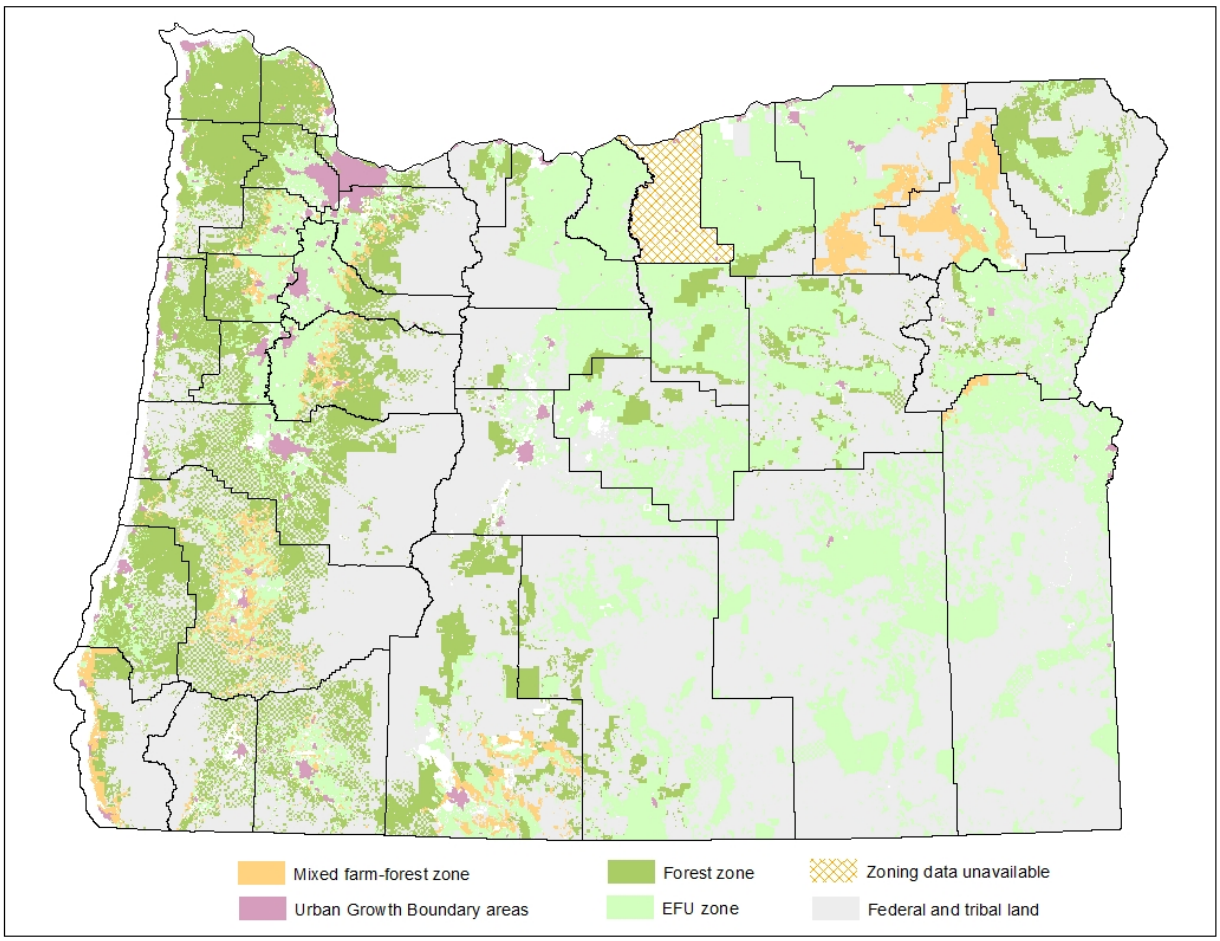
Farm and Forest Resource Evaluation goals:

1) Identify currently zoned farm and forest lands that meet capability and productivity thresholds.
2) Identify additional suitability factors that require further analysis to determine potential rural resource land designation qualifications.

## Area of Analysis

Geospatial analysis began by narrowing the area of analysis to those lands which are potentially eligible for rural resource land designation. The initial area of analysis includes land currently zoned EFU, forest, and mixed farm-forest (see Figure 1).[7] Federal lands not subject to the Statewide Planning Goals were subsequently removed from the farm and forest zoning layer. Additionally, because local governments often retain farm and forest zoning as an interim measure for urbanizable lands within an urban growth boundary (UGB), such lands were also removed from the layer. The resulting narrowed layer formed the extent of the area analyzed in the following processes.

**Figure 1: Exclusive Farm Use, Forest, and Mixed Farm-Forest Zoning on Non-Federal Lands**




[7] Digital zoning data was unavailable for Gilliam County.

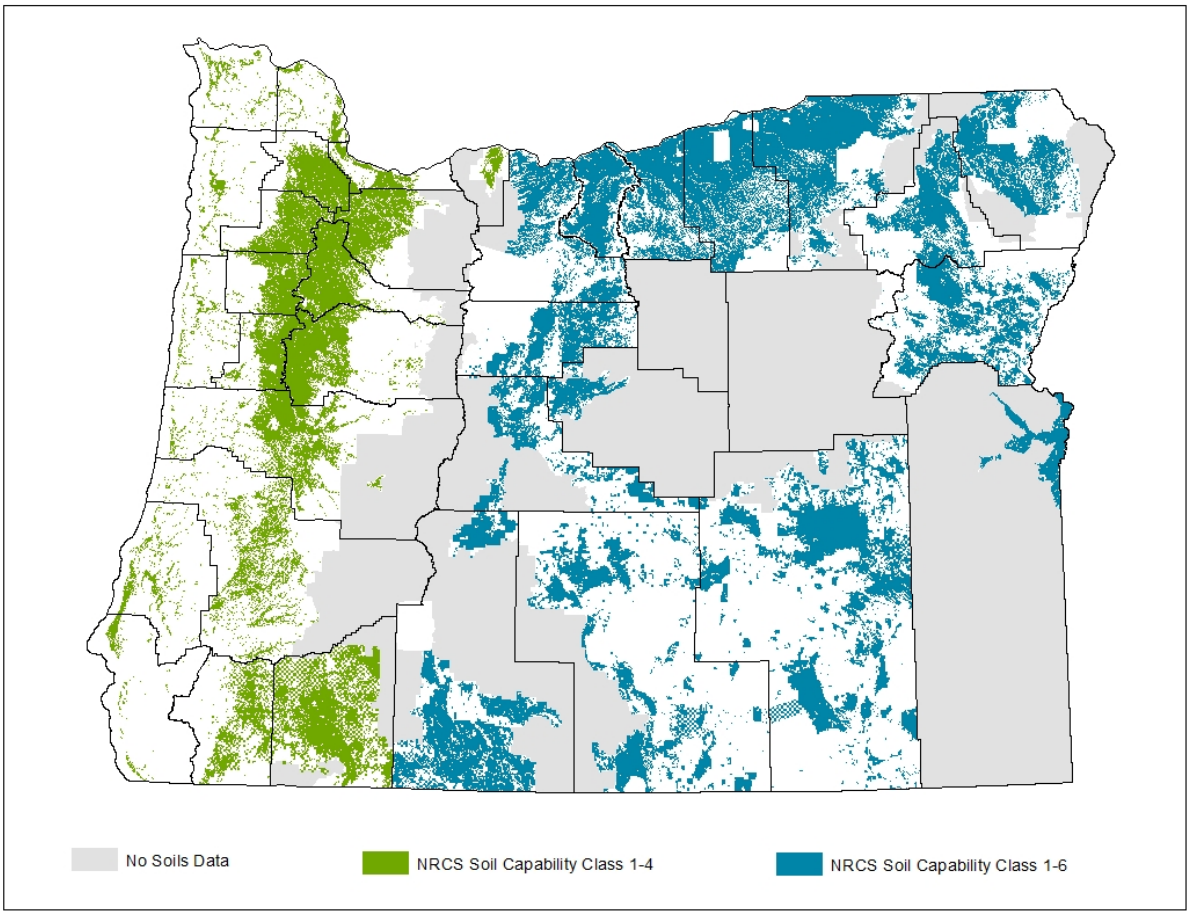
## Agricultural Land

Agricultural Capability Classification

"Agricultural land" as defined by OAR 660-033-0020(1) is land composed of Class I-IV soils in Western Oregon and Class I-VI in Eastern Oregon as determined by Natural Resource Conservation Service (NRCS) soils data. Per this definition, the NRCS Gridded Soil Survey Geographic dataset for Oregon was used to determine agricultural soil capability classes for both irrigated and nonirrigated classifications. The NRCS Gridded Soil Survey Geographic is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey depicting information about the types and distribution of soils across Oregon. Soil map units are linked to attributes in the National Soil Information System relational database, giving the proportionate extent of the component soils and their properties. Large areas, particularly in Eastern Oregon, have not yet been surveyed yet, although NRCS is actively working on private land in these areas which should be done in the next five years.

For the purposes of this analysis, lands were considered to be agricultural land if they had either an irrigated or nonirrigated capability class of I-IV/I-VI due to lack of consistent statewide data regarding existing, former, or potential future irrigation rights. See Figure 2 for results. The ability to irrigate soils requires a more detailed analysis when lands are proposed for rural resource designation.

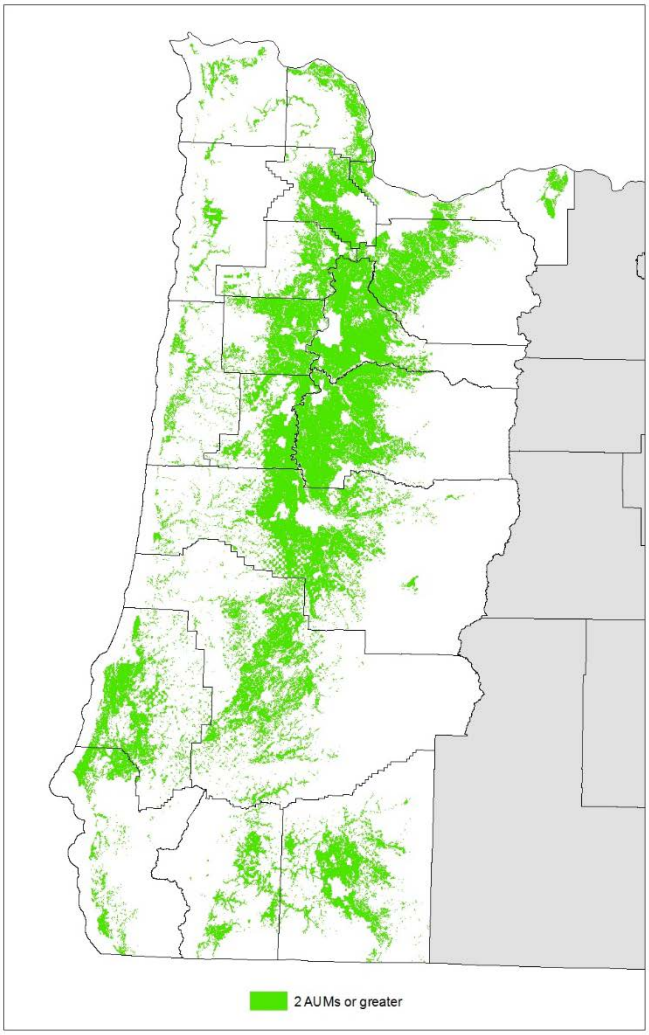
**Figure 2: NRCS Agricultural Capability Classes on Non-Federal Lands**



Suitability for Farm Use

In addition to NRCS soil capability classes, OAR 660-033-0020(1) further defines agricultural land as land in other soil classes that is suitable for farm use, taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land use patterns, technological and energy inputs required, and accepted farming practices. Land may also be suitable for farm use if it is necessary to allow farm practices to occur on nearby lands or if it is intermingled with lands in capability classes I-IV/I-VI within a farm unit. A property specific evaluation is most likely necessary to definitively ascertain whether or not a specific parcel meets the agricultural lands definition by these additional criteria, if the definition is not met by NRCS soil capability class.

**Figure 3: Animal Unit Months (AUMs) for Western Oregon on Non-Federal Lands**




*Animal Unit Months (AUMs):* Animal Unit Months are a measure of carrying capacity and land suitability for grazing and livestock production. AUMs are computed from the NRCS soils database as a way to assign pasture yields on a per acre basis for both irrigated and non-irrigated lands. Specifically, a single AUM unit denotes the amount of forage required to sustain one mature 1,000 pound cow and a calf up to 6 months of age, or equivalent (five sheep or goats, one bull or one horse), for one month. Two AUMs per acre has been considered suitable for grazing by ODA, which correlates with being capable of sustaining two cow/calf pairs, with the above stipulations, for an entire growing season. As AUMs are based on pasture yields, it is important to consider that the definition of pasture includes a high level of management which includes "periodic renovation and/or cultural treatments such as tillage, fertilization, mowing, weed control, and may be irrigated."[8] For this reason, AUMs are generally considered only applicable to Western Oregon, although there are some lands on the eastside which might have a level of management appropriate for AUM threshold application. For Eastern Oregon, pounds of forage per acre is the appropriate

[8] United States Department of Agriculture. *NRCS Range and Pasture Handbook: Glossary*. <https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17746.wba>.

measure but there has been no definitive determination as to what is a reasonable productivity threshold for grazing operations. However, ten acres per AUM is considered excellent pasture for native rangeland in Eastern Oregon. Many commercial livestock producers depend on seasonal pasture that is less productive than ten acres per AUM. Additional criteria outside of productivity threshold metrics are necessary to maintain viable livestock operations including a minimum number of acres and a variety of land types to accommodate seasonal changes. These factors may require additional consideration by counties. See Figure 3 for analysis results.

Questions also remain regarding the development of appropriate eastside threshold parameters. It will likely be necessary to work with ODA and NRCS to identify beneficial forage and determine a suitable quantitative metric threshold for eastside range productivity. Conclusions would need to be verified through on-the-ground field analysis and stakeholder input.

*Prime and unique farmland*: Prime and unique farmland soils are considered to be high-value farmland soils per ORS 215.710.[9] In a limited number of circumstances, land that is classified as prime or unique farmland does not have a capability class that would automatically make it agricultural land. However, these areas may be suitable for farm use. It should also be noted that NRCS has not mapped unique soils across Oregon as has been done in other states. For the purposes of this report, farmland was considered to be prime or unique regardless of whether it needs to be irrigated or drained to receive those soil designations.

*High-value farmland portions of American Viticultural Areas*: Portions of Oregon's American Viticultural Areas are considered to be high-value farmland per the definition in ORS 195.300(10).[10] High-value American Viticultural Area data is derived from United States Geological Survey ten-meter digital elevation models processed to identify cells with aspect, slope, and elevation values meeting certain criteria and falling within specific viticultural areas. If land falls within high-value farmland portions of the specified American Viticultural Areas, it may be suitable for farm use.

*Irrigation Districts*: Irrigation is critical to consider as irrigated agriculture uses an estimated 86 percent of the water diverted from surface water or pumped from groundwater sources in the

[9] Prime farmland is defined by NRCS as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses." Unique farmland is "land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables."
[10] ORS 195.300(10)(e) and (f): (10) "High-value farmland" means: (e) Land that is in an exclusive farm use zone and that is at an elevation between 200 and 1,000 feet above mean sea level, with an aspect between 67.5 and 292.5 degrees and a slope between zero and 15 percent, and that is located within: (A) The Southern Oregon viticultural area as described in 27 C.F.R. 9.179; (B) The Umpqua Valley viticultural area as described in 27 C.F.R. 9.89; or (C) The Willamette Valley viticultural area as described in 27 C.F.R. 9.90. (f) Land that is in an exclusive farm use zone and that is no more than 3,000 feet above mean sea level, with an aspect between 67.5 and 292.5 degrees and a slope between zero and 15 percent, and that is located within: (A) The portion of the Columbia Gorge viticultural area as described in 27 C.F.R. 9.178 that is within the State of Oregon; (B) The Rogue Valley viticultural area as described in 27 C.F.R. 9.132; (C) The portion of the Columbia Valley viticultural area as described in 27 C.F.R. 9.74 that is within the State of Oregon; (D) The portion of the Walla Walla Valley viticultural area as described in 27 C.F.R. 9.91 that is within the State of Oregon; or (E) The portion of the Snake River Valley viticultural area as described in 27 C.F.R. 9.208 that is within the State of Oregon.

state, with 40 percent of Oregon's farms relying on some level of irrigation.[11] The state requires irrigation districts to measure and report water use. Water rights in irrigation districts are managed by the district and are subject to frequent changes. The current irrigation districts GIS data layer available, provided by OWRD, is incomplete due to a lack of reporting. Further development of this dataset would provide decision makers with a better understanding of where governmental and physical water infrastructure may currently exist for agricultural uses. If land is inside an irrigation district, it may be inappropriate to designate it as rural resource land.

*Irrigated Places of Use*: The OWRD Places of Use dataset provides basic information on where the water right is being used and what it is being used for (e.g., irrigation, construction, recreation). All current and individually held water rights are included in the dataset except where held by irrigation districts, applications, temporary transfers, instream leases, and limited licenses. This data, updated on a regular basis, gives decision makers an understanding of where water is currently being reported as used for agricultural and forest uses. If land holds an irrigated water right, it may be inappropriate to designate it as rural resource land.

## Forest Land

Woody Biomass Productivity Capability

OAR 660-006-0005(7) defines "forest lands" and 660-006-0010 provides a data hierarchy for evaluating biomass productivity capability. Productivity capability data was evaluated in this order, with data sources lower in the hierarchy used only when the primary data was unavailable:

1. NRCS productivity data
2. DOR Western Oregon site class data
3. USDA Forest Service plant association guides
4. Other information determined by the State Forester to be of comparable quality. In this case, U.S. Forest Service (USFS) Historic Vegetation was utilized as recommended by ODF.

*NRCS productivity*: Annual woody biomass production capability was determined through analysis of a layer provided by ODF, which contains NRCS Statewide Forest Productivity data. To compute annual wood production, productivity in cubic feet per acre per year was calculated as a weighted average, based on the percentage makeup, of the productivity ratings for the soil components which comprise a map unit from NRCS soils data. Where productivity calculations were available for multiple different tree species, the highest value was used. Unmapped areas are those that did not have a productivity rating available. A lack of productivity rating often, but not always, corresponds to non-forest areas. Non-forest areas may be capable of producing the minimum capability threshold even if they were not evaluated by NRCS for forest productivity.

Annual woody biomass production capability thresholds, 50 cubic feet per acre per year (cfay) or greater based on NRCS soils data using a weighted average calculation in Western Oregon and 20 cfay in Eastern Oregon, were selected based on information gathered during the SORPP process, input from ODF staff, and review of case law. The State of Oregon has

[11] Oregon Water Resources Department. (2017). *Oregon's Integrated Water Resources Strategy*. <https://www.oregon.gov/owrd/wrdpublications1/2017_IWRS_Final.pdf>.

consistently used a threshold of 20 cfay to define commercially viable forestland in Eastern Oregon and has either used a 20 or 50 cfay threshold to define commercial viability in Western Oregon. Current Forest Practices Act Reforestation Rules (OAR 629-610-0010) requires reforestation on any land capable of producing 20 cfay after a timber harvest has occurred. Land with a NRCS productivity rating of 20 cfay or greater for Eastern Oregon and 50 cfay or greater for Western Oregon is most likely "forest land" and not eligible for designation as rural resource lands.

*DOR site class maps*: For the purposes of property taxation, Oregon DOR assigned values to forestland in Western Oregon by classifying land into eight productivity classes. Oregon DOR's land productivity classifications, provided by ODF, indicate the average productivity class for 40-acre blocks of land in Western Oregon, as surveyed in the 1960s and 1970s. This data only exists for the west side and thus is not applicable to Eastern Oregon. DOR data has only been utilized when NRCS productivity data is unavailable. Land that falls within a DOR Forest classification capable of producing 50+ cfay in Western Oregon are most likely forest land as defined in OAR 660-006-0005(7) and subject to Goal 4 protection.

*USDA Forest Service plant association guides*: The use of USDA Forest Service plant association guides requires a field survey of plants within a specific parcel or area. The field observations would be cross-referenced with the guide in order to determine the "association type" of the field site. Using the guide, productivity could be inferred from the survey results. Plant association guides are not available statewide. Plant association guides may be useful when evaluating property specific zone change applications but have not been utilized as part of this analysis due to the need for field verification.

*USFS Historic Vegetation*: The U.S. Forest Service layer for Historic Vegetation comes from a 1930s forest resources survey which was later digitized.[12] The original vegetation types were sorted by ODF into "forest" and "non-forest" categories, where juniper was treated as "non-forest" for these purposes. Although this dataset does not quantitatively assess productivity, ODF considers the 1930s forest resources survey to be a high-quality data source which identifies lands that were historically capable of sustaining productive forest. USFS Historic Vegetation data should only be utilized when NRCS productivity data and DOR data are unavailable. Land that has a USFS Vegetation category of "forest" may be capable of forest productivity meeting the thresholds utilized in evaluating NRCS and DOR data.

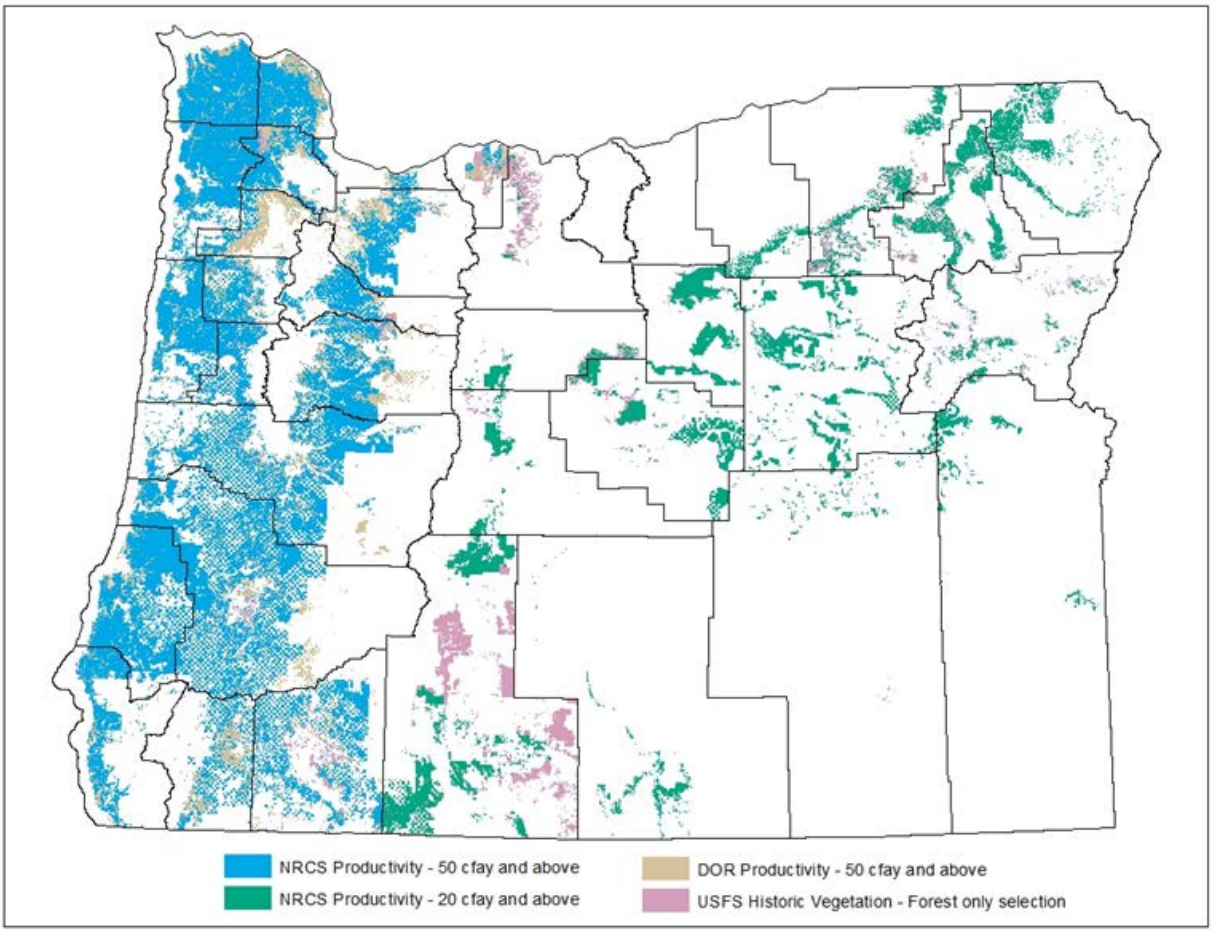
See Figure 4 for results.

<u>Suitability for Forest Use</u>

Suitability for forest use is tied to woody biomass productivity but also includes "adjacent or nearby lands which are necessary to permit forest operations or practices." Adequately addressing the suitability aspect of forest land reinforces the need for a detailed local analysis due to the inherent data gaps and limitations present in geospatial analysis such as was conducted for this report.

[12] United States Forest Service. "The 1930s Survey of Forest Resources in Washington and Oregon." <https://www.fs.fed.us/pnw/pubs/pnw_gtr584.pdf>.

**Figure 4: Non-Federal Forest Lands Derived from NRCS, DOR, and Historic Vegetation Data**




Natural Resources

The definition for “forest lands” in OAR 660-006-0005(7)(b) includes “other forested lands that maintain soil, air, water and fish and wildlife resources.” To address this portion of the definition, data presented under the following Carrying Capacity Evaluation section should be considered. Additionally, agricultural lands may provide similar natural resource benefits but this consideration is not addressed within the current definition of agricultural land.

## Conclusions from the Farm and Forest Resource Evaluation

DLCD has identified several datasets that are useful in determining which lands should continue to be protected under Statewide Planning Goals 3 and 4. NRCS-derived capability and productivity data is particularly useful due to the extent and quality of the data for determining both farm and forest land, with improvements being made continuously. As stated above, the NRCS soils data will be updated within the next five years to include areas where data does not currently exist, most notably in Eastern Oregon.

Regarding grazing potential, the 2 AUMs and greater threshold denoting viable pastureland on the westside is a useful metric for analysis, although the high level of management defining

pastureland may allow for some application of this metric to lands on the eastside meeting the pasture definition. A significant data omission is eastside forage productivity threshold data. This will likely consist of working with ODA and NRCS to determine beneficial forage species and productivity levels associated with soil capabilities. Consideration should also be given to whether AUM or beneficial forage thresholds should be added to the definitions of agricultural and forest lands.

A significant opportunity exists to incorporate natural resource data into farm and forest definitions to account for the considerable benefits provided by Oregon's vital natural resources. Information in the Carrying Capacity Evaluation section may be useful in this endeavor.

## Carrying Capacity Evaluation

A carrying capacity evaluation requires analysis of multiple factors to determine whether potential rural resource land should continue to be protected as resource land in order to meet other Statewide Planning Goals or whether potential rural resource lands are suitable for development and in what form and density. Unless the process in ORS 215.788-794 is utilized, counties are not required to conduct a formal carrying capacity evaluation when designating rural resource lands although they do have to demonstrate compliance with the other Statewide Planning Goals.

The rural resource lands approval option in ORS 215.788-794 does require a formal carrying capacity analysis and is the basis for evaluation of potential rural resource lands under this section. DLCD has reviewed available data that can be used to evaluate the effect of development on:

- Fish, wildlife habitat, and other ecologically significant lands;
- Water quality or the availability of water supply; and
- Natural hazards including wildfire, flooding, and landslides.

In addition, ORS 215.791 requires consideration of:

- Ensuring that development will be rural and not urban in character;
- Impacts to farm and forest uses or practices;
- Impacts to development in urban areas;
- Energy use;
- State or local transportation facilities; and
- The cost of public facilities or services and the fiscal health of a local government.

Spatial data is not readily available or easily analyzed for these factors on a statewide scale. However, possible considerations for evaluation are discussed in this section as these issues are critical to evaluating the type and form of development on rural lands.

### Fish, Wildlife Habitat, and Other Ecologically Significant Lands

The protection of natural resources is considered in the definition of Forest Lands in the phrase: "other forested lands that maintain soil, air, water and fish and wildlife resources" as well as in

Statewide Planning Goal 5. Due to the wording in both the Forest Lands definition and Goal 5 there is variation in how counties apply these rules—regarding what resources should be considered, how they should be evaluated, how to determine resource significance, and how to secure protections. In addition, many comprehensive plans and the accompanying Goal 5 resource inventories across the state have not been updated since LCDC's original acknowledgement in the 1980s. As a result, the best available natural resource data is not always included in local comprehensive plans or utilized when making land use decisions. Thus rural resource designations may create conflicts between newly allowed uses and natural resources. Due to these circumstances, it may be appropriate to evaluate rural resource lands using the best available data to avoid or minimize these potential conflicts, which may include a consideration of data beyond the outdated acknowledged Goal 5 inventories. In addition, it may be appropriate to consider conservation values, including restoration of natural resources, when determining the appropriate density and location of development.

Oregon Conservation Strategy

As ODFW is the agency responsible for developing the Oregon Conservation Strategy, DLCD worked with ODFW in assessing which natural resource GIS data would be most useful to address the rural resource lands issues. Although ODFW is charged with the protection and enhancement of fish and wildlife species, the agency has very limited authority over the habitat on which fish and wildlife depend. To address these cross-boundary management issues ODFW updated the Oregon Conservation Strategy[13] in 2016 using the best available scientific information to inform fish and wildlife conservation planning efforts statewide. This statewide strategy provides a shared set of priorities with corresponding recommended voluntary actions and tools. The natural resource geospatial data referenced in this section has been selected in consultation with ODFW, using the Conservation Strategy as guidance.

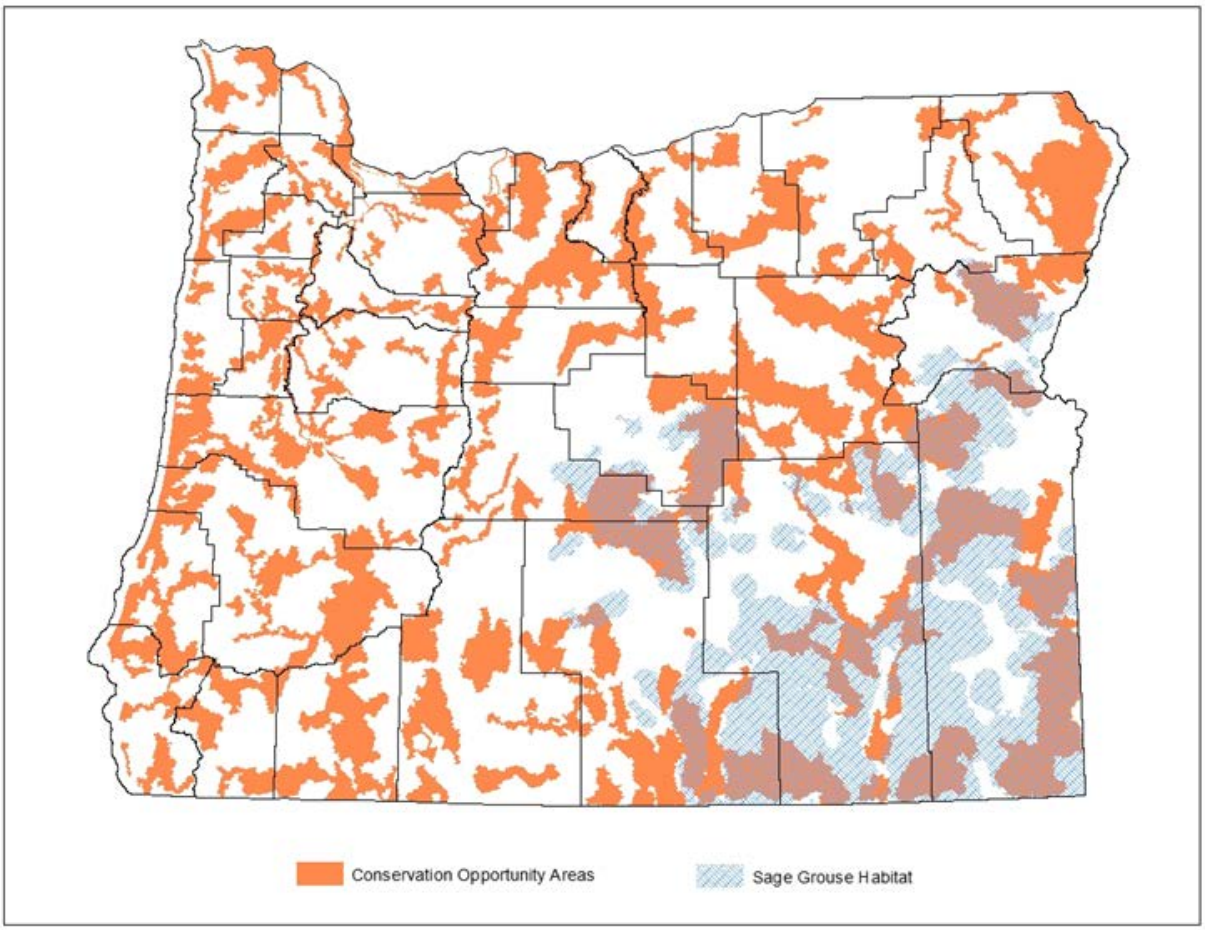
*Conservation Opportunity Areas (COA)*: A component of the Oregon Conservation Strategy, Conservation Opportunity Areas (see Figure 5), encompass 206 priority conservation areas across the state. These areas are places where broad fish and wildlife conservation goals would best be met. COAs are generally either areas of high biodiversity, areas with unique habitat values, or areas with known restoration needs. All COAs have an associated COA profile, providing details about the area's Conservation Strategy priorities, recommended actions consistent with local priorities and ongoing conservation efforts.[14] For example, Crater Lake's COA profile details recommended conservation actions: "maintain or enhance wetland and wet meadow habitat" and "work with national and regional partners to provide Conservation Strategy outreach."

Although COAs were primarily developed to focus investments, there is precedent for using this data in making land use decisions. ORS 215.791, developed as part of "The Big Look" in 2009, requires counties designating rural resource lands to consider the 2006 version of the Oregon Conservation Strategy when evaluating whether such lands contain ecologically significant natural areas or resources. As previously mentioned, counties have not utilized "The Big Look" option when designating rural resource lands. Consideration of the current version of the Oregon Conservation Strategy when designating rural resource lands would help ensure that lands of ecological significance not identified in adopted Goal 5 inventories are zoned

[13] The Oregon Conservation Strategy site. <http://www.oregonconservationstrategy.org/>.
[14] Find COA profiles here: <http://oregonconservationstrategy.org/conservation-opportunity-areas/>.

appropriately for natural resource conservation. COAs may also be useful as a screening tool which may allow for those lands which fall inside a COA to trigger on-the ground site-specific natural resource analysis in consultation with ODFW before development may be considered. An on-site ODFW evaluation may be useful in determining the appropriate density and form of development (e.g. require large minimum lot sizes or clustering of structures to avoid sensitive habitat).

**Figure 5: Conservation Opportunity Areas and Sage Grouse Habitat**




*Strategy Habitats*: The 2016 Oregon Conservation Strategy identifies 11 Strategy Habitats[15] 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's (INR) Oregon Biodiversity Information Center (ORBIC) at Portland State University was contracted to

[15] "Oregon Conservation Strategy: Strategy Habitats." <http://oregonconservationstrategy.org/strategy-habitats/>.

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). Strategy Habitats may be evaluated during the consideration of eligible rural resource lands to identify those lands no longer qualifying as farm or forest land but that may have a significant conservation priority to address. This dataset can also be evaluated as part of any potential updates to existing Goal 5 resource maps and, based on the specific habitat or species, a more programmatic assessment of conflicting uses can be evaluated based on the rural resource lands proposed allowed uses. Additionally, ORBIC data, which informs much of the Conservation Strategy's geospatial data, could be useful in making more detailed spatial inquiries, although it is only available behind a $5,000 paywall, making it substantially more difficult to gain access to. Strategy Habitat data is intended to provide a broad view for these habitat types using the best available geospatial data. However, conditions may vary by site, watershed, or ecoregional level based on differences in soil, climate, and management history. Therefore, local conditions will need to be considered when determining site-appropriate conservation actions.

Oregon Fish Habitat Distribution

Oregon Fish Habitat Distribution maps provide data on the distribution of high priority fish species habitat. This data describes areas of suitable habitat believed to be used currently or historically by native or non-native fish populations. The term "currently" is defined as within the past five reproductive cycles. Historical habitat includes suitable habitat that fish no longer access and will not access in the foreseeable future without human intervention. This information is based on sampling, the best professional opinion of ODFW or other natural resources agency staff biologists or modeling. Historical habitat distribution data is not comprehensive.

While most comprehensive plans include a riparian buffer for perennial and intermittent streams, there are varying datasets and analysis used to apply appropriate protections. Assessment of current fish distribution, through the evaluation of this dataset, is a useful tool to gauge potential conflicts for streams that may have state or federally listed aquatic resources. Rural resource lands with aquatic habitats necessary for sustaining those aquatic resources for high priority fish species could apply more protective riparian protections (i.e., larger riparian buffers to avoid or minimize conflicts as a result of the new allowed uses). This dataset is useful in identifying important fish bearing streams and applying appropriate riparian buffers (i.e., Goal 5 Riparian Corridors) to avoid and minimize impacts to those aquatic resources, including many that may be listed as threatened or endangered.

Greater Sage-Grouse Habitat

Greater Sage-Grouse habitat is a distinctive wildlife resource subject to a multiplicity of threats across a wide landscape spanning several states on both public and private land. Due to the cross-boundary nature of sage-grouse management, partnership and cooperation among diverse stakeholders with accompanying voluntary conservation measures is key. In response to collaborative conservation planning for sage-grouse and the need to encourage responsible economic development, the Greater Sage-Grouse Conservation Assessment and Strategy, Oregon Sage-Grouse Action Plan, and Sage-Grouse Mitigation Program were developed. Through these planning and program efforts data were derived to map significant sage-grouse habitat and improved representation of vegetative components within sage-grouse habitat that can both be used to prioritize locations for proposed development, conservation, restoration, and mitigation actions. Specifically, the goal of these datasets is to protect essential sage-grouse habitats to meet habitat and population objectives. These data were derived based on proximity to sage-grouse leks[16] and as such may exhibit bias towards breeding and nesting areas.

To supplement this data, the Sage-Grouse Development Siting Tool[17] is an interactive application that allows prospective developers to input project data in order to get a coarse level perspective of potential project impacts to sage-grouse and their habitats. The tool utilizes best available remotely-sensed data on existing development, vegetation condition, and other land uses to provide information to help developers site projects within and adjacent to sage-grouse habitat. Prospective developers should contact the ODFW to discuss results of the Sage-Grouse Development Siting Tool and other important avoidance, minimization, and mitigation requirements contained within the Greater Sage-Grouse Conservation Strategy for Oregon (OAR 635-0140). The Oregon Sage-Grouse Data Viewer and Sage-Grouse Development Registry Viewer are also tools available through the Oregon Explorer website that are aimed at providing information about sage-grouse to help conservation and development action placement and track development actions in and around sage-grouse habitat. Additional tool(s) may be developed to provide landscape level information to help strategically place mitigation actions to increase potential benefits to sage-grouse.

Greater Sage-Grouse habitat (see Figure 5) is already considered a Goal 5 resource in the DLCD rule (OAR 660-023-0115). Maps are directly applied in county reviews unless a local jurisdiction goes through Goal 5 process, which has not yet occurred in any counties with such habitat.

Big Game Habitat

Big Game Habitat, including winter range, is already protected as a Goal 5 resource in local comprehensive plans across the state. However, many counties have not updated their big game maps since comprehensive plan acknowledgment. Additionally, comprehensive plans often do not specifically identify sensitive migration corridors. Protecting these areas is critical to maintaining habitats which sustain viable big game populations in Oregon. ODFW is working on

[16] (j) “Lek” means an area where male sage-grouse display during the breeding season to attract females (also referred to as strutting-ground). OAR 660-023-0115(3)
[17] Oregon Explorer: Sage-Grouse Development Siting Tool. <https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=sage_grouse_dev_siting>.

habitat connectivity mapping which will be available within the next three years which will further identify key conservation areas to support deer and elk in Oregon.

Big Game Habitat data is broken into Western Oregon Big Game Habitat and Eastern Oregon Big Game Habitat. Western Oregon Big Game Habitat contains two datasets: 1) Columbian White-tailed Deer (CWTD) – Occupied Habitat 2015 and 2) Western Oregon Deer and Elk Habitat. Columbian White-tailed Deer (CWTD) – Occupied Habitat 2015 covers critical, year-round habitats including brushy deciduous trees and shrubs and/or oak savanna habitats providing functions and values necessary to satisfy all CWTD life history needs. Much of these habitat areas, although impacted by anthropogenic development, are the only remaining available habitat for Columbian White-tailed Deer in Oregon. Western Oregon Deer and Elk Habitat is not inclusive of all big game species but it further categorizes habitat based on how Columbian black-tailed deer, Columbian white-tailed deer and Roosevelt elk use the habitat. Generally, deer and elk need habitat which provides a combination of food, water, and security to survive and reproduce. Abundance, distribution, and connectivity of these habitats are crucial to species survival and may vary seasonally depending on a specific species dependence on migratory or non-migratory behavior to fulfill life history requirements. Habitats supporting Black-tailed deer exhibiting a predominately migratory life history are subdivided into Summer Concentration Habitat and Winter Concentration Habitat. Habitats supporting Black-tailed deer and Elk exhibiting a predominately non-migratory life history are subdivided into Year-around Major Habitat and Year-round.

Western Oregon Deer and Elk Habitat are broken down as follows:

- Peripheral Habitat are those areas where the presence of deer and elk are considered in conflict with primary land uses and are described as Impacted Areas.
- Winter Concentration Areas are seasonal concentration areas providing essential and limited functions and values (e.g. thermal cover, security from predation and harassment, forage quantity, adequate nutritional quality, escape from disturbance, etc.) for concentrated migratory deer or elk typically from November through April.
- Summer Concentration Areas are seasonal concentration areas providing essential and limited functions and values (e.g., thermal cover, security from predation and harassment, forage quantity, adequate nutritional quality, calving and fawning areas, etc.) for concentrated migratory deer or elk typically from May through October.
- Year-round Major Habitat includes areas identified and mapped as providing essential functions and values (e.g., thermal cover, security from predation and harassment, forage quantity, adequate nutritional quality, calving and fawning areas, etc.) for non-migratory deer or elk.
- Year-round Peripheral Habitat includes areas identified and mapped as providing important but not essential functions and values (e.g. cover, forage, etc.) for deer or elk.
- Impacted Areas are identified by anthropogenic development such as areas within UGBs, city limits, otherwise determined to be less suitable habitat for deer or elk because of conflicts with proximity to humans, disease, damage, or public nuisance resulting from use by local or resident deer or elk.

Eastern Oregon Big Game Habitat is comprised of two datasets: Eastern Oregon Deer Winter Range and Eastern Oregon Elk Winter Range.[18] Eastern Oregon 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. Data are current to 2009 except for updates made in 2012 to portions of The Dalles and Heppner Districts. Eastern Oregon Elk Winter Range includes a single set of polygons which encompass the general outline of elk winter range for eastern Oregon, east of the crest of the Cascades. The Oregon Department of Fish and Wildlife considers Winter Range to be that area normally occupied by deer from December through April. The data were assembled in 2009 with updates for The Dalles District in 2012.

Big game habitat data maps were not provided as part of this report due to the complexity and overlap of big game data layers. However, this data remains available for county use and it would be beneficial for DLCD to continue working with ODFW on appropriate application methods. While most comprehensive plans include Goal 5 considerations for big game, the acknowledged maps and implementing ordinances have typically not been updated to use the best available data and apply necessary protections to avoid conflicting uses. 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.

Wetlands

Wetlands provide vital ecosystem services including flood storage and water supply, water quality improvement, food-web support, wildlife and fish habitat, as well as aesthetics, recreation, education. Oregon has lost a significant portion of its wetlands to other land uses, however these habitats remain of critical importance across the state and are identified as a Strategy Habitat in the Oregon Conservation Strategy.[19] Wetlands are already identified as significant Goal 5 resources in many local comprehensive plans across the state. However, many counties have not updated wetland inventories since original adoption in the 1980s and significant wetlands on acknowledged Goal 5 maps may not reflect current data related to water quality or wildlife habitat. [20] Improved geospatial data is available to assist in evaluating priority wetland areas and how the proposed new uses from development in rural resource zones may conflict with many of the ecosystem services they provide. Datasets which should be utilized in evaluating wetland considerations includes a combination of the National Wetland Inventory (NWI), Statewide Wetland Inventory (SWI), and Local Wetland Inventories (LWI). Using more recent data in rural resource designations would help avoid conversion of wetlands and direct development to suitable locations.

The U.S. Fish and Wildlife Service has developed a National Wetland Inventory as the principal agency tasked with national wetland management. The NWI delineates the areas of wetlands and surface waters based on an aerial data gathering methodology where wetlands were identified by their vegetation, visible hydrography and geography. The NWI dataset is

[18] ODFW Data Clearinghouse. Oregon Department of Fish and Wildlife. “ODFW Deer and Elk Winter Ranger for Eastern Oregon (2012).”
[19] Oregon Department of State Lands. “Wetland Planning and Conservation.” <https://www.oregon.gov/dsl/WW/Pages/WetlandConservation.aspx
[20] Ibid.

supplemented by the U.S. Geological Survey's National Hydrography Dataset, primarily for linear wetland and water surface features. Although they may be key, certain types of "farmed wetlands" are excluded from the dataset by policy. Due to the limitations and gaps inherent in this data gathering methodology, detailed on-the-ground site inspection is recommended. This dataset is to be integrated with the Oregon Department of State Lands' Statewide Wetland Inventory.

The Oregon Department of State Lands (DSL) is currently developing a Statewide Wetland Inventory which is an amalgamation of the NWI and DSL-approved LWI as well as the U.S. Geological Survey's National Hydrological Dataset and the U.S. Department of Agriculture National Resources Conservation Service Soil Survey data. Again, due to the limitations and gaps inherent in this data gathering methodology, detailed on-the-ground site inspection is recommended.[21]

The DSL SWI should be evaluated along with other geospatial datasets referenced above, such as Strategy Habitat or COAs, to assist in prioritizing and protecting significant wetlands, such as those providing a local watershed need or critical wildlife function. Prioritizing wetlands that are of particular importance to conservation actions should be considered and those conflicting uses be avoided or minimized to reduce potential conflicts (e.g., larger buffer around significant wetland). Consideration of this dataset with the COA overlay, for example, may also provide opportunities to develop incentives to either avoid or minimize development impacts to significant wetland areas or develop incentives to address or implement the conservation priorities.

Other Goal 5 resources

Goal 5 inventories also include natural areas, open space, scenic views and sites, federal wild and scenic rivers, Oregon scenic waterways. These areas may also be ecologically important. DLCD has not identified any new data layers that would better define these areas but they should be protected in accordance with current Goal 5 requirements in state rules and county comprehensive plans and land use ordinances.

Conclusion for fish, wildlife habitat, and other ecologically significant lands

A diversity of natural resource geospatial data exists across the state, although the extent, scalability, and applicability can vary considerably. It is likely beneficial to incorporate a subset of natural resource data into farm and forest definitions to appropriately recognize the conservation values provided by these resources. It will likely be beneficial for DLCD to institutionalize collaboration and communication with ODFW and other natural resource management agencies to determine how to best integrate their data for policy implementation. DLCD can utilize current natural resources data in consultation with the respective agencies while working with these same agencies to improve data for land use planning application.

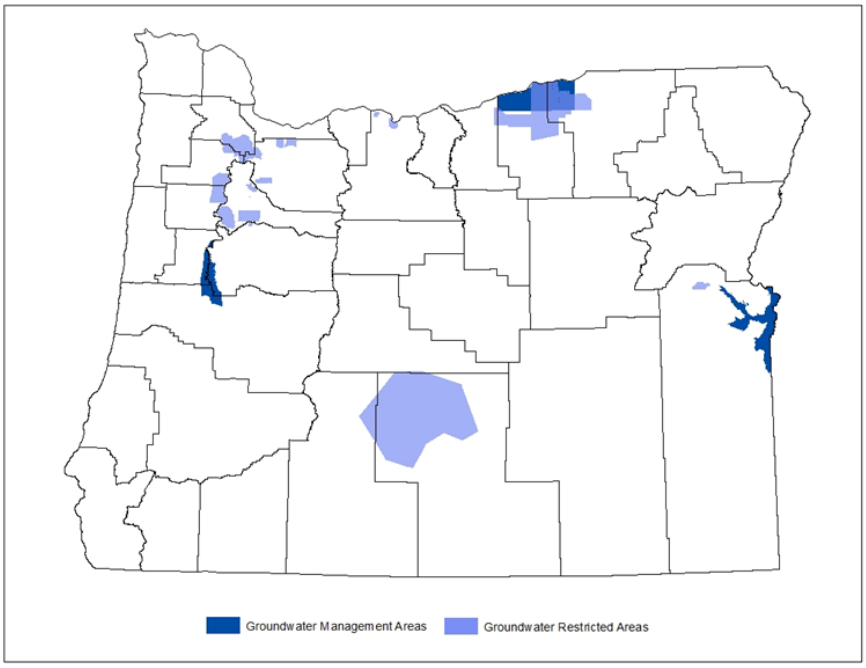
[21] Oregon Department of State Lands. "Statewide Wetlands Inventory." <https://www.oregon.gov/dsl/WW/Pages/SWI.aspx>.

## Water Quality and Quantity

Healthy watersheds and working lands are intimately connected. Degraded watersheds can negatively impact the economic viability of rangeland, farms, and forests. When sustainable management practices are employed, agricultural and forest lands provide valuable services and assets related to maintaining adequate water quality and quantity by supporting critical watershed functionality. Additionally, conversion of working lands to development can adversely influence water quality and quantity.[22] Rural development primarily affects water quality by increasing nutrient and bacterial inputs via faulty septic systems and increased road traffic.

Listed in this section are GIS datasets which may be of particular use when considering rural resource land designations.[23] Additional water availability considerations can be found in the "Agricultural Lands" section above. Development on lands which falls within multiple layers may have a greater chance of negatively impacting water quality and/or quantity and will likely trigger greater scrutiny in finer scale analyses.

**Figure 5: Groundwater Management Areas and Groundwater Restricted Areas**




<u>Groundwater Management Areas</u>

Oregon revised statute 468B.180 requires DEQ to declare a Groundwater Management Area (GWMA) when DEQ groundwater assessments reveal area-wide groundwater contamination problems at consistently high levels. Oregon currently has three groundwater management areas (Northern Malheur County, Lower Umatilla Basin, and Southern Willamette Valley) which exhibit widespread nitrate contamination (see Figure 6). Each area has developed a voluntary action plan to reduce nitrate concentrations in groundwater. This dataset gives decision makers an understanding of where widespread groundwater contamination currently exists and should likely trigger additional analysis regarding negative impacts on water quality indicators based on land use type and water quality issues.

[22] Sierra Nevada Alliance. (2008). *Planning for Water-Wise Development in the Sierra: A Water and Land Use Policy Guide*. <https://sierranevadaalliance.org/wp-content/uploads/2014/02/PlanningforWaterWiseDevelopment.pdf>.
[23] Merenlender, A. M. and Lohse, K. A. *Planners Guide: Chapter 9: Impacts of exurban development on water quality*. <https://ucanr.edu/sites/merenlender/files/143668.pdf>.

Groundwater Restricted Areas

The Oregon Water Resources Department has classified several areas where groundwater uses are restricted in order to prevent excessive groundwater decline, restore aquifer stability, and preserve aquifers with limited storage capacity for designated high public value uses. Limitations usually apply only to the specific aquifer that has had water-level declines or other documented issues, allowing for some occasions where groundwater may still be available at a different depth from a different aquifer. It is critical to note that water availability is dynamic as new uses for water are permitted. Even if water is shown to be unavailable, there may be conditional allowance for a limited number of specific uses to be permitted. Additionally, water availability is based on estimates with variable data reliability.[24] This dataset gives decision makers an understanding of where development may further strain water availability. Figure 6 shows the locations of groundwater restricted areas.

**Natural Hazards**

Local mitigation planning is vital to creating a disaster resilient Oregon. The 2015 Oregon Natural Hazards Mitigation Plan identifies eleven natural hazards in the state. For this review, natural hazards were considered based upon availability of relevant datasets. Wildfire, floodplains, and landslides were determined to be the most pertinent hazards to consider in relation to rural resource land designations. Other natural hazards such as tsunamis, earthquakes, and volcanic hazards might be useful for local planners to evaluate, depending on their respective location. Data and information associated with this section should be used to inform how to most appropriately locate and cluster rural development to avoid lands subject to natural hazards while minimizing effects on farm and forest uses and reducing costs of public facilities and services.

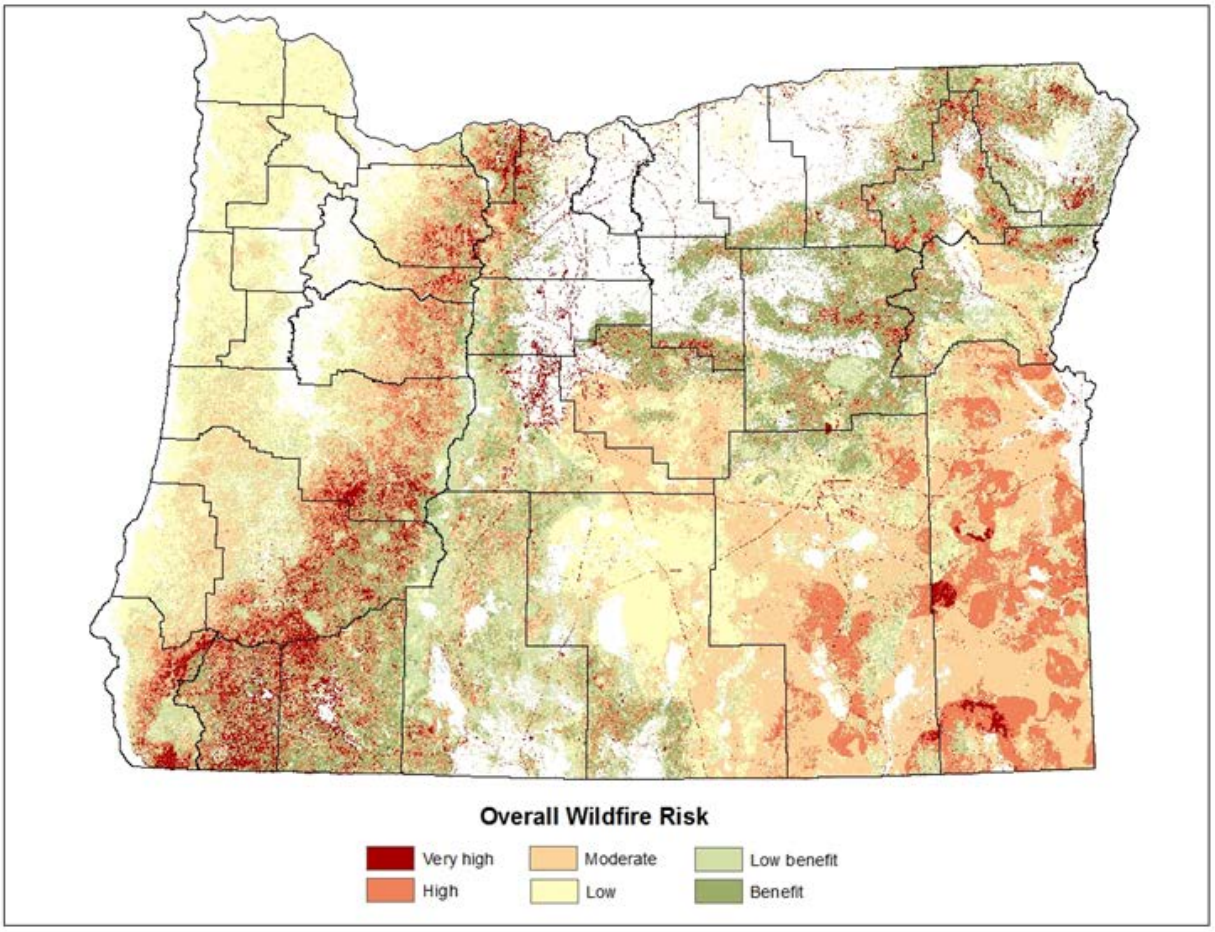
Wildfire Risk

Large, highly destructive wildfires are becoming increasingly common across the western United States including Oregon, extracting heavy economic, ecological, and social costs.[25] Additional rural development can increase vulnerability to wildfires at a time when wildfire risk is already at record heights.[26] Fire suppression is a costly endeavor with structural defense being by far the most significant of these costs.[27] The US Forest Service estimates that between 50 and 95 percent of its firefighting spending is used to defend residential structures.[28] In 2017 alone, $454 million was spent fighting wildfires across 665,000 acres statewide, with $38 million coming from state coffers.[29] Increasing development in high and very high risk areas will only serve to exacerbate rising suppression effort costs.[30] Wildfire not only causes these direct

[24] Oregon Water Resources Department. (2002). *Determining Surface Water Availability in Oregon*. <https://www.oregon.gov/OWRD/WRDPublications1/DeterminingSurfaceWaterAvailabilityInOregon.pdf>.
[25] Fox, A., 1000 Friends of Oregon. (2018). *A New Vision for Wildfire Planning: A Report on Land Use and Wildfires*. <https://www.friends.org/sites/friends.org/files/images/1kf_wildfire_paper_pdf_-_final-1.pdf>.
[26] Ibid.
[27] Fox, A., 1000 Friends of Oregon. (2018). *A New Vision for Wildfire Planning: A Report on Land Use and Wildfires*. <https://www.friends.org/sites/friends.org/files/images/1kf_wildfire_paper_pdf_-_final-1.pdf>.
[28] Ibid.
[29] Ibid.
[30] Ibid.

impacts, damaging structures and valuable resources, but can lead to secondary hazards including floods and landslides. Soil can become impermeable post-burning, increasing runoff and ultimately the risk of post-wildfire floods and landslides.[31]

**Figure 6: Overall Wildfire Risk**




Pyrologix, an organization contracted by the USFS to provide specialized fuel characterization and wildfire modeling services, has developed the most up-to-date, comprehensive quantitative data regarding wildfire hazard and risk to highly valued resources and assets as part of the USFS Pacific Northwest Region Quantitative Wildfire Risk Assessment. In consultation with the Oregon Department of Forestry, Pryrologix's Overall Wildfire Risk data, which can be found on Oregon Explorer, was deemed to be the most appropriate to consider in planning for rural development patterns. This dataset is the product of the likelihood and consequence of wildfire on all mapped highly valued resources and assets combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat. This dataset considers the likelihood of wildfire events encompassing more than 250 acres, the susceptibility of resources and assets to wildfire of different intensities, and the likelihood of occurrence of wildfires of each intensity. The data values reflect a range of impacts from a very high negative

[31] *Oregon Post-Wildfire Flood Playbook*. (2018). <https://silverjackets.nfrmp.us/Portals/0/doc/Oregon/PostFireFloodPlaybook_2018-09-30.pdf?ver=2018-10-04-203119-453>.

value—where wildfire is detrimental to one or more resources or assets (for example, structures, infrastructure, early seral stage and/or sensitive forests)—to positive, where wildfire will produce an overall benefit (for example, vegetation condition/forest health, wildlife habitat).[32] The Overall Wildfire Risk dataset, shown in Figure 7, can be used to determine areas where wildfire risk is high or very high. The risk of loss of life and property from wildland fire or the cost of fire suppression may be too high to justify locating additional rural development in these areas. An additional consideration in managing fire risk for rural development is Rural Fire Protection Districts (RFPDs), which delineate areas where fire and emergency medical services are provided to rural areas outside city limits. The Oregon Department of Forestry and the State Fire Marshal keep record of the state's rural and urban fire protection districts, respectively. Rural fire protection districts provide fire and emergency medical services in rural areas outside city limits. RFPDs do not always translate to adequate fire protection due to limited resources and the size of territories. These districts can also be expanded to include new developments, potentially causing further strain on existing capacity issues. Limiting rural resource land development to areas within existing RFPDs would concentrate fire protection efforts, which is critical in a time of growing wildfire threats. More information is needed to determine whether existing fire districts are currently functioning and if they have the capacity to expand.

Special Flood Hazard Areas

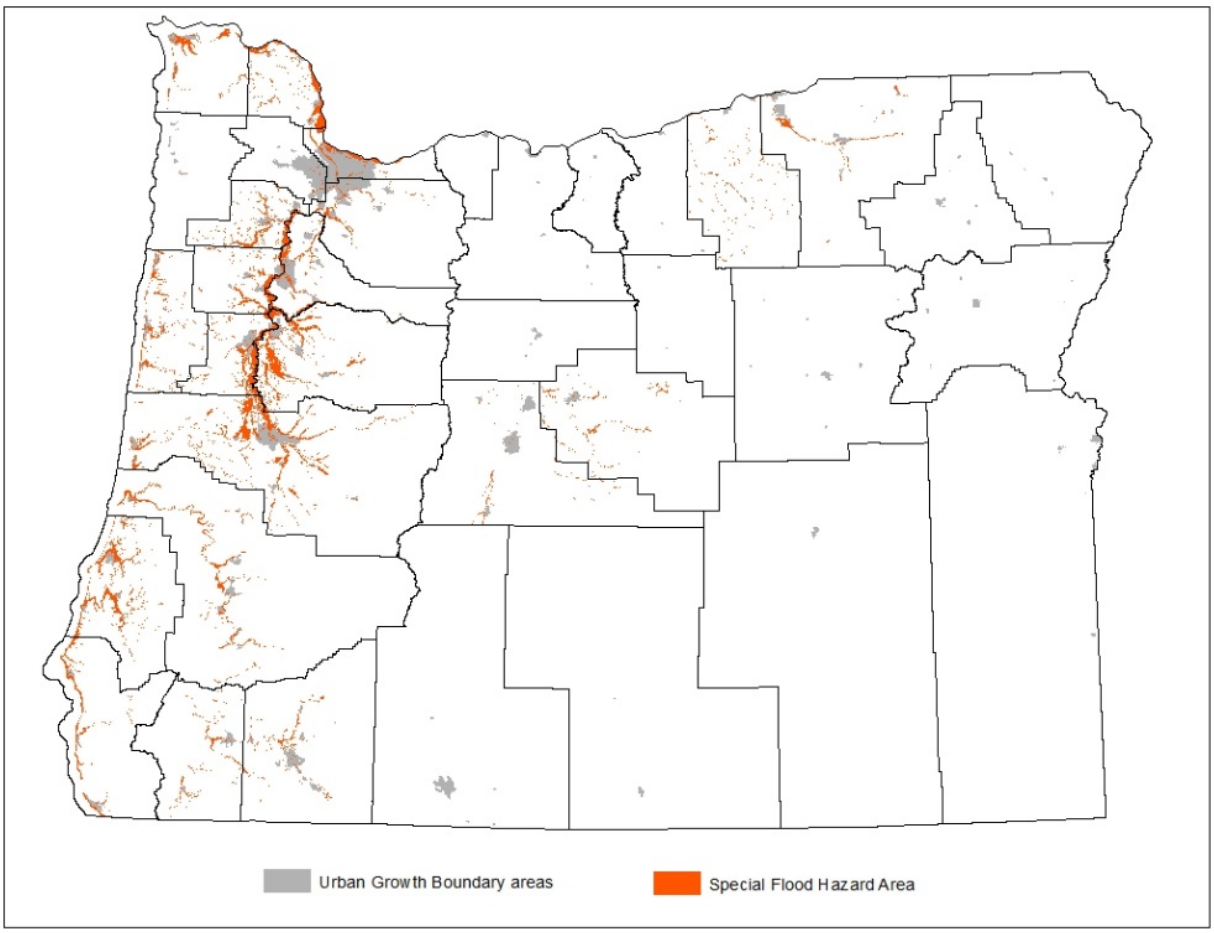
Historically, Oregon has experienced extensive flooding events, fluctuating in intensity and duration in tandem with local variability in weather, climate, and geophysical characteristics. Climate change models indicate a projected rise in extreme precipitation, resulting in an elevated flooding risk in specific basins, particularly in Western Oregon.[33] Floods alone cause property damage and loss of life but may also precipitate landslides, causing additional losses.[34]

The National Flood Hazard Layer for Oregon was developed by the Federal Emergency Management Agency's National Flood Insurance Program (NFIP). The layer contains current effective flood hazard data to support the NFIP including flood insurance zones, base flood elevations, floodways, and flood fringe areas. The majority of flood studies were conducted in the late 1970s and early 1980s and, although map updates have occurred in some locations, data gaps and limitations persist. Flooding probability is stated as a percent chance that a flood of a certain magnitude or greater will occur at a specific location in any given year. This probability is measured as the average recurrence interval of a flood in a given size and place.[35] A one percent chance of flooding at a location in any given year is commonly known as the 100-year flood and is the standard for flood regulation under the NFIP. The floodway and flood fringe together comprise the Special Flood Hazard Area (see Figure 8) which is the regulatory floodplain under the NFIP.

[32] Advanced Oregon Wildfire Risk Explorer. <https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=wildfireplanning>.
[33] *Oregon Natural Hazards Mitigation Plan*. (2015). <https://drought.unl.edu/archive/plans/GeneralHazard/state/OR_2015.pdf>.
[34] Ibid.
[35] Ibid.

The National Flood Hazard layer for Oregon can be used to determine the areas most and least likely to flood. Flood hazard vulnerability and associated flood insurance costs can be mitigated by (a) not locating development inside the floodway; (b) avoiding building inside the Special Flood Hazard Area; or if building cannot be avoided, (c) building to NFIP minimum, or higher (more protective), standards in the Special Flood Hazard Area. Development includes building structures, filling, and grading.

**Figure 7: Special Flood Hazard Area**



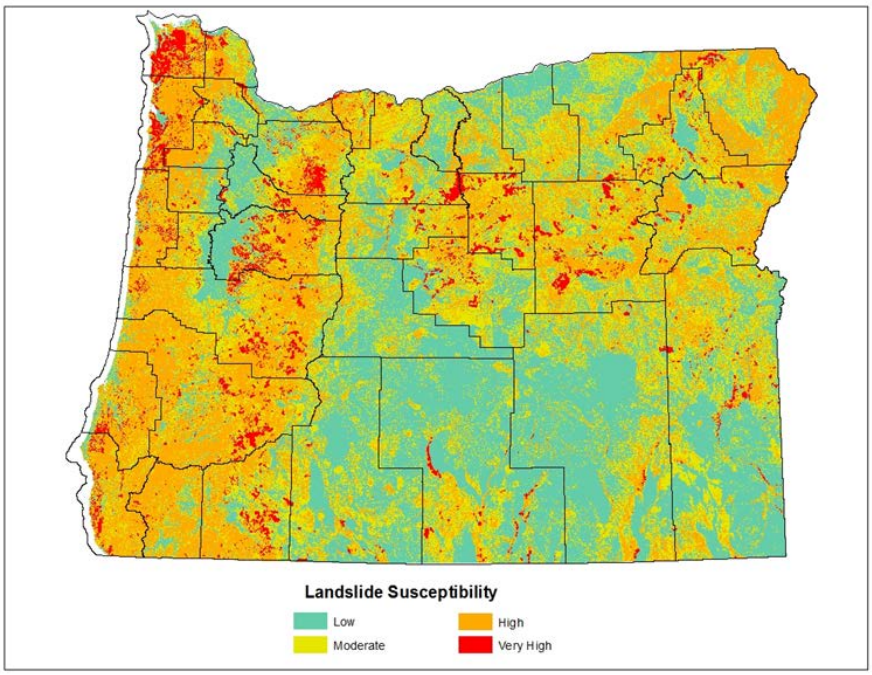

Landslide Susceptibility

Landslides are one of the most common and devastating geologic hazards in the state. Vulnerability to and costs from this hazard increase as population growth pushes development into more landslide-prone terrain. Landslides are typically triggered by ground saturation from heavy rainfall or rapid snowmelt, earthquakes, volcanoes, and human activity. Landslide susceptibility is influenced primarily by slope geometry (steepness), geologic material, and water. Due to strong correlation between precipitation and landslides, the projected increase in extreme precipitation accompanying climate change will likely result in an increase in landslide occurrence.[36]

[36] Ibid.

DOGAMI has developed a statewide landslide inventory layer (see Figure 9) at a coarse scale to inform regional planning and analysis. The intended use of this data is to help identify regions that may be more or less regionally at risk for future landslides which public agencies can then prioritize as areas for more detailed studies to be done. This coarse scale data is derived from elevation data converted into slopes which was then analyzed along with generalized geology and mapped existing landslides. Spatial statistics were then derived from the preceding analysis to create four susceptibility classes: Low, Moderate, High, and Very High.[37]

**Figure 8: Landslide Susceptibility**




Although the statewide landslide inventory layer is useful for regional planning and analysis, landslide risk is best evaluated using detailed landslide susceptibility data. This finer scale data is available in a few select locations. DOGAMI is continuing to develop shallow and deep landslide susceptibility maps as resources become available. Finer scale data should be used where available.[38] Shallow landslides involve movement of a relatively thin layer of slope material and have a shallow failure plane while deep landslides involve movement of a relatively deep layer of slope material. Although there is no widely accepted depth boundary between shallow and deep landslide susceptibility, DOGAMI selected 4.6m (approximately 15 feet) as the depth boundary for their shallow and deep landslide susceptibility mapping.[39] The Shallow and Deep Landslide Susceptibility maps can be used to locate new rural developments outside of areas categorized as having high and very high susceptibility to shallow or deep landslides. This data is not appropriate for site-specific evaluations but can be used to provide regional and community-scale land use planning information.[40]

[37] Burns, W. J.; Mickelson, K. A.; and Madin, I. P. Oregon Department of Geology and Mineral Industries. (2016). *Open-file Report O-16-02: Landslide Susceptibility Map of Oregon.* < https://www.oregongeology.org/pubs/ofr/p-O-16-02.htm>.
[38] Ibid.
[39] Burns, W. J.; Mickelson, K. A. *Protocol for Deep Landslide Susceptibility Mapping*. (2016). <https://www.oregongeology.org/pubs/sp/SP-48.pdf>.
[40] Burns, W. J.; Madin, I. P.; and Mickelson, K. A. *Protocol for Shallow Landslide Susceptibility Mapping*. (2012). <https://www.co.washington.or.us/lut/planningprojects/area93/upload/sp-45-protocol-for-shallow-landslide-susceptibility-mapping-web.pdf>.

Conclusions for Natural Hazards

Wildfire, floods, and landslides are likely the most useful datasets to use in addressing carrying capacity questions as they pertain to natural hazards. Depending on location, other natural hazards might be useful for local planners to consider in considering rural resource lands designation. Data and information associated with this section should be used to inform how to most appropriately locate and cluster rural development to avoid lands subject to natural hazards and associated negative cost impacts to public facilities and services. Site specific evaluation will inform what measures can be taken to appropriately mitigate natural hazards.

**Rural Character of Development**

LCDC's Statewide Planning Goals and rules help ensure that rural resource land remains rural. This is generally accomplished through thresholds on the type, size, and intensities of available uses, the application of parcel sizes, and limitations on the extension of sewer systems.

While not directly applicable to rural resource lands, the administrative rule regulating newly created rural residential exception areas (OAR 660-004-0040) illustrates one tool for maintaining rural lands. The rule requires a minimum parcel size of at least ten acres unless an exception is taken to Statewide Planning Goal 14 (Urbanization).The commission concluded, for the purposes of rural residential exception areas, that ten acres is the minimum parcel size to ensure fulfillment of the state's land use policy of maintaining rural land as sparsely settled with few public services. Depending on carrying capacity constraints (e.g., big game habitat), a parcel size larger than ten acres may be appropriate in some areas.

Statewide Planning Goal 11 (Public Facilities and Services) and OAR 660-011-0060 limit the establishment or extension of sewer systems on rural lands. For rural resource lands, sewage disposal requires an on-site treatment system serving a single parcel. On-site sewage disposal systems typically require larger parcel sizes which is consistent with the parcel size limitations described above.

One technique which could be implemented in order to retain rural character would be the use of open space conservation. Open space conservation is a key piece of retaining rural character. Conservation design or open space development design standards can be used in planning by structuring development around natural features. Planning begins by designating a significant percentage, at least a quarter, of otherwise buildable land to open space in a pattern conducive to a set of prioritized goals such as preserving agricultural and outdoor recreation uses as well as protecting environmental, scenic, and cultural assets.[41] Conservation design can be incentivized through offering density bonuses, reduced fees, and/or a streamlined permitting process.[42]

[41] Horst, M. et al. Portland State University. (2018). *Analysis of Expanding Rural Residential Housing in Malheur County, Oregon*.
[42] Ibid.

### Impacts to Farm and Forest Uses or Practices

Development in rural areas may increase conflicts with or hinder neighboring agricultural and forestry operations. Examples of potential conflicts include complaints about spray and odor or increased traffic on public roads needed to move agricultural and forest machinery and products. For uses that may impact farm or forest uses in EFU and forest zones, property owners must demonstrate that the proposed use will not force a significant change to farm or forest practices or significantly increase their cost.[43] The rural resource designation process in ORS 215.791 similarly requires consideration of conflicts with farm and forest uses and practices.

The rural resource designation method that has been used by counties does not require these findings. Demonstrating general compliance with Goal 3 and Goal 4 may partially address impacts to neighboring farm and forest operations but it typically does not provide the level of detail that is currently required for approving conditional uses in EFU and forest zones.

### Impacts to Urban Areas

Rural resource land designations may currently occur within urban reserves surrounding UGBs. Establishing new rural resource areas in close proximity to urban areas may provide some benefits when compared to isolated development (e.g. more efficient access to public services). However, such designations may interfere with the orderly and efficient development of urban areas if they are located within urban reserves. Urban reserves are intended for future UGB expansions and rural development in those areas may negatively affect the ability of cities to efficiently plan those lands for urban use following UGB expansion.

Additionally, most Oregon cities have not adopted urban reserves, and thus expand onto rural exception lands or farm and forest lands when adding to their UGBs. Allowing additional development associated with rural resource lands within close proximity to an existing UGB may hinder the ability of a city to expand its UGB in the most efficient manner possible when needed to assure a 20-year supply of urban land. Therefore, it may be appropriate to limit new development on rural resource lands within a certain distance from an existing UGB boundary.

### Energy Use

Statewide Planning Goal 13 (Energy Conservation) is primarily concerned with conserving energy through proper land use planning. Goal 13 guidelines discuss promoting energy efficient development, reuse of vacant land, minimizing use of nonrenewable energy sources, and increasing density along high capacity transportation corridors.

Rural resource designations may conflict with Goal 13 when located in isolated rural areas. Isolated development may require an increase in vehicle miles traveled, inefficient extensions of energy facilities, and overall lacks the energy efficient compact design allowed in UGBs. Consideration of energy impacts is necessary when designating rural resource areas to ensure these impacts are minimized.

[43] ORS 215.296, OAR 660-033-0130(5) and OAR 660-006-0025(5)

**Impacts to State or Local Transportation Facilities**
Rural resource designations have potential to increase traffic on state and local roads and may even utilize private roads for access. Evaluating potential impacts to transportation systems is vitally important for public safety and is a consideration in determining the fiscal impacts of development which are associated with needed transportation facilities. Counties have adopted road standards which may dictate when a traffic impact study is required and requirements for road improvements. Counties have also adopted fire safety design standards for roads to ensure that adequate access is provided for firefighting equipment, although these standards may not apply outside of forest and mixed farm-forest zones. The application of county road and fire standards, in conjunction with consideration with the fiscal impact of rural resource land development, would help ensure that development on rural resource lands benefits counties and future landowners.

**Impacts to Other Public Facilities**
Rural resource designations also have the potential to increase other public facilities costs on a myriad of public services, such as fire protection, primary and secondary schools, public water service (in areas within special districts providing water service), storm runoff, and waste disposal. It is unclear how a local government would include such considerations in its analysis of carrying capacity issues.

## Conclusions and Policy Options

This report provides a summary of issues pertinent to rural resource lands policy. The report documents the availability of spatial data that can be utilized at a statewide scale and highlights areas where additional data would be useful. DLCD intends to utilize the report as a basis for future research and possible rulemaking.

Regulatory application of geospatial data is challenging due to unavoidable statewide data gaps and scale limitations on the use of data. Also there are frequent updates to datasets which restrict the ability to utilize current data when relying on static date references in statute and rule. Perfect data is never an option. Policy development should consider the best available data, focus on development of new data where essential, and recognize that some issues can only be addressed upon consideration of local conditions.

Prior to 2017, DLCD began discussions with a few key stakeholders regarding rural resource policy. During the preparation of this paper, several parties expressed interest in the rural resource lands issue but, due to DLCD capacity, only a select few public agencies were able to provide input on the contents of this report. If further work on this issue is pursued, the department and commission should begin broader outreach on this issue to ensure citizen involvement. Further discussion of these issues could occur during a formal rulemaking advisory committee. However, it may be more appropriate to continue less formal discussions using this report as a reference document. Additional discussions would be most profitable if there were a set timeline for reaching conclusions and proceeding with a formal rulemaking process.

## Discussion of Policy/Tool Options

Below are several policy options or tools which the department and commission could use to address rural resource lands. The department will be reviewing these policy options before presenting any recommendations for future work on this issue to the commission.

Pursue additional research

The department could conduct additional research on several aspects of the rural resource lands issue. Prioritized recommendations for further research include:

- *Citizen involvement*: Undertake stakeholder engagement process to solicit and integrate stakeholder input to bolster implementation feasibility.
- *Eastern Oregon grazing*: Develop eastside forage threshold data to delineate farm and/or forest zones from rural resource zones. However, this is complicated because grazing requires an extensive land base to sustain an economically viable operation. Animals are rotated among a variety of land types based on changing environmental conditions such as weather, forage, topography, and season. Thus, lands with less capable soils and water constraints often play a crucial role in ranchlands management.
- *Economic considerations*: ORS 215.791 requires consideration of the costs of public facilities and services and impacts to government fiscal health in designating rural resource lands.[44] A methodology for performing this analysis would help the state and counties better understand the impacts of rural resource designations.
- *Cumulative impacts*: Research cumulative impacts of development patterns on agriculture, forestry, water quality/quantity, fish and wildlife, and/or costs of public services/infrastructure.
- *Future potential resource uses:* It is critical to note that the agricultural economy is in a state of constant evolution, especially recently with expanding technologies, emerging markets and trends, and a changing climate. A significant example is seen in the Oregon's now booming viticulture industry taking hold in soils and landscapes once thought to be agriculturally insignificant and unproductive. Aside from valuable agricultural industries, these lands could be important for renewable energy resource production such as solar arrays for energy capture as well as biomass production from current invasive species (e.g., western juniper). Further research should be done to determine what burgeoning technologies and markets are on the horizon for which rural resource lands could be used.
- *Natural resource considerations:* Work with ODFW and other natural resource management agencies to determine how to best integrate their data for policy implementation. ODFW is continuing to develop geospatial data at more refined scales to support regional land use planning, which can be evaluated for updates to Goal 5

[44] ORS 215.791

acknowledged inventories. In addition, ODFW and DLCD could evaluate opportunities to enhance conservation values on lands subject to rural resource designation.

- *Climate change considerations:* Carbon sequestration is a contributor to keeping excess carbon-based greenhouse gases out of our atmosphere. Forest and agricultural lands provide a unique opportunity to withdraw atmospheric carbon through biological sequestration in soil and biomass carbon sinks.[45] Forests, particularly, play a crucial role in sequestering carbon—with U.S. forests offsetting approximately 10 to 20 percent of the nation's carbon emissions from burning fossil fuels annually.[46] Consideration of carbon storage opportunities may be beneficial in evaluating rural resource lands.
- *Ecosystem service valuation:* Ecosystem service valuation refers to the financial value of the measurable productivity of natural systems.[47] Ecosystem service valuation provides tools for decision-makers and policy-makers to evaluate management implications through rate of return on investment calculations and cost-benefit analyses of potential policies. There is an evolving understanding worldwide that the value of ecosystems increasingly can and should be taken into account in land use planning, yet efforts to do so are in their infancy.[48] Currently, ecosystem service valuation is primarily enacted through markets and payments for ecosystem services (PES) such as sulfur dioxide trading, wetlands mitigation banking, and nutrient trading. Research should be done to determine how ecosystem service valuation can be integrated into Oregon's land use planning system and how it can be applied to rural resource lands.
- *Irrigation districts:* The current OWRD irrigation district GIS data layer could be updated to provide statewide coverage.

<u>Rulemaking</u>

*Require the process in ORS 215.788-794 to be used for all rural resource land designations*.

As previously mentioned, this process currently exists and provides a thorough framework for review of rural resource lands by requiring a more comprehensive evaluation of the carrying capacity of potential rural resource lands, an assessment of impacts to the cost of public facilities or services, and includes direct DLCD involvement. This option would most likely require an amendment to rule with a potential need for an amendment to statute to update the current reference to the 2006 Oregon Conservation Strategy in ORS 215.791 to the 2016 version. It may be necessary to clarify whether the entire county needs to be evaluated or only a

[45] United States Department of Agriculture Economic Research Service. "Agriculture and Climate Change." <https://www.ers.usda.gov/topics/natural-resources-environment/climate-change/agriculture-and-climate-change/>.
[46] Oregon Forest Resources Institute. "Forests, carbon and climate change." <https://oregonforests.org/Carbon_Capture>.
[47] Davis, A. I. "Ecosystem Services and The Value of Land." *Duke Environmental Law and Policy Forum*. 20. <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1045&context=delpf>.
[48] Goldstein, J. H., Caldarone, G., Duarte, T. K., et al. (2012). "Integrating ecosystem-service tradeoffs into land-use decisions." *Proceedings of the National Academy of Sciences of the United States of America*. (2012) <https://www.pnas.org/content/109/19/7565>.

portion of the county. In addition, it may be necessary to adopt further rules to define or clarify statutory requirements.

*Develop additional rule requirements for rural resource land designations that do not utilize the process in ORS 215.788-794*.

Under this option, land could still be designated rural resource if it did not meet the definitions of agricultural and forest land. Rulemaking could clarify undefined terms in rule, establish new standards and criteria regarding which rural lands are eligible for redesignation, and address carrying capacity issues. Possible amendments include:

- Further defining land that is suitable for agriculture. This could include:
  - Land suitable for grazing
  - High-value farmland portions of the American Viticultural Areas identified in ORS 195.300.
  - Land in an irrigation district or place of use for agricultural water
  - Prime or unique farmland

- Further defining "Other forested lands that maintain soil, air, water and fish and wildlife resources" in OAR 660-006-0005(7).

- Further addressing areas important to fish and wildlife. This could potentially require a Goal 5 update before designating rural resource lands, or use of current ODFW data and/or consultation with ODFW for site-specific evaluations.

- Addressing carrying capacity issues discussed in this report such as natural hazards, groundwater impacts, and cost of services.

- Consideration of cumulative impacts of rural resource designations, and other surrounding development, on agriculture, forestry, and wildlife.

<u>Provide guidance to counties</u>

Rural resource lands has long been an interest of local planners. Considering current development pressures, giving additional guidance at the state level could be of assistance to counties as they develop land use planning policy. A rural lands guidance document could be provided to counties could offer clarity regarding methodology and criteria for rezoning resource lands in to a new Rural Resource Lands zone. The document could provide an outline of recommendations for how to identify and appropriately develop Rural Resource Land. This type of document could be used to supplement new rulemaking or provide guidance on the current rural resource framework. However, the positive impact of a guidance document using the current framework may be limited, especially where vague language exists in state rule.

# Appendix

## Appendix A: Oregon Revised Statutes related to Rural Resource Lands

**215.304 Rule adoption; limitations.** (1) The Land Conservation and Development Commission shall not adopt or implement any rule to identify or designate small-scale farmland or secondary land.

(2) Amendments required to conform rules to the provisions of subsection (1) of this section and ORS 215.700 to 215.780 shall be adopted by March 1, 1994.

(3) Any portion of a rule inconsistent with the provisions of ORS 197.247 (1991 Edition), 215.213, 215.214 (1991 Edition), 215.288 (1991 Edition), 215.317, 215.327 and 215.337 (1991 Edition) or 215.700 to 215.780 on March 1, 1994:

(a) Shall not be implemented or enforced; and

(b) Has no legal effect.

(4) Notwithstanding subsection (3) of this section, the uses authorized by ORS 215.283 (1)(x) or (2)(n) may be established on land in exclusive farm use zones, including high-value farmland. [1993 c.792 §28; 2001 c.672 §19; 2012 c.74 §4]

**(NOTE: This section was added in 1993 following LCDC adoption of "secondary lands" rules, which were effectively repealed.)**

**215.316 Termination of adoption of marginal lands.** (1) Unless a county applies the provisions of ORS 215.705 to 215.730 to land zoned for exclusive farm use, a county that adopted marginal lands provisions under ORS 197.247 (1991 Edition), 215.213, 215.214 (1991 Edition), 215.288 (1991 Edition), 215.317, 215.327 and 215.337 (1991 Edition) may continue to apply those provisions. After January 1, 1993, no county may adopt marginal lands provisions.

(2) If a county that had adopted marginal lands provisions before January 1, 1993, subsequently sites a dwelling under ORS 215.705 to 215.750 on land zoned for exclusive farm use, the county shall not later apply marginal lands provisions, including those set forth in ORS 215.213, to lots or parcels other than those to which the county applied the marginal lands provisions before the county sited a dwelling under ORS 215.705 to 215.750. [1993 c.792 §29]

**(NOTE: Marginal lands designations are only allowed in Lane and Washington counties. Land uses allowed in Exclusive Farm Use zones for those counties are found in ORS 215.213 while the rest of the state uses 215.283.)**

**215.788 Legislative review of lands zoned for farm and forest use; criteria.** (1) For the purposes of correcting mapping errors made in the acknowledgment process and updating the designation of farmlands and forestlands for land use planning, a county may conduct a legislative review of lands in the county to determine whether the lands planned and zoned for

farm use, forest use or mixed farm and forest use are consistent with the definitions of "agricultural lands" or "forest lands" in goals relating to agricultural lands or forestlands.

(2) A county may undertake the reacknowledgment process authorized by this section only if the Department of Land Conservation and Development approves a work plan, from the county, describing the expected scope of reacknowledgment. The department may condition approval of a work plan for reacknowledgment under this section to reflect the resources needed to complete the review required by ORS 197.659 and 215.794. The work plan of the county and the approval of the department are not final orders for purposes of review.

(3) A county that undertakes the reacknowledgment process authorized by this section shall provide an opportunity for all lands planned for farm use, forest use or mixed farm and forest use and all lands subject to an exception under ORS 197.732 to a goal relating to agricultural lands or forestlands to be included in the review.

(4) A county must plan and zone land reviewed under this section:

(a) For farm use if the land meets the definition of "agricultural land" in a goal relating to agricultural lands;

(b) For forest use if the land meets the definition of "forest land" used for comprehensive plan amendments in the goal relating to forestlands;

(c) For mixed farm and forest use if the land meets both definitions;

(d) For nonresource use, consistent with ORS 215.794, if the land does not meet either definition; or

(e) For a use other than farm use or forest use as provided in a goal relating to land use planning process and policy framework and subject to an exception to the appropriate goals under ORS 197.732 (2).

(5) A county may consider the current land use pattern on adjacent and nearby lands in determining whether land meets the appropriate definition. [2009 c.873 §5]

**Note:** 215.788 to 215.794 were enacted into law by the Legislative Assembly but were not added to or made a part of ORS chapter 215 or any series therein by legislative action. See Preface to Oregon Revised Statutes for further explanation.

**215.791 Review of nonresource lands for ecological significance; inventory and protection of ecologically significant nonresource lands; criteria.** (1) If a county amends its comprehensive plan or a land use regulation mapping zoning designations under ORS 215.788 to 215.794, the county shall review lands that are planned or rezoned as nonresource lands to determine whether the lands contain ecologically significant natural areas or resources. The county shall consider appropriate goals and the "Oregon Conservation Strategy" prepared in September of 2006 by the State Department of Fish and Wildlife.

(2) The county shall maintain an inventory in the comprehensive plan of nonresource lands that contain ecologically significant natural areas or resources and establish a program to

protect the areas or resources from the adverse effects of new uses allowed by the planning or zoning changes. The county may use nonregulatory programs to protect the resources including, but not limited to, programs for the transfer of severable development interests to other lands that do not contain ecologically significant resources.

(3) If a county amends its comprehensive plan or a land use regulation mapping zoning designations under ORS 215.788 to 215.794, the county shall review lands that are planned or rezoned as nonresource lands to determine that the uses allowed by the planning or zoning changes are consistent with the carrying capacity of the lands. The county shall ensure that:

(a) The amount, type, location and pattern of development on lands redesignated as nonresource lands:

(A) Will be rural in character and will not significantly interfere with orderly and efficient development of urban areas in the vicinity;

(B) Will not significantly conflict with existing or reasonably foreseeable farm or forest uses or with accepted farm or forest practices; and

(C) Will not lead to significant adverse effects including, but not limited to, adverse effects on:

(i) Water quality or the availability or cost of water supply;

(ii) Energy use;

(iii) State or local transportation facilities;

(iv) Fish or wildlife habitat or other ecologically significant lands;

(v) The risk of wildland fire or the cost of fire suppression;

(vi) The cost of public facilities or services; or

(vii) The fiscal health of a local government.

(b) Additional residential development on nonresource lands is, to the extent practicable, located and clustered to:

(A) Minimize the effects on farm and forest uses;

(B) Avoid lands subject to natural hazards; and

(C) Reduce the costs of public facilities and services. [2009 c.873 §6]

**Note:** See note under 215.788.

**215.794 Review of county rezoning designations; rules.** (1) A county shall submit decisions on planning and rezoning designations under ORS 215.788 to 215.794 to the Department of Land Conservation and Development for review pursuant to the procedures set forth in this section and ORS 197.659.

(2) The department shall coordinate with:

(a) The State Department of Agriculture in reviewing decisions on planning and rezoning designations for lands planned for farm use or mixed farm and forest use.

(b) The State Forestry Department in reviewing decisions on planning and rezoning designations for lands planned for forest use or mixed farm and forest use.

(3) The Land Conservation and Development Commission has exclusive jurisdiction for review of a county's decision made under ORS 215.788 to 215.794.

(4) A person who participated in the proceedings leading to the county's decisions under ORS 215.788 to 215.794 may not raise an issue on review before the commission that was not raised in the local proceedings.

(5) The commission may adopt rules implementing ORS 215.788 to 215.794. [2009 c.873 §7]

**Note:** See note under 215.788.

## Appendix B: Oregon Administrative Rules related to Rural Resource Lands

Agricultural Lands (OAR Chapter 660, Division 33)

**660-033-0020**
**Definitions**

(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.

**660-033-0030**
**Identifying Agricultural Land**

(1) All land defined as "agricultural land" in OAR 660-033-0020(1) shall be inventoried as agricultural land.

(2) When a jurisdiction determines the predominant soil capability classification of a lot or parcel it need only look to the land within the lot or parcel being inventoried. However, whether land is "suitable for farm use" requires an inquiry into factors beyond the mere identification of scientific soil classifications. The factors are listed in the definition of agricultural land set forth at OAR 660-033-0020(1)(a)(B). This inquiry requires the consideration of conditions existing outside the lot or parcel being inventoried. Even if a lot or parcel is not predominantly Class I-IV soils or suitable for farm use, Goal 3 nonetheless defines as agricultural "Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands." A determination that a lot or parcel is not agricultural land requires findings supported by substantial evidence that addresses each of the factors set forth in 660-033-0020(1).

(3) Goal 3 attaches no significance to the ownership of a lot or parcel when determining whether it is agricultural land. Nearby or adjacent land, regardless of ownership, shall be examined to the extent that a lot or parcel is either "suitable for farm use" or "necessary to permit farm practices to be undertaken on adjacent or nearby lands" outside the lot or parcel.

(4) When inventoried land satisfies the definition requirements of both agricultural land and forest land, an exception is not required to show why one resource designation is chosen over another. The plan need only document the factors that were used to select an agricultural, forest, agricultural/forest, or other appropriate designation.

(5)(a) More detailed data on soil capability than is contained in the USDA Natural Resources Conservation Service (NRCS) soil maps and soil surveys may be used to define agricultural land. However, the more detailed soils data shall be related to the NRCS land capability classification system.

(b) If a person concludes that more detailed soils information than that contained in the Web Soil Survey operated by the NRCS, would assist a county to make a better determination of whether land qualifies as agricultural land, the person must request that the department arrange for an assessment of the capability of the land by a professional soil classifier who is chosen by the person, using the process described in OAR 660-033-0045.

(c) This section and OAR 660-033-0045 apply to:

(A) A change to the designation of a lot or parcel planned and zoned for exclusive farm use, forest use or mixed farm-forest use to a nonresource plan designation and zone on the basis that such land is not agricultural land; and

(B) Excepting land use decisions under section (7) of this rule, any other proposed land use decision in which more detailed data is used to demonstrate that a lot or parcel planned and zoned for exclusive farm use does not meet the definition of agricultural land under OAR 660-033-0020(1)(a)(A).

(d) This section and OAR 660-033-0045 implement ORS 215.211, effective on October 1, 2011. After this date, only those soils assessments certified by the department under section (9) of this rule may be considered by local governments in land use proceedings described in subsection (c) of this section. However, a local government may consider soils assessments that have been completed and submitted prior to October 1, 2011.

(e) This section and OAR 660-033-0045 authorize a person to obtain additional information for use in the determination of whether a lot or parcel qualifies as agricultural land, but do not otherwise affect the process by which a county determines whether land qualifies as agricultural land as defined by Goal 3 and OAR 660-033-0020.

(6) Any county that adopted marginal lands provisions before January 1, 1993, may continue to designate lands as “marginal lands” according to those provisions and criteria in former ORS 197.247 (1991), as long as the county has not applied the provisions of ORS 215.705 to 215.750 to lands zoned for exclusive farm use.

(7)(a) For the purposes of approving a land use application on high-value farmland under ORS 215.705, the county may change the soil class, soil rating or other soil designation of a specific lot or parcel if the property owner:

(A) Submits a statement of agreement from the NRCS that the soil class, soil rating or other soil designation should be adjusted based on new information; or

(B) Submits a report from a soils scientist whose credentials are acceptable to the Oregon Department of Agriculture that the soil class, soil rating or other soil designation should be changed; and

(C) Submits a statement from the Oregon Department of Agriculture that the Director of Agriculture or the director’s designee has reviewed the report described in paragraph (a)(B) of this section and finds the analysis in the report to be soundly and scientifically based.

(b) Soil classes, soil ratings or other soil designations used in or made pursuant to this section are those of the NRCS Web Soil Survey for that class, rating or designation, except for changes made pursuant to subsection (a) of this section.

(8) For the purposes of approving a land use application on high-value farmland under OAR 660-033-0090, 660-033-0120, 660-033-0130 and 660-033-0135, soil classes, soil ratings or other soil designations used in or made pursuant to this definition are those of the NRCS Web Soil Survey for that class, rating or designation.

<u>Forest Lands (OAR Chapter 660, Division 6)</u>

**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.

**660-006-0010**
**Identifying Forest Land**

(1) Governing bodies shall identify “forest lands” as defined by Goal 4 in the comprehensive plan. Lands inventoried as Goal 3 agricultural lands, lands for which an exception to Goal 4 is justified pursuant to ORS 197.732 and taken, and lands inside urban growth boundaries are not required to planned and zoned as forest lands.

(2) Where a plan amendment is proposed:

(a) Lands suitable for commercial forest uses shall be identified using a mapping of average annual wood production capability by cubic foot per acre (cf/ac) as reported by the USDA Natural Resources Conservation Service. Where NRCS data are not available or are shown to be inaccurate, other site productivity data may be used to identify forest land, in the following order of priority:

(A) Oregon Department of Revenue Western Oregon site class maps;

(B) USDA Forest Service plant association guides; or

(C) Other information determined by the State Forester to be of comparable quality.

(b) Where data of comparable quality under paragraphs (2)(a)(A) through (C) are not available or are shown to be inaccurate, an alternative method for determining productivity may be used as described in the Oregon Department of Forestry’s Technical Bulletin entitled “Land Use Planning Notes, Number 3 April 1998, Updated for Clarity April 2010.”

(c) Counties shall identify forest lands that maintain soil air, water and fish and wildlife resources.

## Appendix C: Full-Size Maps

Figure 1: Exclusive Farm Use, Forest, and Mixed Farm-Forest Zoning on Non-Federal Lands

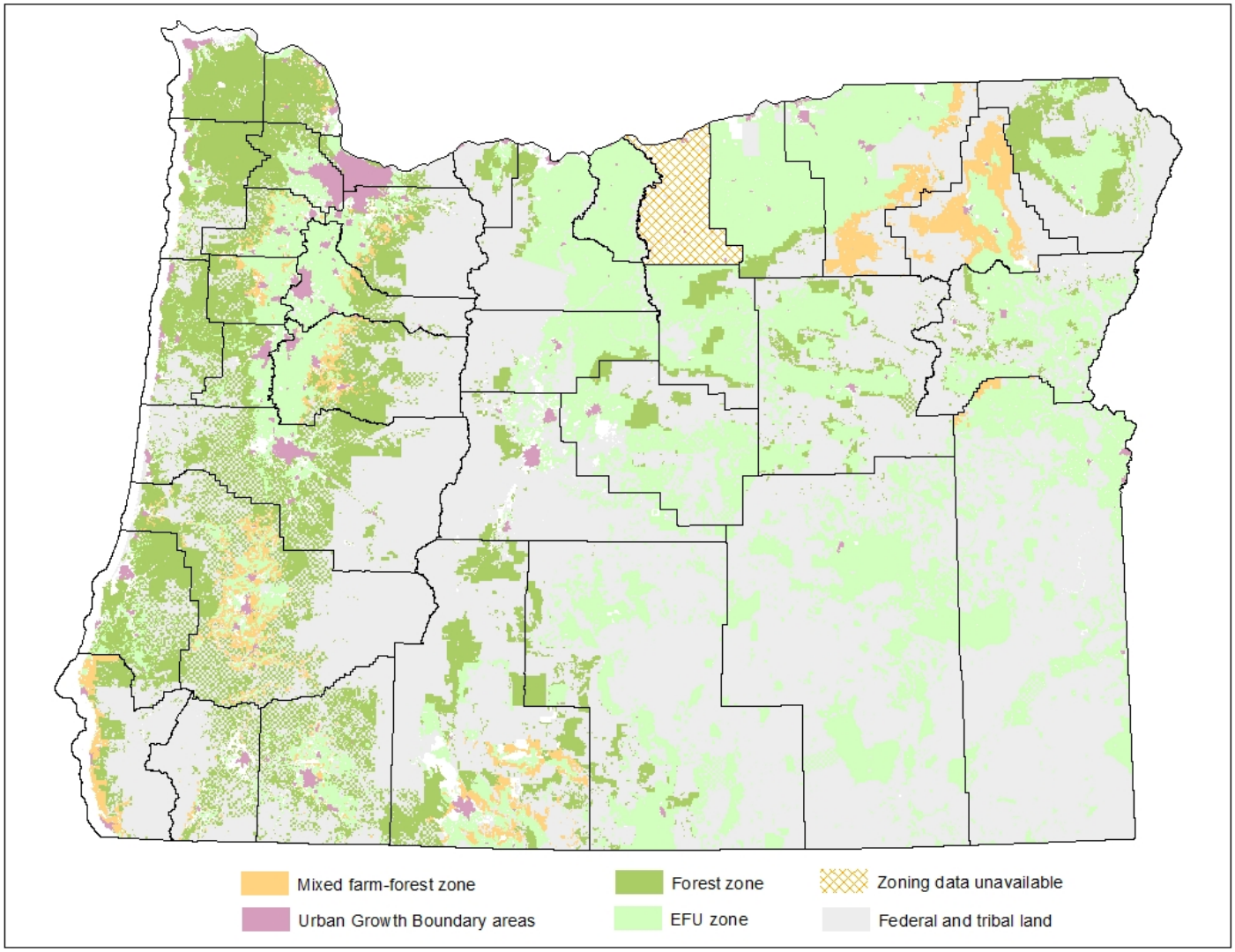


Figure 2: NRCS Agricultural Capability Classes on Non-Federal Lands

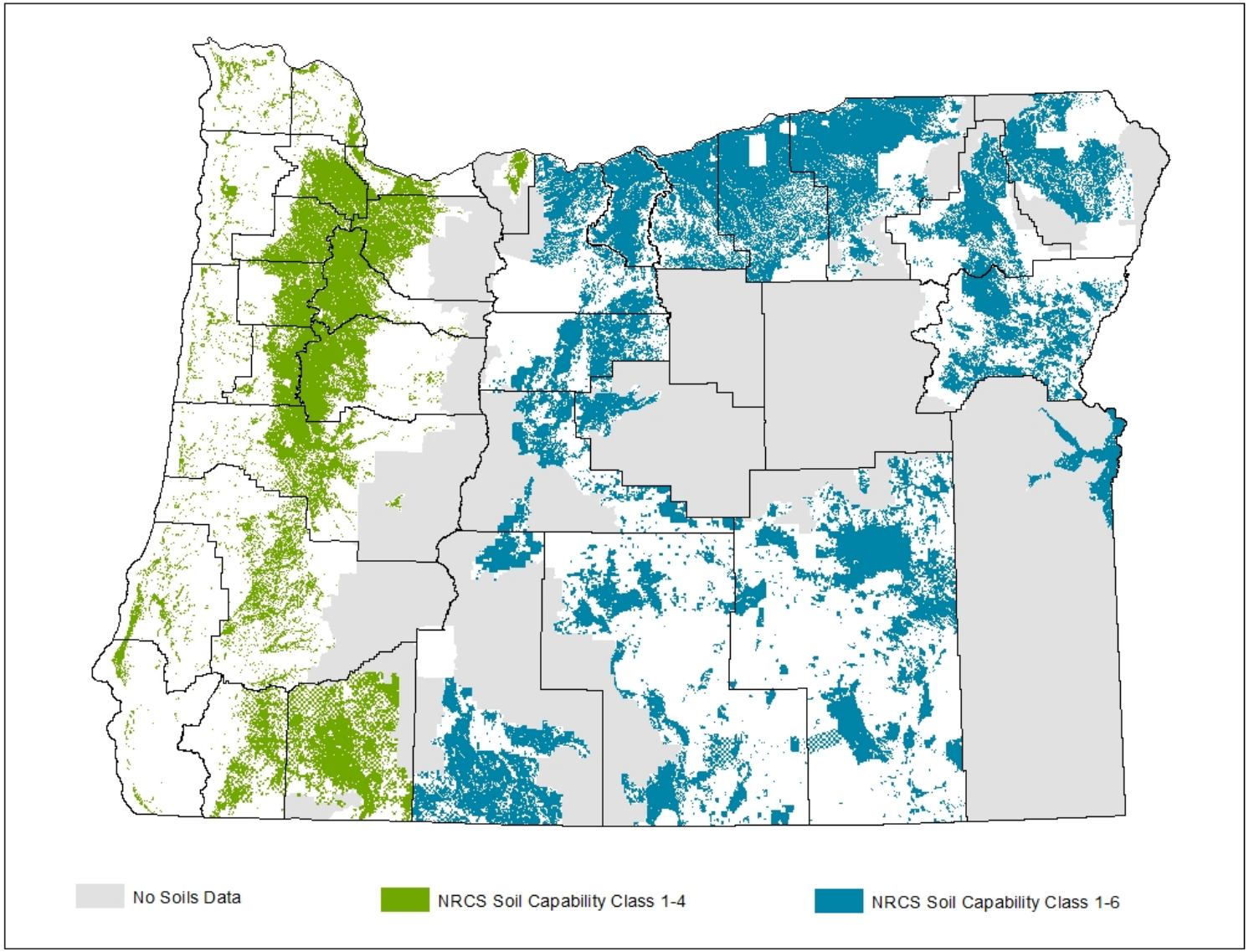


Figure 3: Animal Unit Months (AUMs) for Western Oregon on Non-Federal Lands

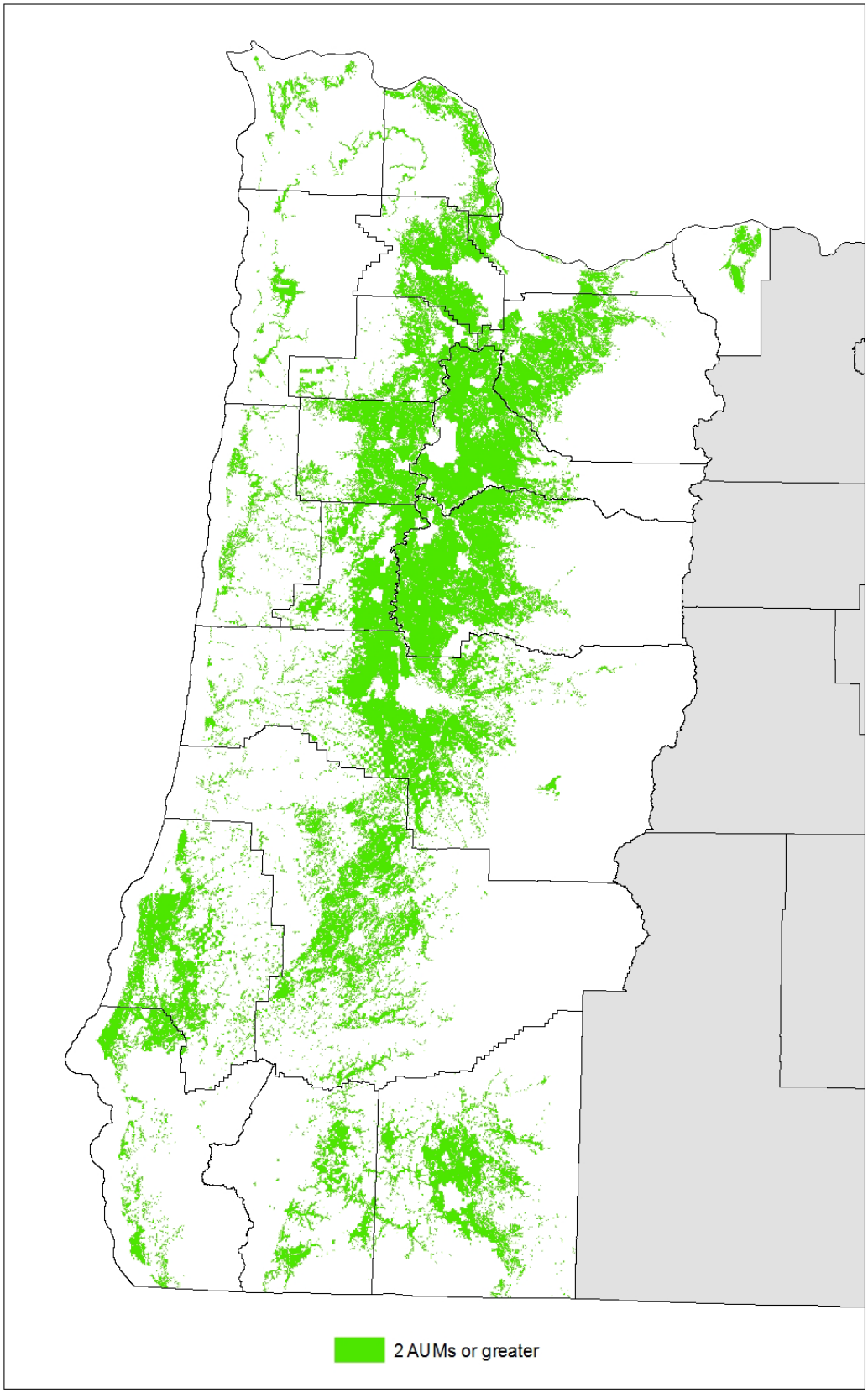


Figure 4: Non-Federal Forest Lands Derived from NRCS, DOR, and Historic Vegetation Data

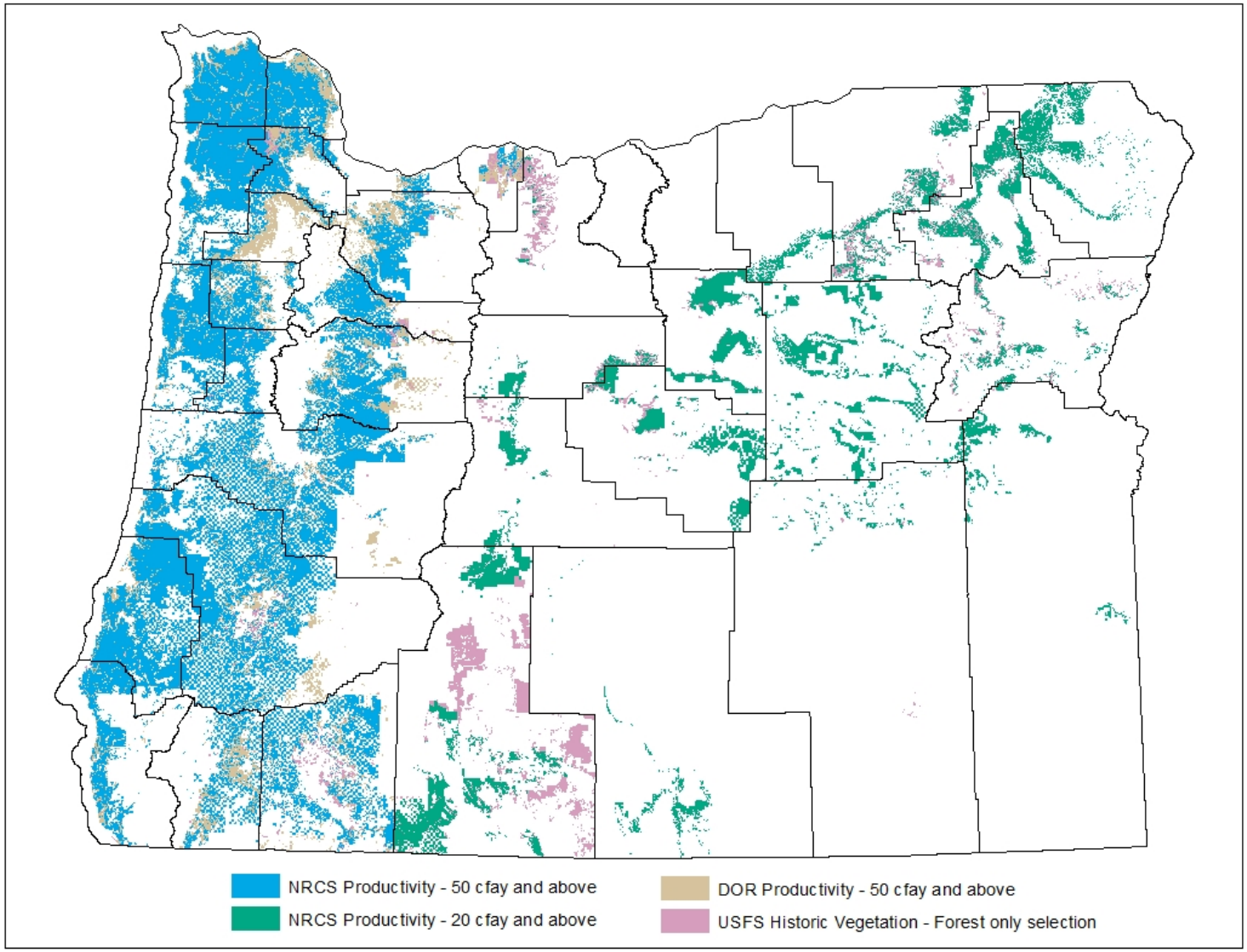


Figure 5: Conservation Opportunity Areas and Sage Grouse Habitat

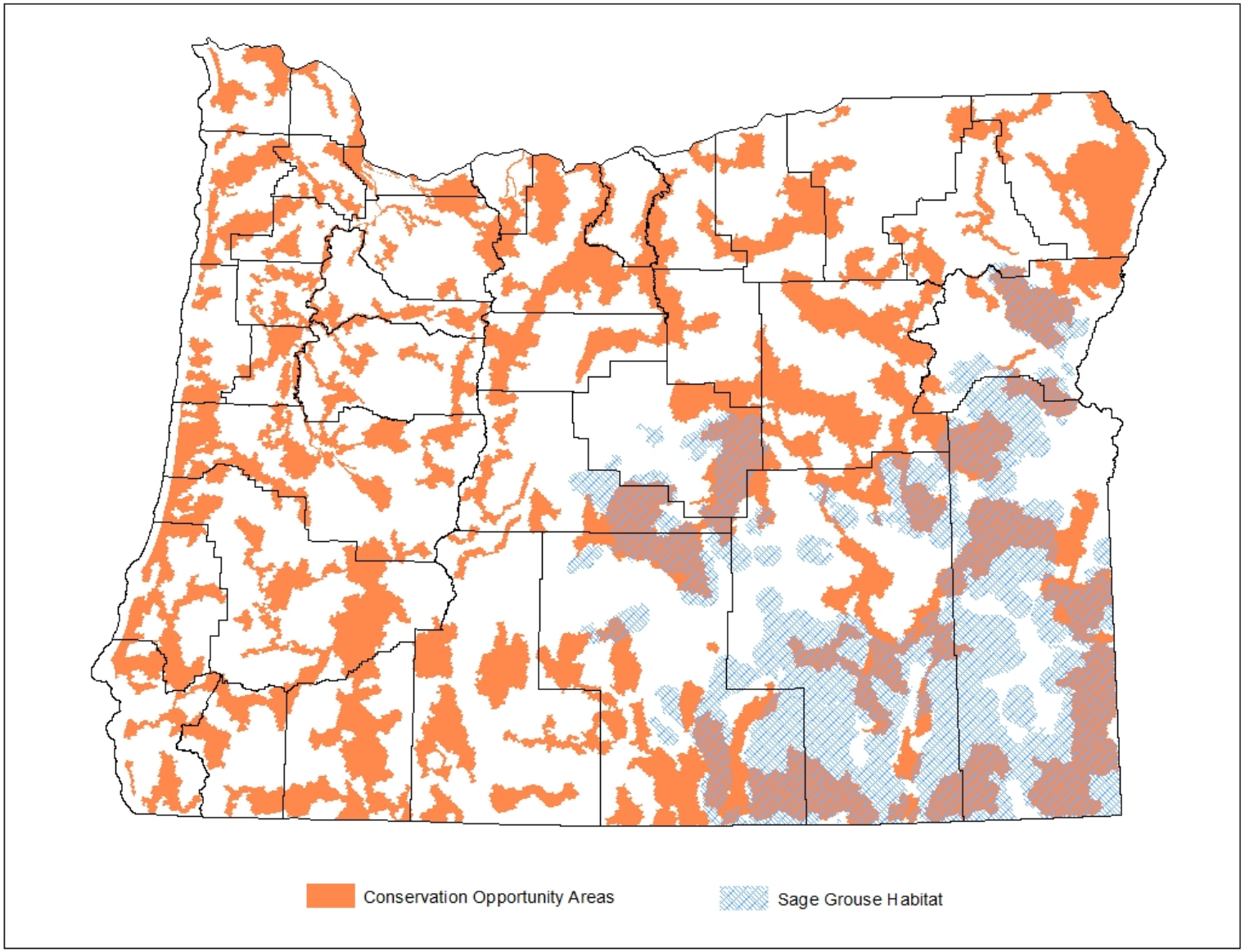


Figure 6: Groundwater Management Areas and Groundwater Restricted Areas

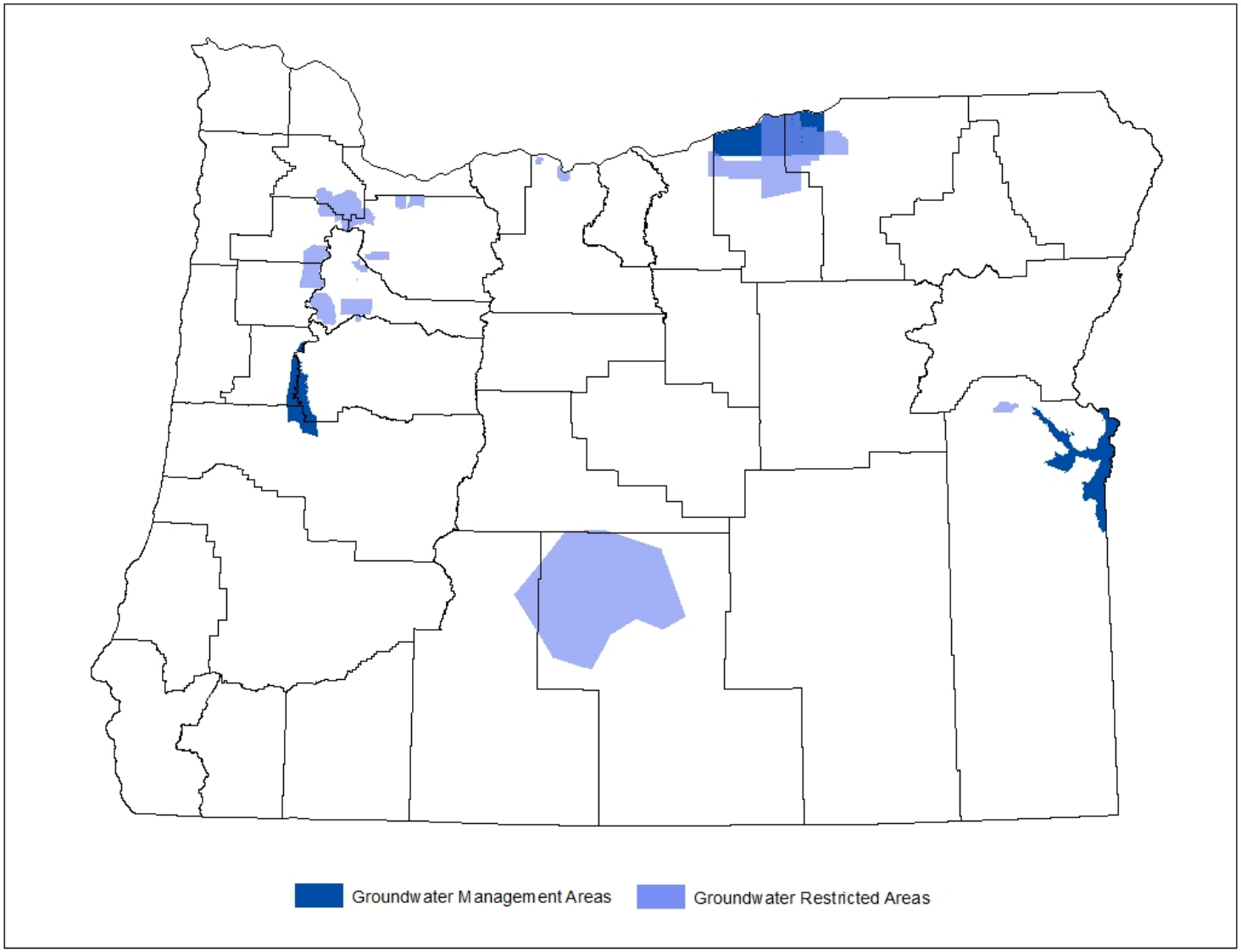


Figure 7: Overall Wildfire Risk

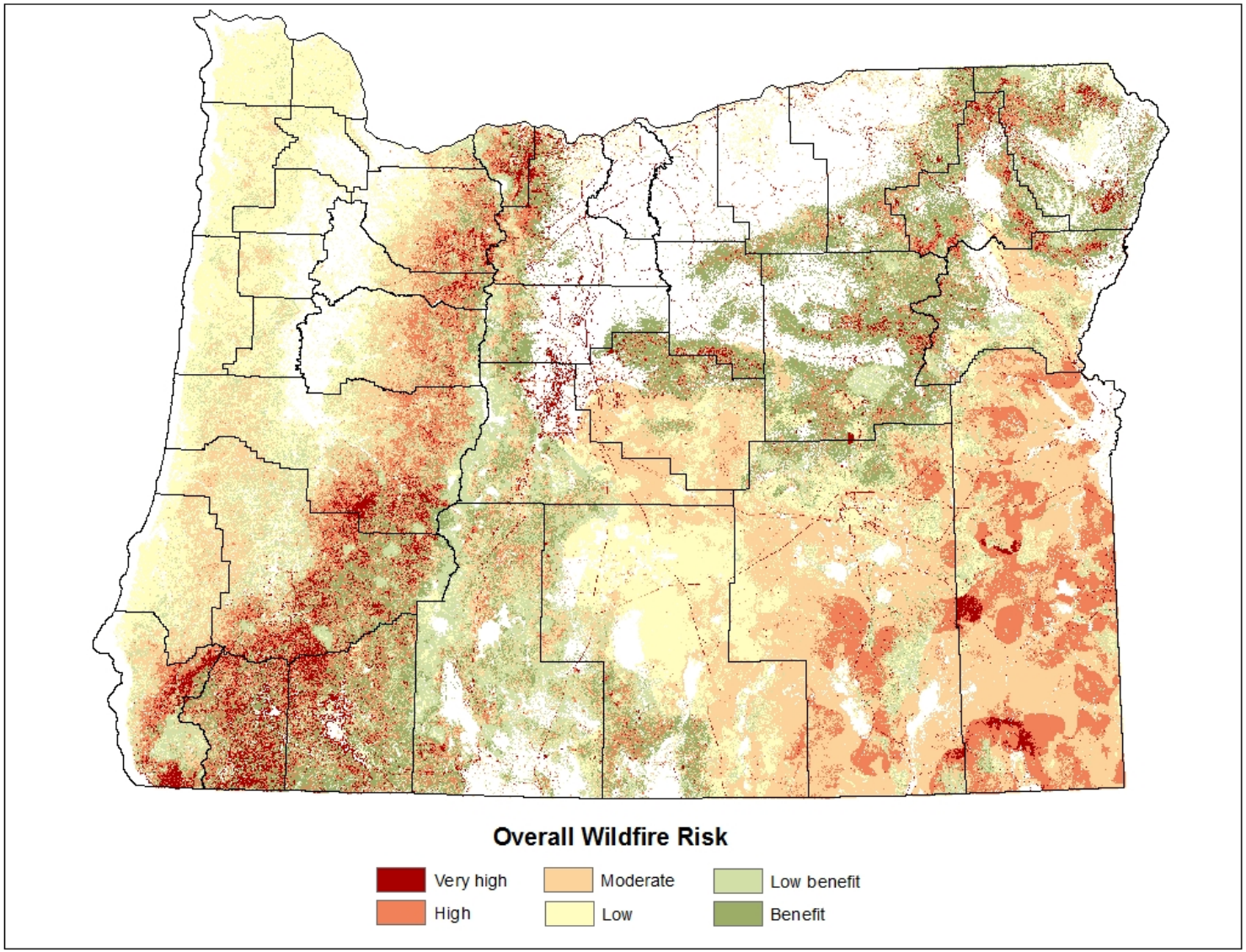


Figure 8: Special Flood Hazard Area

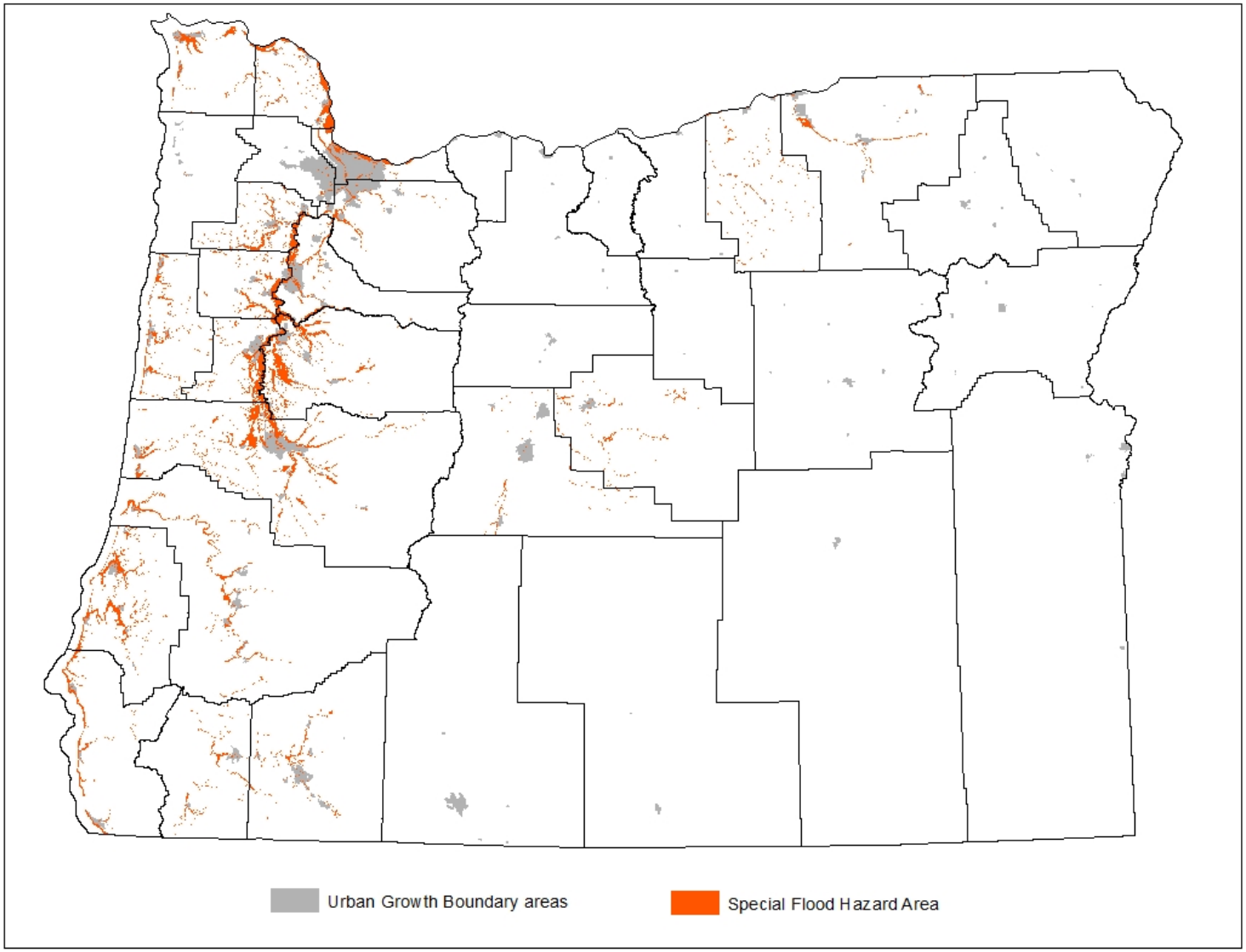
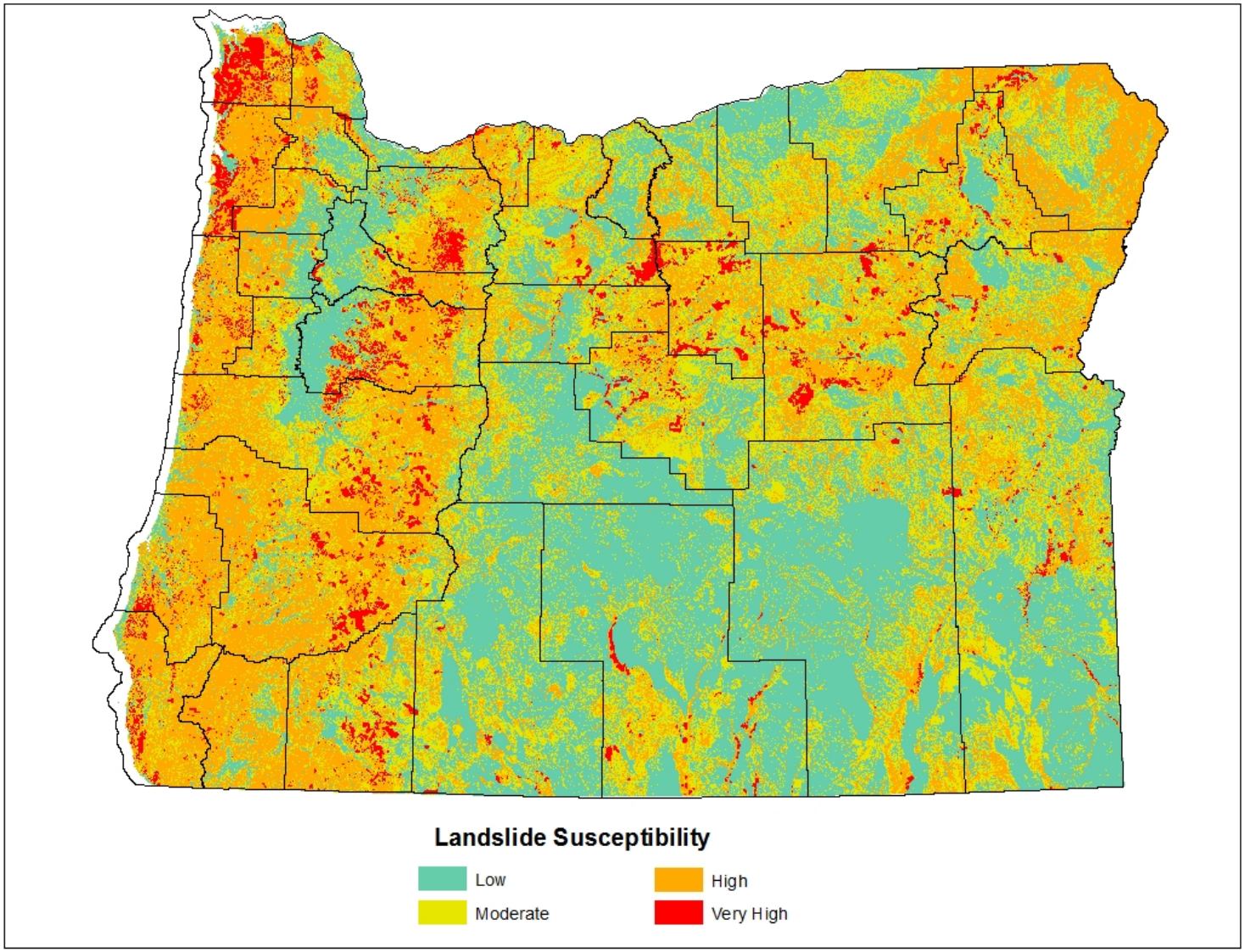


Figure 9: Landslide Susceptibility



# STATE OF OREGON AGRICULTURE

*Report from the State Board of Agriculture*

Oregon's eight agricultural growing regions

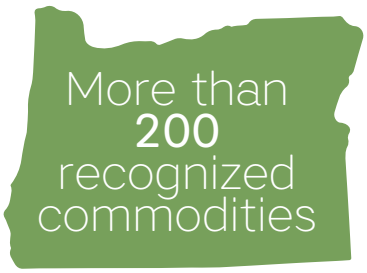
JAN 2019

# OREGON AGRICULTURE FACTS & FIGURES

**percent of farms** are family-owned

**39%** of Oregon farmers are women

**34,200** Oregon farms[1]

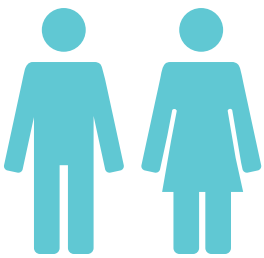


of all Oregon **exports** are agricultural

**#1 commodity** greenhouse & nursery products[2]

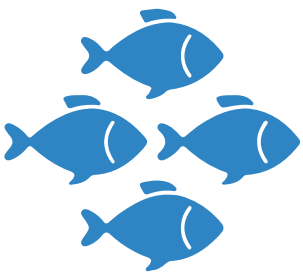
**$351 million** organic ag

**$16 billion** ag processing



**13.8%** of Oregon jobs are related to agricultural industries

**Marion County** #1 ag production



**$144.5 million** commercial fish landings

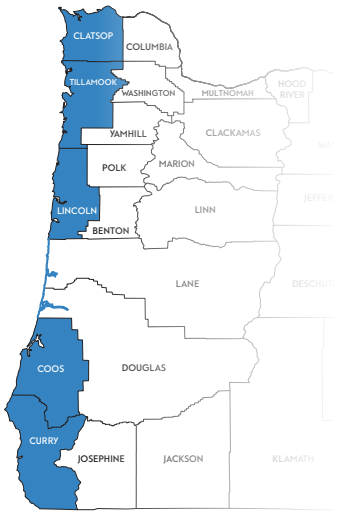
**More than 100** farmers markets in the state

*1 A farm is defined as any place from which $7,000 of agricultural products were produced and sold or normally would have been sold.*
*2 Based on 2017 estimate from the Oregon Department of Agriculture.*
*Sources: United States Department of Agriculture (USDA)-NASS Census of Agriculture (2012) and Certified Organic Survey (2016); Oregon Farmers Market Association; Oregon State University Extension Service Rural Studies Program (2015); Oregon Department of Fish and Wildlife Commercial Fish Landings (2017).*

# REGIONAL FACTS & ECONOMIC IMPACT BY COUNTY

## *Coastal*

**Total land area:**
**4.0 million acres**




Number of farms:
**1,692**

Land in farms:
**303,996 acres**

Irrigated land:
**22,698 acres**

2012 market value of agricultural products sold:
**$206 million**

## *Willamette Valley*

**Total land area:**
**9.0 million acres**

Number of farms:
**18,114**

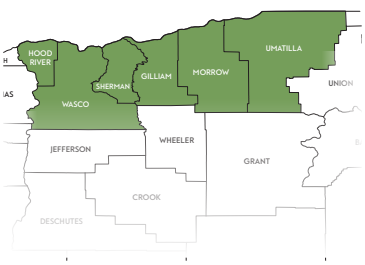
Land in farms:
**1.7 million acres**

Irrigated land:
**235,676 acres**

2012 market value of agricultural products sold:
**$2.2 billion**

## *Columbia Plateau*

**Total land area:**
**6.6 million acres**




Number of farms:
**3,584**

Land in farms:
**5.2 million acres**

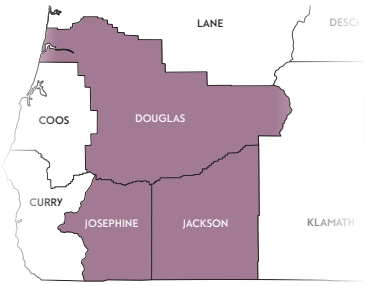
Irrigated land:
**287,000 acres**

2012 market value of agricultural products sold:
**$1.3 billion**

*Total land area source: Oregon Secretary of State, 2014*
*All other data source: USDA NASS, 2014*

## *Southern Oregon*

**Total land area:**
**6.1 million acres**




Number of farms:
**4,266**

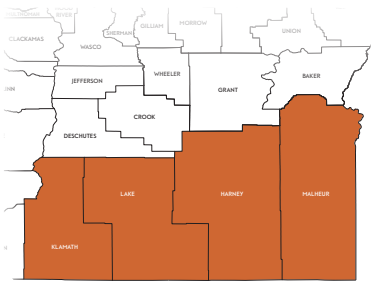
Land in farms:
**624,721 acres**

Irrigated land:
**60,132 acres**

2012 market value of agricultural products sold:
**$148 million**

## *Southeast Oregon*

**Total land area:**
**22.2 million acres**




Number of farms:
**2,938**

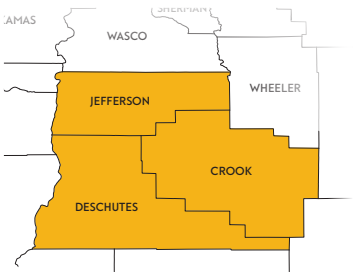
Land in farms:
**3.9 million acres**

Irrigated land:
**657,400 acres**

2012 market value of agricultural products sold:
**$715 million**

## *Central Oregon*

**Total land area:**
**5 million acres**




Number of farms:
**2,308**

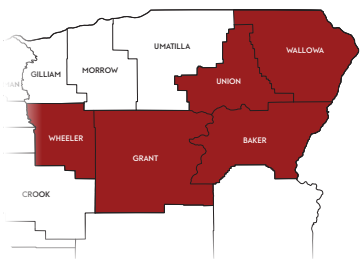
Land in farms:
**1.8 million acres**

Irrigated land:
**137,000 acres**

2012 market value of agricultural products sold:
**$128 million**

## *Northeast Oregon*

**Total land area:**
**9.4 million acres**




Number of farms:
**2,547**

Land in farms:
**2.9 million acres**

Irrigated land:
**230,000 acres**

2012 market value of agricultural products sold:
**$248 million**

# EXECUTIVE SUMMARY

Oregon's farmers, ranchers, fishers, and food processors are the heart of one of the state's most important economic sectors. With a $50 billion annual economic impact, Oregon agriculture not only plays a huge role in the state's economy, but also in the everyday lives of Oregonians by providing food, beverages, agricultural products and services.

This report serves as an opportunity for the State Board of Agriculture to highlight facts and figures about Oregon agriculture, economic impact by regions of the state, and share some of the key issues in Oregon agriculture.

The Board of Agriculture plays an important role for Oregon agriculture. Board members bring broad perspectives and expertise to discussions of key agricultural issues, provide connections to industry sectors, and serve as advocates for the agriculture industry in general. The board tours the state to become familiar with all aspects of Oregon agriculture and develops resolutions to clarify and define policy positions on issues related to agriculture in the state.

Water quantity and quality, a vibrant agricultural workforce, market access and co-existence, agricultural land use, and investments in value-added agriculture are priorities for the board.

We encourage you to contact board members to learn more about these important issues.

**Barbara Boyer**
McMinnville

**Pete Brentano**
St. Paul

**Stephanie Hallock**
Lake Oswego

**Bryan Harper**
Junction City

**Shantae Johnson**
Portland

**Grant Kitamura**
Ontario

**Sharon Livingston**
Long Creek

**Marty Myers**
Boardman

**Tyson Raymond**
Helix

**Luisa Santamaria**
Canby

**Alexis M. Taylor**
Ex-Officio member
ODA Director

**Alan R. Sams**
Ex-Officio member
OSU Dean of Agricultural Sciences

# RESOLUTIONS

The State Board of Agriculture (BOA) creates and maintains policy statements, known as resolutions, on topics and issues facing the agricultural industry. The board recently completed a review of all existing resolutions and established a new resolution regarding the siting of energy transmission and generation facilities on agricultural land.

Addressing issues related to agricultural labor, food safety, land use, marketing, pesticide use, predator control, renewable energy and water remain a high priority for the board.

To download the full resolution packet, visit **https://oda.direct/BOAresolutions**

# KEY ISSUES

## *Water for Agriculture*

**Water is the lifeblood of agriculture.** Without an adequate supply of safe, clean water, Oregon agriculture would look very different in terms of what can be produced as well as the economic contribution. The Oregon Department of Agriculture collaborates with other agencies to monitor and evaluate conditions on agricultural lands that can affect water quality and quantity. Continued support of programs to identify and address the current and future needs for water in Oregon is critical for agriculture.

## *Agricultural Workforce*

**Oregon's agricultural workforce is vital to Oregon's economy.** Finding and maintaining skilled, qualified agricultural labor is a growing challenge nationally and for Oregon's farmers, ranchers, fishers, and food processing industry. To ensure worker availability, the Board of Agriculture supports changes to existing laws such as the H-2A Temporary Agricultural Workers Program, so all agricultural sectors have the opportunity to secure a qualified workforce.

## *Agricultural Land Use*

**Protecting agricultural working lands across Oregon is essential for current and future generations.** The majority of Oregon's agricultural lands will be changing hands over the next several decades as farmers and ranchers retire, and many of these land owners do not have succession plans. The Oregon Agricultural Heritage Program is designed to help ensure the future of agriculture in Oregon, and the OAHP Commission should continue to work with the Oregon Watershed Enhancement Board, the Oregon Department of Agriculture and others to assist with succession planning and protection of threatened working lands for agriculture.

**Conversion of high-value and highly productive farmland to non-agricultural uses is of great concern to the Board.** For example, the board has requested Oregon's Land Conservation and Development Commission to review administrative rules related to the siting of solar facilities on lands zoned for exclusive farm use. The board also developed Resolution #318 to recognize the importance of energy produced from renewable sources, but not at the expense of ongoing and future agricultural operations.

## *Market Access and Co-existence*

**Access to markets and promotion of Oregon agriculture, food, and beverages in local, domestic and international markets is vital for Oregon's agricultural future.** Local farmers, fishers, and ranchers produce or harvest much more than Oregonians can consume. Exploring options to develop a food and beverage brand for Oregon, and creating and maintaining demand for Oregon food and agriculture in new as well as existing markets is essential to the economic viability of Oregon agriculture.

**Some of the world's most productive agricultural land can be found within Oregon's diverse geography.** While this diversity has many benefits there are also challenges. One of those challenges is co-existence between different agricultural and land uses. Board Resolution #301 addresses the challenges of coexistence by supporting stewardship of natural resources; ongoing communication; choice of production technologies, practices and business structures; best management practices to minimize conflict, and state and federal programs that support a variety of production systems.

# ABOUT THE STATE BOARD OF AGRICULTURE

The State Board of Agriculture advises the Oregon Department of Agriculture (ODA) on policy issues, develops recommendations on key agricultural issues, and advocates for the state's agriculture industry in general. The board is comprised of 10 members, nine of whom are appointed by the Governor. The tenth member is the chair of the Oregon Soil and Water Conservation Commission. Both the Director of ODA and the Dean of the College of Agriculture at Oregon State University serve as ex-officio members. The board meets quarterly across the state to discuss relevant issues.

State law requires that seven of the appointed board members be actively engaged in the production of agricultural commodities and two members are to be representative of consumer interests in the state. Each member term is four years with the ability to be reappointed for a second four-year term.

# THE BOARD AT WORK

Every year, the Board of Agriculture holds meetings throughout the state to stay abreast of the opportunities and challenges facing Oregon agriculture. The board tours local agricultural operations and meets with local producers to hear their issues and concerns. Opportunity for public comment is provided at all board meetings, and the board often will develop a policy resolution or communicate with other agencies in response to an issue of concern that has been raised during these statewide meetings. Statewide site visits introduce the board to new industries such as cannabis production and processing, growing olives in wine country, or Tilapia farming in the Klamath Basin, and provide the opportunity to see food processing and packing operations, farm worker housing, and on-the-ground projects to protect water quality on agricultural lands.

# QUARTERLY OREGON AG BRIEFING

OREGON AG BRIEFING

A QUARTERLY REPORT FROM THE STATE BOARD OF AGRICULTURE

FALL

**Updates from the Board of Agriculture**

Board of Agriculture dock walk tour led by OSU's Jamie Doyle at Charleston Marina Complex

**Board meeting highlights**

A highlight of the meeting in North Bend included a panel presentation from Oregon's four seafood commissions Oregon Albacore Commission, Oregon Dungeness Crab Commission, Oregon Salmon Commission, Oregon Trawl Commission and the collaborative efforts under Seafood Oregon. Each commission presented information about the specific fishery, impacts and challenges facing the industry. The panel included commissioners Crystal Adams, Mike Retherford and Dwight Collins as well as the commission executive directors Nancy Fitzpatrick, Hugh

**Meeting Calendar**

• Nov 27-29, McMinnville

**State Board of Agriculture**

Tyson Raymond, *Chair*
Helix

Marty Myers, *Vice Chair*
Boardman

Barbara Boyer
McMinnville

Pete Brentano
St. Paul

Bryan Harper
Junction City

Tracey Liskey
Klamath Falls

Sharon Livingston
Long Creek

Laura Masterson
Portland

Stephanie Hallock
*Public Member*, Portland

Luisa Santamaria, Ph.D.
*Public Member*, Aurora

For information about the State Board of Agriculture and its members, click here.

The State Board of Agriculture provides a quarterly briefing on issues the board is working on and discussing, as well as input they receive from stakeholders. The briefing also includes highlights and photos from Board of Agriculture meetings.

Receive the quarterly report via email by signing up online at: **https://oda.fyi/BOAsubscribe**

## WHY THIS REPORT?

**ORS 561.378 State Board of Agriculture Report**

The State Board of Agriculture shall report as provided in ORS 192.230 to 192.250 on a biennial basis to the Governor and the Legislative Assembly regarding the status of the agriculture industry in this state.


| | | | |
|---|---|---|---|
| Published | January 2019 | Report | https://oda.direct/BoardReport |
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| | | Webpage | https://oda.direct/BOA |
| | | Report design | Liz Beeles<br>Publications & Web Coordinator |