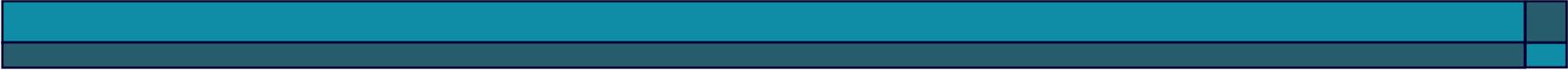


Oregon/Washington Land Use Studies

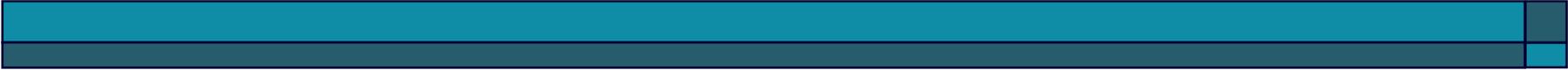
Gary Lettman

November 2009



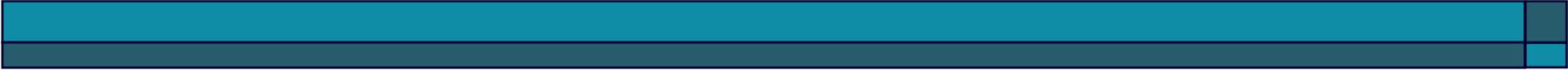
An economist's guess is liable
to be as good as anybody else's

-Will Rogers



Purpose

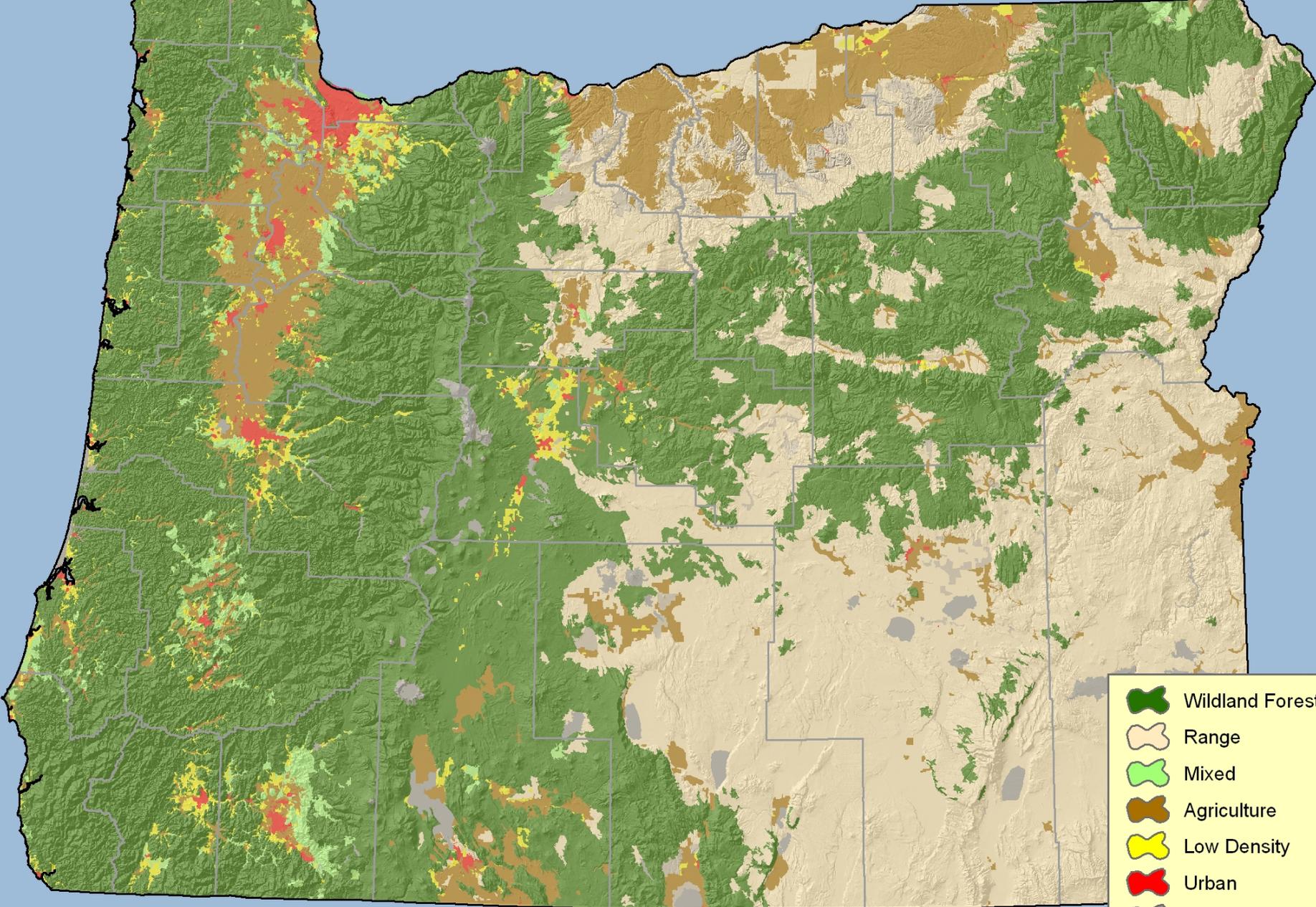
- Background on Oregon & Washington land use studies
- Update Oregon Report progress
- Washington Report progress
- Issues to be addressed in future reports?
 - Fish and Wildlife habitat – Examples: deer winter range on Skyline tract and other wildlife connectivity issues, salmon habitat
 - Tie to productivity for forests and farms
 - Tying to indicators of: water quality; fire hazard, risk, cost, etc.
 - Use in evaluating tradable development rights?
 - Others?



What did we do in Oregon?

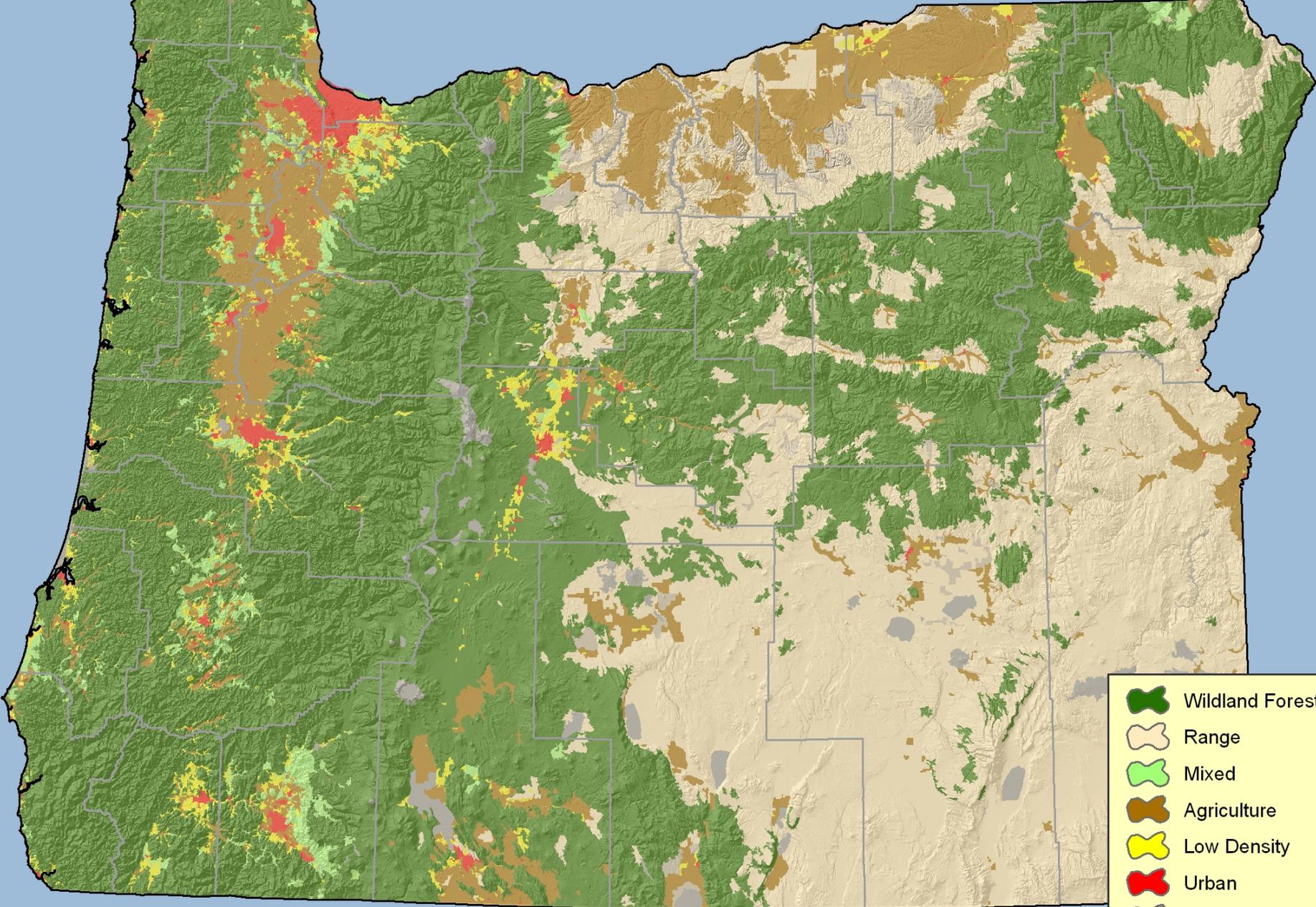
- Land use polygons for all Oregon Lands
 - 1994, 2005, 2009
- Land use data on 37,003 points on nonfederal lands
 - Land use, structure counts, and more
 - 1974, 1984, 1994, 2001, 2005, 2009
- 2009 in progress

Landuse Class 1994



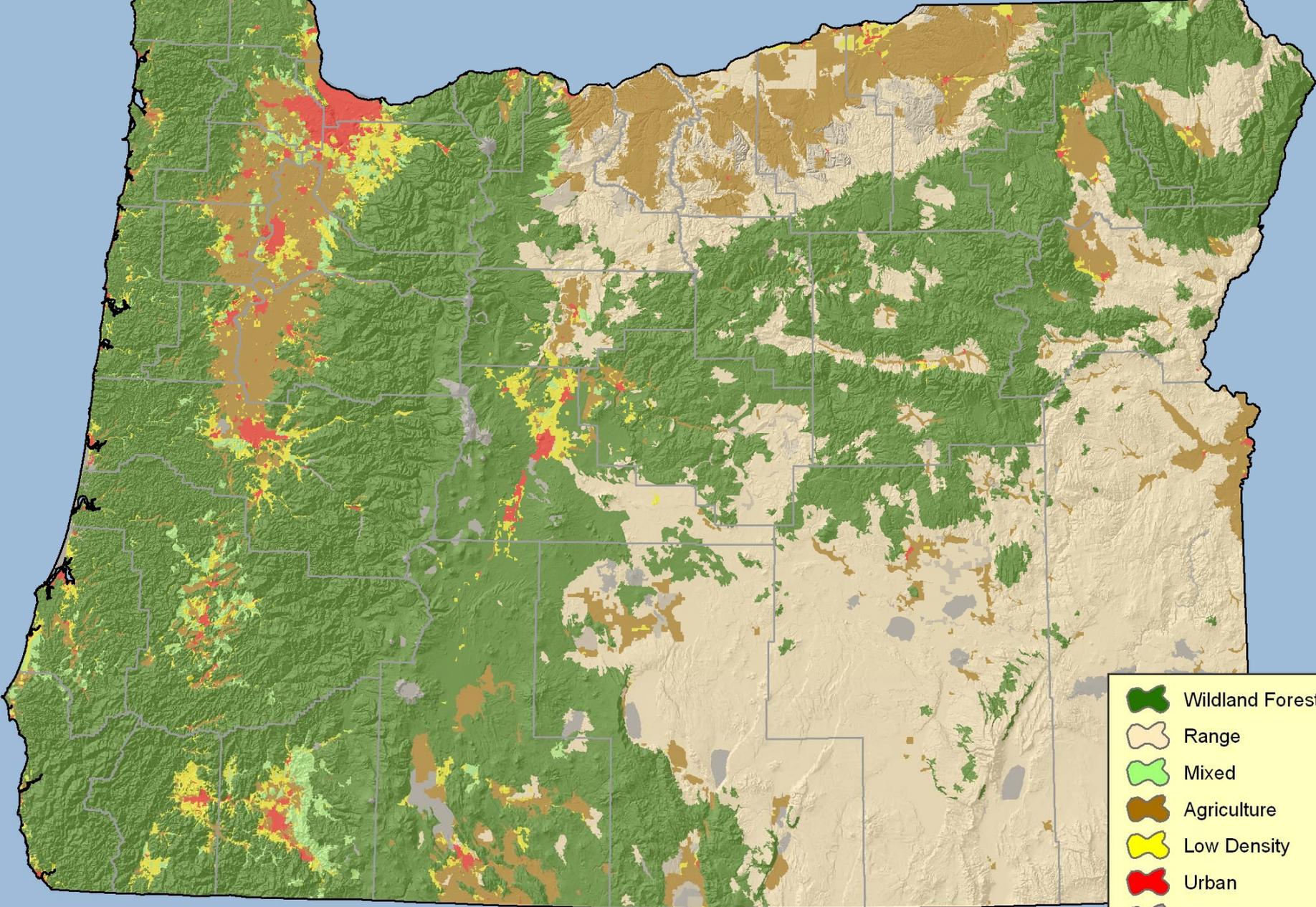
- Wildland Forest
- Range
- Mixed
- Agriculture
- Low Density
- Urban
- Other

Landuse Class 2005



- Wildland Forest
- Range
- Mixed
- Agriculture
- Low Density
- Urban
- Other

Landuse Class 2060



- Wildland Forest
- Range
- Mixed
- Agriculture
- Low Density
- Urban
- Other

**Low-density
residential**

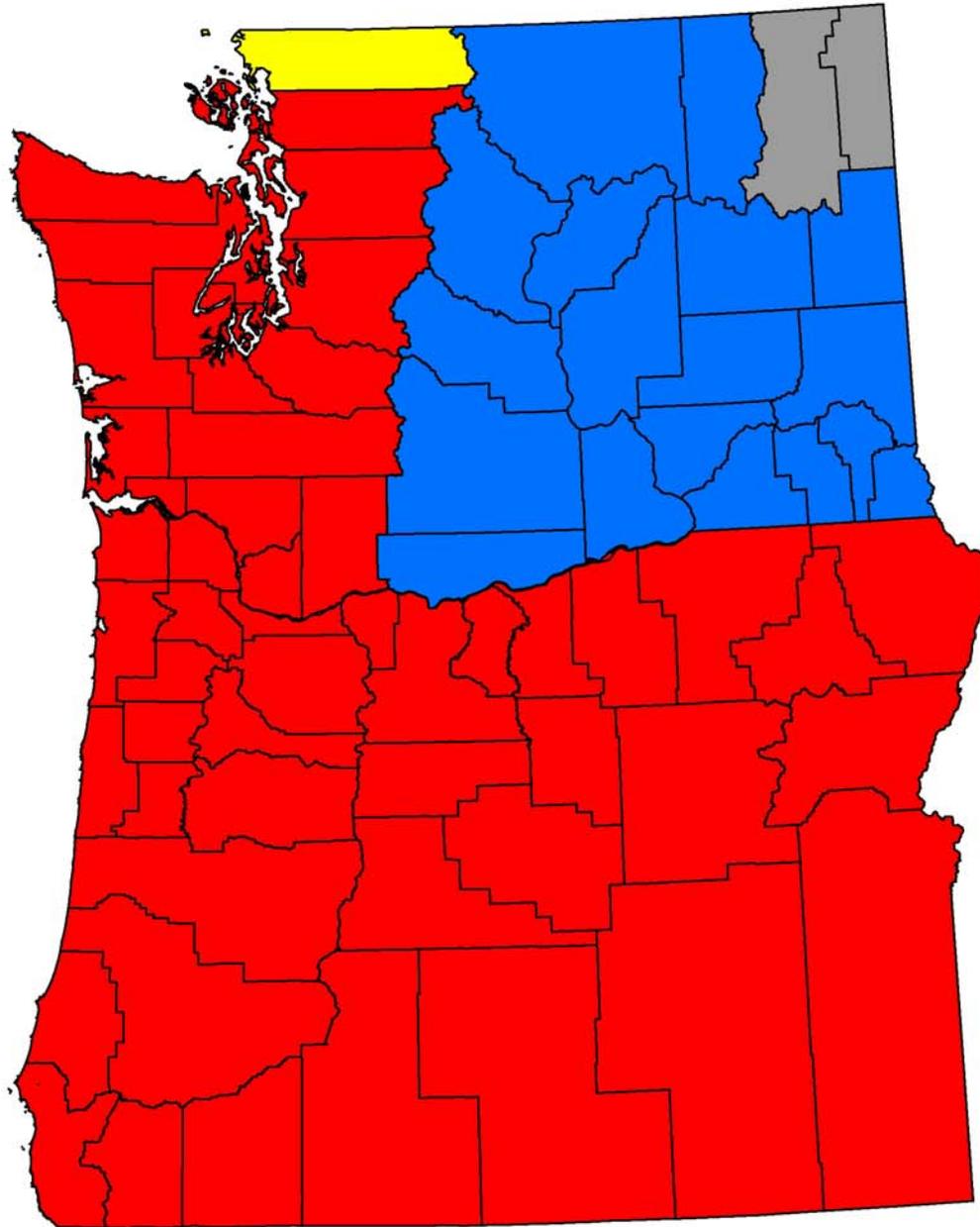




**Wildland
forest**

**Low-density
residential**

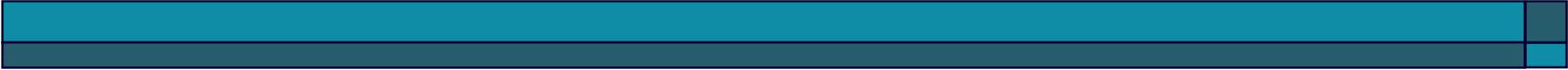
Washington & Oregon Land Use Progress



Washington Polygon Progress

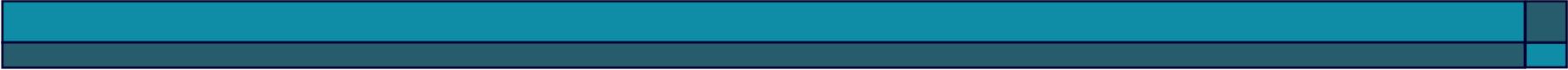
- 2006, 1994 & 1976 Polygons Completed
- 2006 & 1994 Polygons Completed
- 2006 Polygons Completed
- No Polygons Completed

2009 Oregon Update Started



Oregon

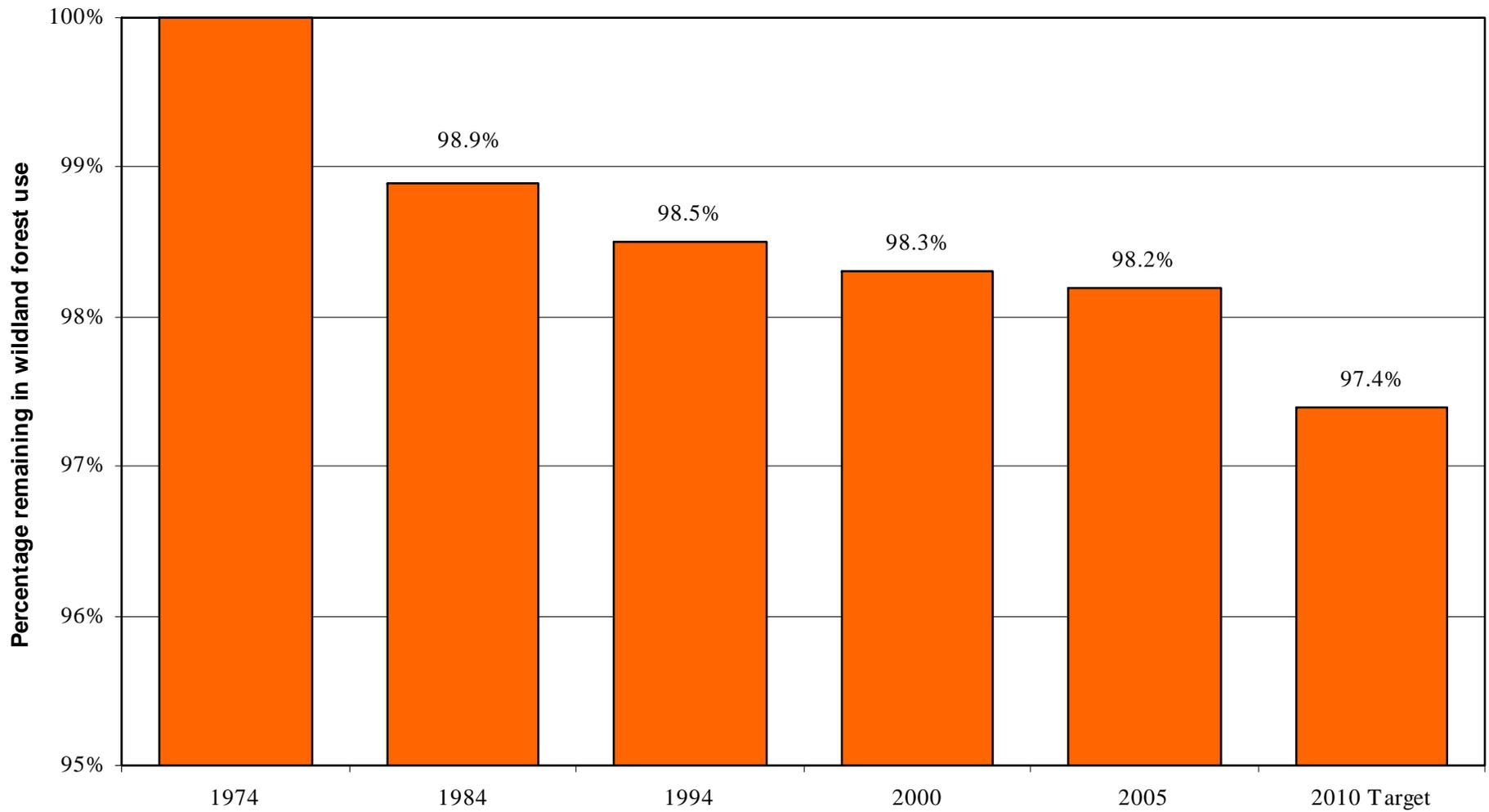
- ❑ Forests, Farms, and People printed
- ❑ Oregon 1/2 meter imagery flown summer of 2009
- ❑ Some 2009 available, the rest here by December
- ❑ Table and graph templates already completed
- ❑ Report update published end of summer 2010
- ❑ Analysis concerning water quality, fire, wildlife habitat, etc. ongoing



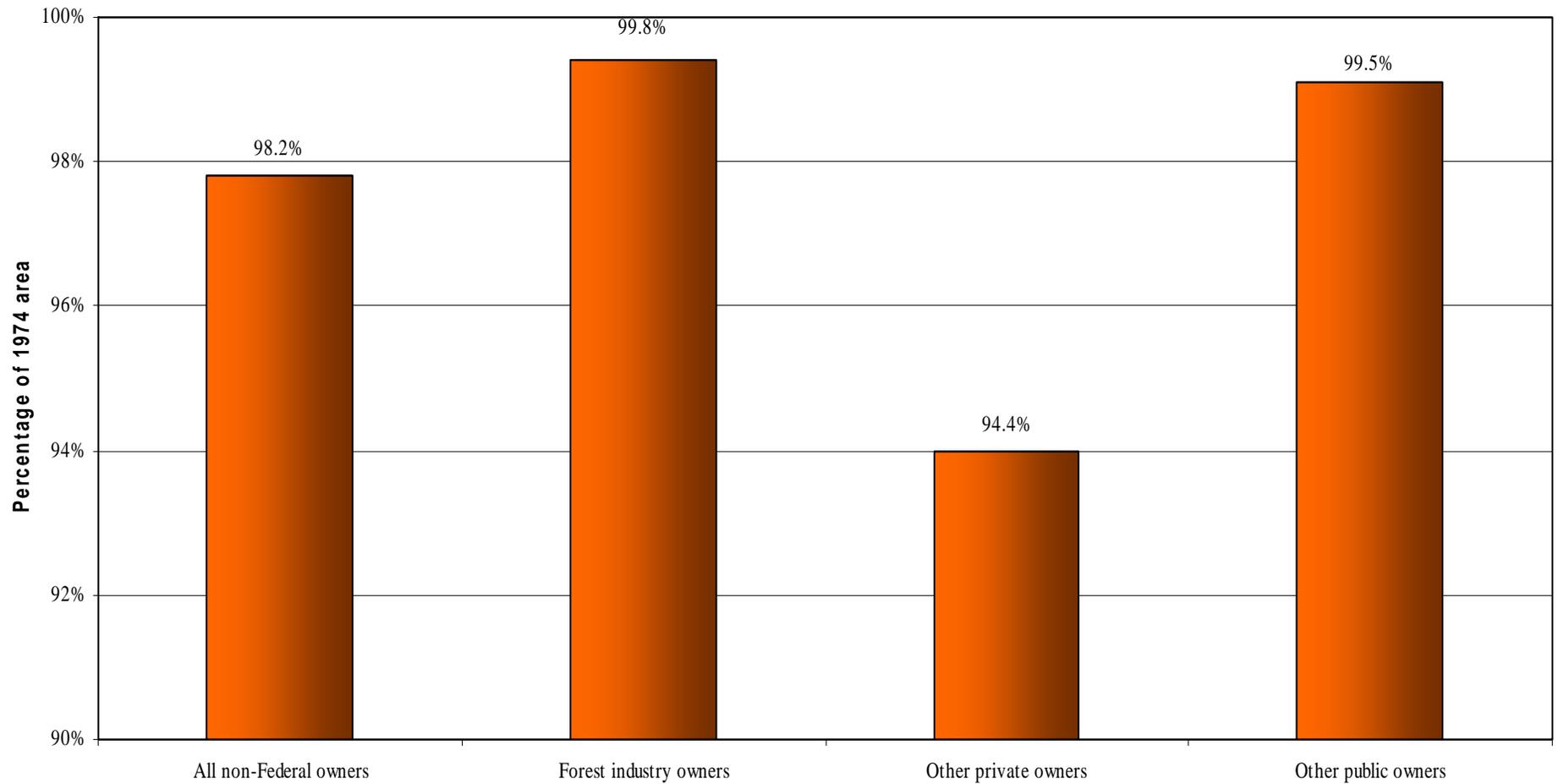
Ties to issues, management, condition of resources, and policy such as:

- Land ownership changes such as Gilchrist and Skyline
- Tradable Development Rights
- Metrics could include
 - Water quality
 - Wildlife habitat
 - Fire hazard, risk, firefighting costs
 - Etc.

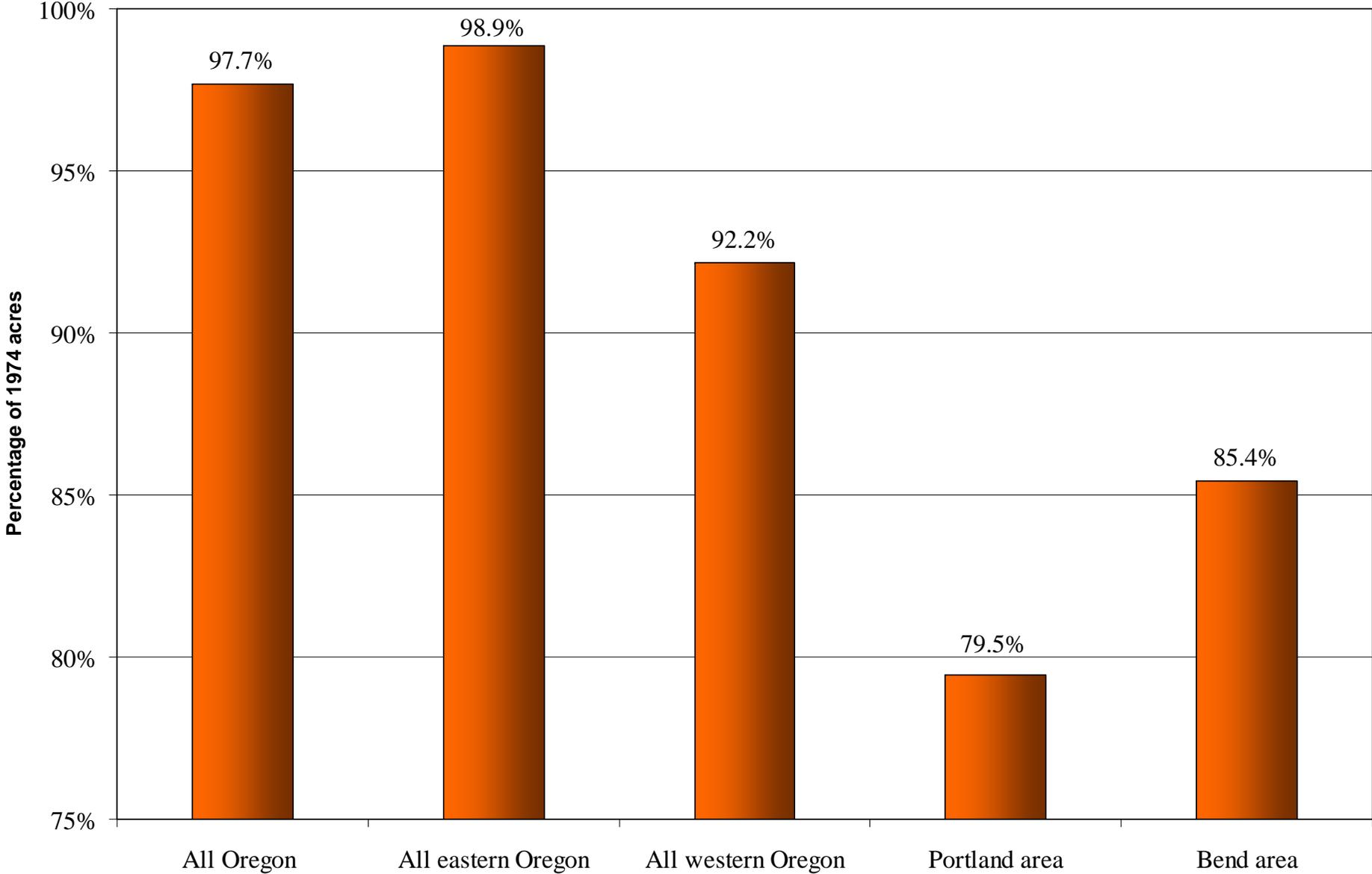
Oregon Benchmark 82: Percentage of non-Federal land in Oregon classified as wildland forest land use in 1974 that remained in wildland forest use in later years



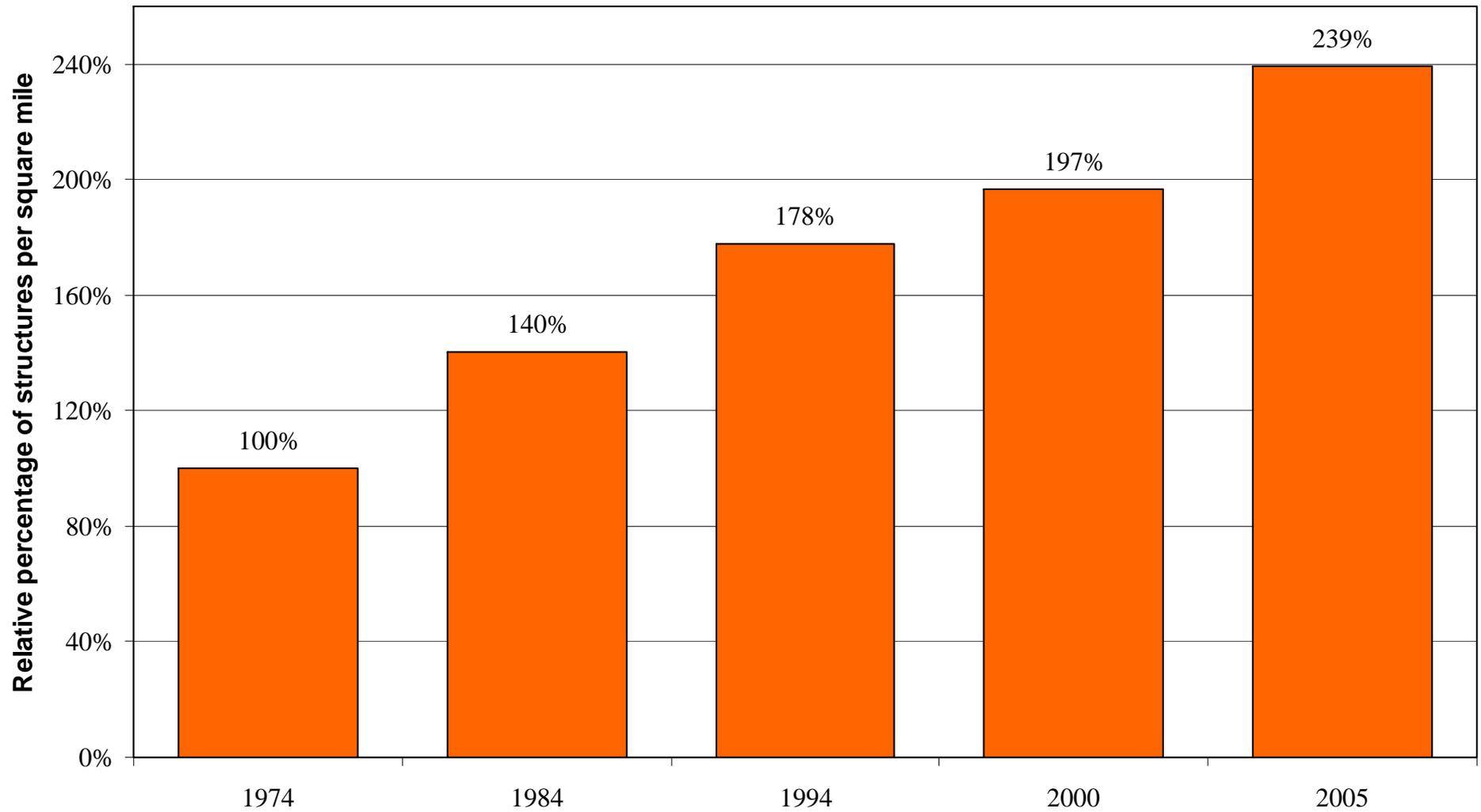
Percentage of non-Federal land in Oregon classified as wildland forest use in 1974 that remained in wildland forest use in 2005, by owner class



**Percentage of private land classified as agricultural land use in 1974
that remained in agricultural land use in 2005, by region**

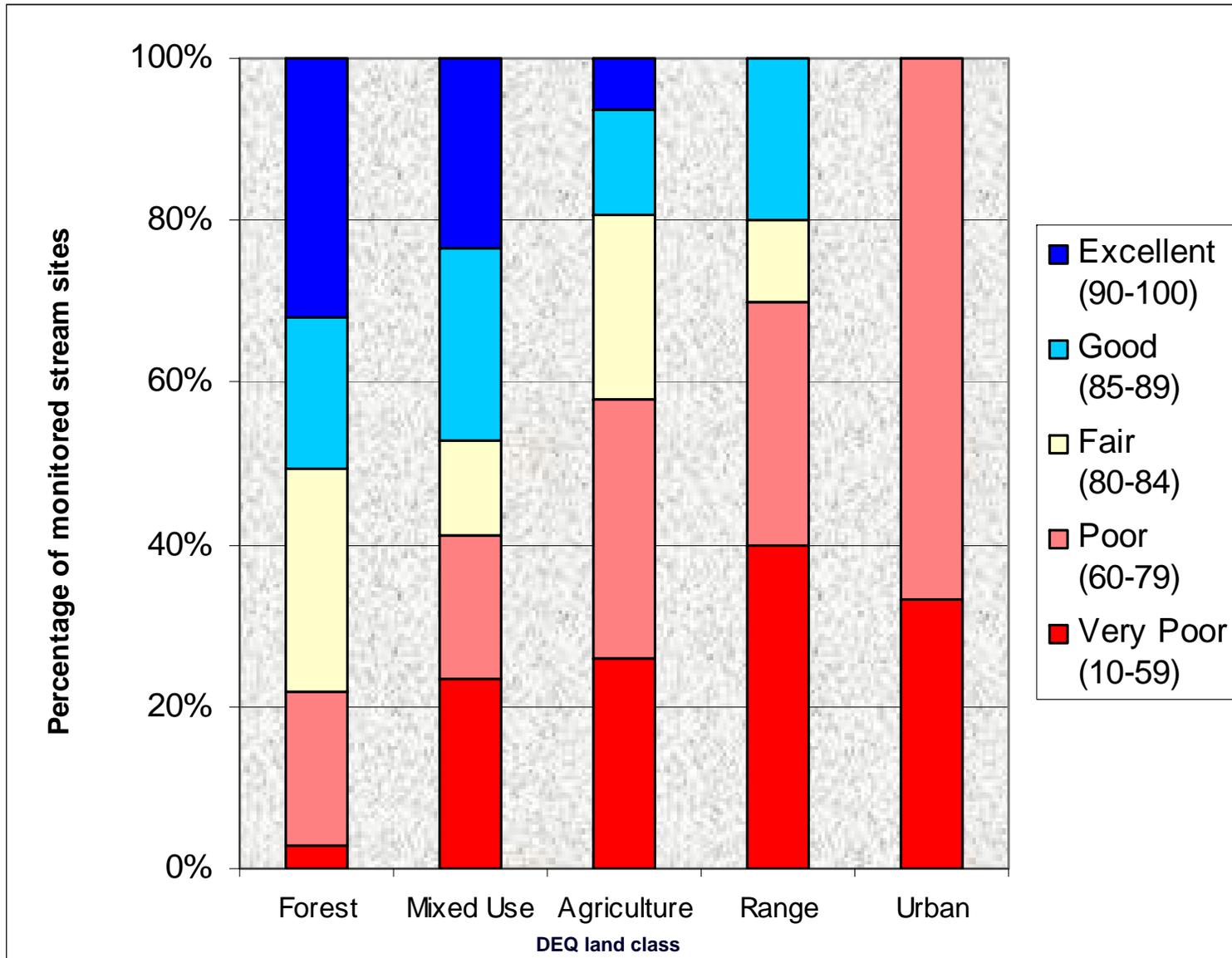


Oregon Indicator of Sustainable Forest Management: The average number of structures, as a percent by year, relative to the number present in 1974 on non-Federal land classified as wildland forest in 1974



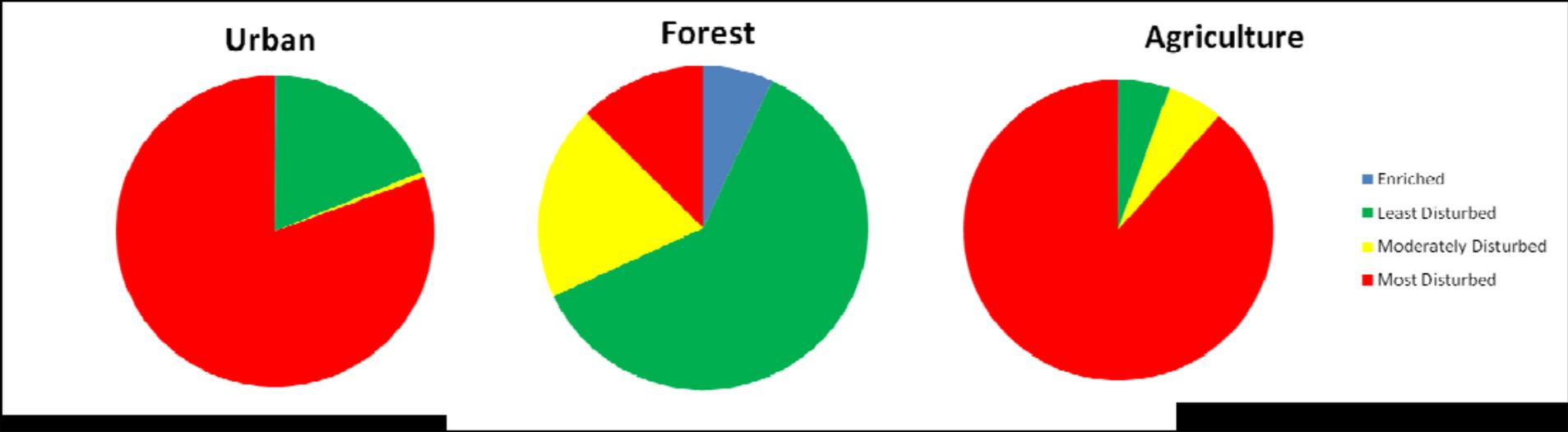
Implications for: fire risk/hazard/cost, federal lands, water quality, etc?

Water quality measurements on land in all ownerships in Oregon, by DEQ land use class, 2005

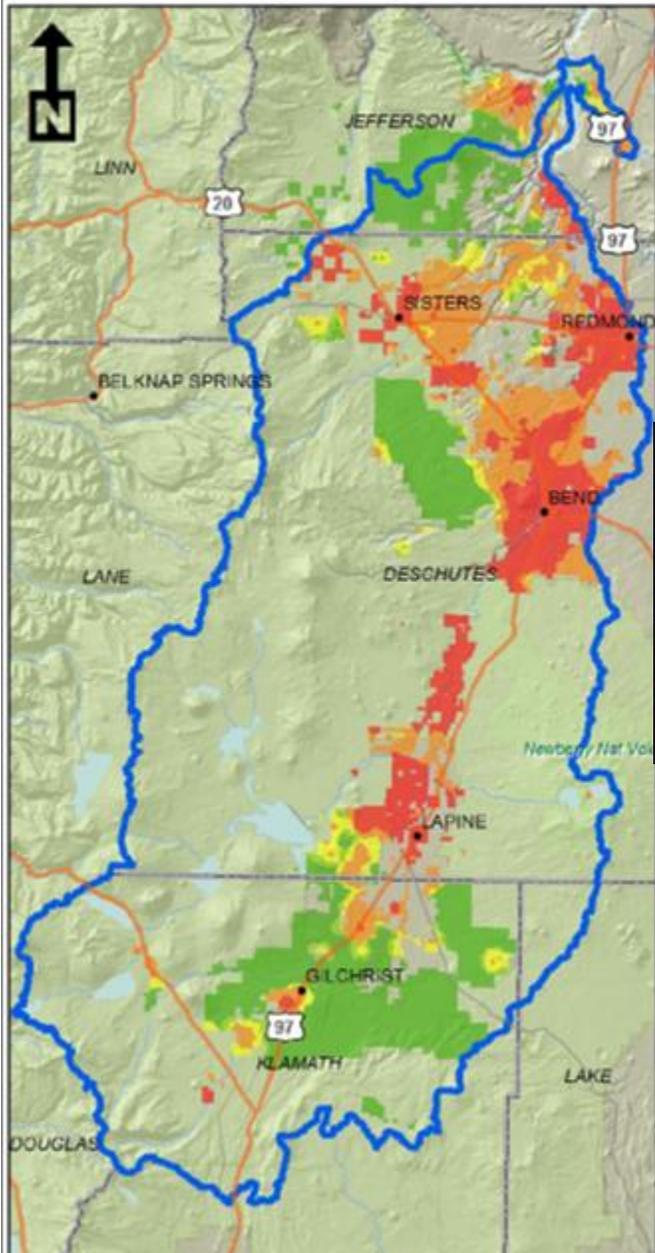


Biological Condition of Willamette Basin rivers and streams, by major land use class

Only about 13% of forest streams are classified as “most disturbed,” significantly less than on Urban or Agricultural land.



Dwelling density - 2000

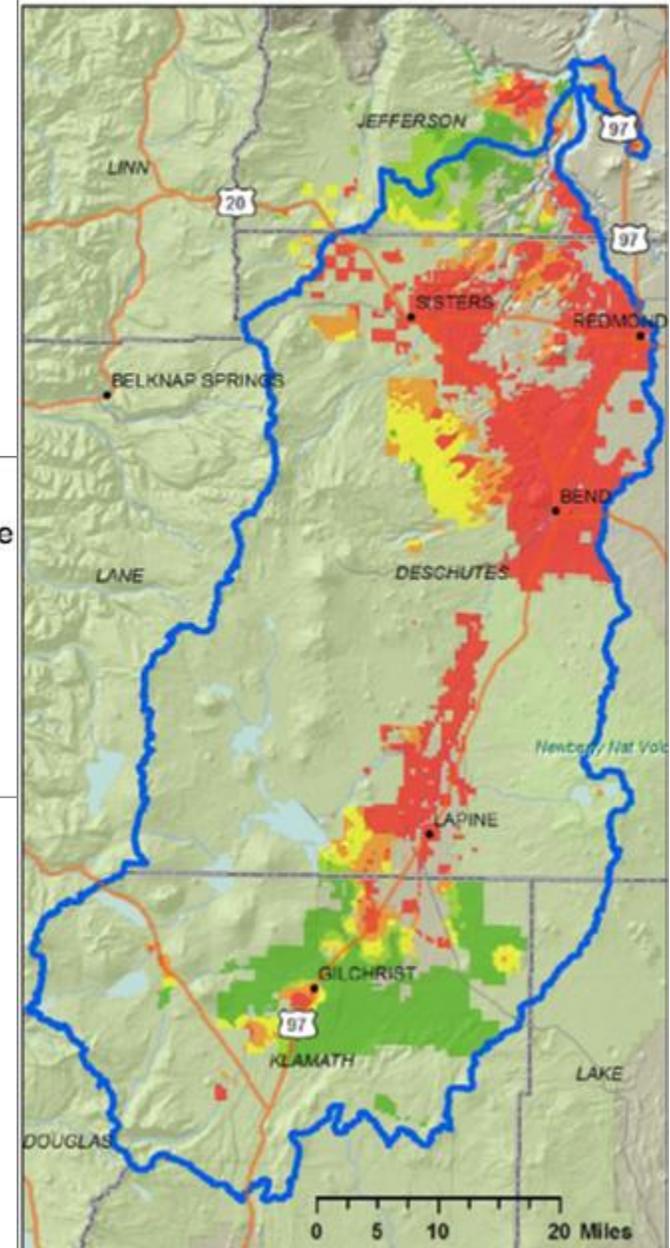


Jeff Kline, PNW
Station, Corvallis

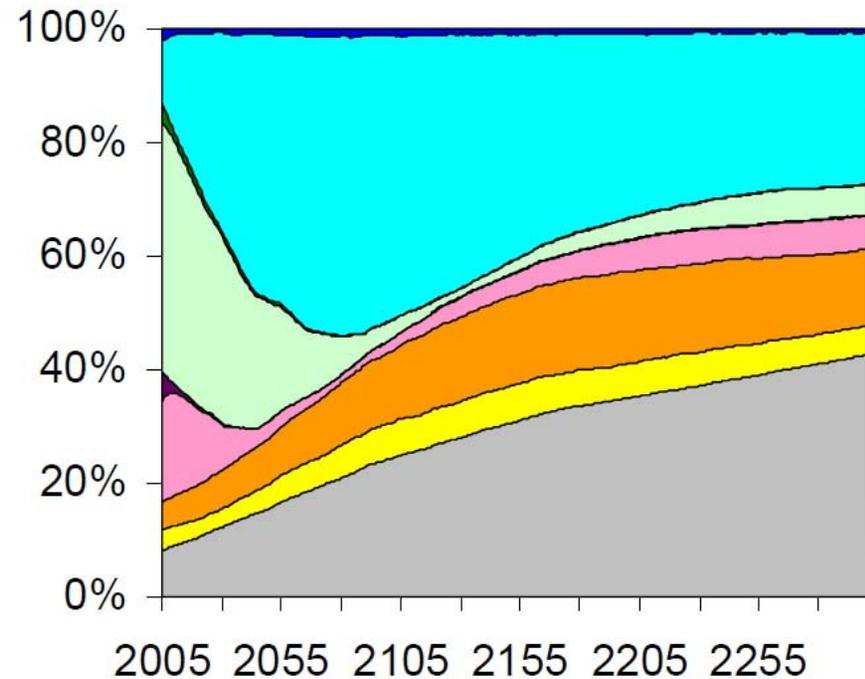
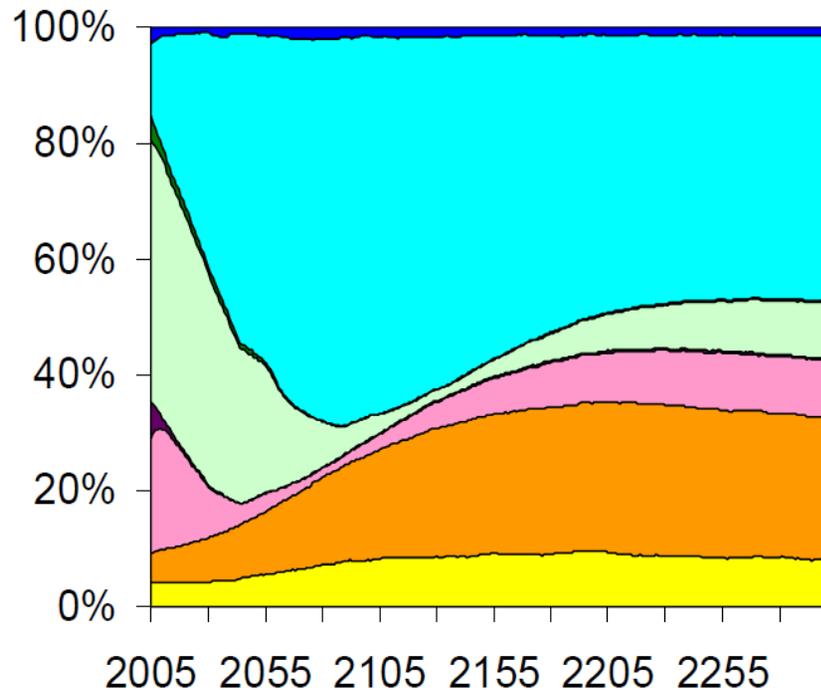
Dwelling Density

- At least 480 acres per home
- 480-240 acres per home
- 80-240 acres per home
- 10-80 acres per home
- <10 acres per home

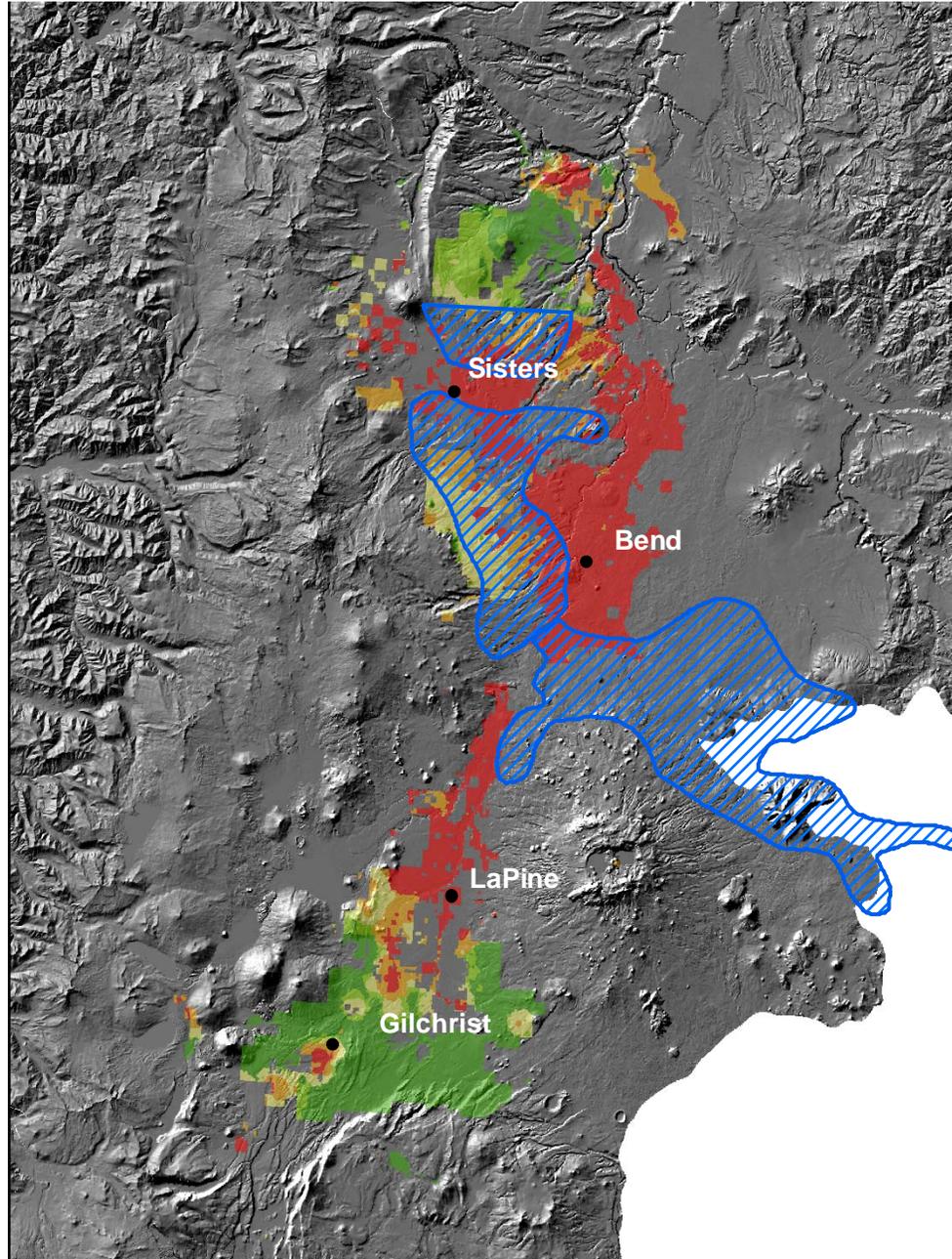
Dwelling density - 2050



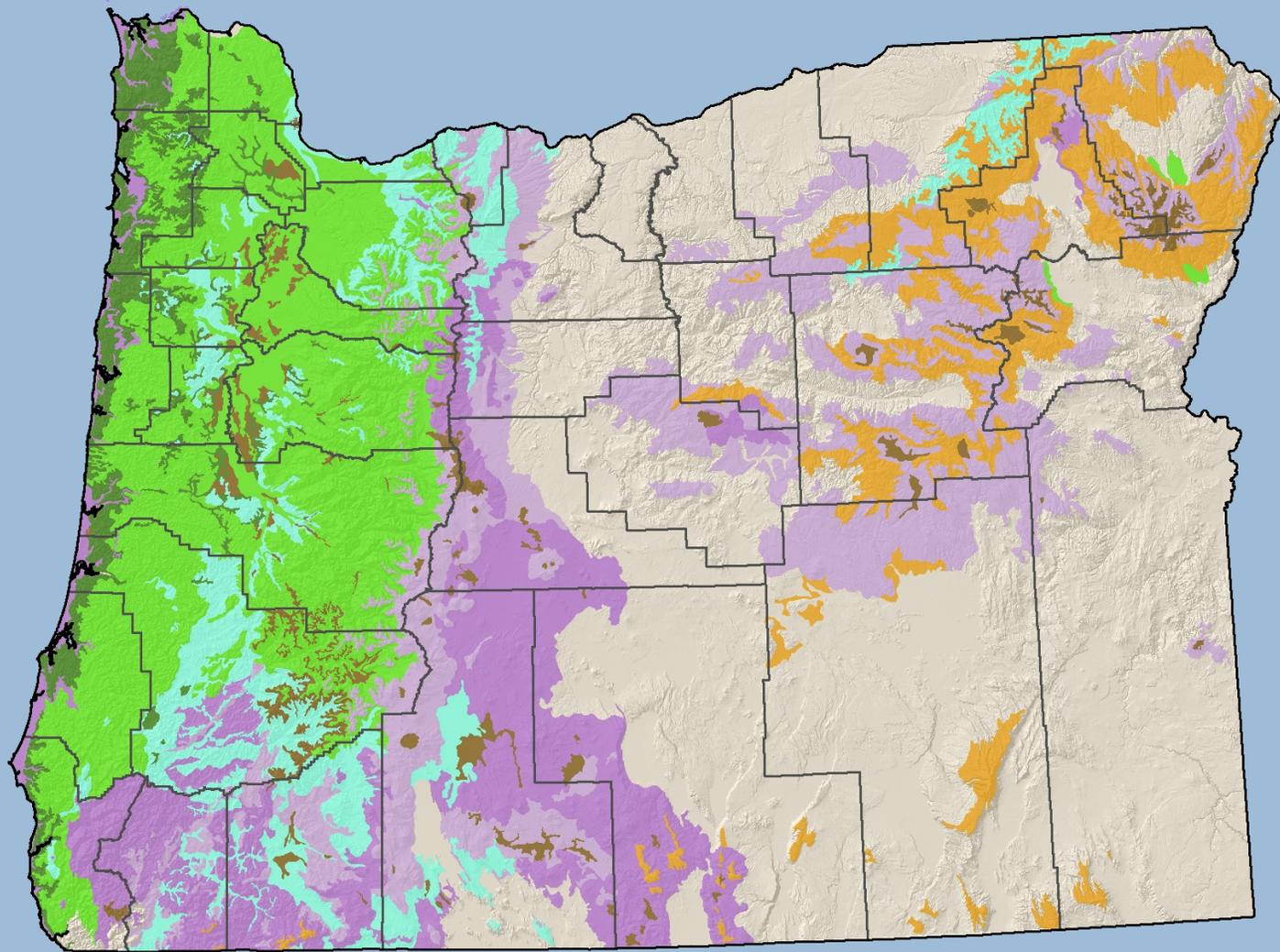
No Development vs. Development – Skyline



- Large trees – closed forests
- Large trees – open forests
- Medium trees – closed forests
- Medium trees – open forests
- Small trees – closed forests
- Small trees – open forests
- Seedling, sapling, and pole trees
- Grass, herbs, & shrubs
- Developed and other

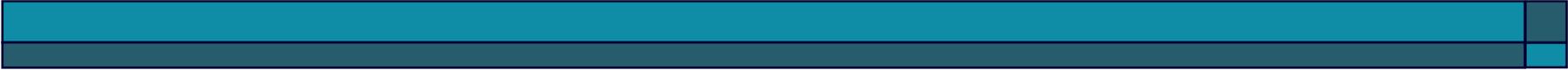


Mule Deer winter range potentially affected by development between 2000 and 2050. Preliminary ODFW mule deer winter range in blue.



Soils Productivity Class

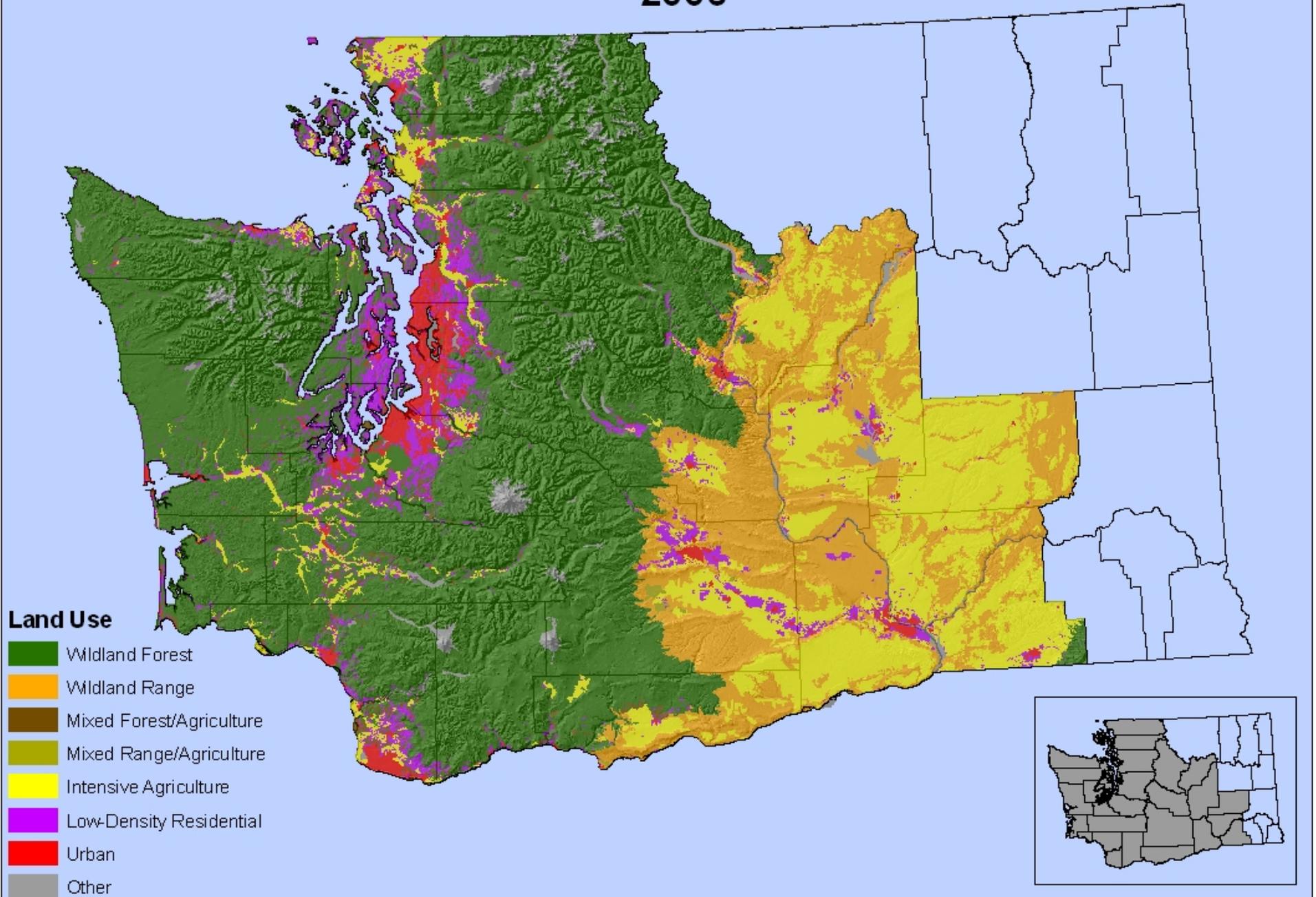
- 1
- 2
- 3
- 4
- 5
- 6
- 7

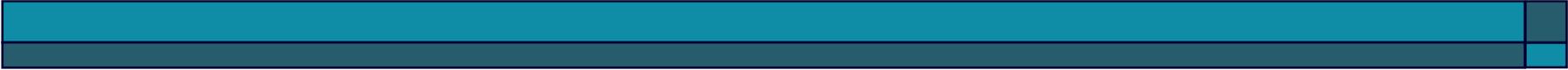


Washington

- W. Washington structure counts, polygons, etc. for 2006 and earlier occasions complete
- Approximately ½ done in E. Washington
- Have not found imagery for earlier occasions for SE Washington
- Have begun outlining W. Washington report

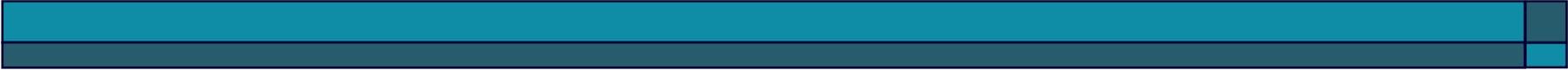
Land Use in Washington 2006





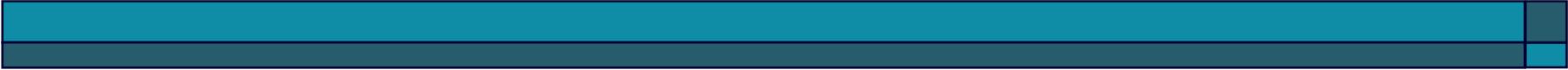
A few factoids

- W. Washington's annual '94-'05 loss of wildland forest 10 times Oregon's (acres & %)
- Washington's forests have fewer structures and fewer are being added (developed directly to urban or low-density residential?)



A few more factoids

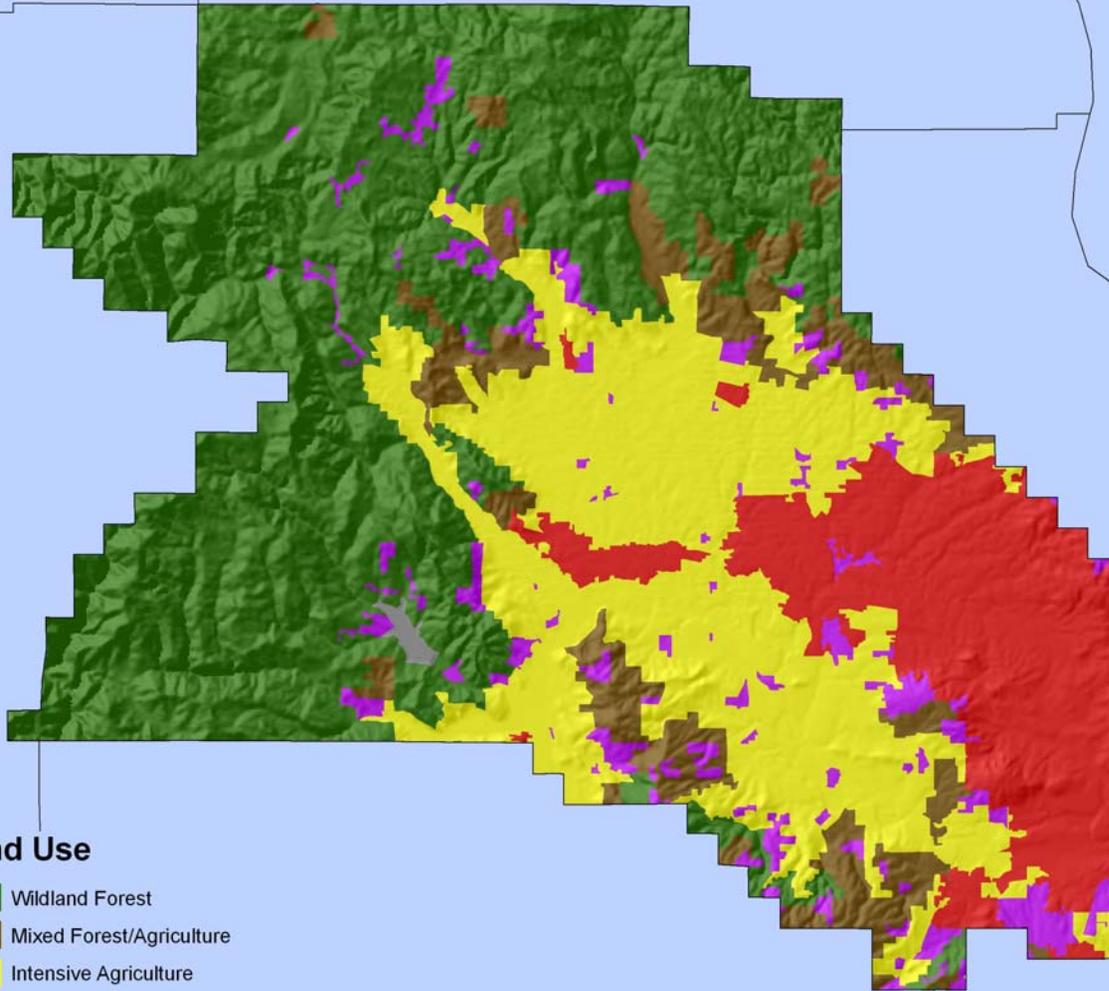
- W. Washington with 10% of the nonfederal land in agriculture – losing agriculture land at 5 times the annual % rate of W. Oregon (which has 24% in agriculture)
- Unlike in wildland forest, agricultural land in W. Washington has more structures and structures are being added faster than in W. Oregon



Last factoid

- Distribution pattern of development different in Vancouver and Portland after Oregon's land use laws implemented

Washington County Land Use 2009



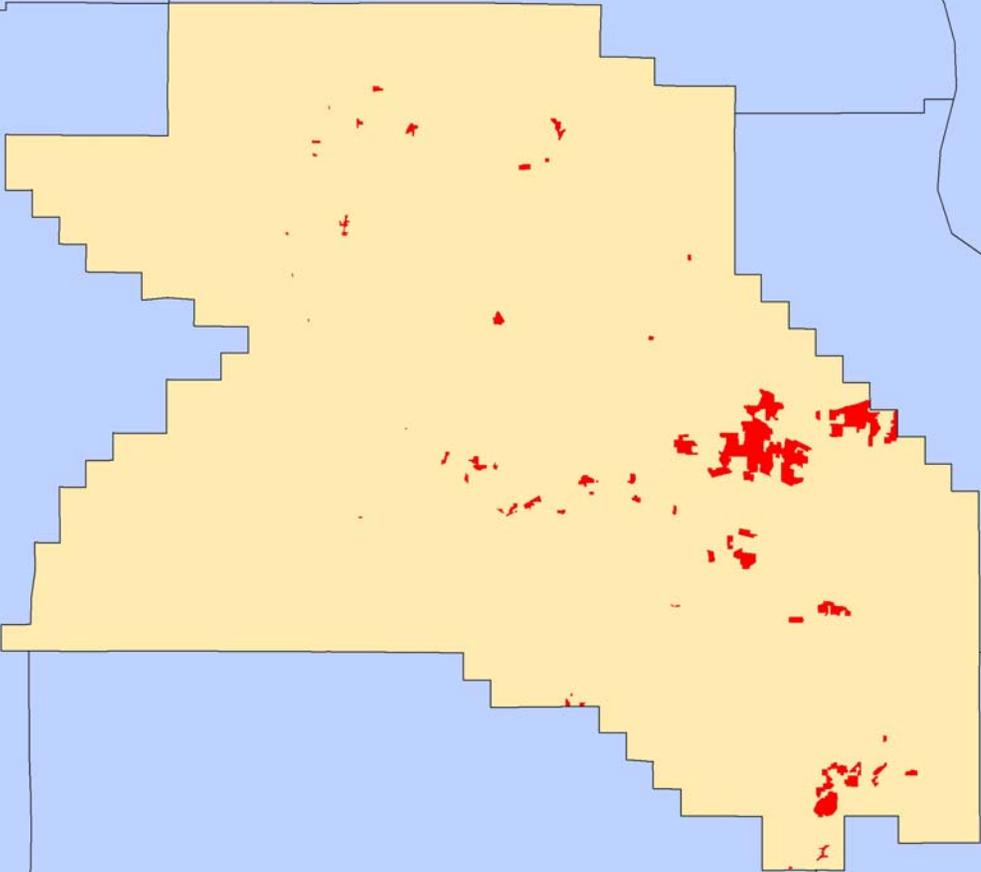
Land Use

- Wildland Forest
- Mixed Forest/Agriculture
- Intensive Agriculture
- Low-Density Residential
- Urban
- Other

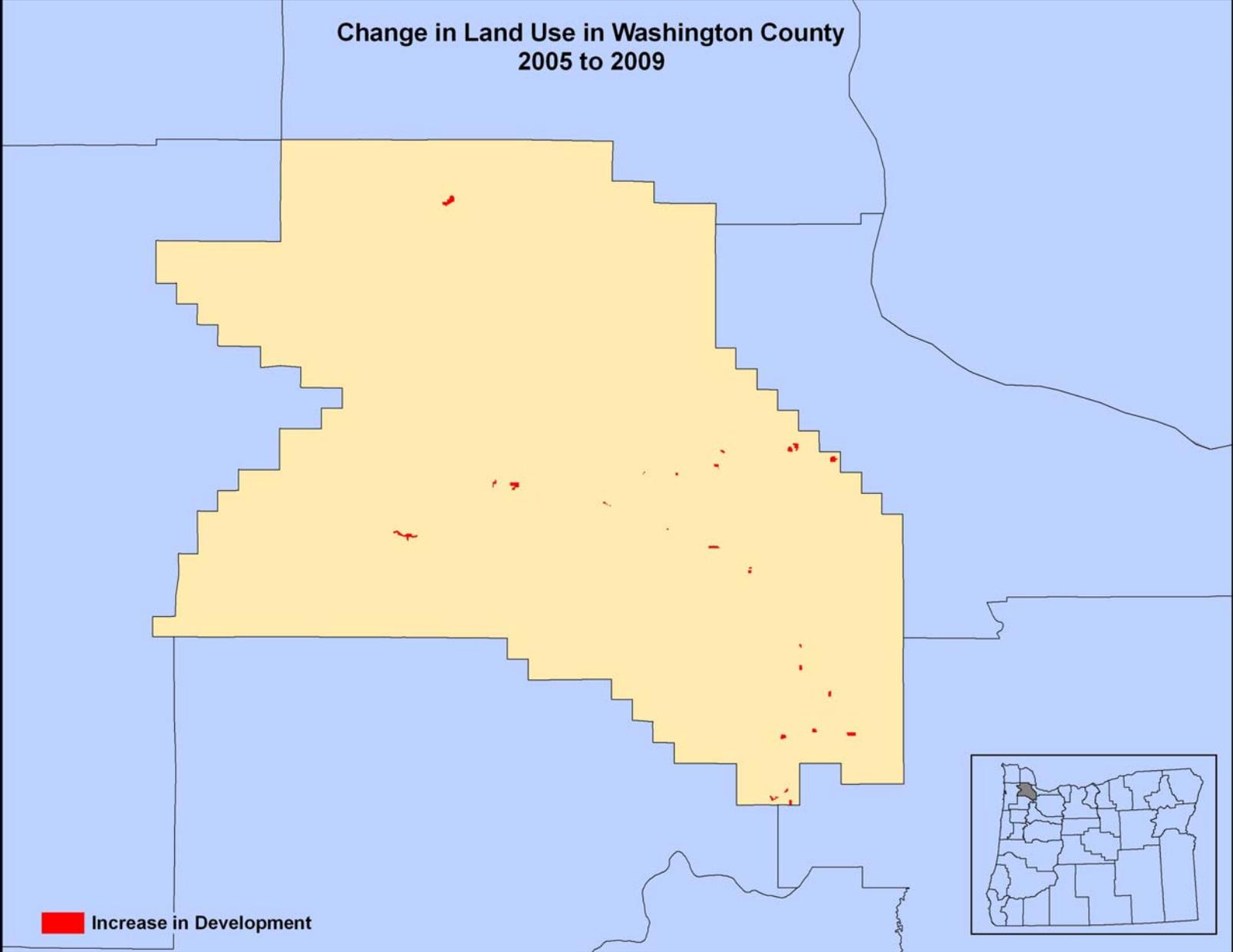


Change in Land Use in Washington County 1994 to 2005

 Increase in Development



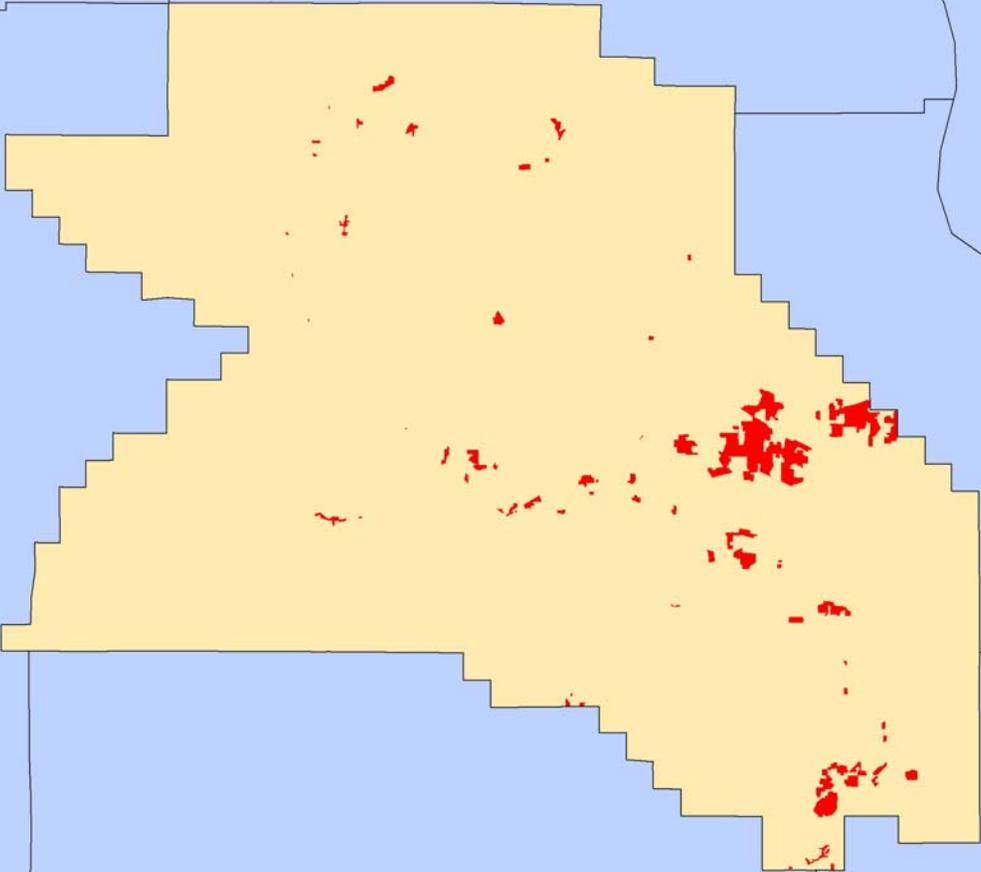
Change in Land Use in Washington County 2005 to 2009

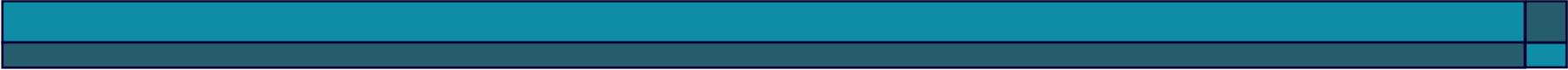


 Increase in Development

Change in Land Use in Washington County 1994 to 2009

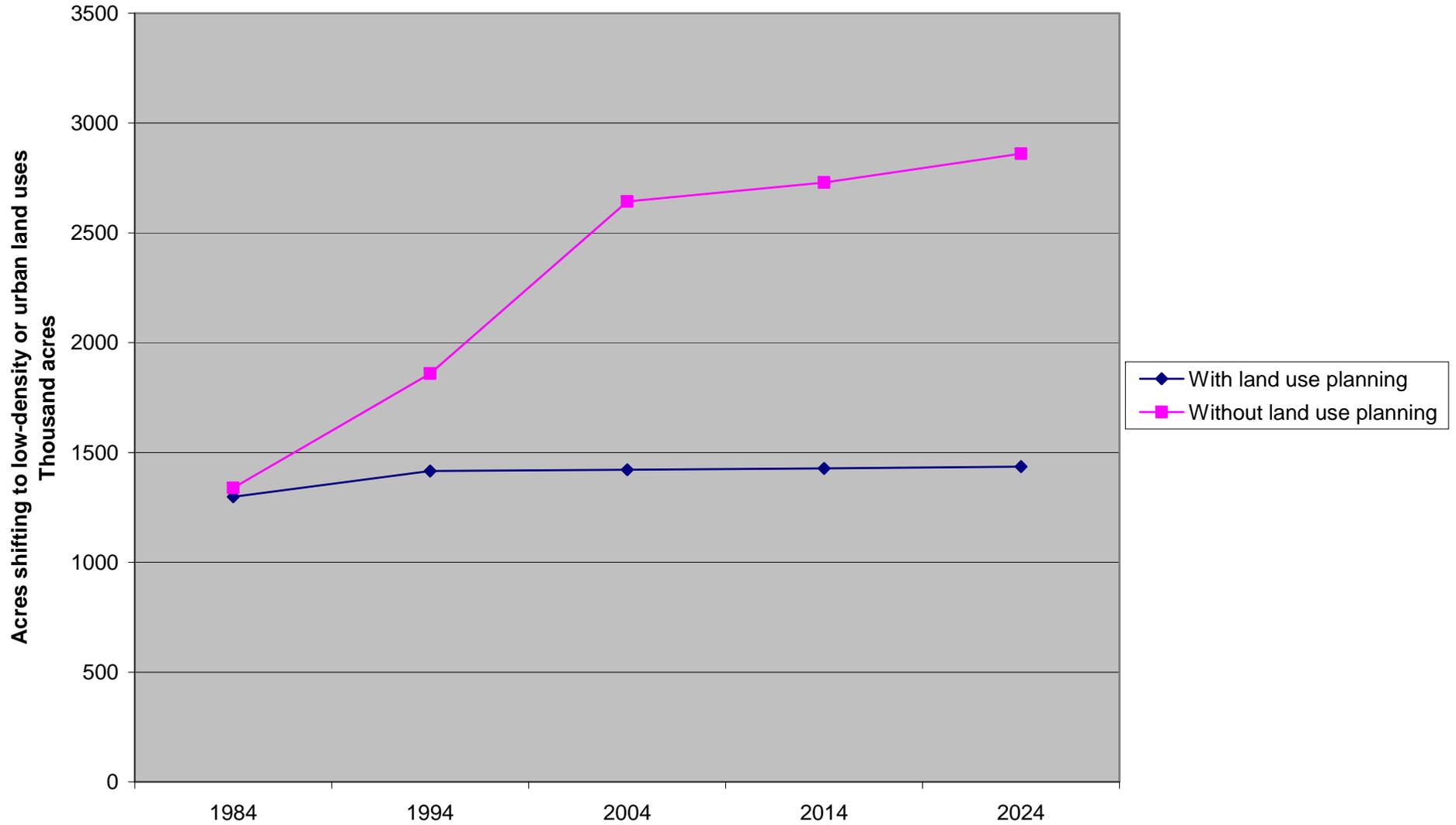
 Increase in Development





Land use change important for carbon cycling

Projected area of non-federal land in western Oregon changing from resource land uses to low-density and urban land uses, 1984-2024^{ab}



a Resource land use classes include wildland forest, mixed forest/agriculture, and intensive agriculture.

b From Cathcart and others 2006.