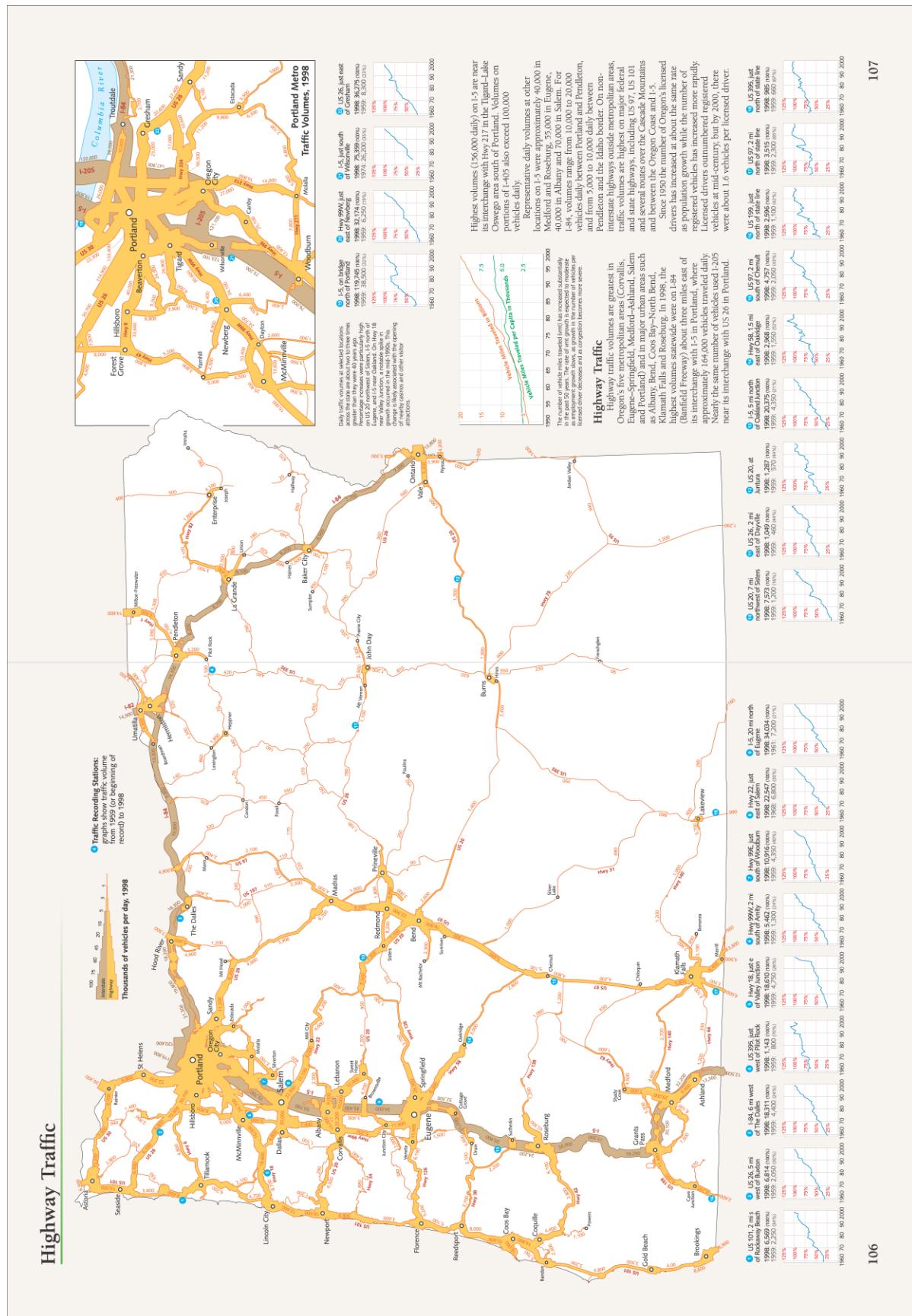


## State Atlas Design



*Figure 1. Highway Traffic page pair.*

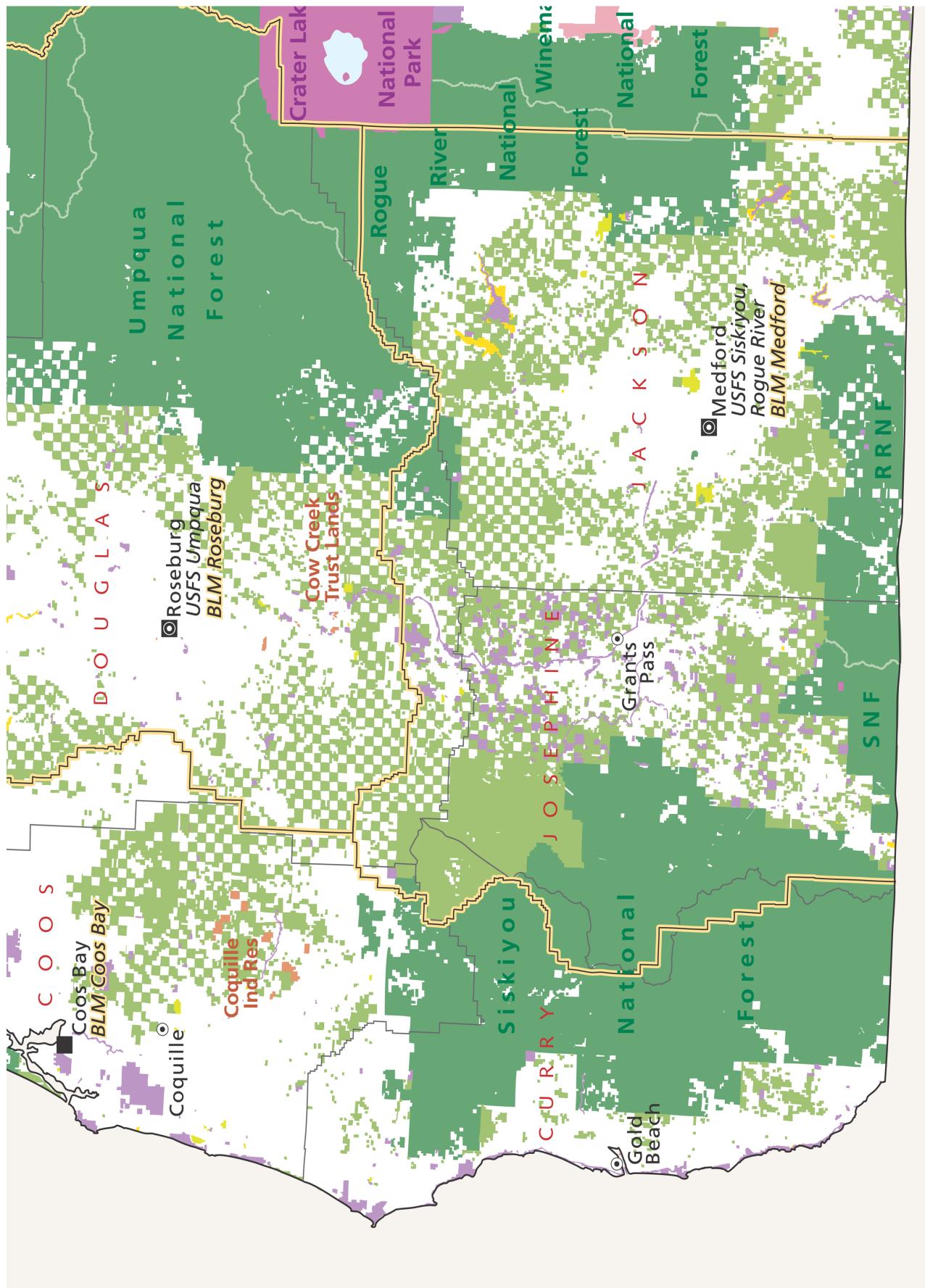


Figure 2. Land Ownership: detail example.

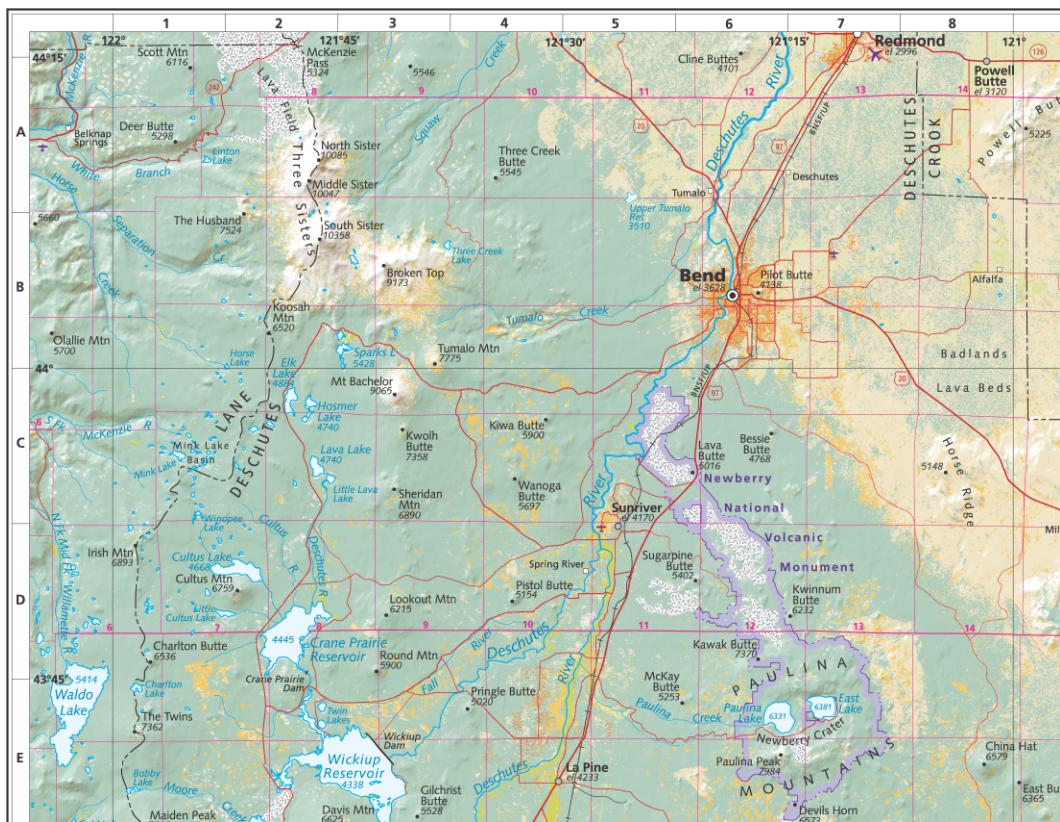


Figure 3. Reference Map Series example (scale 1:500,000).

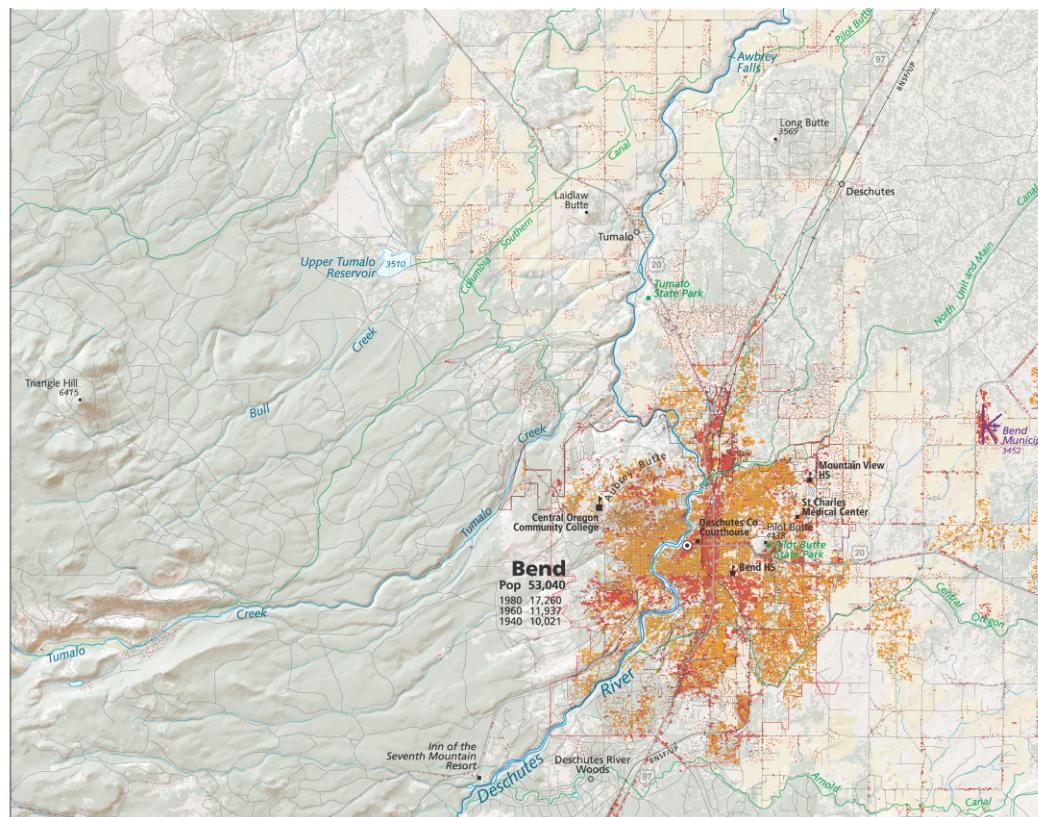


Figure 4. Urban Center map series example (scale 1:150,000).

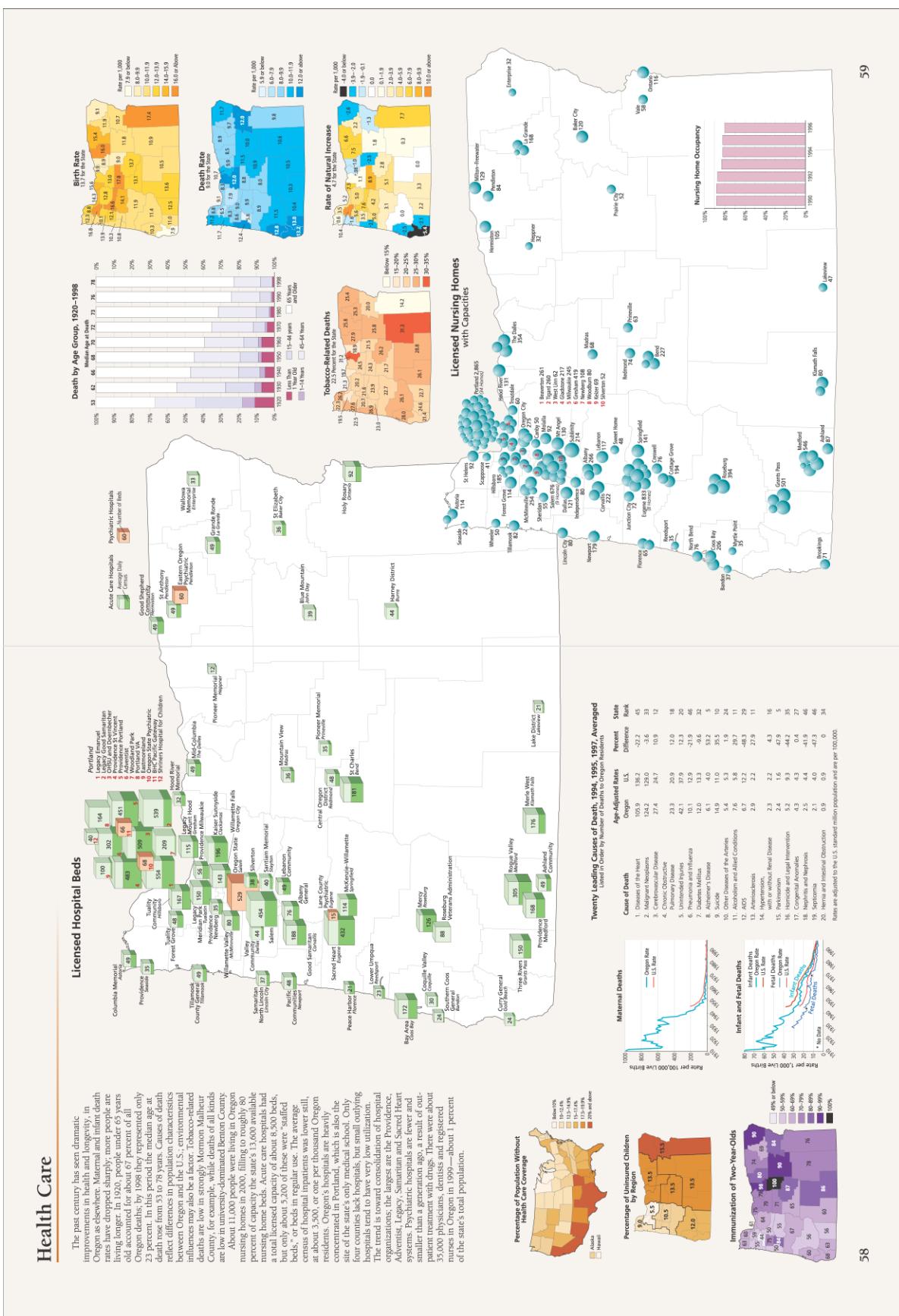


Figure 5. Health Care page pair.

## Annual Precipitation

Oregon precipitation originates in the Pacific Ocean, where water evaporates from the surface, becoming water vapor. This vapor is transported by the prevailing winds, which blow from west to east during most of the year. Active Pacific storms with strong winds, clouds and rain blowshore in Oregon with the greatest frequency and intensity between October and March.

If it were possible to station a rain gauge 50 miles off the Oregon Coast, the instrument would likely receive about 30 inches of rainfall per year. Much more rain falls ashore due to the effects of terrain. Not far inland, the eastward-moving storms meet the slopes of the Coast Range, which force the storms to ascend. As air rises, it cools; as it cools, its capacity to retain water (in the form of water vapor) diminishes. Some of the water vapor in the cooling air turns to liquid in a process known as condensation. When water condenses, clouds form, and when the condensation reaches a critical point, precipitation begins to fall. Because the air

moving into Western Oregon is very humid (contains a great deal of water vapor), and because the slope of the Coast Range is steep, the air rises, cools and condenses quite violently, resulting in heavy precipitation. While coastal areas typically receive 60 to 80 inches of rain annually, even greater amounts fall at higher elevations in the Coast

Range, where the full effect of terrain-induced rain (also known as orographic precipitation) pours from the sky. In an average year 180 to 200 inches of rain deluge some portions of the Coast Range, typically at elevations of 2,000 to 4,000 feet. Though there are no rain gauges in the western slope, the volume of water flowing down streams provides a reliable estimate of rainfall in a drainage basin. These estimates are reflected in the Average Annual Precipitation map shown here.

Even after dropping huge volumes of water (or snow, if temperatures are low enough while passing the mountains), the storms entering the Willamette Valley retain so much moisture that significant precipitation still falls. The lowest elevations in the valley (where most Oregonians live) average 35 to 45 inches of precipitation per year—only 20 percent of what falls in some

Average Annual Precipitation  
1961–1990

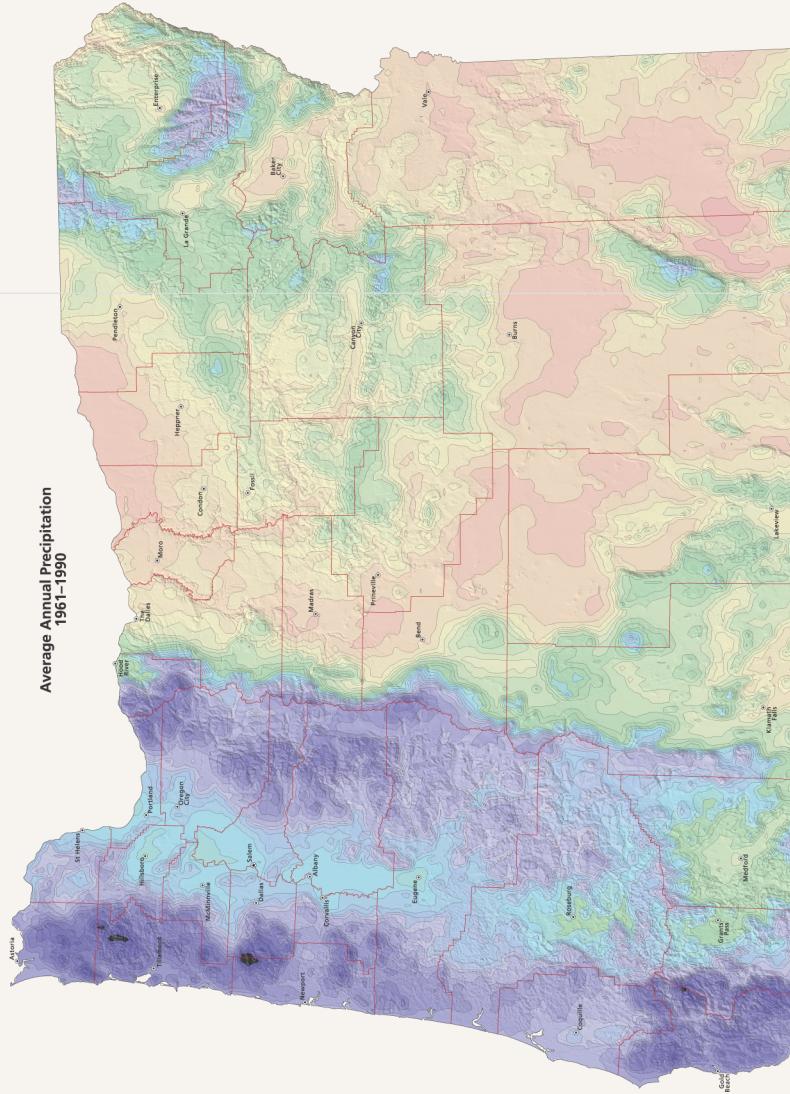


Figure 6. Annual Precipitation page pair.