Land Ownership Change and the Ranching Economy in the Okanogan Valley and Eastern Okanogan County, Washington

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ABOUT HEADWATERS ECONOMICS

Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions in the West.

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TABLE OF CONTENTS

	Page
Introduction	1
Summary Findings	2
The Farming Landscape of Okanogan County	5
Livestock Ranching in Okanogan County	9
Economic Trends in Livestock Production	13
Land Ownership Trends	17
Agricultural Land Sales Dynamics	24
Conclusions	31

INTRODUCTION

This report is concerned with the changing nature of the ranching landscape in the Okanogan Valley and eastern Okanogan County, especially as it concerns fragmentation and turnover in large, agricultural properties and the local effects of these trends.

Okanogan County is located in north central Washington and shares a northern border with Canada. The county features a rugged topography, with forested hillsides and valley grasslands. The Methow River and the Okanogan River, tributaries of the Columbia River, dominate the lowland areas. In the western portion of the county, forested hills ascend quickly to the steep peaks of the Cascade range, while the eastern ranges, also forested, are of a more rolling nature. The Colville Confederated Tribes occupy a large portion of the southeast corner of the county, while public lands—administered by the State of Washington and the U.S. Forest Service and Bureau of Land Management—dominate much of the area's foothills and mountain country.

Okanogan County is one of the nation's largest counties—at nearly 5,300 square miles it is close in size to the state of Connecticut—but it is also among the most sparsely populated.[1] Long focused on primary production of crops, livestock and timber, the county has struggled in recent years to adjust to shifting national and regional economies. A changing agricultural economy and increasing demand for rural residential lots has led to large-scale subdivision of agricultural lands in many parts of the county. The highly scenic Methow Valley is a well-known amenity landscape popular among urban Washingtonians as a vacation and recreational destination. In many ways, it is a very distinct region from the rest of the county—the focal area of this report.

The population of Okanogan County, Washington was 39,231 in 2006. Since 1970, the county's population grew at a rate exceeding population growth nation-wide, but slower than the state average. During the period 1970 to 2006, job growth in Okanogan County occurrred more slowly than state and national averages. In 2006, per capita income in Okanogan County, Washington ($27,841) was lower than the state ($38,212) and the nation ($36,714).[2]

The report begins with a basic agricultural profile of the county, followed by a discussion of area livestock ranching in the county and its economic circumstances. The area's current land ownership profile begins a discussion on land ownership dynamics, which then turns to detailed consideration of land sales. (While orcharding is an important part of the area's agricultural landscape, it is not a focus of this report, which is primarily concerned with ranch lands.)

Map 1 shows general land ownership patterns in Okanogan County, with the study area outlined in red. While there are private land holdings within the boundaries of the Colville Confederated Tribes Reservation, they were excluded from this study due to data limitations.

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[1] Washington State Department of Agriculture, "Okanogan County Agriculture." A Report in the County Agricultural Data Series, 1958.

[2] Headwaters Economics, "A SocioEconomic Profile: Okanogan County, Washington." Produced by the Economic Profile System, 2007. Available online: http://www.headwaterseconomics.org/profiles/p_Okanogan_County_Washington.pdf.

SUMMARY FINDINGS

See page 3 for definitions of key terms, indentified in red.

Agriculture & the Economy

- Okanogan County fits the profile of a rural, isolated county with an economy that is slow-growing and underperforming compared to the state and the nation.
- Agriculture's share of total employment and personal income county-wide declined significantly during the period 1970-2007.
- Gross income from livestock production has been relatively stagnant, and net profits declining for about 25 years.

Ownership Profile

- A very small number—roughly 14—full-time ranches remain in the Okanogan Valley and eastern Okanogan County.
- Part-time ranches have been significant contributors to the local livestock industry, but their numbers are declining and ranches in this size cohort may show the most ownership change in the near future.
- Leasing public and private grazing land has been a critical survival strategy for full-time ranches. Future development of existing small parcels and further agricultural land ownership change could affect the the area's working ranches by adding to or removing available grazing land.
- 41 percent of the private landowners in the Okanogan Valley and eastern Okanogan County use a non-local mailing address for tax purposes. Of the land classified as agricultural (68% of private land), 71 percent is associated with a local mailing address and 29 percent with a non-local mailing address.
- In the study area, nearly half of the private land and one third of the agricultural land is in parcels of 40 acres or less.
- The inventory of agricultural holdings that exceed 160 acres is spread across size cohorts, with a third in the size cohort of 160 to 640 acres, and half in units of 1,280 or more acres.

SUMMARY FINDINGS, CONTINUED.

Ranch Ownership Change

- The study area's rate of turnover of large ranches (>400 acres) —roughly 45 percent changing hands between 1993 and 2008—is on par with fast-growing and fast-changing areas elsewhere in the West.
- 53 percent of the acreage in large ranches that changed hands between 1993 and 2008 left the working ranch landscape, going to developers (24%), investors (14%), amenity buyers (15%), and government (6%).

Definitions of Key Terms Used in this Study

Full-time ranch: Owner-operated livestock operation running 500 or more head of cattle, typically associated with more than 1,280 acres of deeded land.

Part-time ranch: Owner-operated livestock operation running fewer than 500 head, typically associated with 120-1,280 acres of deeded land.

Hobby ranch: Recreational enterprise, often associated with rural residential properties (20 to 40 acres), running fewer than 50 head.

Large ranch: Private land taxed in agricultural land use belonging to one owner(s) whose total holdings exceed 400 acres. Chosen as a threshold for considering a sale of agricultural property a "ranch sale" to facilitate comparison with other research

Local: Owner mailing address in county records located in Okanogan, Douglas, Chelan (excluding Wenatchee) and Ferry counties.

Non-local: Owner mailing address in any other zip code.

Agricultural land: Classified by Okanogan County Assessor as agricultural according to Department of Revenue (e.g., codes beginning with 81 or 83). These parcels may or may not have structures on them.

Other land: Classified by Okanogan County Assessor as any other land use code, including timber or undeveloped land.

Traditional rancher: Owner-operator raising livestock for profit.

Amenity buyer: purchases a ranch for ambience, recreation, and other amenities.

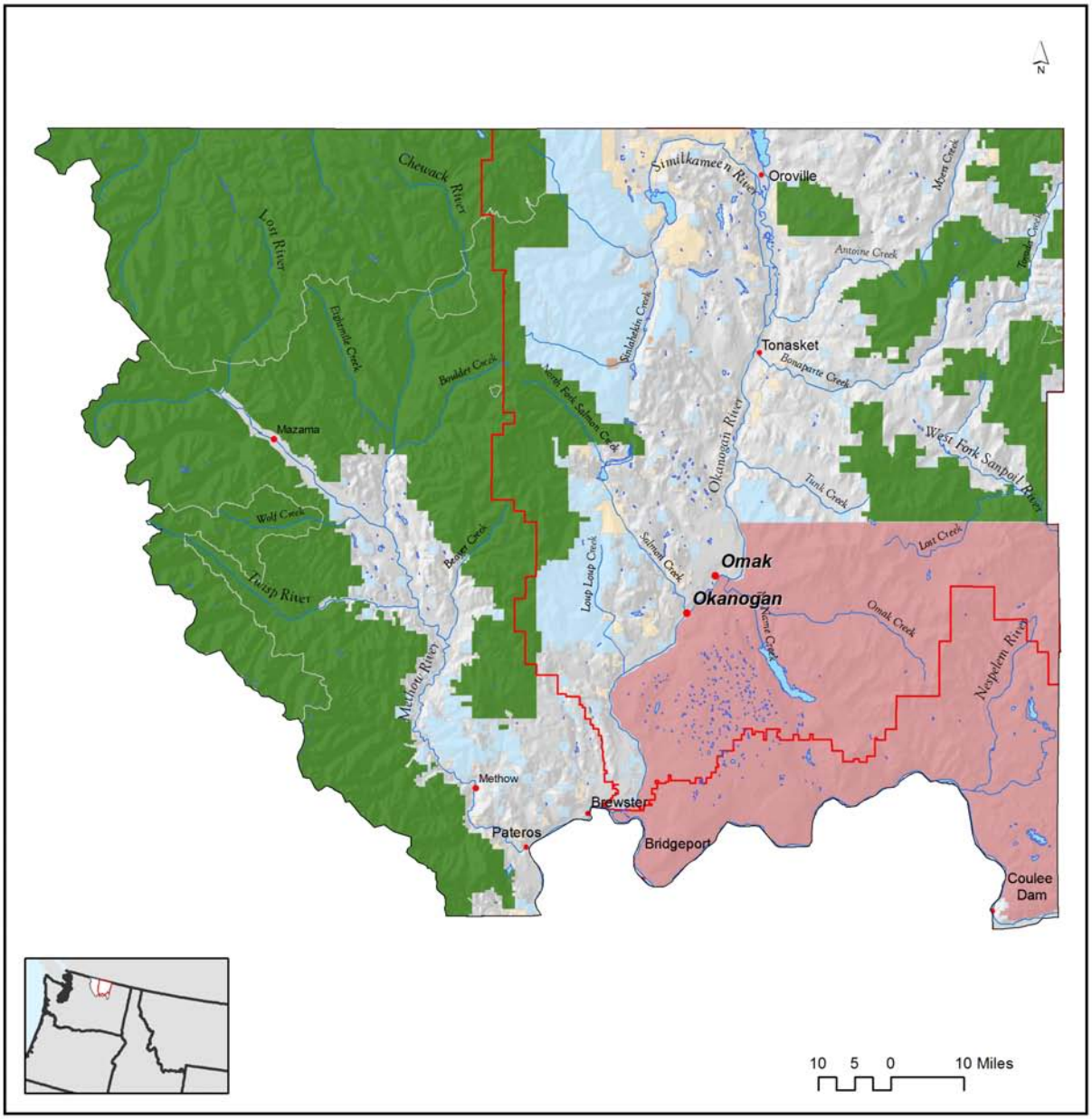
Developer: buys the land with intention to subdivide and sell off to others.

Investor: buys with intent to resell property intact at profit in short-term.

Government/Institution: includes local, state and federal land management agencies, churches, schools, municipalities.

See page X for complete ranch buyer typology.

Map 1. Land Ownership in Okanogan County and Study Area



Study Area Boundary

Land Ownership

- Private
- State
- Tribal
- US Bureau of Land Management
- US Fish and Wildlife Service
- US Forest Service
- US National Park Service

Data Sources: US Census, US Geological Survey

World Mercator Projection

Map Date: 9/10/2008

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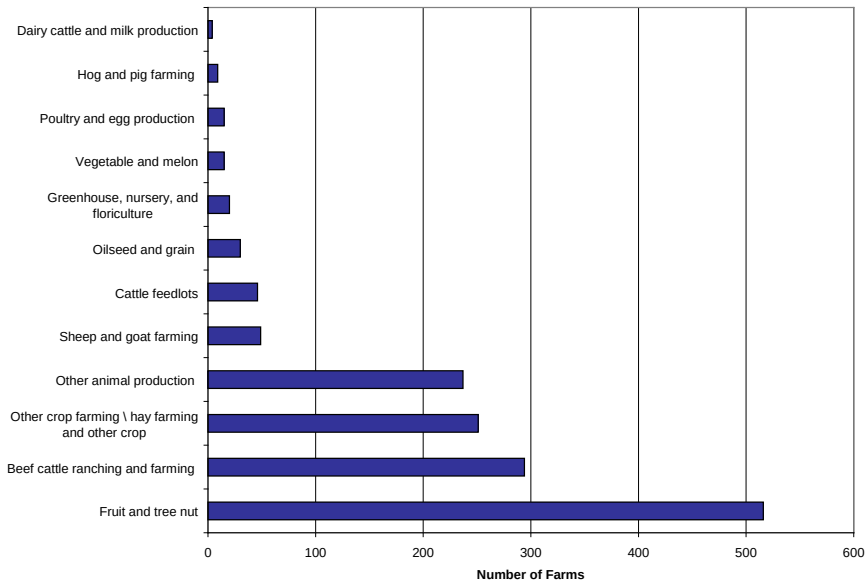
THE FARMING LANDSCAPE OF OKANOGAN COUNTY

Types and size of farms

According to the federal Census of Agriculture, in 2002 Okanogan County featured 1,486 farm operations utilizing 1.2 million acres of farmland.[3] The average farm size was 835 acres. 724 (52%) of the county's farm operations were smaller than 50 acres in size, while 222 (17%) were 500 acres or larger.[4]

Orchards are the most numerous type of agricultural operation in Okanogan County, as suggested by Figure 1. 516 (35% of total) of farm operations in 2002 were orchards. Cattle ranches (294, 20% of operations) were the second-most numerous.[5] Hay farming as well as horse farming are also numerically important components of the county's agricultural profile.

Figure 1. Number of Farms by Type (2002)



[3] The total number of acres in farms can exceed the amount of land in a county due to reporting of farmland used that is located outside of the county. Current ownership patterns are presented later in this report and may differ from these census estimates, based on all farmland in use which can include public and private land.

[4] Census of Agriculture, 2002. Volume II: State and County Data. Table 8.

[5] Census of Agriculture, 2002, Volume II: State and County Data. Table 53. Types are based on the North American Industrial Classification System (NAICS).

According to Census of Agriculture data, 1,026 of the farms in Okanogan County harvested crops—including fruit as well as field crops—from 71,149 acres in 2002. County farmers utilized 797,828 acres in pasture (public and private). Orchards (primarily apples, pears and cherries) accounted for 24,819 acres of county farmland. 1,044 (70%) farms irrigated a total of 48,416 acres in 2002.[6]

Farming and the Okanogan County Economy

In 2006, the Bureau of Labor and Statistics tallied 17,396 jobs in the public and private sectors in Okanogan County.[7] The largest general categories of employment in the county were Service-providing (36%), Goods-producing (30%), and Public (*i.e.*, government) (29%). In 2006, farm employment comprised 19 percent of all employment in the county, paying an average annual wage of $14,089. This is a significant decline from 1970, when the categories "Farming" and "Agricultural Services" constituted about 32 percent of employment in the county.[8]

In terms of personal income, labor sources in Okanogan County generated 61 percent of personal income, with non-labor sources (dividends, interest and rent, and transfer payments) comprising the remaining 39 percent. According to 2000 data, farming generated $83.5 million in personal income, or 8.7 percent of total personal income in the county.[9]

Gross income in the farming sector was $248 million in 2006, with receipts from crops totaling $193 million and those from livestock and related production totaling $32 million. Government payments and rent comprised the remainder. Net farm income for 2006 was estimated at $58 million.[10]

6 Census of Agriculture, 2002. Table 8.

7 Headwaters Economics, "A SocioEconomic Profile: Okanogan County, Washington." 32.

8 Ibid, 29.

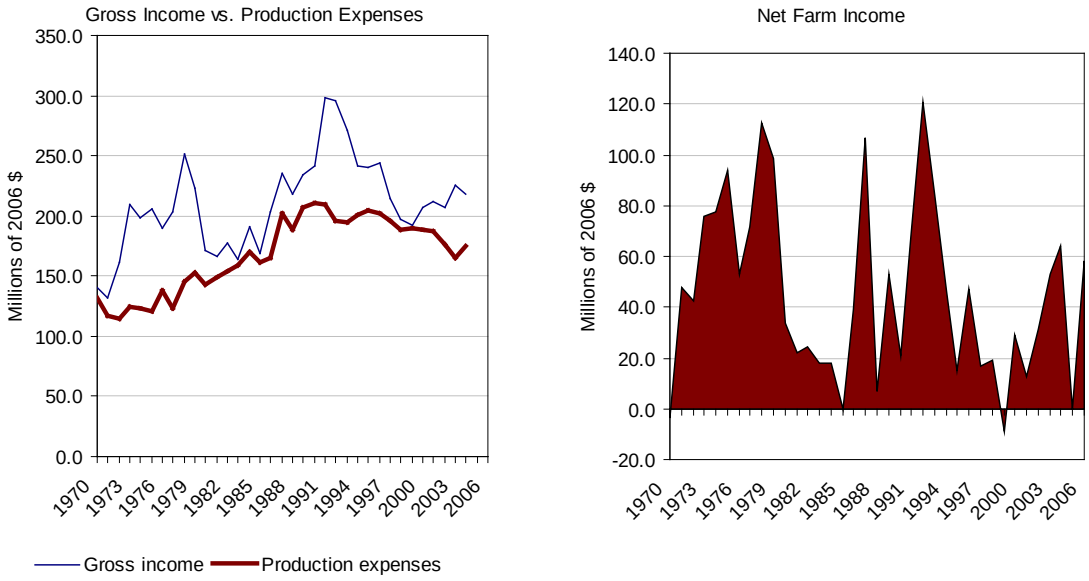
9 Ibid, 30.

10 Ibid, 21.

Production & Market Trends

County-wide, net farm income has experienced significant volatility over the period 1970 to 2006, reflecting market dynamics for both fruit and livestock industries. Figure 2 includes a chart (left) tracking the costs of production against gross farm income in the county and a chart showing the resultant net farm income. These charts are based on county-wide, cumulative statistics and so speak to agriculture as a whole, not necessarily the performance of any one agricultural specialty.[11]

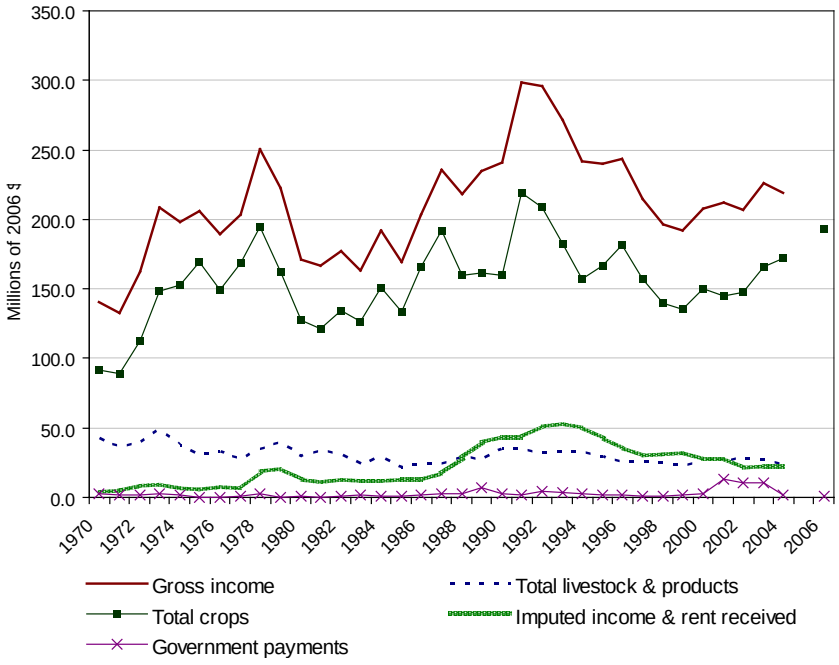
Figure 2. Gross Income, Production Expenses, and Net Farm Income, Okanogan County, 1970–2006.



[11] U.S. Department of Commerce, 2008. Bureau of Economic Analysis, Regional Economic Information System (BEA REIS).

Figure 3 describes specific market trends more closely, showing gross income (as 2006 dollars) for agriculture as a whole as well as for specific income sources. This chart indicates that the volatility in cumulative, county-wide gross income figures for the county are strongly influenced by trends in crop production. The dotted blue line demonstrates a far more stable, but slowly declining situation for livestock commodity prices.[12]

Figure 3. Gross Farm Income by Type, Okanogan County, 1970–2006.



[12] Ibid.

LIVESTOCK RANCHING IN OKANOGAN COUNTY

Information in the section is based on Census of Agriculture estimates as well as local interviews.

Production model

Since the 1950s, the majority of full-time livestock producers in Okanogan County have focused on production of a fall calf crop. Irrigated hay and corn are grown to support the calf crop, with few other farming activities occurring.

Livestock prices and increasing production and cost of living costs have increased in the average herd size required to "support a family" to a minimum of 500 or more in the 2000s. Some increase in production has been possible in mountain valley ranching through the application of advances in animal husbandry and farming techniques, but feed availability, both in terms of summer forage and winter feed, represents an ongoing limiting factor on herd size expansion. Land values and the availability of leased land strongly affect ranch viability by constraining opportunities to acquire additional feed.

SUMMER FORAGE. Ranches in Okanogan County utilize a combination of on-ranch pasture and leased grazing land, including Forest Service, state, and private land. (See below for more information on leasing.)

WINTER FEED. Ranches typically require winter feed for three or more winter months, with more for mothering cows with calves or for hold-over calves. Ranchers grow hay and or corn for silage, but most also purchase hay from neighboring counties in the Columbia River Basin. They are sensitive to increases in the cost of farming inputs (fuel and fertilizer) as both consumer and producers.

The purchase of winter feed is a long-standing trend in the Okanogan Valley, but has become increasingly problematic in recent years due to increase costs of hay. Hay prices are affected by costs of production, climate variability, transportation costs and competition from non-local hay buyers. (Large volumes of Columbia Basin hay are exported overseas and also to high end recreational markets on the Pacific Coast.)

Tenure dynamics

Livestock production in Okanogan Valley occurs on ranch properties that range in size. While arguably all but very small properties are "working ranches" in form, locals maintain a distinction between "full-time" and "part-time" operations. This distinction is largely focused on ranch size, for which both acres in use and herd size serve as proxies. Local wisdom suggests that a full-time ranch could support at least one family, but this varies and often arrangements are more complicated—for example, there may be more than one generation of a family working a ranch, necessitating that one or more family members also work off the ranch to generate income.

In addition to the largest, full-time ranches, there is a strong presence of part-time ranch operations in the Okanogan Valley and Okanogan County. Membership in this cohort represents both small landowners who utilize cattle as a land management tool and hobby, older ranchers maintaining a reduced herd, as well as younger operators who would be full-time ranch operators if their financial and land ownership situations were better. Our study distinguished "part-time" operators as those

with a herd size of 50 to 499 head (see page 3). Absentee ownership of ranch properties has been uncommon in the Okanogan Valley until very recently. See Land Ownership Trends (page 17) for more discussion.

Census of Agriculture estimates confirm local estimates that there are perhaps a dozen "full-time" ranches in Okanogan County. Table 1 presents the livestock owning population of Okanogan County by cohort of herd size.[13] According to these census estimates, in 2002 there were just 14 (or 3% of total) livestock operations that meet the (local) definition of full-time in the sense of having a herd of 500 or more cattle. The number of farms in the part-time category, with herds range from 50 to 499 head, was roughly one-third of all livestock operations in 1987-1997 census years, but had declined to one-quarter as of 2002.

Table 1. Farms by Size of Herd, 1987–2002 Census Years.

	1987	1992	1997	2002
1 to 49 head	312 (64%)	291 (62%)	299 (62%)	324 (72%)
50 to 499 head	159 (32%)	160 (34%)	167 (34%)	113 (25%)
500 or more head	19 (4%)	19 (4%)	19 (4%)	14 (3%)

Table 2 shows the breakdown of ownership of all cattle in the county by the size of herd. The few "full-time" ranches owned 45 percent of the cattle in the county in 2002, while the most numerous group, hobby ranches with fewer than 50 head, owned just 5% of all cattle in the county. Over half of the cattle in the county have historically belonged to those with 50 to 499 animals.[14]

Table 2. Livestock Ownership (Share of All Cattle) by Size of Herd, 1987–2002 Census Years.

	1987	1992	1997	2002
1 to 49 head	4,672 (4%)	4,904 (4%)	4,223 (4%)	4,473 (5%)
50 to 499 head	27,995 (56%)	27,295 (59%)	27,808 (55%)	19,452 (50%)
500 or more head	21,780 (40%)	19,240 (37%)	22,584 (41%)	19,677 (45%)

[13] USDA, Census of Agriculture 2002, Vol II, State and County Data, Table 14.

[14] A closer look suggests that within this category, farms are distributed about equally among three sub-cohorts of herd size: 50-99 head, 100-199 head, and 200-499. However, the latter cohort of farms, 200-499, claims about two-thirds of the inventory.

Leasing

In the greater Okanogan Valley, the Okanogan-Wenatchee National Forest administers 42 allotments, has 37 grazing permittees, 45 grazing permits, and approximately 34,000 Animal Unit Months (AUMs, defined as the amount of forage required for one month by a cow-calf pair, or their equivalent in sheep or horses). Out of the 37 permittees in the Okanogan Valley which graze the National Forest 10 permittees have permits for over 300 pairs, and 15 permittees graze under 100 pairs.

In general, the Okanogan-Wenatchee National Forest has not made substantial changes to its permitting arrangements since the 1980s, meaning that there have been no closures of significant reductions of permitted AUMs on allotments (though one wilderness allotment is currently vacant). Since the early 1980s, the number of AUMs has remained static, while the number of permittees has declined, according to a representative for the Forest Service. This indicates a trend of livestock operations increasing in size while others suffer attrition.

There are 100 BLM allotments in Okanogan County, the total acreage of the allotments is 49,172 acres. There are 86 leases, 76 lessees and a total 7,548 permitted AUMs. Roughly half of the allotments are 200 acres or less in size and all of the BLM lands in the county are within pastures that contain lands owned or administered by other entities. The season of use, AUMs authorized and other terms and conditions vary by lease.

A BLM representative reported anecdotally that there may have been a modest decrease in the BLM lands leased for grazing over the past decade, mostly due to acquisition of the adjacent lands by individuals or organizations that are not in the livestock business. He guessed that some 17 of the 100 BLM allotments in the county are not currently leased for grazing (due to non-use rather than agency closure).

The Washington Department of Natural Resources is a very important source of leased grazing land in Okanogan Valley and the county at large. Data from the agency was available for the county only, and so includes the Methow Valley, where there are large DNR holdings. DNR offers two types of grazing agreements, grazing leases and permit ranges. The leases are on smaller acreages, while permit ranges run into several thousand acres. In Okanogan County, DNR sponsors 183 grazing leases over about 75,000 acres. There are 31 permits on 18 ranges covering roughly 219,000 acres. DNR permits a total of 25,941 AUMs on these lands.

Season of use and other rules for the DNR grazing lands vary by lease or permit. Each agreement has a Resource Management Plan that describes how grazing will be allowed including timing and duration. Generally the Permit Ranges are for a shorter duration and only during late spring and summer. DNR's representative reported that the leases and permits tend to be very stable and have seen relatively little in the way of major changes in management or permitted numbers.

The Washington Department of Fish and Wildlife permits grazing in three wildlife areas in the Okanogan Valley. Cumulatively, the areas feature six permits for 765 AUMs. Livestock under a grazing permit are allowed to remain in a pasture for no more than 30 days per year, thus each pasture has no livestock for 330 days per year or longer. These constraints make state wildlife areas a less important resource than other public and private leased grazing lands.

Colville Confederated Tribes also lease lands for grazing, but we did not obtain data about total acres and AUMs.

Most difficult to quantify but vitally important to both full- and part-time working ranches is private land available for grazing leases, as this has been a key way for local operations to expand their herd size without the cost of acquiring deeded land since the 1970s.

Washington's Open Space Taxation Act contributes to the supply of available private grazing land because it creates an incentive for rural landowners to maintain agricultural use of rural property. Anecdotally, we learned that many non-local owners of undeveloped (or minimally developed) 20- and 40-acre parcels lease their land for grazing at minimal fees in return for the significant tax benefits proferred by designation as "farm and agricultural" or "open space" land.

Based on tax rolls, we estimate that there is a minimum of approximately 95,000 acres available for leasing to local ranchers by non-local owners, based on the assumption that owners of parcels between 5 and 160 acres in size who receive agricultural tax status do so by leasing land for grazing. (See pages 17-19 and Map 3, page 19 for full discsusion of current ownership dynamics.) Additional private land may be available for lease from retired or other local, part-time operators with surplus grazing lands.

As mentioned above, leased grazing land is considered vital to ranch continuity as it allows for expansion of herds in times without the burden of purchasing land outright. These data suggest that while Forest Service, BLM, and DNR lands provide a relatively stable source of grazing lands, the fate of the area's small- and medium-sized agricultural parcels will be of concern to livestock operators who depend on them for inexpensive leased land.

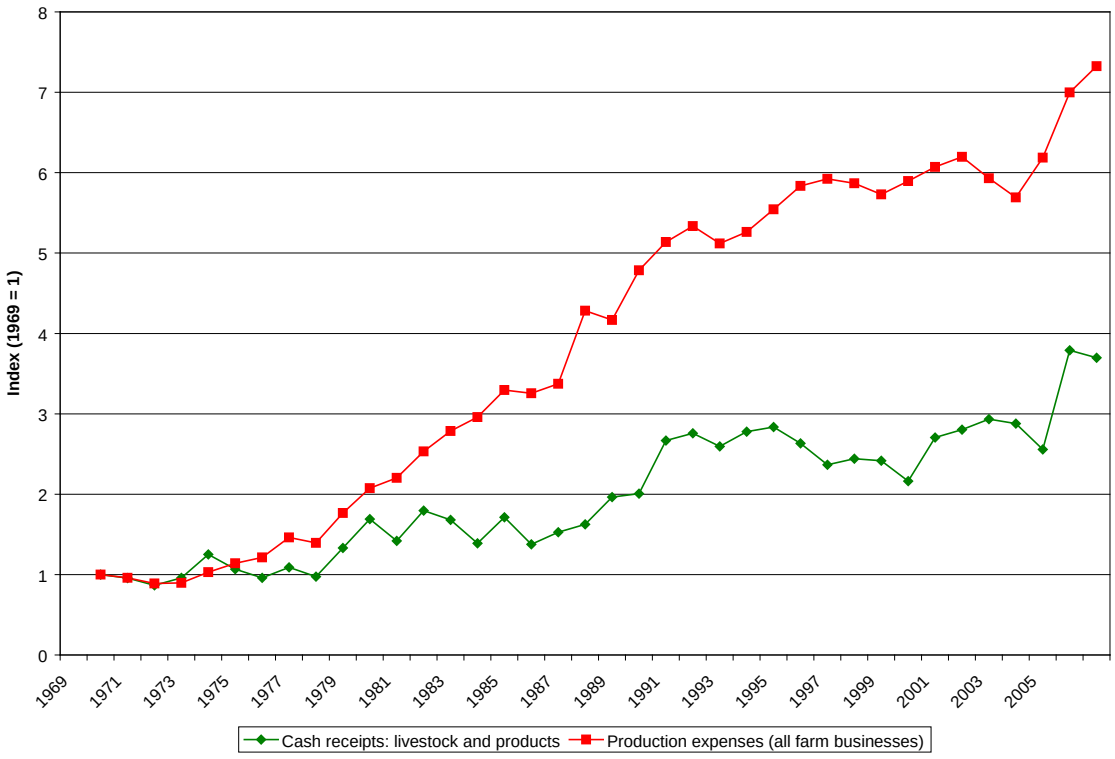
ECONOMIC TRENDS IN LIVESTOCK PRODUCTION

Agriculture's classic "cost-price squeeze"—stagnant or declining values for product, relative to increasing costs of production—represents a common issue for livestock producers across the American West. Okanogan County is no different. Over the past two to three decades, the economic situation of livestock production has deteriorated significantly, contributing to an erosion of the local ranching infrastructure both through attrition among producers as well as supporting businesses.

Livestock production has declined as a component of agriculture in Okanogan County since the 1970s, when it accounted for 30 percent of the total of gross income from farming and ranching. In 2005, the role of livestock production was about 16 percent of gross income, up slightly from a low of 12 percent in 1995. (Farming contributed 8.7% to total personal income in the county that year.)

A key factor in the declining number of livestock and the declining influence of income from livestock is the growing cost of production relative to the relatively stagnant price for livestock products. This relationship is described in Figure 4, which compares the rate of increase in receipts from livestock to the rate of increase in production expenses (as an average for all reporting farm businesses).[15]

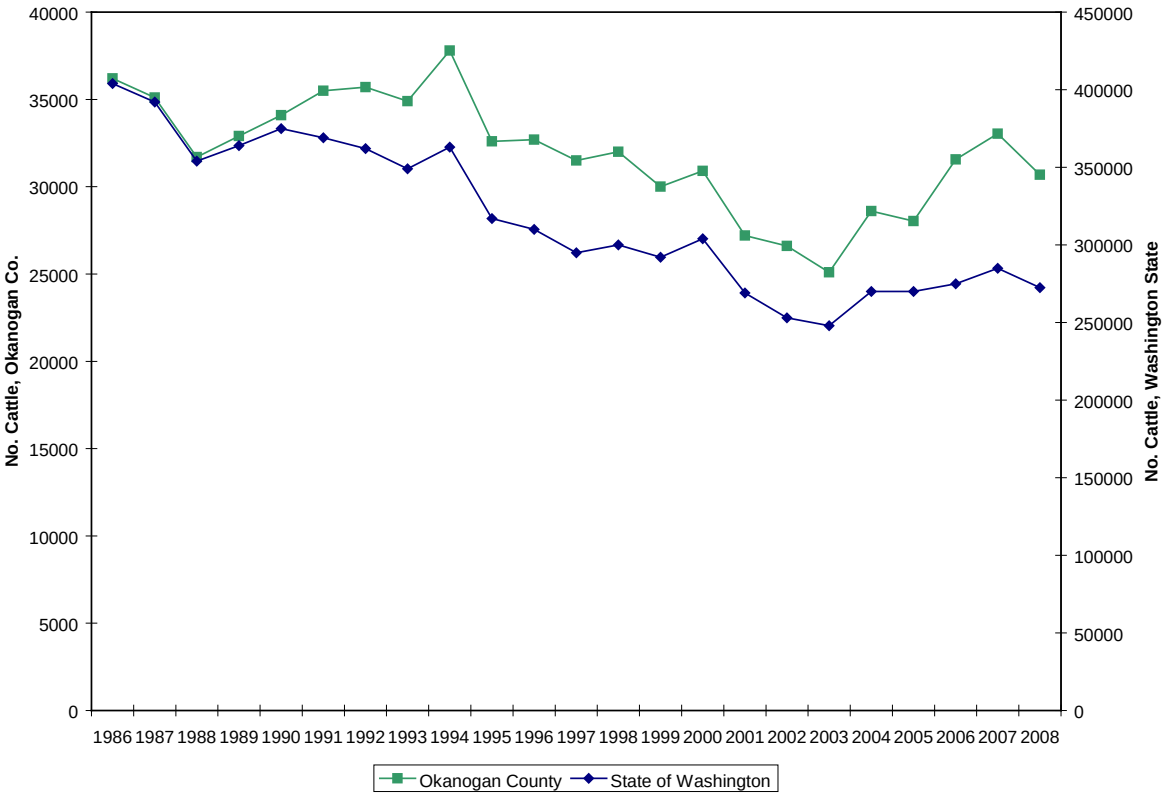
Figure 4. Receipts from Livestock and Production Expenses, 1969–2007 (indexed to 1969)



[15] BEA REIS 2006 CD, Table CA45.

Figure 5 below, records the inventory of beef cattle in Okanogan County and Washington State from 1986 to 2008.[16] State of Washington total beef cattle numbers are shown on the right-hand access, Okanogan County on the left. The chart indicates an overall decline in the number of livestock in the county of about 15 percent since 1986, that has roughly mirrored state-wide trends. (Values for the years 2005 to 2008 are rough estimates only, imputed based on the average ratio of beef cattle to all cattle in previous years—only "all cattle" is reported in available county estimates.)

Figure 5. Beef Cattle in Okanogan County and State of Washington, 1986–2008



[16] USDA NASS published estimates database, online query. Source: USDA NASS County Estimates, Livestock.

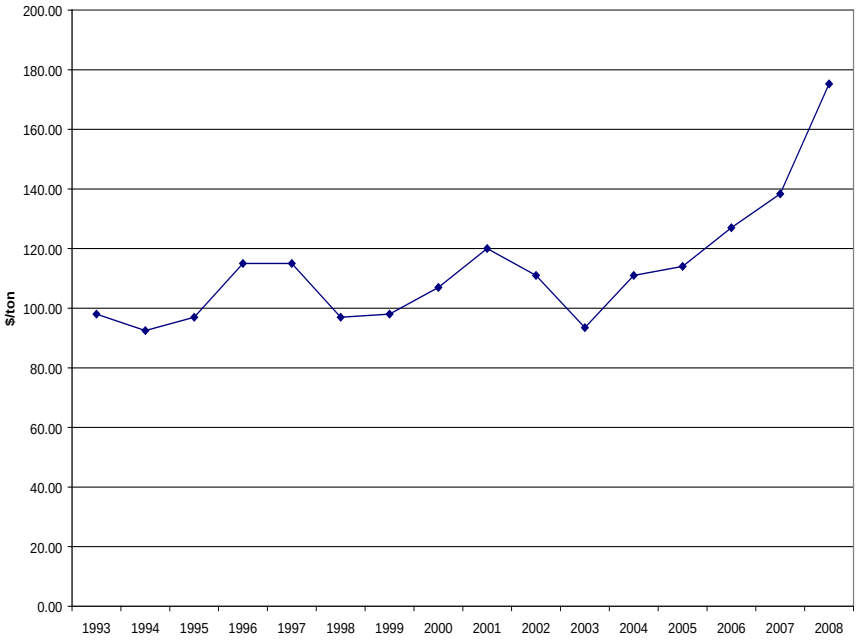
Production Costs

Local operators are sensitive to the cost of fuel and fertilizer, which have increased steadily since the 1970s, but especially dramatically in the context of the current fuel crisis. Fuel costs affect producers both through their impact on the cost of other inputs and because of the long distances that livestock travel to stockyards: the nearest stockyards are in Toppenish (about 130 miles from Tonasket) and Davenport (over 200 miles away). The local, family-run livestock markets at Tonasket and Omak closed in 2000 due to declining inventory.

The latest USDA figures indicate that nation-wide, fertilizer costs are nearly two-and-a-half times the average cost in 1990–1992, while fuel is nearly three times as expensive. Between January 2007 and 2008, the cost of fertilizer increased 32 percent and fuel 35 percent.[17] Fuel prices cut into a ranch businesses bottom line from several angles. A frequent concern voiced in local interviews was the fate of smaller herds that are too small to bear the increasing costs of shipping. A popular anecdote concerns the shipping cost of getting a slaughter cow to market exceeding its pricetag.

As mentioned, the cost of hay is a particularly pressing concern this summer. Nation-wide, the cost of feed was 11% higher in January 2007 v. 2006. Figure 6 shows the cost of hay (all hay types, average) for Washington state relative to the 1990–1992 average value. (2008 is a year-to-date average.)[18]

Figure 6. Price, Ton of Hay in Washington State, 1993–2008.



[17] USDA NASS. "Agricultural Prices." Jan. 31, 2008: 58. http://usda.mannlib.cornell.edu/usda/nass/AgriPric//2000s/2008/AgriPric-01-31-2008_revision.pdf

[18] Data provided by Washington State Agricultural Statistics Survey.

Land values are discussed in the following section. There is little data available to describe trends in grazing fees. However, a recent survey by the United States Department of Agriculture's National Agriculture Statistics Service (NASS) found that private, non-irrigated grazing fees (per AUM) in Washington averaged $9.60 in 2006 and $12.10 in 2007.[19]

Coping Strategies

Ranchers in the Okanogan Valley exhibit a variety of strategies for negotiating the difficult economics of their industry. Short-term solutions to the current production cost issues for some families include cutting back on the costs of inputs such as fertilizer and labor. Some have or will sell parts or all of their herds to cut back on winter feed costs. Some smaller operators in particular, may shift toward purchasing cattle to feed in the spring that are sold on in the fall.

In the past, timber sales have bolstered income on many ranches, but the closure of local sawmills has made is less economical to harvest in small volumes, diminishing the returns from on-ranch cuts.

Diversification

Ranch diversification efforts in the area include some guest ranching and limited private hunting services—these are at best developing markets as the area has limited tourist recognition. One ranching family has specialized in organic production, while another recently joined a large, vertically-integrated agribusiness enterprise.

The local Resource Conservation and Development program (a local venture sponsored by the USDA's Natural Resource Conservation Service) has a strong interest in facilitating projects that support local agriculture and in particular local food networks, such as organizing a direct marking network for local beef.

Federal and other public programs

This study did not involve reviewing records about enrollment in federal support programs. However, interviews suggest that large ranches have to date been most likely to take part in conservation-oriented funding schemes offered by the Natural Resources Conservation Service and the local Conservation District. Conservation easement activity has been limited to date, but there are some large ranches that are currently considering selling easements.

In sum, livestock ranching in Okanogan County is a highly marginal enterprise that has over time been eclipsed by fruit in terms of its contribution to gross farm income. Local interviews suggest that large ranches are actively considering diversification and other ways to secure their ranch's future, while part-time, medium-sized operations may be especially likely to experience further attrition in the context of a marked increases in the costs of production and the value of agricultural land.

[19] USDA NASS. "Agricultural Prices." Jan. 31, 2008: 65. http://usda.mannlib.cornell.edu/usda/nass/AgriPric//2000s/2008/AgriPric-01-31-2008_revision.pdf

LAND OWNERSHIP TRENDS

Changes in land use and ownership have been underway to varying degrees throughout the late nineteenth and the twentieth century in the Okanogan Valley and eastern Okanogan County. In the past, changing trends within agriculture—for example large-scale irrigation encouraging the spread of orchards—explained changes in land ownership and use. In contrast, the past thirty years have been marked by steady progression of rural subdivision of large properties into smaller lots. In that case, a declining agrcultural economy has intersected a growing market for rural land to be used for recreation-oriented rural residency.

This section describes the area's current ownership profile with regards to the extent of subdivision and the breakdown of private land in terms of the residency of owners and its land use.

Current Ownership Profile

The study area features roughly 601,000 acres of private land, concentrated primarily along valley floors and foothill areas. This land is split into about 29,000 parcels of varying sizes. Table 3 breaks down the private holdings in the study area according to their parcel size cohort, their local/non-local status (based on mailing address, see sidebar for definition), and tax status vis a vis agricultural production. Maps 2 and 3 on the following pages show private parcels according to their taxable land use and ownership status.

Table 3. Parcel Details by Size Cohort, Study Area.

owner mailing address / *parcel tax status*		Local				Non-Local			
		Ag Tax Code		Other		Ag Tax Code		Other	
Parcel Size (acres)		No. Parcels	Total Acres	No. Parcels	Total Acres	No. Parcels	Total Acres	No. Parcels	Total Acres
	<5	1,264	2,967	8,170	7,621	328	679	3,063	4,260
	5 to 20	1,865	23,237	1,597	17,870	849	12,750	2,259	30,162
	20 to 40	1,875	56,933	755	19,831	1,220	33,982	1,783	44,266
	40 to 160	1,778	109,662	259	13,745	841	47,983	562	30,836
	160 to 320	208	43,533	7	1,425	67	13,781	37	8,212
	320 to 640+*	122	56,155	6	2,998	19	8,525	21	9,252

Land Ownership Definitions

Local: Owner mailing address in county records located in Okanogan, Douglas, Chelan (excluding Wenatchee) and Ferry counties.

Non-local: Owner mailing address in any other zip code.

Agricultural Land: Classified by Okanogan County Assessor as agricultural according to Department of Revenue (e.g., codes beginning with 81 or 83). These parcels may or may not have structures on them.

Other: Classified by Okanogan County Assessor as any other land use code, including timber or undeveloped land.

In all, locals own 59 percent of the private land in the study area and non-locals own 41 percent. It was beyond the scope of this study to pursue the accuracy of a widespread local perception that many of the properties in the 20-acre category are absentee owned and only minimally developed. This could be a revealing line of inquiry that would involve querying the parcel layer according to the size of the parcel and the absence or presence of residential structures.

Table 4 tallies the share of total acreage in each size category of parcels, according to whether the land is in agricultural, non-agricultural, or either taxable land use category. This indicates that 45 percent of the private land in the study area has been divided into units of 40 or fewer acres and 17 percent into units smaller than 20 acres. 40 acres was often the unit of acquisition in the homesteading era, but this figure likely also reflects an extensive degree of subdivision in the past 30 years.

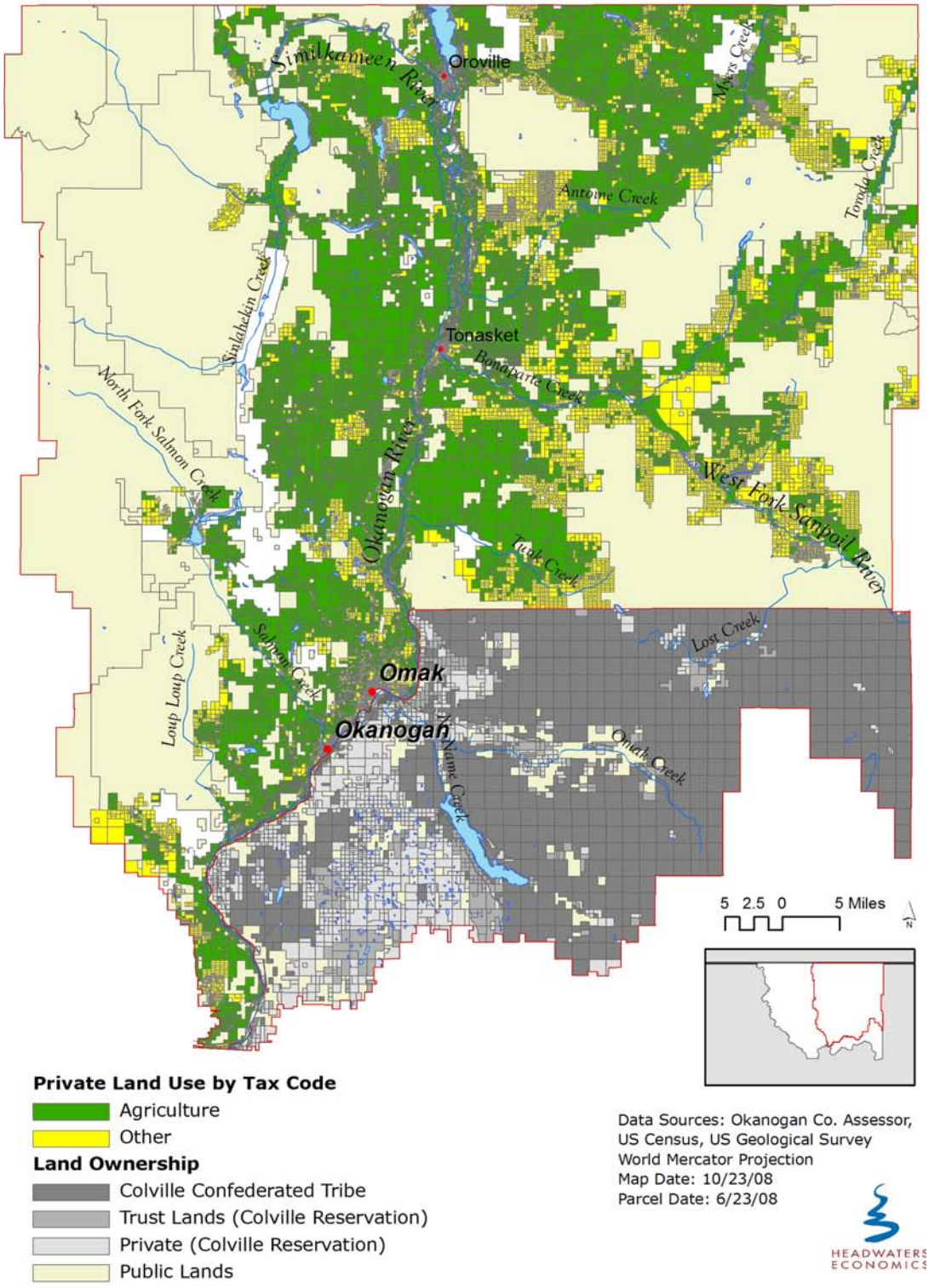
Slightly more than half of the acreage in these smaller units are still receiving agricultural tax status. However, these parcels, especially the 20-acre and smaller parcels are a vulnerable element of the landscape. Even in the absence of future subdivision, full development of the existing small parcels and or conversion of those 5- to 40-acre parcels currently in agricultural use (21% of the private land area) could shift the area's agricultural landscape significantly.

Table 4. Parcel Size Cohorts Share of Total Acreage, Study Area.

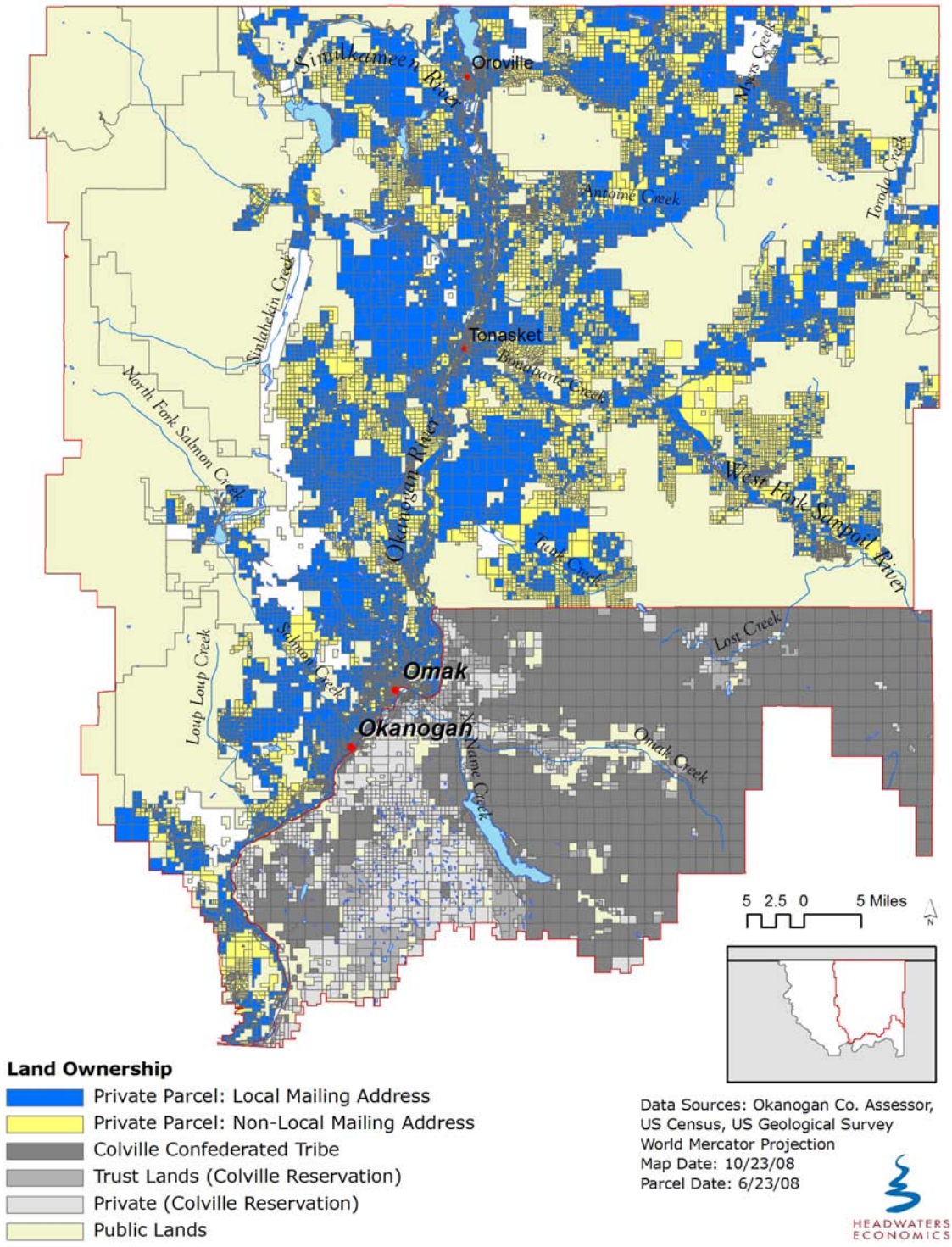
		Share of total acres		
		Ag.	Other	Either
parcel size (acres)	<5	1%	2%	3%
	5 to 20	6%	8%	14%
	20 to 40	15%	11%	26%
	40 to 160	26%	7%	34%
	160 to 320	10%	2%	11%
	320 to 640+*	11%	2%	13%

In terms of the parts of the landscape that are unlikely to return to agricultural use, the accompanying maps show that land conversion and non-local ownership is dispersed in many parts of the study area though it is often predictably concentrated on the boundaries of public land holdings and alongside rivers and lakes. A few notable points of concentrations of fragmented, non-local ownership are in the Aeneas Valley and along the West Fork of the Sanpoil River, north of Antoine Creek to the forest boundary, on Wannacut Lake's eastern boundary and on the shores of Lake Osoyoos.

Map 2. Private Parcels by Taxable Land Use Code (Agricultural and Other), Study Area.



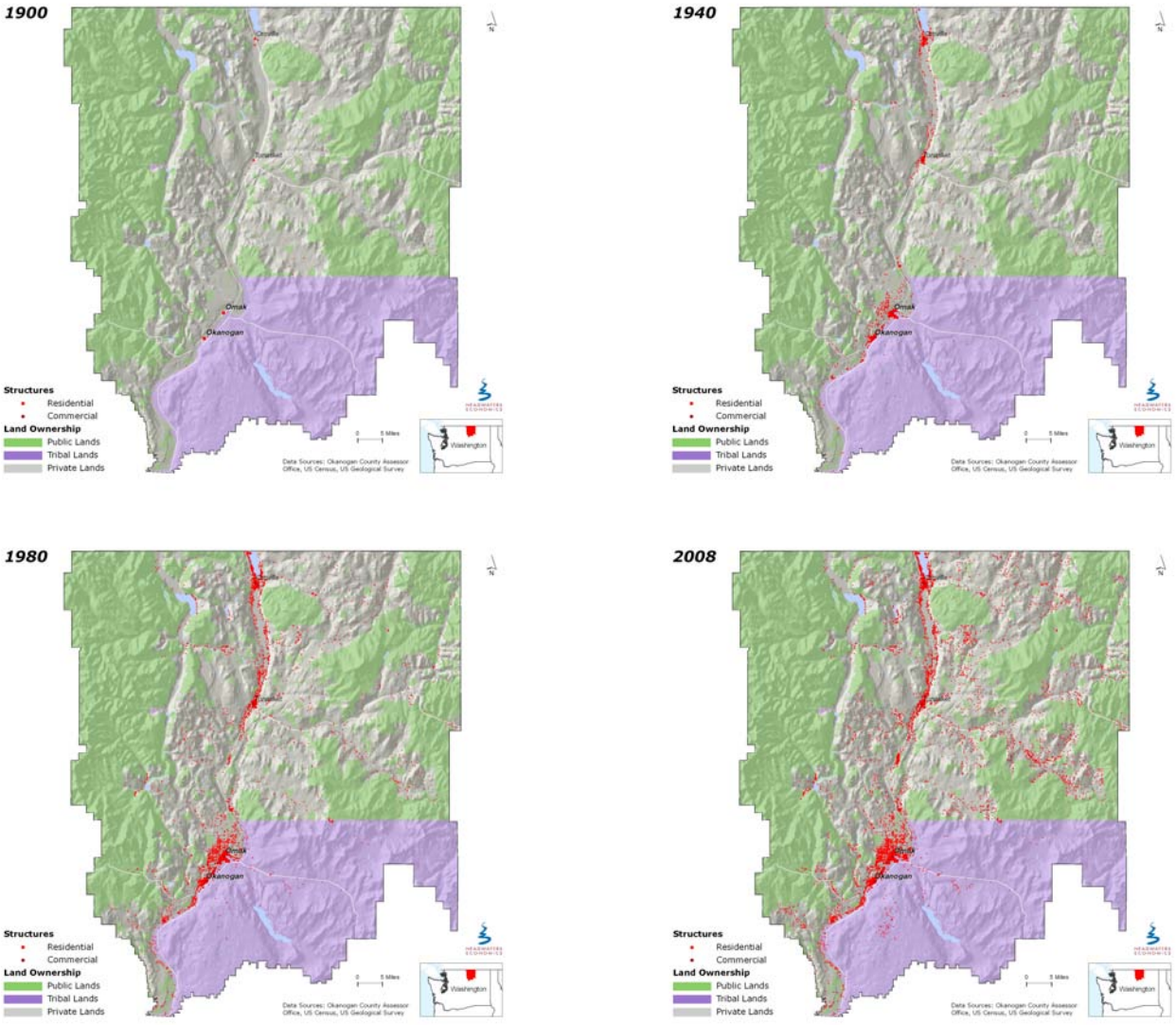
Map 3. Private Parcels by Local and Non-Local Mailing Addresses, Study Area.



Development Time Series

Another way to look at the current parcel profile of the county is to examine the rate and pattern of the development of structures. The following images are thumbnails taken from a series which is available as a slide series, better suited than print to demonstrating change over time. It documents the appearance of structures in quarter-sections by decade, based on tax records documenting the year structures were built. The methodology supporting this approach has been described elsewhere.[20]

Figure 7. Structure Development Series, Study Area.



[20] Gude, P. H. et. al., "Rates and drivers of rural residential development in the Greater Yellowstone." *Landscape and Urban Planning 77* (2006): 131-151.

Agricultural Holdings

410,000 acres of land in the Okanogan Valley and eastern Okanogan County are classified for tax purposes as agricultural, comprising 68 percent of the private land. (See Map 2.) The majority of the acreage classified as agricultural is in lots greater than 40 acres in size, and 30 percent of the area's agricultural land is in parcels greater than 160 acres in size.

Of the land classified as agricultural, 71 percent of the total acreage is associated with a local mailing address and 29 percent with a non-local mailing address.

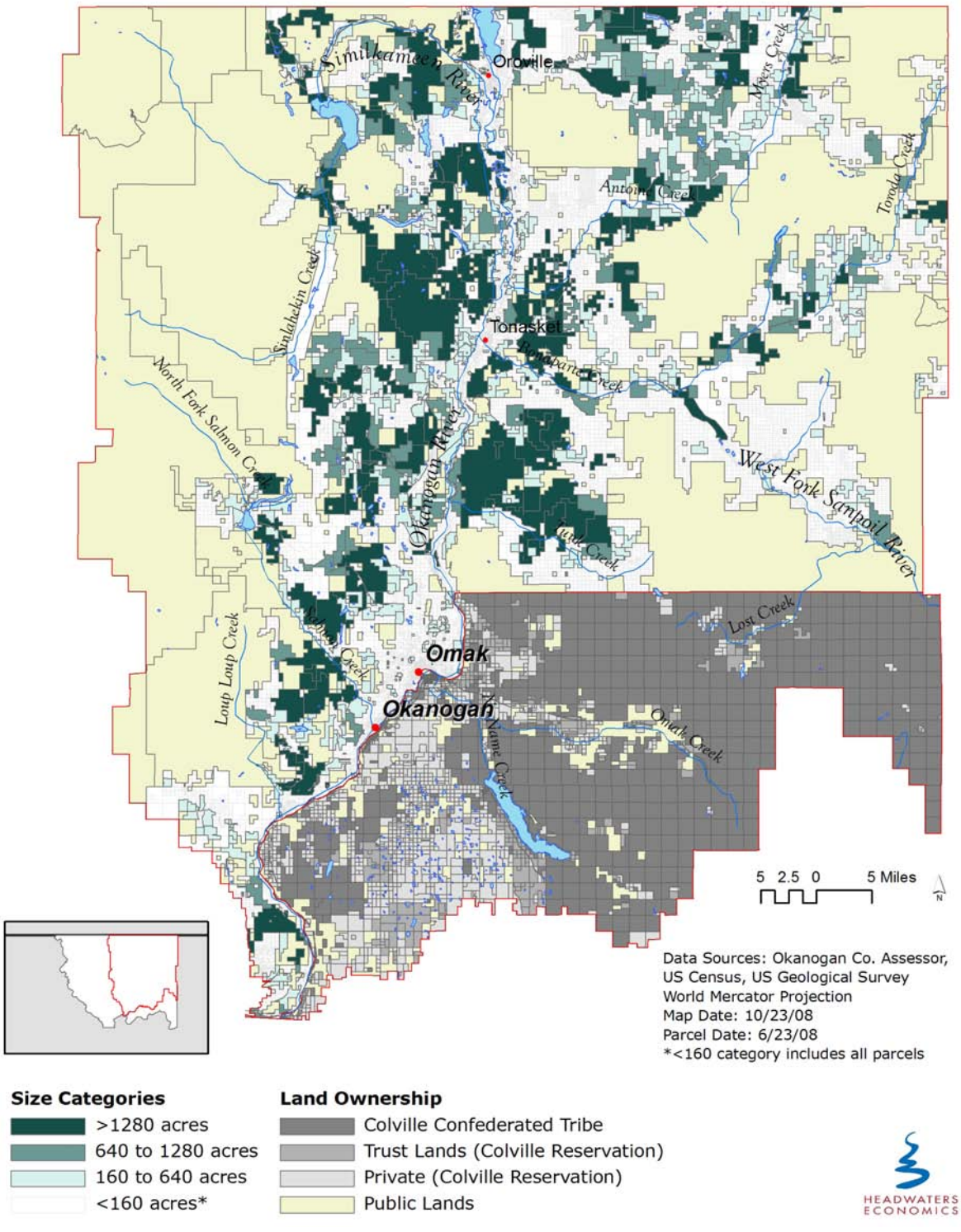
In order to better understand agricultural land ownership, we agglomerated holdings based on unique owner names in the parcel database and selected those holdings greater than 160 acres in size. This helps to describe the 'real' number of agricultural operations in the study area and provides some of the detail about the remaining inventory of agricultural real estate in the area. (A caveat: because it is impossible for us to know when operators use multiple owner names in relationship to a single agricultural operation, this method overestimates the total number of agricultural owners in this category.)

The details of agricultural holdings are shown in Table 5. There are some 304 unique local owner names associated with holdings greater than 160 acres and 131 non-locals. Half (49%) of the agricultural holdings in the county is owned by owners whose holdings are 1,280 or more acres in size and the majority of these large holdings (39%) is in local hands. Roughly one-third of the area's agricultural holdings are smaller than 640 acres.

Table 5. Size and Ownership Details, Agricultural Holdings >160 ac.

mailing address		Local				Non-Local			
		No. Owners	Share Total Owners	Total Acres	Share Total Ac.	No. Owners	Share Total Owners	Total Acres	Share Total Ac.
Parcel Size (acres)	160-320	117	38%	25,874	8%	65	50%	13,827	4%
	320-640	97	32%	43,773	14%	31	24%	14,614	5%
	640-1280	48	16%	43,058	14%	23	18%	19,636	6%
	>1280	42	14%	124,102	39%	12	9%	31,059	10%

Map 4. Agricultural Holdings by Size Category, Study Area.



AGRICULTURAL LAND SALES DYNAMICS

Synopsis

The Okanogan Valley has had an active ranch real estate market since at least the 1970s, when the area was first targeted by large-scale land development companies. During the 1970s, 80s, and 90s, due to limited competition for ranch properties, those properties that could not be assumed by an expanding neighboring ranch were often sold in large blocks to be subdivided en masse into 20- or 40-acre lots and sold as recreational properties. In the early years, many buyers were from out-of-state and reportedly bought parcels sight-unseen. Many of the parcels created during these transactions reportedly remain undeveloped or minimally developed.[21]

The Okanogan Valley has not traditionally attracted absentee or recreational buyers of large properties. The area lacks some of the key features that drive amenity ranch sales elsewhere: blue ribbon trout fishing, exclusive elk hunting, and the name recognition established through a dude ranching tradition. Besides neighboring ranchers and developers, the primary other category of ranch buyer has been the State of Washington's Department of Natural Resources and Department of Fish and Wildlife which have acquired key ranch properties for public access and or wildlife protection over the course of many decades.

However, competition for certain ranch properties has increased in the past three to five years due to two convergent trends: the arrival of conservation and amenity interests and growing interest in lakefront properties spilling over from the active real estate market in the Okanagan Valley in British Columbia, Canada. To a more limited extent, viticulture as well as a market for downstream water rights have also opened up new markets for area ranch land. These new interests are increasing ranch sale prices for certain ranches, but buying activity is limited to properties with particular values. For conservation or amenity buyers, proximity to protected lands, scenery and wildlife habitat are often priorities, while for lakefront development, viticulture and sale of water rights, access to water in various forms is obviously critical.

Okanogan County passed a moratorium on the existing subdivision review exemption applying to large-lot (20 acre) subdivision in 2007-2008. The moratorium and exemption are due to expire September 15, when the county is expected to pass new subdivision review standards. Reflecting this issue as well as market trends, some land developers are shifting their marketing and development strategies toward "resort" style developments with more planning and amenities than were previously offered. Despite the apparent shifts in longstanding development patterns, one local realtor felt that developers will continue to see potential in most ranch properties offered on the market.

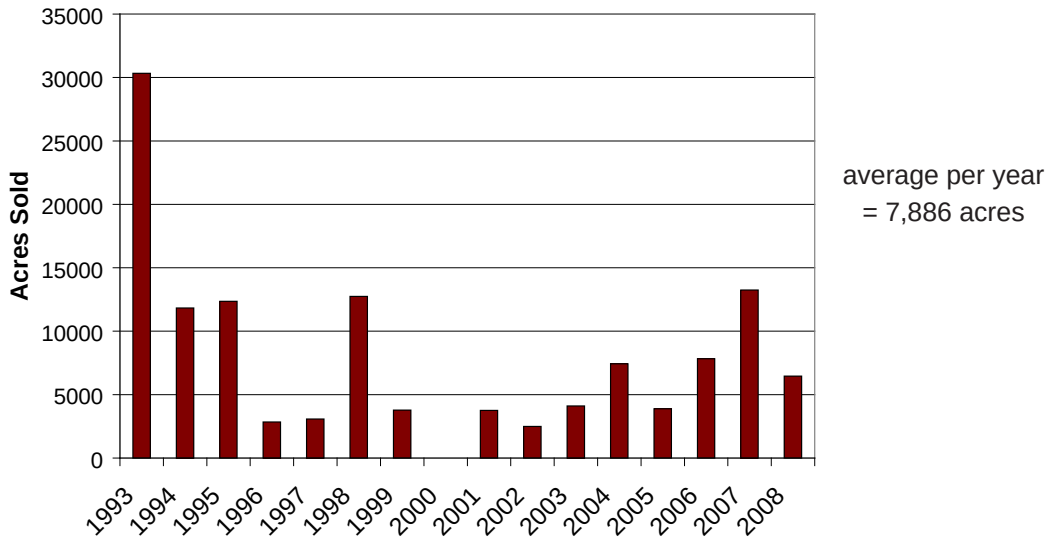
[21] Sales of forest and timber land are an important factor in the development of the Okanogan Valley. For example the liquidation of a local sawmills holding in the 1990s led to the eventual subdivision of about 20,500 acres of land in the valley, according to the county's Chief Appraiser. However, timber lands are not considered in this study.

Rate, volume, and price

The following description of ranch sales dynamics is based on information and sales provided by the Okanogan County Chief Appraiser. We considered transactions in that occurred between January 1993 and July 2008 in the study area involving agricultural holdings of 400 or more acres.[22] The period of January 1993 through July 2008 was chosen based on data availability and reliability. As a point of reference, there were 209 ranch operations with holdings greater than 400 acres in 2008. These operations owned 260,487 acres of land in total, a little more than half of the area's agricultural holdings.

From 1993 to 2008, a total of 126,184 acres of large agricultural holdings changed hands in 94 separate transactions in the Okanogan Valley. 9,964 of those acres and 7 transactions were repeat sales, meaning that a total land area of 116,220 acres changed hands in this time period in 87 transactions. This volume represents 45 percent of the total land area in private, large agricultural holdings in 2008.[23] Transactions ranged in size from 400 to 9,369 acres; the median sale size was 759 acres and the average size was 1,342 acres. Figures 8 and 9 chart the rate of land sales, in terms of volume by acreage and number of transactions, by year. They show a slowdown in sales activity in the early 2000s, with re-acceleration of transactions in recent years.

Figure 8. Acres of Large Agricultural Holdings Sold by Year, 1993–2008.



[22] 400 acres is a threshold used elsewhere to study real estate dynamics affecting large ranch properties. See Hannah Gosnell et. al., "Ranchland Ownership Change in the Greater Yellowstone Ecosystem, 1990-2001: Implications for Conservation." *Society and Natural Resources* 19 (2006): 743-759.

[23] Caution should be used when interpreting this figure. Given the ever-changing nature of the parcel map in Okanogan County, comparing the volume of land sold in the past to the current amount of land in agriculture will not yield a wholly accurate figure for that historic year. Percentages thus err on somewhat large side, given that the inventory of large agricultural holdings was presumably greater in previous years.

Figure 9. Transactions Involving Large Agricultural Holdings by Year, 1993–2008.

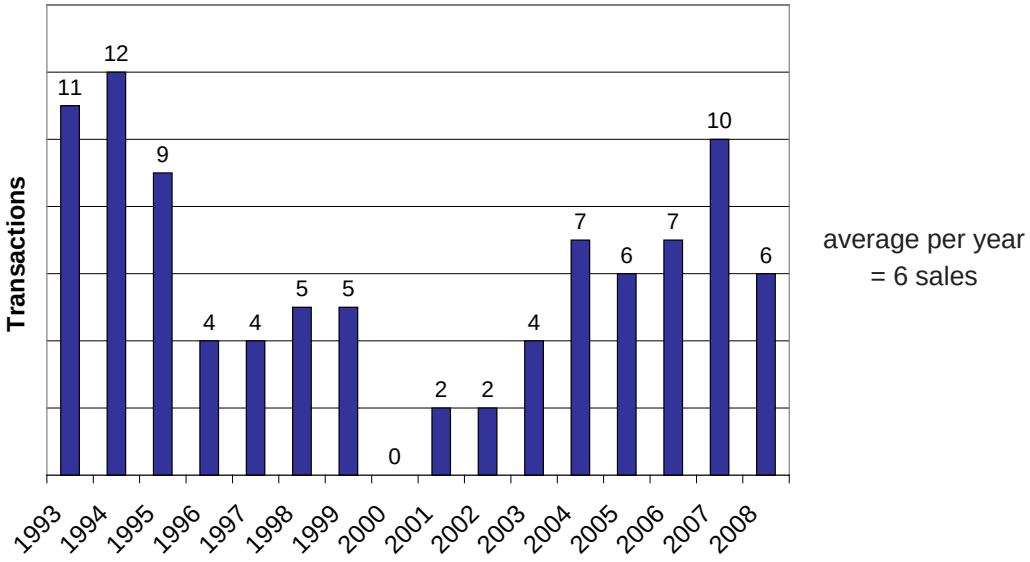


Table 6 shows the number of sales in different size cohorts. The figures speak to the impact of single large ranch sales, with just 5 sales accounting for 28% of the total inventory. However, these numbers also speak to the potential significance of parcels of two sections or less in size, which make up about two-thirds of all transactions. If predictions that medium-size, part-time operations are most vulnerable to current economic circumstances are accurate, this may be the dominant type of property on the market.

Table 6. Sales by Size Cohort, 1993–2008.

Size cohort (acres)	No. sales	Acres sold	Median $/acre
400-639	36	17,981	$534
640-1279	32	29,069	$562
1280-2499	21	44,207	$304
3500	5	34,926	$129

The prices of agricultural land varied significantly over the period, based on the nature of the property, buyers and many other factors.[24] Surveying the 87 distinct transactions, we found sales prices ranging from $9 to $3,515 per acre. The median value in all transactions was $482/acre and the average was $591.[25]

[24] Median price appears to reflect a volume discount, but this is very difficult to quantify without more detailed assessment of appraisal information for individual sales. Because sales data provided by the appraiser are not verified for 'arm's length' and other reporting idiosyncracies, these data are extremely non-specific.

[25] Average price tabulation excluded outliers <$100/ac (4 sales) and >$3,000/ac (4 sales).

Buyer types

We appealed to the Chief Appraiser in the Okanogan County Assessor's Office for insight into the specifics of the 94 sales transactions in the sales database. We asked him to assign a typology to each buyer based on a typology that has been developed elsewhere for categorizing ranchland buyers (see below).

Ranch Buyer Typology, *modified from* Gosnell et. al., 2006.

Traditional rancher: Owner-operator raising livestock for profit, with or without the aid of a ranch manager; may engage in some off-ranch work (or on-ranch work unrelated to livestock, e.g., outfitting)

Part-time rancher: does his or her own ranching but often has a full-time job off the ranch; ranch income is generally less than the off-ranch income; usually smaller operations, herd size and/or deeded acreage insufficient to support full-time ranching

Amenity buyer: purchases a ranch for ambience, recreation, and other amenities, not primarily for agricultural production; often an absentee owner; may have some interest in ranching but generally hires a ranch manager who makes most day-to-day decisions and does the majority of the work; or, might lease the majority of his or her land and/or cattle to a "real rancher"; majority of an amenity buyer's personal income is by definition from off-ranch sources; economic viability of the ranch is usually not an issue

Developer: buys the land with intention to subdivide and sell off to others, with profits from that sale the main objective

Investor: buys primarily for investment with intent to resell property (largely intact) in the short term.

Corporation: typically purchases ranch to function as one unit in a large network of related operations and holdings elsewhere; ranch is operated by an employee.

Conservation organization: private group that buys ranch with intent to manage for habitat, wildlife, etc. (e.g., The Nature Conservancy, Okanogan Valley Land Council)

Government/Institution: includes local, state and federal land management agencies, churches, schools

Timber: buys the land to log timber; often resells for other purposes after cut.

The results of the buyer typology are shown in Table 7. They indicate the rapid rate of change in ranch land use in Okanogan Valley. While the category of "Traditional Rancher" was the most active in terms of acres purchased (42,000 acres or 33% of all acres changing hands), these buyers were in competition with a cohort of buyers with interests other than conventional livestock production: collectively, developers, investors (land traders), amenity buyers and government agencies acquired 53 percent of the acres changing hands between 1993 and 2008.

Within this broader "non-traditional" cohort, it could be expected that about 19 percent of the acres changing hands would remain intact in large parcels, having been sold to amenity buyers and government agencies, while the remaining 34 percent—43,775 acres—was likely slated for subdivision of some form given that the buyers were investors and developers.

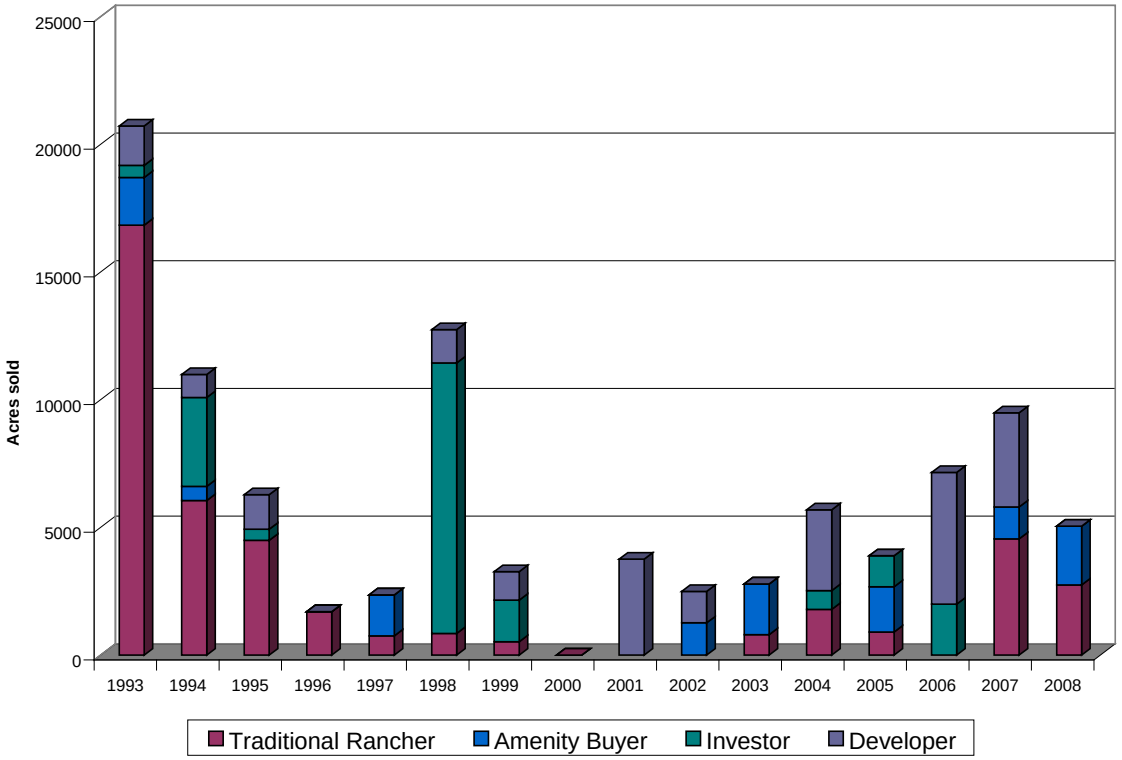
While part-time ranchers are an important component of the ranching community in terms of livestock ownership, they have not been active in the ranch real estate market, purchasing only 6% of the land sold in parcels greater than 400 acres in size.

Table 7. Transactions and Acres Sold by Buyer Type, 1993–2008.

Buyer Type	No. Transactions	Share of Total Transactions	Acres purchased	Share of Total Acres Purchased
Traditional Rancher	22	23%	41,983	33%
Developer	23	24%	23,198	18%
Investor	13	14%	20,577	16%
Amenity Buyer	14	15%	12,603	10%
Government/Institution	6	6%	11,410	9%
Part-Time Rancher	5	5%	7,711	6%
Timber	8	9%	6,687	5%
Unknown	2	2%	1,118	1%
Conservation Organization	1	1%	896	1%

Figure 10 on the following page considers sales activity over time, showing the amount of land changing hands and the relative activity of the four most significant buying cohorts during this time. This figure suggests several trends: high volumes of land changing hands in the early 1990s, an overall market slowdown accompanying the economic slowdown of the early 2000s (as mentioned earlier) and declining participation of traditional ranchers as buyers since the mid-1990s. Amenity buyers have been intermittently active, although there is evidence that their rates of acquisition have been increasing since 2002.

Figure 10. Sales Activity by Year for Four Major Buyer Categories, 1993–2008.



Discussion

The Okanogan Valley has long been an agricultural landscape in transition and sales of large agricultural land parcels in the past fifteen years reflect this overall trend. Competition for land from non-agricultural interests along with the economics of ranching make it difficult for full-time ranching enterprises to expand.

The Okanogan Valley is not a high amenity ranching landscape in any conventional sense and as such has not yet seen the demand for luxury ranch properties that is working to help keep some Rocky Mountain ranching landscapes intact (in the sense of land fragmentation). For example, a recent study of sales dynamics in 10 of the counties in Wyoming and Montana adjacent to the public lands of the Greater Yellowstone area, found that developers purchased just 6 percent of all land changing hands while amenity buyers acquired 40 percent of the total acreage.[26] In that area, about 22 percent of the land in large agricultural holdings changed hands between 1990 and 2001. While the dates are not strictly comparable, this study suggests that the Okanogan Valley—with 45 percent of the land in large agricultural holdings changing hands in a fifteen-year period—shows rates of land turnover that are as rapid if not more rapid than those in the fast-changing Greater Yellowstone area.

[26] Gosnell *et. al.* page 749.

Limited interviewing in the area points to several outcomes of ranchland ownership change that merit further inquiry. First is the likelihood of future turnover of small- to medium-sized ranch properties that are currently in 'holding' status, meaning that a semi-retired rancher might run a small herd or a partnership of heirs who live elsewhere may be holding the property, maintaining a low level of production while they decide the ranch's future. Several well-informed locals noted that this is the ranch-owning cohort most likely to demonstrate volatility in response to rapidly increasing fuel and shipping costs. This projection is based on an assumption that the dozen or so large, full-time ranches that remain in the area have weathered so many changes in the past twenty years that the current amplification in production costs is not likely to have a dramatic impact in the near-term. This is of course highly speculative.

Based on our analysis of current large agricultural holdings, we know that these smaller holdings comprise roughly one-third of the available inventory. Thus, turnover in this area could be significant in future years, if local projections of volatility in this sector are accurate. Who will buy these holdings?

The data suggest that if current trends continue, at least 50 percent of the acres will go to non-ranching interests. The relative competition between developers and investors versus amenity buyers (who tend to keep the land intact) is hard to gauge. Long recognized for its value (in terms of land prices) and with the trend toward owning ranches as part of a larger portfolio continuing to expand among the nation's wealthy elite, the Okanogan Valley may increase in appeal to amenity buyers. A word-of-mouth phenomenon has certainly affected amenity ranching landscapes elsewhere, whereby wealthy recreational ranch buyers attract like-minded investors.

Our limited interviews revealed some complex issues that make it difficult to assess the impact of one type of sale versus another on the function of remaining ranch operations. On the one hand, much of the subdivided land in the county remains functional as agricultural land in the sense of offering low-cost grazing leases to ranchers. This may be less true of new subdivisions emerging on the market that are likely to feature more intensive planning, management and development. And, if and when existing undeveloped rural parcels are developed over the course of time, the available supply of leased grazing land may be diminished.

We did not pursue the interests and goals of the area's existing amenity ranch owners in this study, but passing references in several interviews suggest that most in this cohort do not have a strong interest in conventional livestock production. As yet, there does not appear to be significant local concern about loss of public access for deer hunting or recreation, nor a strong sense of social upheaval in terms of the arrival of a large group of urban-based, absentee owners of large ranches with different values and backgrounds than their neighbors. However, area ranchers are watching land turnover closely—transactions including public as well as private investment—with concerns about the relationship of changing land uses to the future of working ranches in the area.

CONCLUSION

By design, this study is preliminary and descriptive in scope. It points to several key trends affecting livestock production in the Okanogan Valley and eastern Okanogan County along with issues that merit further inquiry.

The role of livestock ranching has declined as a share of total county-wide farm income since the 1970s, while a cost-price squeeze has prompted significant agglomeration and attrition in the ranching community. Those ranches that remain in production have necessarily increased production: leasing grazing land is an important strategy they have used to do so and will be increasingly important if land values increase, especially relative to returns from livestock sales. Ranchers appear to have fewer diversification options such as fee hunting and guest ranching than in areas of the West with greater name recognition as wildlife and scenic retreats.

Together, these factors have led to a rate of ownership change of large ranches on par with or exceeding some of the fastest growing and fastest changing areas in the rural West. The nature of the outcomes of ownership change in the Okanogan Valley and eastern Okanogan County include a large degree of subdivision, with as yet limited residential development. Amenity-oriented acquisition of large ranches with the intent of keeping them intact is far less prevalent in this area than in other, high-amenity areas of the West.

There appears to be a significant inventory of ranches that are in some kind of transitional or part-time standing and this cohort of operations may be especially vulnerable to current increases in production costs, especially fuel. Sales in this cohort are likely and will serve to continue the region's relatively rapid rate of ranch land ownership change.