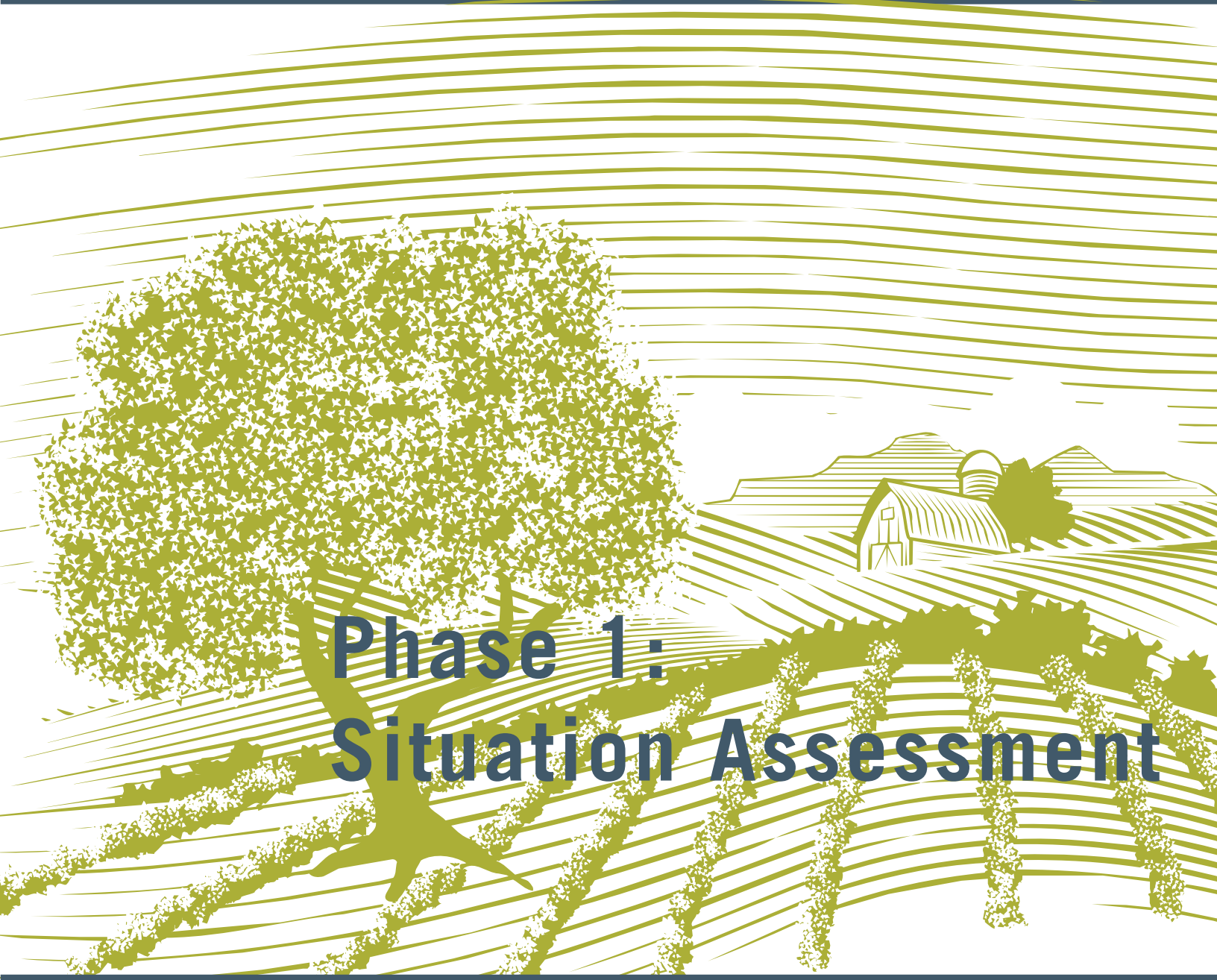
CLARK COUNTY

Rural Lands Study

MAY 15, 2012



Phase 1: Situation Assessment

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2025 First Avenue, Suite 800
Seattle, Washington 98121
P (206) 324-8760
www.berkconsulting.com

Project Team

BERK: Paul Roberts, Morgan Shook, Lisa Grueter, Dawn Couch, Alex Krieg

Forterra: Nick Bratton, Taylor Carroll

K&L Gates: Eric Laschever

Blair Wolfley (Faculty Emeritus at the Washington State University Extension Program)

ATTACHMENT B

Assessment of Agriculture and Forestry in Clark County

May 15, 2012

CLARK COUNTY RURAL LANDS STUDY

Assessment of Agriculture and Forestry in Clark County

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1.0 INTRODUCTION

To support the County's investigation of resource and rural land issues, this assessment examines the land use and economic trends in resource land uses and agricultural and forest products to provide insight on current challenges and key drivers of future demands as it relates to these rural land uses.

This document presents an assessment of farming and market activities related to farming in Clark County, as well as some consideration of forestry. Agriculture and forestry represent industries that typically occur on rural lands, though not exclusively in the case of agriculture.

1.1 Approach and Data Inputs

The most recent prior assessment of agriculture in Clark County was *Analysis of the Agricultural Economic Trends and Conditions in Clark County, Washington*, conducted by Globalwise, Inc. in 2007. This assessment builds on previous work conducted by that analysis, and efforts of the Friends of Farming group and the County, among other work. This report updates the understanding of the status and trends of these rural land-depended industries in Clark County.

The approach to the assessment is twofold: 1) a quantitative assessment of the available economic and census data; and 2) a series of interviews and outreach with individuals and businesses engaged in agriculture and forestry in Clark County.

1.2 Key Questions

The purpose of this analysis is to describe the historical trends in agriculture and forestry production and to identify the broad driving forces shaping these uses in rural lands in the County. Specifically, the key questions posed in the assessment are:

- What are the long terms trends in agriculture and forestry (i.e. employment, income, productivity, etc.) that describe what is happening in Clark County?
- What has been the experience of individuals and businesses engaged in agriculture and forestry in Clark County?
- What do the answers from these two questions suggest about the future of agriculture and forestry in Clark County as it relates to rural land use?

This report is not an in-depth analysis of the market (i.e. yields and prices) for individual commodities or a land use forecast of individual agricultural or forestry uses. Such a level of detail and precision is beyond the scope and resources of this analysis. As stated above, the purpose of the analysis is **to describe the dynamics at work in these industries to inform the discussion around rural land use planning.**

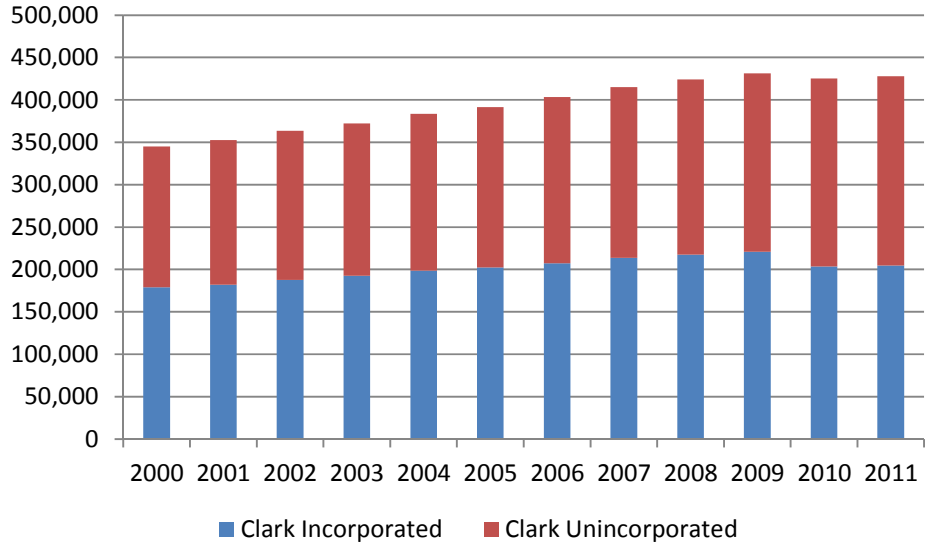
2.0 CONTEXT – EMPLOYMENT, POPULATION, AND HOUSING CHANGES

Clark County has a long and rich history of farming and forestry that has played a large role in its growth and economic development. In order to better understand the current situation in these industries, it is useful to start with a discussion of how the County has changed in recent times.

2.1 Population and Housing

Exhibit 1 shows population growth over the past decade. Overall, population grew at rate of 2.0% from 2000 to 2010. However, population in Clark County unincorporated areas accounted for the majority of the growth, 2.7% as opposed to 1.2% in the cities.

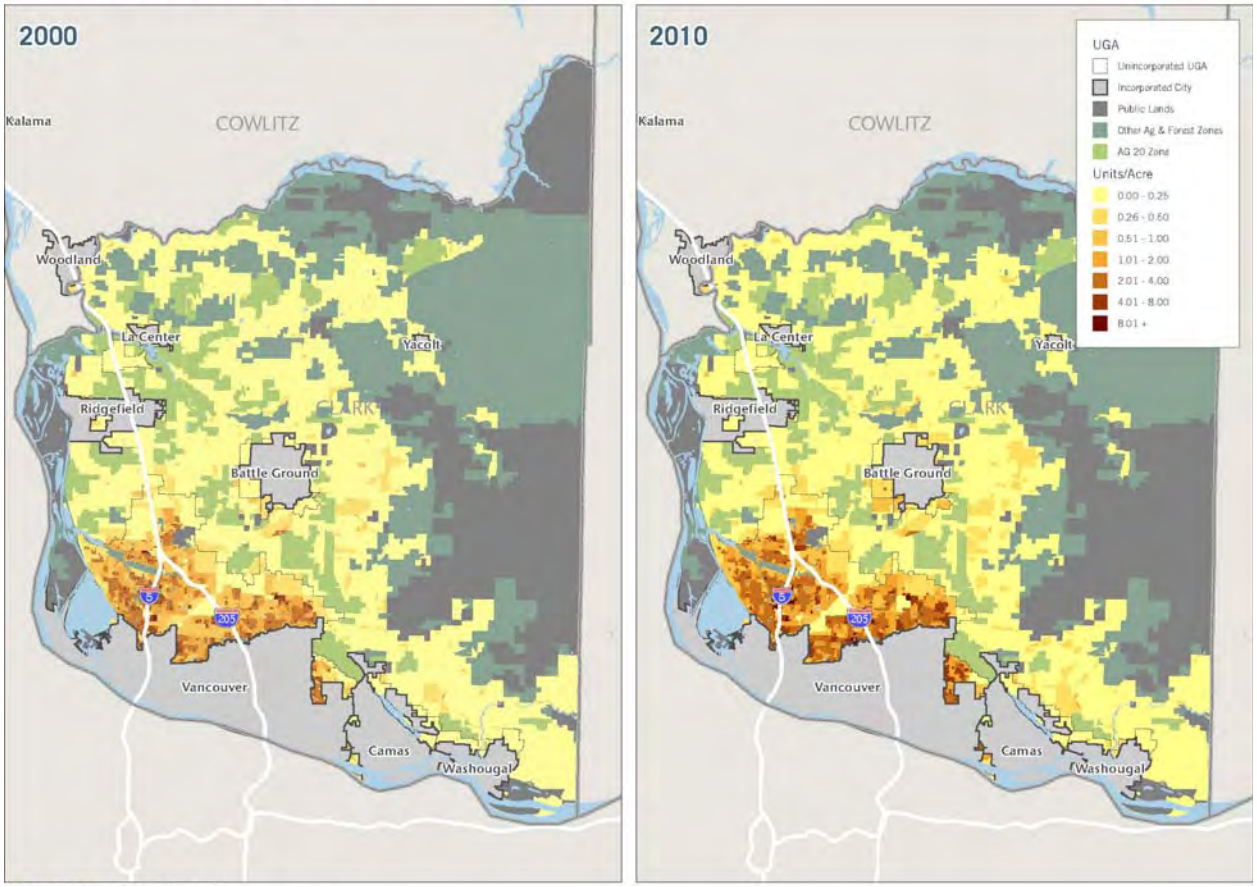
Exhibit 1 Clark County Population Growth



Source: OFM, 2012. (Note: no intercensal revisions of population estimates.)

Exhibit 2 and Exhibit 3 show the relative location of much of this growth. The map in Exhibit 2 shows how housing density has moved into the rural areas of the County. As summarized in Exhibit 3, between 2000 and 2010, the rural areas (land outside cities and UGAs) lost approximately 6,000 acres of the lowest density land (<0.25 units/acre). Together, the two exhibits paint the picture of residential creep into rural lands.

Exhibit 2 Map of Clark County Change in Housing Density



Source: OFM, 2011; BERK, 2012.

Exhibit 3 Clark County Change in Housing Density

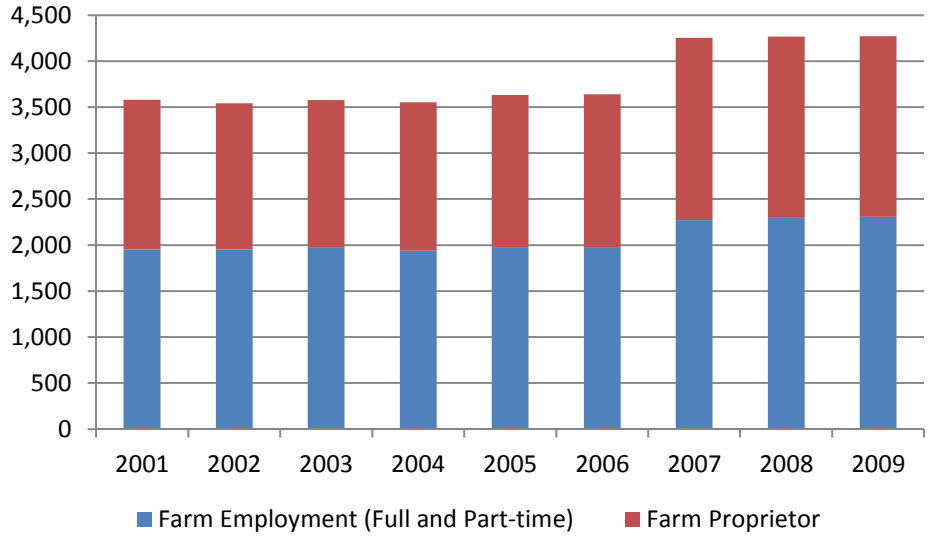
Housing Unit Density				Acres		
				2000	2010	Change
0	to	0.25	per acre	314,440	308,290	-6,150
0.25	to	0.5	per acre	5,900	10,260	4,360
0.5	to	1	per acre	790	1,070	280
1	to	2	per acre	100	70	-30
2	to	4	per acre	110	80	-30
4	to	8	per acre	10	10	0

Source: BERK, 2012.

2.2 Employment Trends

Those employed in farming and agriculture (proprietors, full-time, and part-time) grew at a rate of 2.2% from 2000 to 2009. The majority of this growth came from increases in farm proprietors, which grew at 2.4%. All other farm employment grew at 2.1%. The rate of growth in this industry outpaces the County as a whole, which grew at a rate of 1.7%. The jobs tied to the forest industry grew at rate of 2% during this period. However, jobs in logging only account for approximately 600 jobs in the County, and these jobs are down 3% since 2000.

Exhibit 4 Clark County Farm Employment



Source: BEA, 2012.

3.0 SUMMARY OF KEY FINDINGS

Key Finding #1: Agriculture in Clark County in 2011 is in the midst of a decade's long transition from large scale commodity farming into more intensive, value-added, urban-oriented farming.

Overall, the composition and nature of farming is changing. More importantly, these changes have been accompanied (and partially caused) by the settlement patterns in the County. While the overall number of farms in Clark County grew by 19% between 1997 and 2007, the total farm output decreased by almost 16%. The decline in commercial farms (a 22% decrease between 1997 and 2007) and mid-sized farms (an 18% decrease between 1997 and 2007) is likely driving the decrease in farm output. The share of commercial and mid-sized farm commodity totals declined 15% between 1997 and 2007. The share of very small and small farm commodity totals declined 17% over the same period, in spite of 22% increase in the number of very small and small farms.

There has been a decline in the number of commercial and mid-sized farms in Clark County between 1997 and 2007, and presumably through 2012 (relayed anecdotally from key informants). This has been accompanied by a similar decline in output (though it might be important to note that output has declined across all farm types, and a bit more steeply for very small and small farms).

There has been substantial growth in the number of very small farms and moderate growth of small farms. This is also reflected by farm size, with farms less than 50 acres making up almost 85% of total farms in Clark County in 2007, up from 79% in 1997.

While the overall output and number of commercial and mid-sized farms declined, there is also opportunity, particularly around capitalizing on the growing interest in and demand for local produce. While there is not quantitative data available on the growth of Community Supported Agriculture (CSA) over time, stakeholder interviews and focus group meetings with Clark County farmers describe this as an emerging market and a great option for small farms to earn income.

With this change in farming has come a marked change in the residential character of the county has both the housing unit numbers and population in the rural areas have outpaced growth within the cities. This has led to a net increase in residential density that creates two key challenges for farms:

- It increases the attractiveness for more intense rural area development.
- It creates tension between uses; much of farming is active use of the land (machinery, animals, fertilizers, etc.) that is sporadically viewed as a nuisance by new residential neighbors.

Key Finding #2: Large farm and mid-size farms are declining in number, acres, and value. However, they remain a viable enterprise but face a multitude of challenges.

Commercial and mid-sized farms experienced the largest decline in the number of farms (from 114 in 1997 to only 91 in 2007) and output (from $43.6M to $39.4M over the same period). In spite of these declines, commercial and mid-sized farms still accounted for approximately 85% of total agricultural output in Clark County in 2007. Much of this decline is occurring at a level where the County would have very little impact. Consolidation in some sectors of the agricultural industry is taking crop production out of the State (and occasionally out of the country). Increasing labor costs and uncertainty (due to federal immigration policies) make labor intensive crop production unattractive to many commercial farms.

There is some sense that certain agricultural products—particularly those that are established and are not labor intensive—have a future in the county. Milk products provide the greatest share of commodity totals in Clark County and the number of milk-producing farms has stayed constant between 2002 and 2007, while experiencing modest growth in output due to rebound in commodity value of milk. Some farmers also mentioned that demand is not currently being met in this commodity area.

Mid-sized farms experience less of these macro issues related to agricultural production in Clark County. Nevertheless, they continue to face challenges, particularly related to water rights and a sense of over-regulation on their operations. One farmer described water rights as “like gold” in that if you have them, you’re much better positioned to succeed. A lack of water rights makes it difficult for farmers to expand operations because the costs are simply too high to irrigate their crops otherwise.

Farmers struggle with regulations that they perceive as always operating against their interests. One farmer complained about labor regulations that prevent children from helping out on the farm because a farmer is then technically in violation of labor laws. Others note that certain regulations are too old and out-of-date for how farming is currently practiced, with one farmer noting that “accommodations haven’t been made to allow agriculture to update to more modern facility sizes.” This is particularly notable around farm stands, where the revenues coming from direct sales of their products (an attractive form of income to some urban oriented farms) cannot justify the investment in modern commercial buildings.

Another challenge facing mid- and larger-scale farms is encroaching urban/suburban development, which raises nuisance issues that farmers believe always benefits the person making the complaint and also raises the cost of land. Indeed, the value (and cost to acquire) of land per acre has increased at almost 5% a year between 1997 and 2007. This issue has been somewhat buffeted during the recession.

Higher land costs work to both encourage current farmers to sell their land and discourages potential farmers from deciding to enter the industry. One farmer noted that someone “can’t start a large farm in Clark County if you don’t inherit land.” The lack of predictability around regulation and land costs currently functions as a deterrent for additional investment in agriculture in Clark County.

In spite of these challenges, mid-sized farms are well-positioned to take advantage of the growing demand for local, farm-fresh produce. This is evident in the growth of products that are sold directly to end users. Between 2002 and 2007, Clark County farms saw a 12% increase of products sold directly to consumers, compared to only 2% in Washington State. Additionally, many farmers noted the robust growth in organics and local produced products that remained strong, even through the recession.

Key Finding #3: A Diverse set of small farms and enterprises are increasingly becoming part of the rural landscape.

All farm growth in Clark County between 1997 and 2007 occurred in the very small and small farm categories. Farms in these categories do not typically experience the issues facing commercial or mid-sized farms solely based on scale: many of these farms are sole proprietors without much labor needs and relatively aren’t at a scale where neighbors raise nuisance claims compared to the larger operations.

Because these farms produce very little income, they are mostly supported with non-farm income, providing additional protection from the factors affecting the economic viability of larger farm enterprises. Many farmers in this category farm for non-market reasons and may be willing to farm at a loss, especially considering the unpaid farm labor within these households. And, as previously mentioned, the growing demand for local produce and increasing market share of CSAs presents farms in these categories with opportunities to generate additional income.

Many of these farms also host other co-located rural business that may, or may not, be related to agricultural production.

Key Finding #4: Timber production is diminished, but retains a productive and uncertain presence in the County.

Washington is the largest exporter of wood products in the United States, accounting for more than 18% of total US wood products export in 2010, representing $1.52 billion. Unlike Clark County's agricultural industry, this sector is affected by a range of factors, including the economic trends of buying nations and changes in national tariff policies, issues far beyond the control of the County.

The supply of forest products is influenced by state and federal regulation. Timber production throughout the US has seen a long pattern of decline due to changing federal land management policies, changing regulatory standards, market trends, and the loss of forest lands. Washington does control a substantial amount of forest lands that are managed as trusts and can help provide revenue. As global demand increased for raw logs and timber in 2010, the State released additional timber for harvest to take advantage of higher prices and to support supply for domestic mills.

Private timber lands and producers continue to feel market pressure to remove lands from commercial forest production and instead convert these lands to residential and commercial uses. When this happens, fragmentation of forests occurs, which increases the costs associated with managing forests for commercial harvest, and can accelerate development pressures.

4.0 DEFINITION OF AGRICULTURE IN CLARK COUNTY

There is a diverse range of agriculture operations in Clark County that vary by size, soil quality, level of investment, and intensity of cultivation, among other variables. Clark County has retirement farms, non-commercial hobby farms, small commercial farms that support farm families, and commercial farms—all of which respond to market conditions in different ways.

This analysis segments farming activity into four categories based on sales to better demonstrate how market forces are impacting the viability of agriculture activity in Clark County. The segments are not rigid categories, and some operations may move from category to category on a yearly basis. Also, these categories are not universal; instead, they are based on observations of activity in Clark County and may not accurately represent farming activity in other communities or at other scales. The segments provide greater resolution at the smaller-end of the family scale.[1]

- **Very Small Farms.** Very small farms produce less than $10,000 in a year. These may be "lifestyle," "hobby," or "retirement" farms, among others. In general, these are family farms that rely heavily on non-farm income.
- **Small Farms.** Small farms produce between $10,000 and $50,000 in annual commodity sales. While they may not be the farmer's only source of income, they represent a greater proportion of income than very small farms.
- **Mid-Sized Farms.** Mid-sized farms produce between $50,000 and $250,000 in annual commodity sales. Mid-sized farms likely produce a majority of a farmer's income, but may or may not operate as a commercial farm.
- **Commercial Farms.** Commercial farms include operations with more than $250,000 in annual commodity sales. While the household may have non-farm income, in general the farming operation represents a significant part of the household's income.

[1] The first three categories would fall under the definition of "small" farms by the National Commission on Small Farms of all farms with sales less than $250,000. This definition would miss much of the agricultural activity in Clark County.

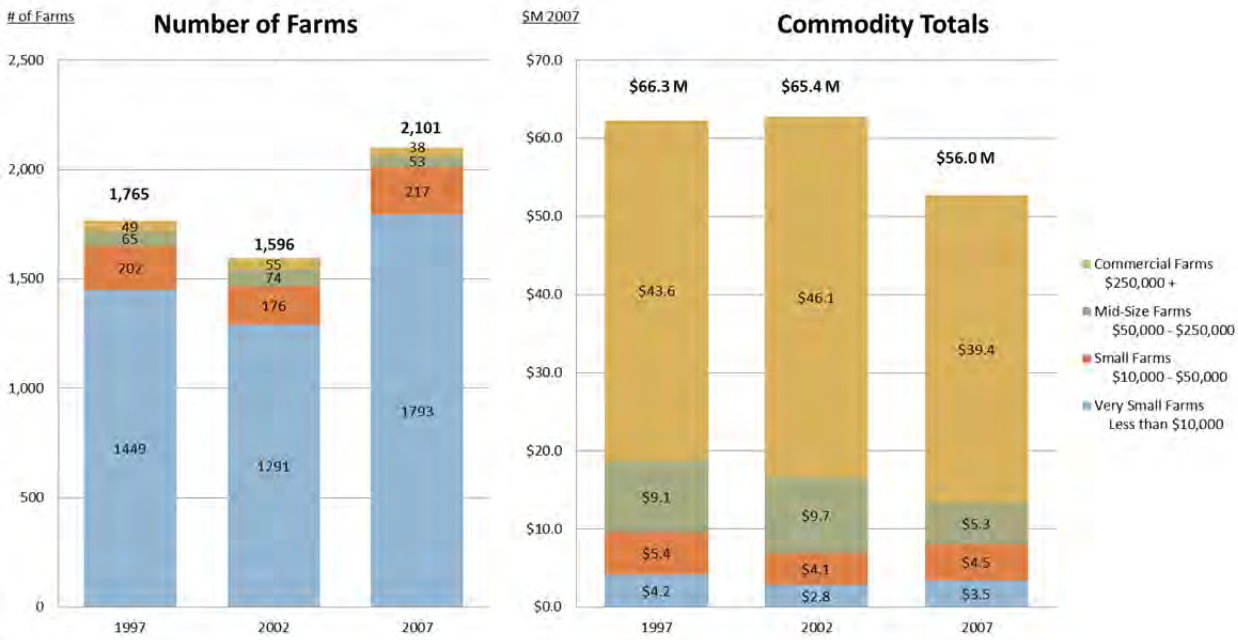
5.0 TRENDS IN FARM ACTIVITY

5.1 Changes in Farm Type

The 2007 Census of Agriculture found a total of 2,101 farms in Clark County. This represents an increase from the 2002 Census of 1,596 farms, as well as from the 1997 Census, which counted 1,765 farms in Clark County.

Exhibit 5 presents agriculture in Clark County in four segments according to commodity totals.

Exhibit 5 Clark County Farms by Type



*"Farms" only include farms having, or usually having, sales of $1,000 or more in a year. Commodity totals normalized to 2007 dollars using CPI.
Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

Some key findings of farm activity in Clark County include:

- The number of farms has increased between 1997 and 2007.
  - Clark County had 2,101 farms in 2007, representing the addition of 336 farms since 1997.
  - The growth in the number of farms is mostly in very small farms with a slight increase in small farms, though some of the increase may be attributed to increased efforts of the USDA to count all small farms in the census.
- Commercial farms are declining.
  - Commercial and mid-sized farms both decreased between 1997 and 2007. These two categories represent only 4% of all farms in Clark County in 2007.
  - Between 1997 and 2007, Clark County lost 23 farms that produced over $50,000 in commodities, an average of two mid-sized and/or commercial farms per year.
  - While the number of commercial farms has decreased between 1997 and 2007, mid-sized and commercial farms' share of total commodity output stayed constant at 85%.
- Commodity values are declining.

- Commercial farms are the most productive farm type, with 38 farms producing $39.4 Million. Put another way, 2% of Clark County farms account for 75% of total commodity outputs. Subsequently, the loss of commercial farms corresponds to a loss in commodity totals.

5.2 Changes in Farm Assets

Farm assets, defined as the value of land and buildings involved in agricultural production, increased over the time period (Exhibit 6). Total asset value by farm and acre increased over the time period as well. While the Census does not differentiate between land and buildings, it is likely that the majority of the growth was due to increases in land values that Clark County experienced during this time.

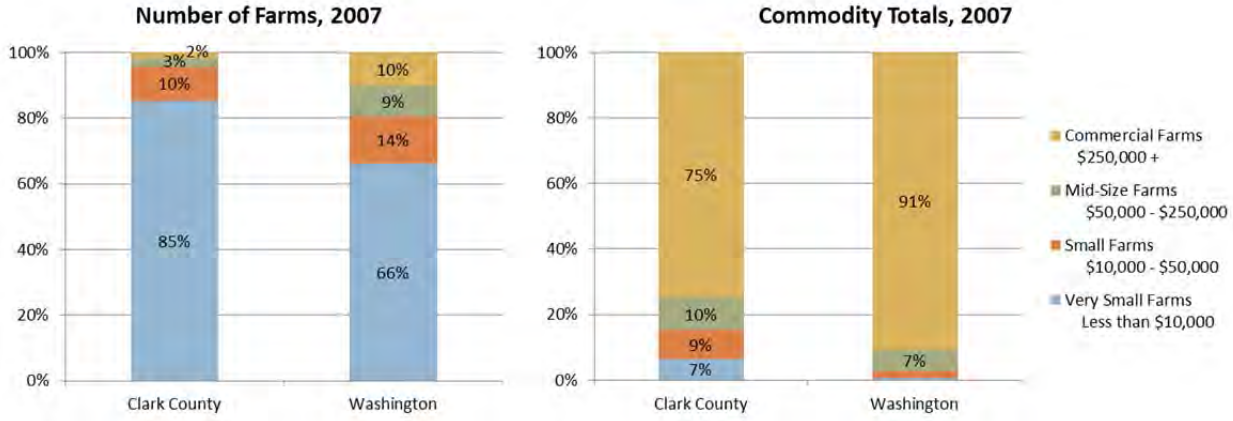
Exhibit 6 Changes in Farm Assets

	1997	2002	2007	Avg. Annual Change
Farm Asset Value*	$648	$776	$1,037	4.8%
Asset Value per Acre	$8,445	$11,538	$13,230	4.6%
Asset Value per Farm	$368,233	$486,763	$493,410	3.0%

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

5.3 Trends in Commodities Values

Exhibit 7 Percentage of Farms by Commodity Total



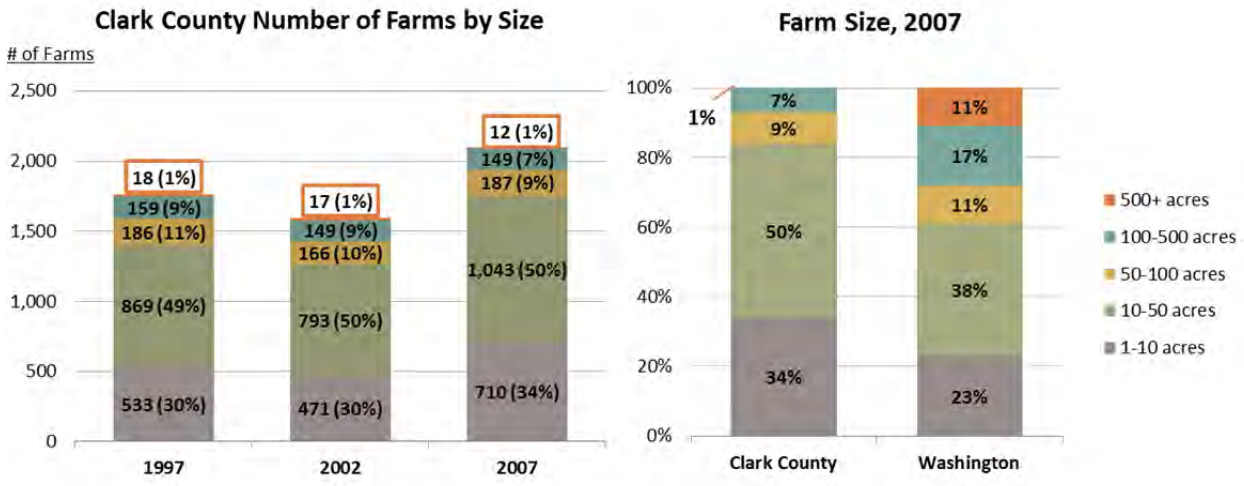
Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

- Clark County's proportion has the highest proportion of farms that are "very small" in Washington State.
  - 85% of Clark County farms earn less than $10,000 a year, compared to only 66% statewide. Only 5% of Clark County farms earn more than $50,000 a year, while almost 20% of Washington farms earn at least $50,000.
  - Grouping commercial and mid-size farms together, 5% of Clark County's farms account for 85% of commodity totals, compared with 19% of Washington farms account for 98% of commodity totals. Clark County's very small farms account for a total of 7% of commodity totals while Washington's 66% account for less than 1%.
- Though commercial farms account for a very small share of total farms, they represent a largest share of commodity totals.

- In 2007, commercial farms only accounted for 2% of all farms in Clark County but 75% of all commodity totals.
- In 2007, mid-size and commercial farms produced $45 million in commodities, representing 85% of farm production in the County.

In estimating farm size, commodity totals provide the best measure of farms in terms of economic activity. In addition to most farms in Clark County (85%) having commodity totals of less than $10,000, many farms in Clark County are on small acreage. Exhibit 8 presents the number and percent of farms by number of acres.

Exhibit 8 Percent of Farms by Acres



*Land in farms is based on the number of acres reported by farm operators and includes both owned and leased lands. Total farm land for an operation may not be contiguous.

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

- Clark County farms tend to be small in terms of acres.
  - About half of Clark County farms are between 10 and 50 acres.
  - Growth in farms has been in the lower scale of acres (100 acres or smaller), while larger farms have declined between 1997 and 2007.
- Clark County has a greater proportion of small farms compared to Washington State.
  - Clark County has a greater proportion of farms smaller than 50 acres (84%) than Washington (61%), and many fewer farms larger than 500 acres (less than 1%) than Washington (11%).
  - The number of Clark County farms with between 50 and 500 acres has stayed relatively constant since 1997, with a total difference of only nine less farms.
- Farm size reflects urban and suburban land use patterns with agriculture dominated by small-scale operations.
  - The average size of a Clark County farm in 2007 was 37 acres, compared to the Washington average of 381 acres. The median size of a Clark County farm was 15 acres, compared to the Washington median of 30 acres. Clark County's numbers are comparable to other, primarily urban counties like Pierce and King.
  - Both Clark County and Washington farms have experienced declines in farm size since 2002. Clark County's average farm size was 44 acres in 2002, representing a 16% decline between 2002 and 2007. Washington's average farm size was 426 acres in 2002, representing an almost 11% decline.

Exhibit 9 Crops by Clark County Farms and Commodity Totals

	Number of Farms				
Agricultural Products	**1997**	**2002**	**2007**	**Percentage Change***	**2007 Percentage of Total**
Cattle and calves	838	502	547	-35%	26%
Other crops and hay	-	284	429	51%	20%
Poultry and eggs	113	120	309	173%	15%
Fruit, tree nuts, and berries	103	117	215	109%	10%
Horses, ponies, mules, burros, and donkeys	-	142	167	18%	8%
Sheep, goats, and their products	-	105	153	46%	7%
Cut Christmas trees and short term woody crops	-	46	69	50%	3%
Hogs and pigs	38	49	62	63%	3%
Milk and other dairy products from cows	32	25	25	-22%	1%
Grains, oilseeds, dry beans, and dry peas	-	17	15	-12%	1%
Total	1765	1596	2101	32%	

	Commodity Totals (in 2007 $)				
Agricultural Products	**1997**	**2002**	**2007**	**Percentage Change***	**2007 Percentage of Total**
Milk and other dairy products from cows	$ 18,384,324	$ 10,965,268	$ 11,841,000	-36%	22%
Poultry and eggs	$ 7,729,141	$ 8,103,511	$ 10,640,000	38%	20%
Fruit, tree nuts, and berries	$ 5,367,639	$ 6,680,124	$ 9,858,000	84%	19%
Cattle and calves	$ 7,069,006	$ 5,437,685	$ 5,439,000	-23%	10%
Cut Christmas trees and short term woody crops	$ -	$ 1,509,828	$ 2,976,000	97%	6%
Other crops and hay	$ -	$ 1,762,234	$ 1,798,000	2%	3%
Horses, ponies, mules, burros, and donkeys	$ -	$ 562,000	$ 917,000	63%	2%
Grains, oilseeds, dry beans, and dry peas	$ -	$ 212,067	$ 450,000	112%	1%
Sheep, goats, and their products	$ -	$ 291,593	$ 342,000	17%	1%
Hogs and pigs	$ 117,558	$ 81,830	$ 37,000	-69%	0.1%
Other crops	$ 23,586,606	$ 27,102,425	$ 8,393,000		16%
Total	$ 62,254,274	$ 62,708,565	$ 52,691,000	-15%	100%

	Commodity Value per Farm (in 2007 $)			
Agricultural Products	**1997**	**2002**	**2007**	**Percentage Change***
Milk and other dairy products from cows	$ 574,510	$ 438,611	$ 473,640	-18%
Poultry and eggs	$ 68,399	$ 67,529	$ 34,434	-50%
Fruit, tree nuts, and berries	$ 52,113	$ 57,095	$ 45,851	-12%
Cattle and calves	$ 8,436	$ 10,832	$ 9,943	18%
Cut Christmas trees and short term woody crops	$ -	$ 32,822	$ 43,130	31%
Other crops and hay	$ -	$ 6,205	$ 4,191	-32%
Horses, ponies, mules, burros, and donkeys	$ -	$ 3,958	$ 5,491	39%
Grains, oilseeds, dry beans, and dry peas	$ -	$ 12,475	$ 30,000	140%
Sheep, goats, and their products	$ -	$ 2,777	$ 2,235	-20%
Hogs and pigs	$ 3,094	$ 1,670	$ 597	-64%
Total	$ 35,271.54	$ 39,291.08	$ 25,079.01	-29%

*Percentage change is between 2002 and 2007 when there is no 1997 data.

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

- Many Clark County farms have livestock of some sort.
  - Cattle and calves are the agricultural product found on the largest number of Clark County farms. 26% of Clark County farms produce cattle and calves.
  - The number of farms with Poultry and egg products has more than doubled since 1997 and make up 15% of the total number of Clark County farms.

- Fruit, tree nuts, and berries and cut Christmas trees make up the largest non-livestock portion of Clark County farms.
  - The number of Clark County farms growing fruit, tree nut, and berry products has doubled since 1997, while the number of farms growing cut Christmas trees and short term woody crops has grown by 50%.
- Milk products make up the greatest commodity totals of Clark County farms.
  - Despite making up only 1% of Clark County's farms, farms that produce milk and other dairy products from cows brought in almost $12 million, or 22% of 2007 commodity totals.
  - The total is down substantially from 1997, though there were seven additional farms producing milk. The commodity total figure has grown slightly from 2002 when there was the same number of farms.
- Other livestock-related products brought in approximately 36% of Clark County's commodity totals in 2007.
  - Poultry and eggs led the way with more than $10 million, or 20% of 2007 commodity totals (and make up only 15% of farms), following by cattle and calves at just over $5 million, or 10% of 2007 commodity totals (despite making up 26% of Clark County farms).
- Fruit, tree nuts, and berries and cut Christmas trees bring in a greater proportion of commodity totals than their numbers would suggest.
  - In addition to growth in the number of farms producing these products, their share represented some of the greatest growth in commodity totals produced by Clark County farms.

5.4 Direct Marketing, Organic, CSAs

Farmers are increasingly turning to other forms of business (value-add, tourism) in order to better monetize their farm produce and assets. Clark County farms experience strong growth in this area (Exhibit 10). Total sales grew at rate of 4% during this time period.

Exhibit 10 Summary of Direct Marketing

	1997	2002	2007
Farms with Direct Sales	347	290	413
Total Sales from Direct Marketing	$1,055,442	$886,303	$1,586,000
Average Sales per Farm	$3,042	$3,056	$3,840

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

In addition, the broad movement toward quality (organic), local foods, and food security has driven the growth of organic products and community supported agriculture (CSA). Exhibit 11 shows the growth of organic products in the community. These are 2007 data and, anecdotally, these numbers have increased since then.

Exhibit 11 Summary of Organic Farming

	Number of Acres		Percentage of Acres	
	2002	2007	2002	2007
Acres	62	119	0.3%	0.5%
Farms	13	38	1.6%	3.7%

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

Exhibit 12 shows the number of CSAs in the County. There is no 2002 reference for this data point, but key informants estimate that these numbers have increased since 2007.

Exhibit 12 Summary of CSAs

	Clark County	Percentage of Clark County Farms
Farms with Community Support Agriculture	20	0.95%

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

6.0 FARM COMPOSITION AND TENURE

Just as it is difficult to describe the farming activity of Clark County with great specificity, it is also difficult to say who, exactly, is farming. The Census of Agriculture provides a high level view of types of farms as well as the demographic profile of principal farm operators. Farmers are sent a Census form to complete and return, with non-responses followed up in-person contact. The response rate for the 2007 Census was 85.2%.

Exhibit 13 2007 Farm Typology

	Operations		Acres	
	Number	Percent	Number	Percent
SMALL FAMILY FARMS	**2,018**	**96%**	**66,136**	**84%**
Limited-Resource	424	20%	10,675	14%
Retirement	534	25%	21,882	28%
Residential/Lifestyle	834	40%	24,026	31%
Farming Occupation - Lower Sales	222	11%	9,208	12%
Farming Occupation - Higher Sales	4	0%	345	0%
OTHER FARMS	**83**	**4%**	**12,223**	**16%**
Large Family Farms	8	0%	1,196	2%
Very Large Family Farms	24	1%	7,752	10%
Non-Family Farms	51	2%	3,275	4%
TOTAL FARMS	**2,101**		**78,359**	

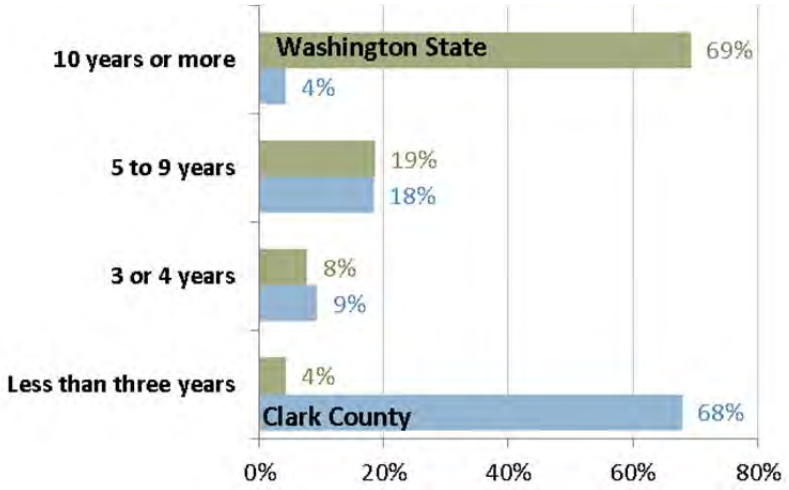
Limited-resource farms are defined as farms that have market value of agricultural products sold gross sales of less than $100,000, and total principal operator household income of less than $20,000.
**Retirement farms are defined as farms that have market value of agricultural products sold of less than $250,000, and a principal operator who reports being retired.
***Residential – Lifestyle farms are defined as farms that have market value of agricultural products sold of less than $250,000, and a principal operator who reports his/her primary occupation as other than farming.
****Farming occupation – lower sales farms are defined as farms that have market value of agricultural products sold of less than $100,000, and a principal operator who reports farming as his/her primary occupation.
*****Farming occupation – higher sales farms are defined as farms that have market value of agricultural products sold of between $100,000 and $249,999, and a principal operator who reports farming as his/her primary occupation.

Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

- Most farms in Clark County are family- or individual-owned and are most commonly residential/lifestyle farms.
  - Approximately 94% of Clark County farms are family farms (e.g. owned by families, individuals, or family-held farm corporations). In 2007, only three farms were owned by non-family-held corporations.
  - After residential/lifestyle farms, the most common type of farms includes retirement farms as well as limited-resource farms.
  - Large and Very Large Family Farms account for 32 of Clark County's 2007 farms.

- Farm operators tend to be older.
  - More than half of farm proprietors are 55 years or older, with 18% (377 farm operators) being older than 70 in 2007. Only 4% (85 operators) of farm operators were younger than 35 in the same year.
  - Retirement farms account for 29% of all farms.
  - Growth in farm operators is dominated by older cohorts, 70% of new farmers were older than 55 years old.
- Clark County farmers typically have off-farm jobs.
  - In 2007, 61% of farmers had a primary occupation other than farming, though the number of farmers where farming is their primary occupation has grown. In 1997, only 33% of Clark County farmers were primarily engaged in farming.
  - Only 32% of Clark County farmers did not work any days off their farm in 2007, while 19% worked between one and 99 days off their operation, and 48% worked more than 100 days somewhere besides their farm.
  - Statewide, 46% of farmers are principally engaged in farming.
- Farmers tend to be male, though the number and percentage of female farm operators is growing.
  - In 2007, 23% of all farm operators were female. The number of female farm operators has increased 75% between 1997 and 2007 while the number of male farm operators has increased 9% over the same period.

Exhibit 14 Length of time on current operation



Source: U.S. Census of Agriculture, National Agricultural Statistical Service; BERK, 2012.

- Clark County farmers are much newer to the industry than Washington farmers in general, and Clark County has many fewer long-term farmers than the State.
  - While having similar numbers of farmers on their current operation between three and nine years, Clark County has a larger number of farmers new to their current operation (68%) and many fewer farmers with more than 10 years at their current operation (4%).

7.0 LAND USED FOR AGRICULTURAL ACTIVITY

7.1 Acres in production

Agricultural land is used in many ways in farm activity that vary by intensity and investment needed. Different types of cultivation require different soil and climate conditions. Exhibit 15 presents acres in types of production for Clark County.

Exhibit 15 Acres in Agriculture Production

Clark County Farms

Type of Production	1997	2002	2007	Avg. Annual Change '97 - '07	Trend
Total Cropland	**46,062**	**38,142**	**34,296**	**-2.9%**	
Harvested Cropland	28,179	22,896	25,423	-1.0%	
Pastured Cropland	15,579	11,481	5,314	-10.2%	
Other Cropland	2,304	3,765	3,559	4.4%	
Idle Acres	-	2,936	2,492		
Failed Crops	175	225	472	10.4%	
Summer Fallow	218	604	595	10.6%	
Total Woodland	**19,771**	**18,072**	**18,554**	**-0.6%**	
Pastured Woodland	8,155	7,838	6,737	-1.9%	
Non-pastured Woodland	11,616	10,234	11,817	0.2%	
Permantent Pasture and Rangeland	**11,095**	**9,421**	**20,129**	**6.1%**	
Other Farm Land	**5,738**	**5,059**	**5,380**	**-0.6%**	
Total Acres	**82,666**	**70,694**	**78,359**	**-0.5%**	

Washington Farms

Type of Production	1997	2002	2007	Avg. Annual Change '97 - '07	Trend
Total Cropland	**8,291,529**	**8,038,469**	**7,609,210**	**-0.9%**	
Harvested Cropland	5,160,717	4,894,634	4,387,169	-1.6%	
Pastured Cropland	525,969	499,226	371,026	-3.4%	
Other Cropland	2,604,843	2,644,609	2,851,015	0.9%	
Idle Acres		1,217,397	1,527,638		
Failed Crops	19,109	30,657	27,627	3.8%	
Summer Fallow	1,651,834	1,396,555	1,295,750	-2.4%	
Total Woodland	**1,907,637**	**1,932,794**	**1,988,322**	**0.4%**	
Pastured Woodland	1,522,819	1,513,329	1,516,554	0.0%	
Non-pastured Woodland	384,818	419,465	471,768	2.1%	
Permantent Pasture and Rangeland	**5,046,711**	**4,847,324**	**4,775,287**	**-0.6%**	
Other Farm Land	**532,729**	**499,421**	**599,970**	**1.2%**	
Total Acres	**15,778,606**	**15,318,008**	**14,972,789**	**-0.5%**	

"Farms" only includes farms having, or usually having, sales of $1,000 or more.
Source: U.S. Census of Agriculture, National Agricultural Statistical Service

- The number of acres in production increased since 2002, but overall has been trending downward slightly since 1997.

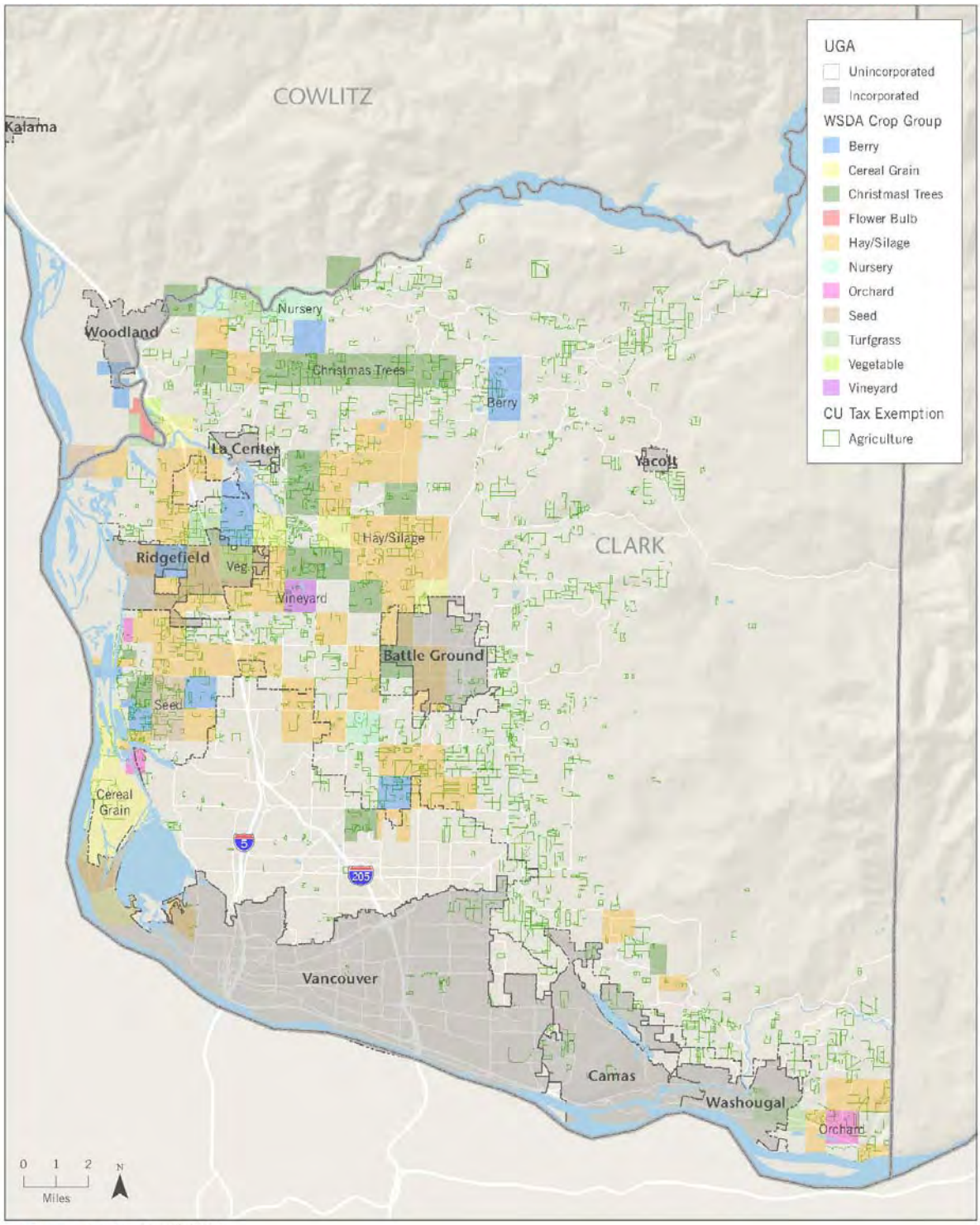
  - Clark County crop land amounted to 34,296 acres in 2007, representing an annual average decline of 2.9% since 1997.

- More passive uses of the land, like Permanent Pasture and Rangeland, has had the greatest increase in acreage between 1997 and 2007.
  - More intensive crop cultivation has declined over the same time period.

7.2 Location and Spatial Patterns of Agriculture

Both the USDA Agriculture Census and Clark County Assessor's data do not provide geospatial specific locations of the actual land being farmed and the nature of the farming. The best approximation of the location of farming (and type) can be gleaned from a synthesis of the Current Use Taxation Program and USDA's Crop Use data (Exhibit 16). Hay/silage followed by cereal grains and Christmas trees are the predominate corps in Clark County by section acreage.

Exhibit 16 Crop Type by Current Use Agriculture Designation



Source: BERK, 2011.

8.0 FARM-RELATED FINANCIAL INDICATORS

Net farm-related income is the sum of farm sales, sales of farm byproducts, and services related to the principal functions of the farm before taxes and expenses. In many cases, farmers also have income from non-farm related

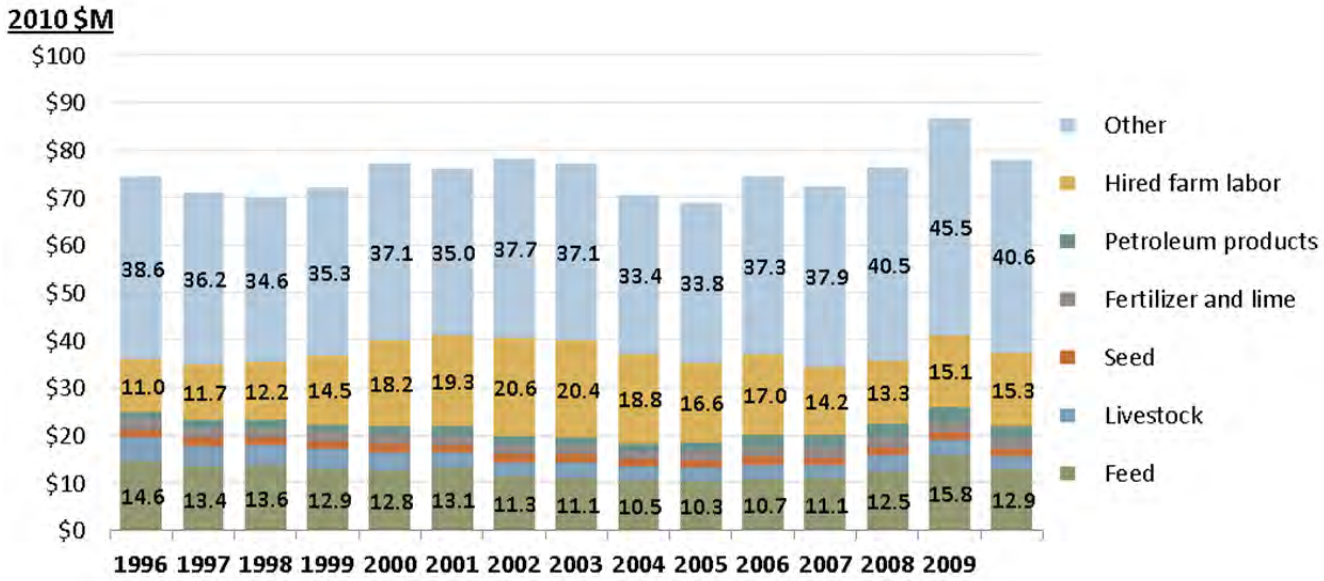
employment and business activities that are separate from their farm operation, especially operators of very small and small farms.

Exhibit 17 Farm Cash Receipts

Source: BEA CA45, adjusted to 2010 dollars using CPI.

- Cash receipts for farms have trended downward since 1996, more significantly for livestock and products.
  - Between 1996 and 2009, income for crops has stayed relatively stable, with $25.1 million in receipts in 2009.
  - Receipts from Livestock and products have declined from $44.2 million in 1996 to $24.5 million in 2009, further demonstrating the decline in cattle and dairy farming in Clark County.

Exhibit 18 Production Expenses



Source: BEA CA45, adjusted to 2010 dollars using CPI.
* All other production expenses refers to repair and operation of machinery; depreciation; rent, interest, and taxes; and other miscellaneous agricultural chemicals.

- Production expenses for farming in Clark County have stayed between $70 and $80 million for all but two years between 1995 and 2009.

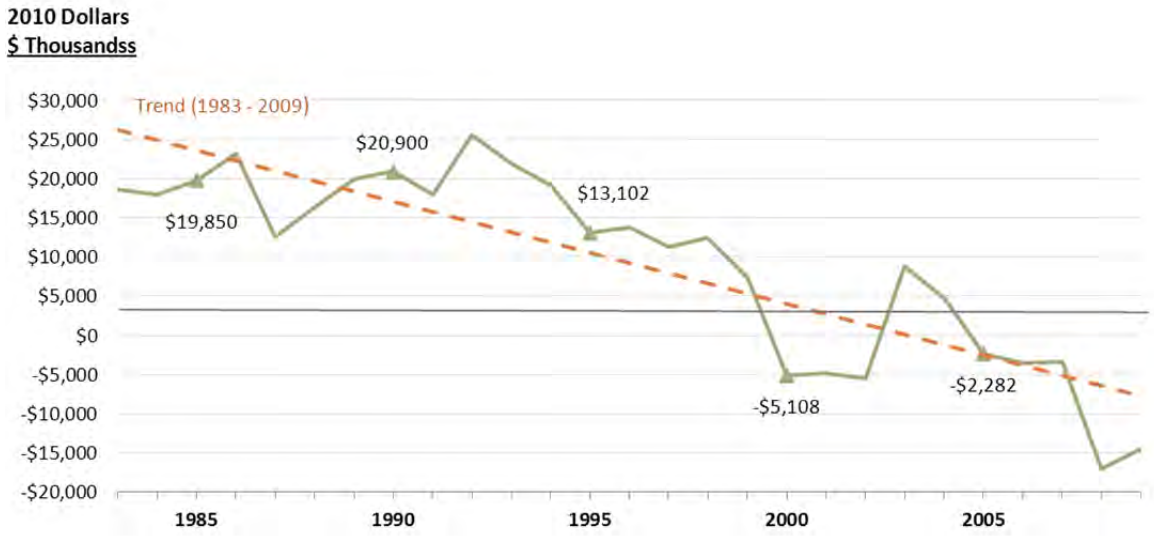
- Hired farm labor expenses have experienced the greatest growth over this time period.
  - Farm labor grew to its largest share of expenses in the early 2000s before retracting slightly.
  - The number of commercial and mid-sized farms in Clark County declined in this time period (from 114 in 1997 to 91 in 2007), which suggests that while farm labor costs have grown and/or stayed relatively stagnant, the number of farms bearing these costs have declined, meaning that they are paying a greater share of their expenses to farm labor. This fact is also borne out in the stakeholder interviews with Clark County farmers who stated that labor costs were growing relative to their other expenses.

Exhibit 19 Production Expenses

Production Expenses	1997	2002	2007	Average Annual Change
All other production expenses*	$ -	$ 22.2	$ 23.0	0.7%
Feed	$ 13.6	$ 10.6	$ 14.6	0.7%
Labor	$ 9.2	$ 16.8	$ 11.7	2.4%
Livestock	$ 4.4	$ 3.1	$ 3.2	-3.0%
Fuel	$ 2.0	$ 2.0	$ 2.6	3.0%
Seed	$ 1.5	$ 1.5	$ 1.3	-1.4%
Fertilizer and Lime	$ 0.7	$ 1.0	$ 1.2	5.7%

Source: USDA Census of Agriculture.
* All other production expenses refers to repair and operation of machinery; depreciation; rent, interest, and taxes; and other miscellaneous agricultural chemicals.

Exhibit 20 Total Farm Net Income



Source: Bureau of Economic Analysis, Table CA45

- Total Farm Net Income is a difficult metric to assess what is happening in Clark County. The trend seen above is confounded by two key trends.
  - First, it captures much of the loss of large commercial farms in the County that account for the vast majority of commodity income.

- Second, it captures the growth in small farms that typically post net operating profits due to the cost deduction that most proprietors take to account for their unpaid time.

9.0 SUMMARY OF COMMENTS/INSIGHTS FROM INDUSTRY INFORMANTS

9.1 Industry Strengths

Commercial Farms

- Some constancy in the number of milk and dairy producing commercial farms that account for the greatest share of Clark County's commodity totals due to the rebound in milk prices
- There is still a solid base in certain sectors of the commercial farm category

Mid-sized Farms

- Diverse crop production
- Well-run mid-sized farms face fewer challenges related to labor
- Well-positioned to capitalize on increasing demand for local produce and growth of Community Supported Agriculture (CSA) market share
- Can generate additional income through direct marketing, value-added products, and "agri-tourism" services (e.g. pumpkin patch, corn maize, etc.)

Very Small and Small Farms

- Farming is seen as an attractive alternative for certain households (retirement and supplemental income)
- Because many of these farms depend on off-farm income, they are less affected by larger-scale agricultural issues

9.2 Industry Challenges

Commercial Farms

- Macroeconomic forces, particularly around global competition, crop consolidation, and labor have shrunk the numbers of commercial farms in Clark County
- Consolidation of the production of certain crops means there is still some vulnerability for commercial farms in Clark County

Mid-sized Farms

- Water rights issues with the State and the Department of Ecology trouble several mid-sized farms in Clark County—"Water rights are like gold," according to one farmer
- Regulatory pressures, particularly around labor, commercial farm structures, and land use
- Encroachment from residential development (conflict of uses and increases in land prices)
- Increasing land costs, which makes it more attractive for incumbent farmers to sell and more difficult for new farmers to enter the market ("Can't start a large farm in Clark County if you don't inherit the land")

Very Small and Small Farms

- Higher rates of off-farm income means that this category is a less stable part of the farming landscape in Clark County

- In general, lack of production means a greater likelihood that farms in this category won't remain viable over the long-term—high turnover, which is demonstrated by data showing that a much greater proportion of Clark County farmers have been working their operation for less than three years
- Regulatory pressures, encroachment, and increasing land costs may dissuade some farmers in this category from expanding

9.3 Opportunities

Commercial Farms

- Current rebound in milk prices presents an opportunity for some of the large diaries to stay viable.

Mid-sized Farms

- Growing awareness of local produce quality, food security, and organic
- Growing local demand for fresh produce and market share of CSAs
- Growing demand for the "food production experience" and being able to tap into the growing metropolitan region population
- Direct marketing and value-added products as an opportunity to reach more consumers and capitalize on greater demand

Very Small and Small Farms

- Growing local demand for fresh produce and market share of CSAs ("you can make $20,000 an acre five months a year")

10.0 TRENDS IN FORESTRY

10.1 Description

Forestry is a significant rural-lands-based industry in Clark County and Washington State as a whole. Washington is the largest exporter of wood products in the US representing $1.52 billion in exports in 2010 and 18.4% of total US wood products export.[2] Forest products are true commodities and prices are set by international markets. Demand for Washington, and by extension Clark County, forest products are affected by a range of factors including economic trends of buying nations, changes in national tariff policies. The supply of forest products is affected by state and federal regulations.

The Eastern portion of Clark County is dominated by forest and woodland including state and federal forests and small forest land owners. Exhibit 21 presents the total acres zoned for forest or woodland in Clark County in 2011.

10.2 Summary of Key Trends

- Similar to agriculture, timber production has seen a long pattern of decline due to changing federal land management policies, changing regulatory standards, market trends and the loss of forest land.
- Private timber lands are under market pressure to be removed from commercial forest production and converted to residential and commercial uses. This leads to forest fragmentation, which increases costs associated with managing forests for commercial harvest.
- In 2008, the county had 3 mill operations (2 sawmills and 1 Roundwood Chipping mill) that harvested logs in Washington, Oregon, and British Columbia.

[2] Center for International Trade in Forest Products, 2011. Washington State Forest Products Export Trends and Future Outlook. Available at: http://www.cintrafor.org/publications/newsletter/C4news2011spring.pdf.

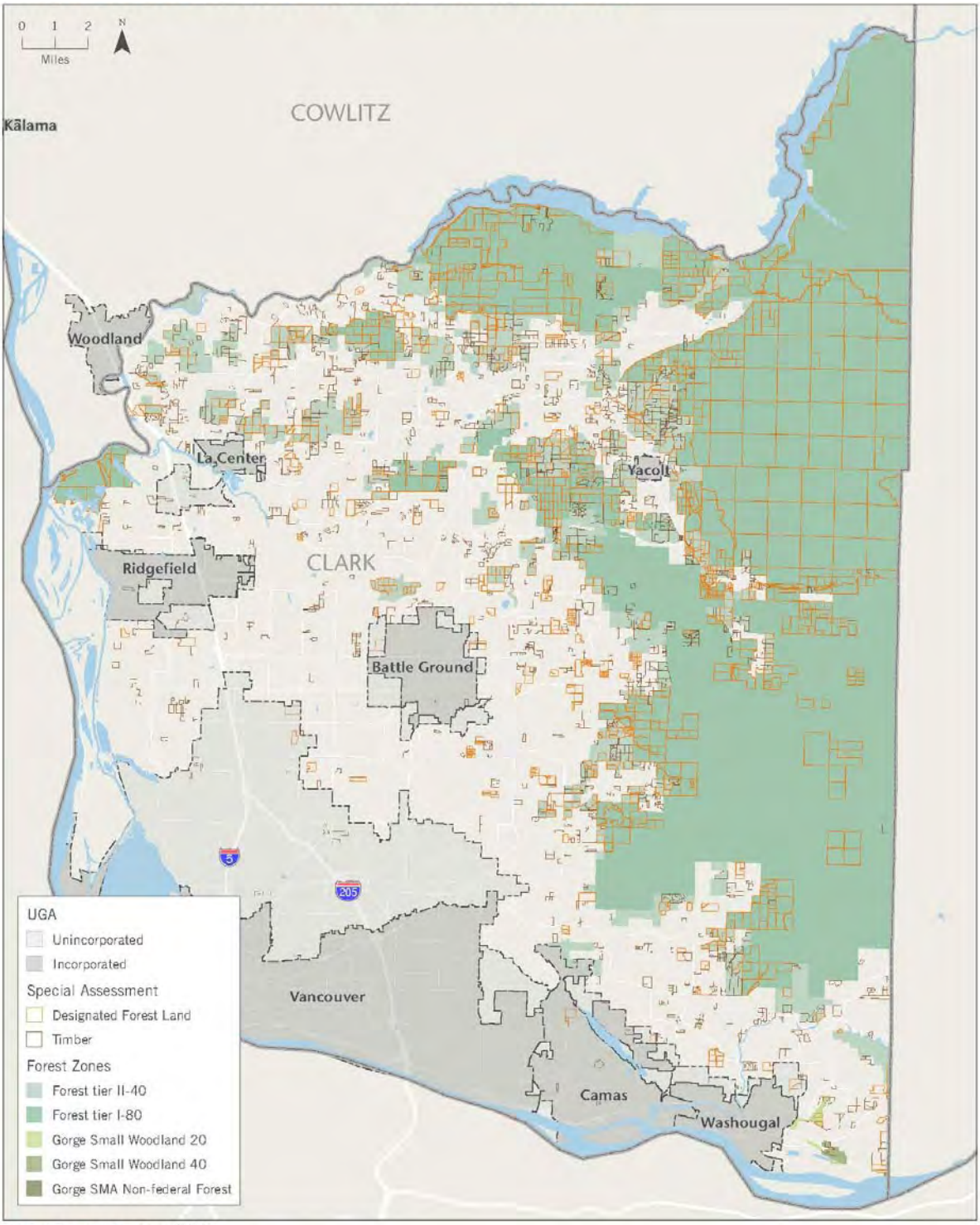
Exhibit 21 Clark County Acres Zoned for Forests and Woodlands

	2011 Acres
Forest Tier 1	130,106
Forest Tier 2	29,617
Gorge SMA Non-federal Forest	54
Gorge Small Woodland 20	191
Gorge Small Woodland 40	153
Total Forest and Woodlands	160,120

Source: Clark County, 2011

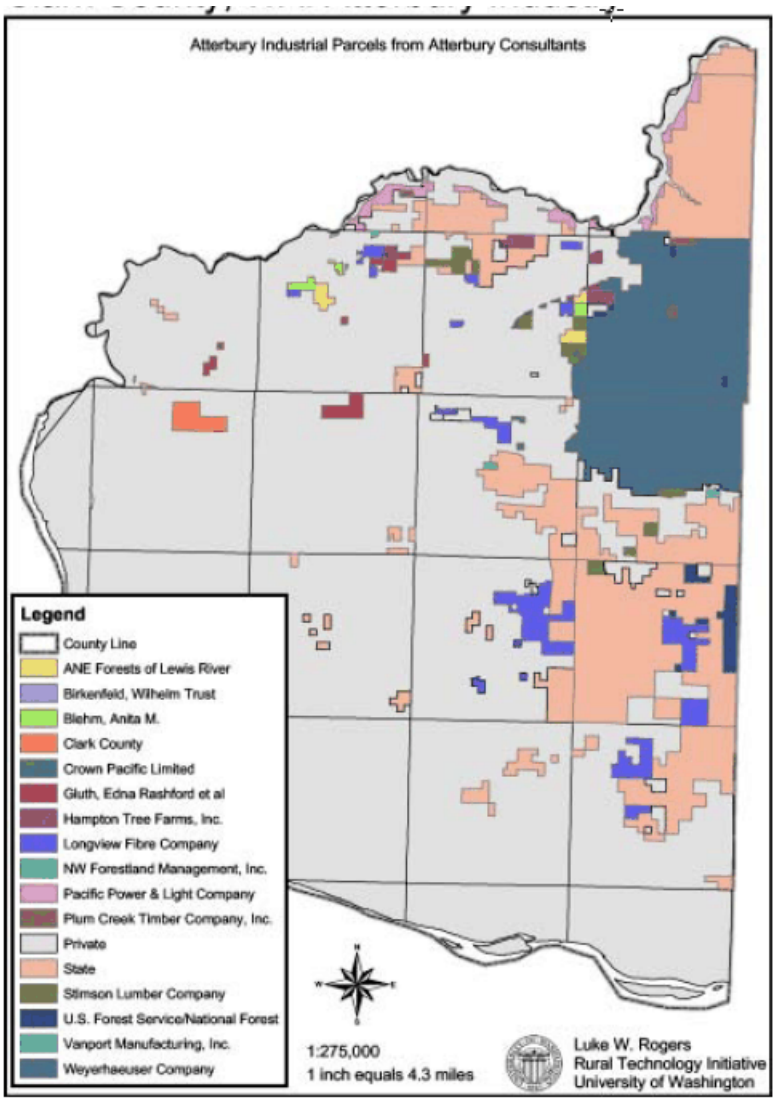
The best approximation of the location of forestry can be gleaned from a synthesis of the Current Use Taxation Program and the County's forest land use designation (Exhibit 22). In addition, a 2002 study for the County by UW's Rural Technology Initiative mapped the ownership of key forest lands (Exhibit 23).

Exhibit 22 Location of Clark County Timberlands



Source: Clark County Assessor, 2011; BERK, 2012.

Exhibit 23 Ownership of Clark County Timberlands



Source: Rural Technology Initiative, 2002.

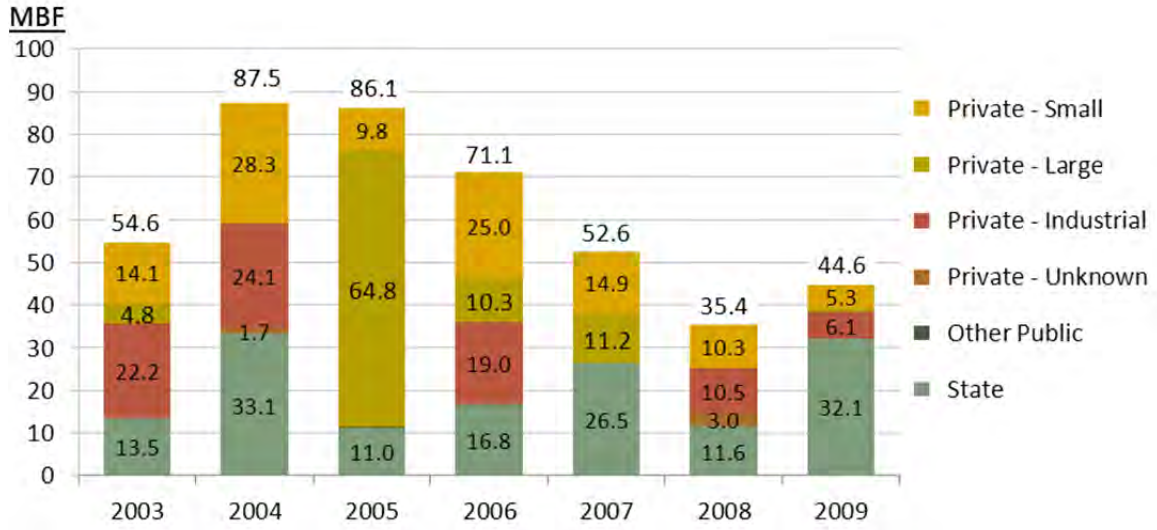
10.3 Trends in Forest Yield

Exhibit 24 presents the origin ownership of Clark County's timber harvest from 2003 – 2009. There are many types of timber producers in Clark County including public, private, industrial, and small producers, with different regulations applying to different types of operators.

- **State lands.** Most Washington state-owned forest lands are "trust" lands managed to provide revenue for public schools and other public buildings. Counties that have state trust forest lands within their boundaries receive tax revenues from timber sales.
- **Private Industrial Owners.** Working forests owned by forest product companies
- **Private Non-Industrial Owners.**
  - **Large Private Owners**. Owners with more than 5,000 acres of forest land Including private investors, Timber Investment Management Organizations (TIMOs), Real Estate Investment Trusts (REITs), Master Limited Partnerships (MLPs), Conservation Groups and some Tribal ownership.
  - **Small Private Owners**. Owners with less than 5,000 acres of working forest land.

Timber production was down between and 2006 and 2009, likely caused by reduced demand due to the global recession.

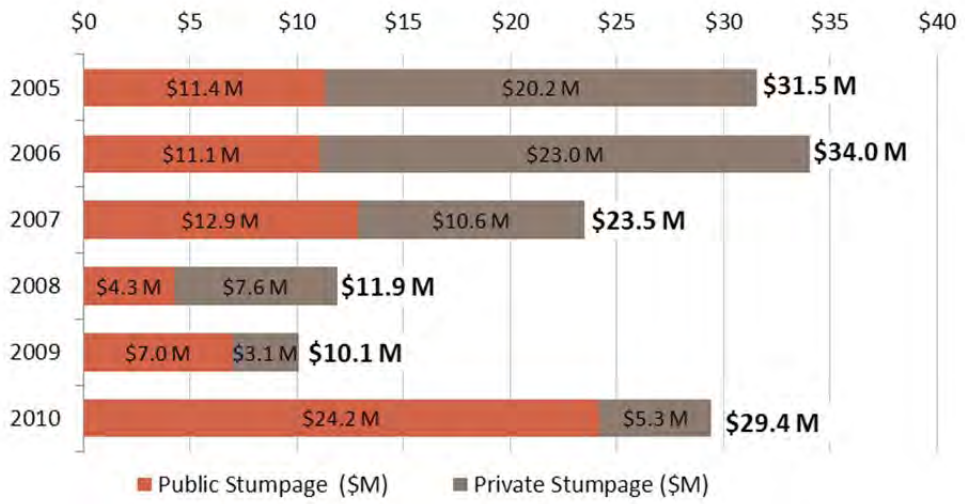
Exhibit 24 Clark County Timber Harvest, 2003 – 2009*



* Reported in Million board feet, Scribner Rule. Only visible amounts labeled. Does not include timber harvested from tribal lands.

Source: Washington State Department of Natural Resources, 2003 – 2010, based on receipts from Washington State Department of Revenue

Exhibit 25 Clark County Harvest and Stumpage Values



Source: Department of Revenue, 2011.

- In 2007, the total stumpage value in Clark County was $23.5 million, or 42% of the value of agriculture commodities produced in the same year.

- The long-term downward trend in forest harvest continues between 2005 and 2009. The increase in public stumpage in 2010 is the result of two interacting factors. First, there was an increase in demand for raw logs and timber from Asia in 2010. This caused an increase in prices, and because private landowners can export raw logs, a shortage of logs available to local mills for processing. The state released additional timber for harvest to take advantage of higher prices and to support supply for domestic mills.

Exhibit 26 Forest Product Income to Farm Operators

Forest Products	1997	2002	2007	Avg. Annual Change
Operations with Receipts	85	57	79	-1%
Forest Product Receipts*	$376	$768	$1,183	12%

*in $1,000 and 2007 dollars

- Output from forestry products has increased while the number of farms providing these products has decreased over time.
  - In inflation-adjusted dollars, forest product commodities have more than tripled, in spite of swings in the number of farms producing these products.