WASHINGTON ASSOCIATION of WINE GRAPE GROWERS

WASHINGTON STATE
THE PERFECT CLIMATE FOR WINE™

MKF RESEARCH LLC

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TABLE OF CONTENTS

Highlights 2

Executive Summary..5

Chapter 1 – Washington's Grape Industries 8

Chapter 2 – Winegrape Industry in Washington.....................................15

Chapter 3 – Grape Juice Industry in Washington 19

Chapter 4 – Washington's Winemaking Industry....................................21

Chapter 5 – Allied Industries in Washington...25

Chapter 6 – Other Economic Benefits 30

Appendix – About MKF Research 33

List of Tables:

A Total Employment
B Total Economic Benefit
1.1 States Grape Production
1.2 Washington Grape Production
1.3 Washington Grape Acreage
1.4 Average Grape Prices by Varietal
3.1 Grape Juice Wages and Revenues
4.1 States Wine Production
4.2 Washington Winery Production
5.1 Tourism
5.2 Winemaking Equipment, Supplies and Services
6.1 Estimated Tax Revenues

FULL ECONOMIC IMPACT OF WASHINGTON GRAPES AND WINE IN WASHINGTON

$3.0 Billion

FULL ECONOMIC IMPACT OF WASHINGTON GRAPES AND WINE ON THE NATIONAL ECONOMY

$4.7 Billion

WASHINGTON WINE, GRAPES AND GRAPE JUICE PRODUCTS	1999 ECONOMIC IMPACT	2006 ECONOMIC IMPACT
Number of Wineries	160+	534
Number of Farm Entities	250+	325
Washington Winery Revenues	$289 million	$436 million
Farm Gate Value of Grapes	$127 million	$144 million
Grape Bearing Acres	54 thousand	57 thousand
Grape Juice Production Value	N/A	$470 million
Wages Paid	$227 million	$579 million in WA $850 million in US
Wine-Related Tourism Expenditures	$18.9 million	$237.6 million
Number of Wine Related Tourists	350 thousand	1.7 million
Taxes Paid in Washington	$72.6 million	$145.2 million WA $196.9 million Fed
Taxes Paid in Other States	N/A	$57.5 million State $71.8 million Fed

CHANGES IN METHODOLOGY FROM 2001 REPORT

Impact of Juice Grapes

This report includes the impact of juice grapes and grape juice products.

Impact of Washington Wine Nationally Versus Impact of Wine in Washington

In the 2001 report covering information as of 1999, revenue amounts reported for distributor, restaurant and retail wine sales included all wine sold in Washington, including wine not produced in Washington. For this report, it was decided it made more sense to limit the report to include only the impact of wine and grapes produced in Washington. However, it is also important to understand the national impact of wine and grapes produced within the state. Therefore, tables A and B below show both the in-state and national impact of wine and grapes produced in Washington. For comparative purposes, corresponding amounts from the 2001 report are also included.

Furthermore, the prior report included total gross sales of wine through the three-tier system, including gross sales made at the winery, distributor and retail levels. This, in effect, triple counted the revenue from Washington wine sold through the three-tier system. In the current report, distributor, restaurant and retail wine sales only include the margin made by each tier beyond the producer.

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- Washington Wine Commission

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- Klickitat County Public Economic Development Authority
- Milne Fruit Products
- Port of Walla Walla
- Tourism Walla Walla
- Tri-Ports (Ports of Kennewick, Benton and Pasco)
- Washington State Grape Society
- Welch Food Company
- Yakima County Development Association
- Yakima Visitors and Convention Bureau

EXECUTIVE SUMMARY

The story of the Washington wine industry over the past decade is one of rapid growth, increased publicity and recognition for high quality production.

In the 2006 calendar year, Washington's wine, grapes and grape juice products and related industries produced nearly $3.0 billion of total economic value to the State of Washington and over $4.7 billion nationally. In comparison, the total economic impact of Washington wine industry was estimated at $2.4 billion in 1999.

Washington's wine, grapes, grape juice products and related industries account for nearly 19 thousand jobs across the state and for a payroll of nearly $579 million. The impact of these Washington industries is felt nationwide to the tune of over 29 thousand jobs and a payroll of over $850 million. These figures represent a significant increase from 11 thousand jobs and wages of $350 million in 1999.

The wine, grape and grape juice products sectors paid over $145.1 million in state and local taxes in Washington state. These sectors were responsible for an additional $268.7 million in federal taxes and $57.5 million in taxes in other states.

The Washington wine industry has seen tremendous growth in the number of wineries over the past decade. The number of wineries has increased from 160 in 1999 to 534 in 2006. Winery revenues have increased 51% from $289 million in 1999 to $436 million in 2006. This growth has led to increased visibility of Washington wines and increased tourism to grape growing areas of Washington. Nationally and internationally, there is a growing awareness of Washington wines. With more and more awareness and recognition of these wines out of state, there is a tremendous opportunity for the industry to extend its reach and continue to grow.

American wine consumption continues to rise, increasing overall by 3.4% in 2006. Wine consumption in Washington alone grew by 4.0% in 2006 and a compounded annual growth rate of 5.5% from 2001 to 2006. Consumption of more expensive, higher quality wines, such as those on which Washington production has focused, has been growing at a faster rate, as consumers seek premium products.

Although not included in the previous economic impact report, the Washington grape juice products industry has struggled with variable yields and decreasing prices over the past decade. The downward trend has reversed recently as prices for juice grapes have increased in both 2006 and 2007.

Table A
Total Economic Impact (Sum of Total Spending) on Wine, Grapes and Grape Juice Products in Washington State

	Effect of WA wine in WA	Effect of WA wine nationally	2001 Report
Revenue:			
Winery Sales	$ 437,640,000	$ 437,640,000	$ 288,667,000
Retail and Restaurant Wine Sales (WA Wine)	135,782,000	333,640,000	575,902,000
Distributors Sales (WA wine)	37,340,000	91,751,000	307,287,000
Juice Processor Sales	20,338,000	20,338,000	-
Juice Retail Sales	8,518,000	440,559,000	-
Juice Broker Sales	2,555,000	2,555,000	-
Tourism	237,628,000	237,628,000	18,864,000
Farm Gate Value of Grapes	144,204,000	144,204,000	63,700,000
Federal Tax Revenues	196,878,000	268,693,000	72,631,000
State Tax Revenues	145,165,000	202,704,000	-
Vineyard Development	13,857,000	13,857,000	34,944,000
Vineyard Supplies and Chemicals	26,363,000	26,363,000	28,344,000
Winemaking Equipment, Supplies and Services	47,030,000	93,564,000	262,385,000
Nurseries	1,890,000	1,890,000	1,376,000
Charitable Contributions	3,268,000	3,268,000	2,802,000
Advertising/Marketing	1,424,000	1,424,000	-
Research and Education	5,108,000	5,108,000	1,375,000
Indirect (IMPLAN)	515,704,000	790,679,000	185,540,000
Induced (IMPLAN)	433,821,000	754,004,000	209,724,000
Total Revenue	$2,414,513,000	$3,869,869,000	$2,053,541,000
Wages:			
Winery Employees	$ 41,707,000	$ 41,707,000	21,023,000
Vineyard Employees	41,122,000	41,122,000	24,184,000
Juice Processor Employees	7,071,000	7,071,000	-
Tourism	68,345,000	68,345,000	3,054,000
Vineyard Development - Labor	2,688,000	2,688,000	-
Winemaking Equipment, Supplies and Services	12,203,000	21,393,000	6,805,000
Nurseries	1,260,000	1,260,000	418,000
Distributors Employees - WA wine	24,633,000	35,563,000	24,000,000
Distributors Employees - other wine	-		-
Retail/Liquor Stores - Wine Specific	17,953,000	37,665,000	8,103,000
Restaurant Wages	49,902,000	99,006,000	166,901,000
Education and Research	2,788,000	2,788,000	-
Indirect (IMPLAN)	171,032,000	248,549,000	35,032,000
Induced (IMPLAN)	138,217,000	242,987,000	60,633,000
Total Wages	$ 578,921,000	$ 850,144,000	$ 350,153,000
Total	**$2,993,434,000**	**$4,720,013,000**	**$2,403,694,000**

Table B

Total Washington State Employment - 2006
Wine, Grapes, Grape Juice Products and Related Sectors

	Effect of WA wine in WA	Effect of WA wine nationally	2001 Report (1999 Data)
Vineyards	2,500	2,500	950
Vineyard Development	163	163	-
Wineries	1,555	1,555	801
Juice Processors	130	130	-
Tourism	2,516	2,516	172
Winemaking Equipment, Supplies and Services	100	260	216
Nurseries	38	38	22
Wine Distribution	496	676	578
Retail/Liquor Store	454	1,474	457
Grocery Employees	-	-	2,022
Restaurants	3,429	7,949	5,281
Education & Research	47	47	-
Indirect	3,830	5,657	-
Induced	3,607	6,410	751
Total	18,865	29,375	11,250

Source: MKF Research

CHAPTER 1 – WASHINGTON'S GRAPE INDUSTRIES

Washington is the second largest grape producer in the United States.[1] There are approximately 325 grape farmers in the state with nearly 57,000 bearing acres, which produced more than 316,000 tons of grapes in 2006 for a total market value of over $144 million.[2] 120,000 tons of grapes were processed for wine. Grapes are Washington's fourth largest fruit crop.

Table 1.1
Leading States' Annual Production of Grapes (Tons)
2003-2006

	State	2003	2004	2005	2006
1	California	5,861,000	5,623,000	6,963,000	5,766,000
2	Washington	344,000	267,000	415,000	316,000
3	New York	198,000	142,000	178,000	153,000
4	Pennsylvania	85,000	86,800	90,000	82,000
5	Oregon	24,000	19,400	25,000	34,400
6	Michigan	94,500	58,000	102,700	27,500
7	Virginia	3,400	3,400	5,600	6,000
8	North Carolina	2,800	3,500	3,900	4,480
	Other States	30,830	26,830	27,300	16,470
	Total United States	6,643,530	6,229,930	7,810,500	6,405,850

NASS Annual Fruit Survey, July 2007

Table 1.2
Washington Grape Production - Tons

Use	2003	2004	2005	2006
Juice	232,000	160,000	305,000	196,000
Wine	112,000	107,000	110,000	120,000
Total	344,000	267,000	415,000	316,000

NASS-USDA Annual Fruit Summary

[1] Based on annual tons produced per NASS
[2] NASS - USDA Agricultural Statistics 2007

HISTORY

Washington's viticultural history dates back to 1825, when the Hudson's Bay Company planted the first wine grapes, and by the start of the 20th century every corner of the state was planted with vines. Italian and German varietals were planted in the Yakima and Columbia Valleys and wine grape acreage expanded rapidly in the early part of the 20th century. Prohibition stopped whatever momentum the young wine grape industry had gained. Following the repeal of Prohibition, the industry was dominated by native Concord grapes.

The first commercial-scale plantings of wine grapes (Vitis Vinifera) began in the 1960s. The earliest producers, predecessors to today's Columbia Winery and Chateau Ste. Michelle, attracted the attention of influential winemakers in California who helped guide their early efforts.

Washington's vineyards are almost entirely irrigated, as the state's eastern side of the Cascade mountain range is mostly desert. Major rivers – the Yakima, the Columbia and the Snake – provide water and define most of the AVA borders. The sandy soils and cold winters have proven resistant to the plague of phylloxera, and Washington is unique in the country in that vines are not grafted onto different rootstock. Though initially it was believed that Washington's winters were too cold for most Vinifera grapes to survive, that has been proven wrong. Better clones, better vineyard management, the judicious use of irrigation and the ongoing exploration of favorable vineyard sites has opened the doors to world class grapes and wines of almost every conceivable variety.

CURRENT WASHINGTON VARIETALS

Presently, Washington has a fairly even balance between planting of Vinifera grapes and American native grapes. Over the past decade, planted acreage of Vinifera grapes has surpassed acreage of Concord and Niagara grapes. Acreage of native grapes, especially Concord, has remained relatively constant over the last 10-15 years. These grapes are predominantly used for non-fermented products such as grape juice. During that same period of time, acreage of Vinifera grapes has nearly tripled.

The acreage of major grape varietals currently grown in Washington are displayed in the following Table.

Table 1.3
Washington Grape Acreage by Variety Type as of January 1,

	1993	1999	2002	2006
Cabernet Sauvignon	1,400	5,000	6,050	5,959
Merlot	1,800	5,600	5,980	5,853
Syrah	0	1,500	2,100	2,831
Other Red Wine Grape Varieties	800	1,400	1,870	2,708
Chardonnay	2,600	6,100	6,640	5,992
White Riesling	2,000	1,900	2,200	4,404
Other White Wine Grape Varieties	2,500	2,500	3,160	3,253
Total Wine Grapes	11,100	24,000	28,000	31,000
Concord	NA	NA	23,989	23,989
Niagara	NA	NA	2,000	2,000
Total Juice Grapes	NA	NA	25,989	25,989

Washington Vineyard Acreage Report 2006

GRAPE PRICES

The different types of grapes face quite different business and economic conditions, clearly reflected in the widely differing market prices received by these products, as shown in the Tables below.

Table 1.4
2006 Tonnage and Average Grape Prices by Major Varietal

Variety	**Tonnage**	**Average Price per Ton**
Chardonnay	28,600	$783
Riesling	23,800	$716
Cabernet Sauvignon	20,000	$1,261
Merlot	19,100	$1,098
Syrah	8,200	$1,152
Sauvignon Blanc	4,300	$764
Gewurztraminer	4,000	$715
Cabernet Franc	2,400	$1,243
Pinot Gris	2,100	$861
Others	7,500	$1,033
Total Wine Grapes	120,000	$948

Source: Washington Winery Report 2006

Juice Grapes	196,000	$159*

Source: NASS Annual Grape Report

* The reported average prices by juice grape processors were between $135 and $140 per ton for 2006.

The preliminary estimates of total tonnage for 2007 are 131,000 tons of wine grapes, an 8 percent increase over 2006, and 250,000 tons of juice grapes, a 28 percent increase over 2006.

While Vinifera grapes claim far higher prices than natives, it would be a mistake to assume their production ensures higher returns for farmers. Far higher farming costs, need for greater handwork and higher sensitivity to climate may make Vinifera less profitable than the low maintenance and hardy native grapes.

The different varieties also reflect quite different viticulture practices. To produce higher quality wines, Vinifera yields are often managed to 4 tons per acre or less, along with careful pruning and trellis investment and management. Overall, Washington's Vinifera yields averaged 3.87 tons per acre. On average, native grapes yielded 7.5 tons per acre in 2006 with minimal additional investment. Successful grape growing for grape juice emphasizes maximum yields. These two models are obviously very different businesses.

Compared to other regions producing similar quality wine grapes, Washington can still be considered quite a bargain. Land prices as well as the cost of doing business are relatively inexpensive. Land with water in good growing areas can be found for $6,000 per acre.

CLIMATE AND OTHER ISSUES

The weather in eastern Washington is excellent for grape growing, with abundant sunshine and little growing season or harvest rainfall. The biggest challenge is the occasional winter freeze. An extensive freeze occurred throughout the state in 1996. The freeze event of 2004 affected the less hardy varieties across much of Eastern Washingtons and many vineyards in the Walla Walla area were significantly affected. Yields were as low as 10% of normal in these years. Freezes of this magnitude vary by region and have typically occurred about once every six to ten years on average. Over the years, site selection has helped mitigate this risk; recent freezes have had a smaller impact than prior ones.

Among the state's geographic advantages are extra daylight hours during the growing season (with 16 hours of daylight at the height of summer), few if any problems with rain, mold, mildew or rot and an extended autumn that allows grapes to hang into maturity, well into October. Canopies can be controlled by irrigation management, and grapes can fully ripen, developing complex fruit flavors, good acid levels and pleasing aromatics.

Eastern Washington is a dry climate and the soils reflect this. The soils are rich in several nutrients, such as calcium, but due to the low organic matter content inherent in these dry climate soils, supplements of several nutrients are required. These supplements are attained through the combination of the use of conventional fertilizers and organic additions, such as compost. Irrigation is used heavily throughout the region since the average rainfall can be less than 10" per year, predominantly falling during the dormant season, is not sufficient to sustain grape production. Careful use of mountain snowpack and warmer season snow melt contribute a source of high quality water.

Washington has been fortunate in that the vine killing louse, Phylloxera, cannot travel in dry soils to reproduce, contributing to Washington's ability to remain uninfected of this vineyard pest. There is ongoing risk that other damaging pests could be imported into the state from other regions. Buying equipment from California, especially stakes and trellis systems, which may contain soil that, if not properly cleaned, have the potential of harboring nonnative pests. Even between Eastern Washington, where the majority of vineyards lie, and regions in Western Washington near Seattle, the pest populations are quite different, with very few native vineyard pests in Western Washington. There is concern that the transportation of grapes from one side of the state to the other could lead to the introduction of non native pests into certain regions.

IMPROVING VITICULTURE PRACTICES

Given advancements in viticulture – the quality of the plantings, matching rootstock and clone type to location, and improved trellis systems – the vineyards of today are of a much higher quality than even ten years ago. Research on vine propagation and management has advanced significantly. Growers and winemakers are learning to work together to produce higher quality fruit, which is resulting in a larger variety of wines of competitive quality.

WSU and various community colleges will need to continue to develop more coordinated efforts in grape research and education to keep up with growth in the industry and its technologies.

VINEYARD EMPLOYMENT

Grape production uses seasonal labor for harvests and vineyard development and full-time positions for maintenance of currently bearing acres and development of new vineyards yet to bear fruit, as well as business management staff for finance, sales and other functions. The industry is concerned about the impact of federal immigration policies on the availability of migrant labor.

A total of 2,500 persons were employed by vineyards in Washington in 2006, according to the U.S. Department of Labor's Bureau of Labor Statistics, with wages in excess of $41.1 million.

VINEYARD DEVELOPMENT

Vineyard development is the process of converting land into a developed vineyard. The land must be prepared to plant vines. Once the vine is planted it must be trellised and trained, and, from the time a vine is planted in the ground, it can take between two and four years before the vine bears fruit. During this time, pre-productive (non-fruit bearing) vines must be tended and cared for in accordance with sound viticultural practices to ensure healthy productive (fruit bearing) vines.

The vineyard development process is capital and labor intensive, with typical development costs in Washington estimated at around $14,300 per acre[3] depending on the specific location of the vineyard and planting layout, not including land acquisition costs. The most important determinant of the cost of planting a vineyard is vine spacing. Grape growing regions use various vine spacings based upon environmental site attributes, desired grape flavors and development cost considerations. Regardless of the ultimate development plan selected, the investment required is significant.

The per-acre development cost is based upon a common (5 by 9 foot) vineyard spacing plan and includes all land preparation; vine layout, planting and trellising; vines; irrigation; materials and equipment; farming costs; direct and allocated overhead, utilities, property taxes, and financing costs during a three-year pre-productive period. These costs include contracted services as well as vineyard worker and administrative employment.

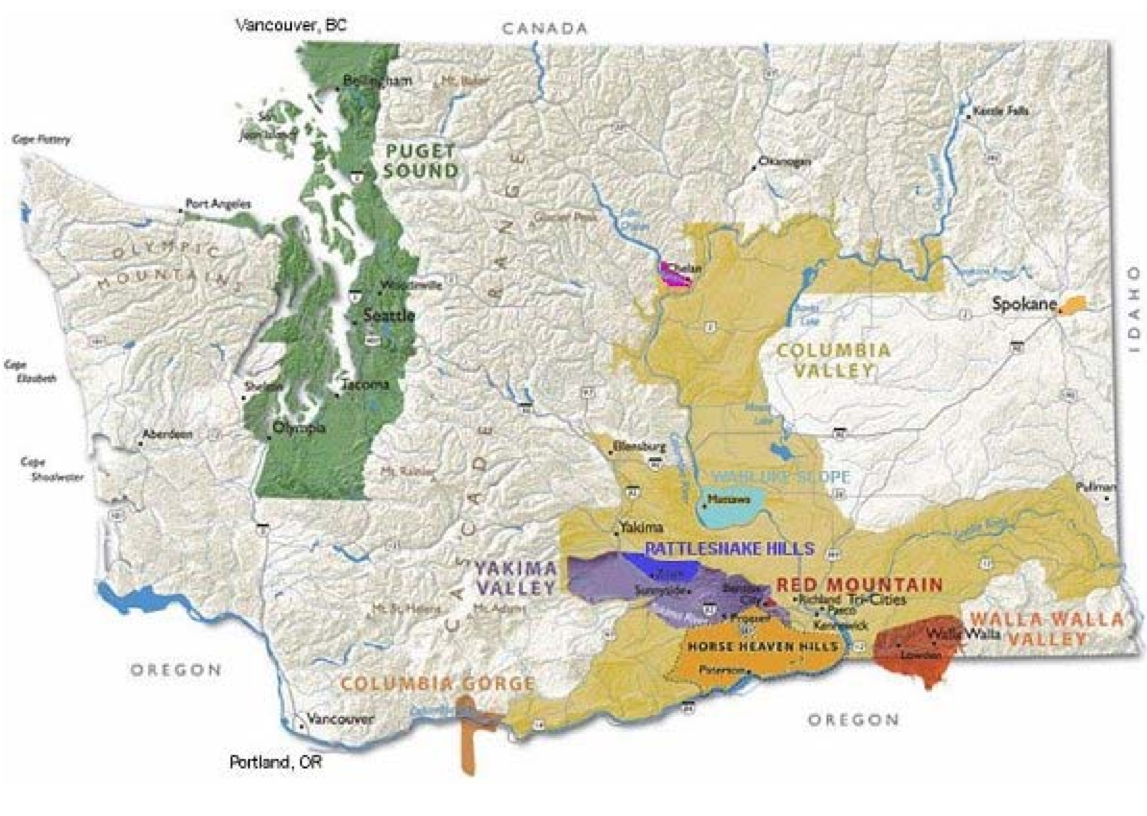
[3] Based on "Wine Grape Establishment and Production Costs in Washington, 2003" issued by Washington State University, with costs adjusted to 2006 dollars using an inflation rate of 4% per annum.

In 2005, 969 acres of wine grapes were planted, according to the 2006 Washington Vineyard Acreage Report. MKF Research estimates the cost to develop these acres is just under $14 million. It is estimated that 163 workers were employed in vineyard development for a total payroll of nearly $2.7 million. Total development costs do not include land acquisition costs.

CHAPTER 2 – WINEGRAPE INDUSTRY IN WASHINGTON

GRAPE AND WINE REGIONS OF WASHINGTON

Washington has two primary wine grape growing regions: the Columbia Valley in Eastern Washington comprising the majority of the state's nine AVAs (American Viticultural Area), and Puget Sound in Western Washington. The state's official AVAs along with the year established are as follows: Yakima Valley (1983), Walla Walla Valley (1984), Columbia Valley (1984), Puget Sound (1995), Red Mountain (2001), Columbia Gorge (2004), Horse Heaven Hills (2005), Wahluke Slope (2006), and Rattlesnake Hills (2006).



Yakima Valley

Yakima Valley was the first officially-designated appellation in Washington State, gaining AVA status in 1983. The valley follows the Yakima River from Union Gap, at its western edge, to the flanks of Red Mountain, its prestigious eastern sub-AVA. On average, the Yakima Valley is 5 to 10 degrees cooler than most other grape-growing regions in the state, providing its wines with lively natural acidity. The appellation is geologically defined by a series of east-west ridges and hills that provide vineyards with a wide range of elevations and exposures. There are more than 50 wineries and 11,000 acres of vineyard. The best vineyard sites seem to be clustered at the eastern end, around Prosser, Benton City and Red Mountain. Some of the oldest vines in the state are grown at sites such as Harrison Hill, Otis and Kestrel Estate.

Walla Walla Valley

Led by pioneering Washington wineries such as Leonetti Cellars and Woodward Canyon, Walla Walla Valley gained a reputation for high quality grapes and wine more than 20 years ago. When the AVA was formally recognized in 1984, there were barely 60 acres of vines in the entire valley, and most of those were located in Oregon. The Walla Walla Valley AVA is a subset of the Columbia Valley AVA and spills across the border into Oregon. Distinctive and very different micro-climates have begun to emerge and it seems very likely that the appellation will be meaningfully subdivided in the not-too-distant future. Though the majority of vineyards are irrigated, this is one of the rare places in Eastern Washington with the potential, in at least a few sites, to be dry-farmed. Walla Walla's outstanding winemaking community has forged a well-deserved reputation for its Syrahs, Merlots, and Cabernet Sauvignons. Today, as the winery population of the county nears 100, there are still only 1,200 bearing acres.

Columbia Valley

The large Columbia Valley AVA contains 11 million acres of land and within its confines are six other AVAs including Yakima Valley, Red Mountain, Walla Walla Valley, Horse Heaven Hills, Rattlesnake Hills and Wahluke Slope. The Columbia Gorge and Puget Sound AVAs are the only appellations in Washington that fall outside of its borders. The Columbia Valley AVA is geographically defined by mountain ranges which border it on the west and north and by the Columbia River on the south until it turns north at the Wallula Gap. Here the appellation continues east, following the state line and then dipping down into Oregon to include the southern part of the Walla Walla Valley AVA. The Columbia Valley's eastern border is loosely defined by the land surrounding the Columbia River as it jogs north and the Snake River as it runs east. Any AVA this large will incorporate significant differences in rainfall, soils and climate, but in general the Columbia Valley may be characterized as encompassing the Eastern Washington desert and is mostly sheltered from the marine climate of Western Washington.

Puget Sound

Some of the earliest vineyards in the state were planted in the Puget Sound AVA, Washington State's lone appellation west of the Cascade Mountains. The AVA's boundaries are in part defined by areas receiving "60 inches or less" annual precipitation, but most vineyards only see between 30-40 inches of rain. More important is that most of the annual rainfall occurs between November and April, far outside the growing season. In fact, summers in western Washington approach drought conditions in many years and vineyard irrigation is not uncommon. With only 80 acres planted, Puget Sound growers focus their efforts on producing and promoting varieties found in few other places in North America, including such early-ripening varieties such as Madeleine Angevine, Siegerrebe, Muller Thurgau and a bit of Pinot Gris and Pinot Noir. Most of the wineries that produce Puget Sound wines supplement their production with grapes sourced from the Columbia Valley. However, it is the locally grown varieties that define the region and its unique terroir.

Red Mountain

Red Mountain is arguably Washington's most well-defined and distinctive viticultural area, primarily due to its geography. It is a moderately steep slope facing southwest at the eastern edge of the Yakima Valley. Two of Washington's most prestigious vineyards, Ciel du Cheval and Klipsun, are located here. In addition, prestigious wineries such as Quilceda Creek, DeLille Cellars and Cadence have planted their own estate vineyards in this AVA. Red Mountain is one of the hottest sites in the state and ripens Merlot, Cabernet Sauvignon and a wide variety of Rhone grapes such as Syrah exceptionally well.

Columbia Gorge

The Columbia Gorge AVA is one of the smallest and newest AVAs, bordering the western edge of the Columbia Valley AVA. The appellation includes land across the Columbia River in Oregon, although the vineyards there are less influenced by the Cascade Mountains and are at lower elevations than those on the Washington side. On the Washington side, vineyards are on south-facing slopes above the river. Those closest to the mountains are among the few in the state that can be dry-farmed.

Horse Heaven Hills

The 570,000 acre Horse Heaven Hills AVA is located between the Yakima Valley and the Columbia River. Most vineyards are planted on south-sloping hills above the river, with winds blowing steadily from the west via the Columbia Gorge. The extreme winds reduce the risks of fungal diseases, thicken grape skins and concentrate juices. This AVA is home to the state's largest winery, Columbia Crest, as well as some of the oldest Cabernet vines on the west coast.

Wahluke Slope

The Wahluke Slope is an isolated, south-facing plateau bordered in the west and south by the winding Columbia River and in the north by the Saddle Mountains. The Wahluke Slope AVA is one of Washington's warmest sites and, combined with the abundance of water, the right conditions for large-scale production of fine wine grapes have been created. Though well off the beaten tourist path, the AVA has more than 20 vineyards accounting for more than a fifth of Washington State's wine grape production. This region does especially well with Riesling, Merlot, Cabernet Sauvignon and Syrah.

Rattlesnake Hills

Like Red Mountain, Rattlesnake Hills falls entirely within the Yakima Valley AVA. However, it lacks the clear-cut geographic definition of Red Mountain. Vineyards are set on ridges and terraces above the valley floor and benefit from good air drainage and protection from frost. The overall climate of the AVA is typical of the Yakima Valley: cooler to the west and warmer as you move east. Warm summer days and cool evening temperatures help to preserve acidity in the grapes. While the distinctiveness of this new AVA is debatable, there is no question that it does contain some top-notch vineyards.

WINE GRAPE VARIETIES AND VALUE

Washington grows a wide variety of grape varieties as noted in **Tables 1.3** and **1.4** in the previous section, with Chardonnay, Riesling, Cabernet Sauvignon and Merlot comprising a substantial percentage of the total. Tonnage of wine grapes now exceeds tonnage of juice grapes.

Between 1999 and 2006, the total value of the Washington State wine grape crop increased nearly 77 percent, from $64M to $113M. The average price per ton received by Washington State growers has increased only slightly, from $910 per ton in 1999 to $948 per ton in 2006.

CHAPTER 3 – GRAPE JUICE INDUSTRY IN WASHINGTON

JUICE GRAPE PRODUCTION

Washington produces more Concord grapes than any other state and accounts for between 40 percent and 50 percent of total US production of Concord and Niagara grapes. Representing a light harvest, 196,000 tons were grown with a farm gate value of $31.2 million in 2006. This was sandwiched between a huge crop of 305,000 tons in 2005 and a similarly large crop in 2007.

Juice grape production nationally increased from 1985 through 1999 but has declined since 2000. This decline was a result of climatic conditions as opposed to a reduction in acreage. Washington is the leading producer of juice grapes, accounting for 45 percent of production in 2004-2006. New York produced 27 percent of all juice grapes, followed by Pennsylvania with 16 percent and Michigan with 12 percent. Planted acreage has actually remained relatively flat over the past three years, but production is extremely variable due to the weather.

Total revenue in Washington from sales of grape juice and concentrate products from Washington grapes or processed in Washington is approximately $40 million. This total is made up of wholesale sales of grape juice and concentrate products estimated at $29 million plus retail sales of grape products within the state of approximately $11 million. Total national retail value of grape juice and concentrate products from Washington grapes is estimated at $463 million.

GRAPE PRICES

According to the NASS 2007 Annual Report, the average price per ton for juice grapes in Washington has remained well below $200 per ton for most of the current decade. Recently quoted prices for juice grapes have not covered the cost of production. Concord concentrate prices are now strengthening due to increased domestic and export demand as a result of the published health benefits of Concord juice, and the increasing price of competing California and imported concentrates. The average price per ton has increased from 2005 to 2006 and from 2006 to 2007.

EMPLOYMENT & REVENUES

Juice grape processing provided employment for approximately 130 persons in Washington with a payroll of $7.1 million. Juice and juice product production and brokerage generated more that $31.4 million in revenue in the state.

Table 3.1

Direct Employment	**130 persons**
Total Washington Wages **Juice Grape Processing Employees**	**$7,071,000**
Total Washington Revenues **Juice Grape Processing and Brokerage**	**$31,411,000**
Total National Revenues **Juice Grape Processing and Brokerage**	**$463,452,000**

Source: MKF Research

RESEARCH PARTNERSHIPS

The Washington State Concord Grape Research Council provided $125,000 for juice related viticulture research in 2006. The Research Council is a group of juice processors who voluntarily provide funding for research. The federally funded Northwest Center for Small Fruits has also provided some funding in the past, estimated at approximately $50,000 in 2006.

Recent research programs include integrated and sustainable insect and mite management, nutrient management, irrigation and crop load management and cold hardiness.

CHAPTER 4 - WASHINGTON'S WINEMAKING INDUSTRY

The wine grape growing/wine production industry is one of the most rapidly growing sectors of the Washington agricultural economy. In 1998, Washington surpassed New York as the second largest wine producing state in the nation. Washington is technically the third largest overall wine processor in the United States in 2006 based on gallons produced, but still second in terms of wine produced from in-state grapes. New York is second largest in overall wine production due to its processing of bulk wine from out of state grapes.

Table 4.1
Top Ten States' Annual Production of Wine (Gallons)
Gallons Produced in 2006

State	Production	Rank	Percentage of Total Production
California	576,057,588	1	89.23
New York	28,214,685	2	4.37
Washington	20,073,054	3	3.11
Oregon	4,139,801	4	0.64
Florida	1,761,015	5	0.27
New Jersey	1,671,991	6	0.26
Kentucky	1,249,858	7	0.19
Ohio	1,129,816	8	0.18
Virginia	980,257	9	0.15
North Carolina	928,382	10	0.14
All Others	9,359,687		1.45

Source: TTB

Washington has 534 wineries producing nearly 70 million bottles per year. MKF Research estimates that Washington wineries' revenues from wine sales total $436 million, taking into account both direct sales and the wineries' share of revenue for wine sold through the three tier system.

WINERY SIZE AND LOCATION

While the major share of Washington wine, by volume, is produced by wineries owned by Ste. Michelle Wine Estates (Chateau Ste. Michelle, Columbia Crest, Stimson Estate Cellars, Snoqualmie Vineyards, among others) and Constellation Brands (Columbia Winery, Hogue Cellars, Covey Run Winery, Paul Thomas Winery), the vast majority of Washington's wineries, by number, produce less than 5,000 cases annually.

Many of Washington State's wineries are located in the Seattle suburbs of West-Central Washington, but their grapes are grown in semi-arid regions hundreds of miles away. Other popular winery regions are the Yakima Valley, the Tri-Cities area and the Walla Walla region. There are wineries today in 33 of Washington's 39 counties. Five counties (King, Walla Walla, Benton, Yakima and Chelan) account for the vast amount of wine production and over two-thirds of the physical locations of wineries, with King and Walla Walla having the most.

PREMIUM SEGMENT

Washington State wineries have focused their production and sales in the premium and ultra-premium segments of the market, or wines marketed in 750ml bottles retailing for over $8.00 a bottle, the fastest growing segment of the U.S. wine market.

EDUCATION

In 1999, representatives from Washington wine grape growers and processors approached Washington State University about the feasibility of creating educational opportunities that would serve the training and education needs of their rapidly growing industry in the areas of viticulture and enology.

As a result of these discussions, the Washington Viticulture and Enology Education Consortium was formed. This consortium includes Washington State University and several Community Colleges in the state. The educational opportunities to students in enology and viticulture in Washington have expanded and are quite varied.

Presently, the state is conducting a survey of the industry to project future human resource needs at various levels of education. With the results of this survey, the educational programs at Washington State and the various Community Colleges can be tailored to meet the current and future needs of the industry.

GROWTH OF WASHINGTON WINE PRODUCTION

The first commercially available Vinifera wines were made in 1967 by Ste. Michelle and Columbia (then called Associated Vintners). From 1981 to 2001, the number of wineries in Washington grew from 19 to 160 and then to 534 in 2006. The new wineries as well as the established ones wrestle with maintaining an identity in an increasingly competitive marketplace.

Table 4.2
Washington Winery Production in Gallons

Year	Gallons	% Change
1987	3,579,000	
1997	9,187,000	+156.7%
1998	10,515,000	+14.5%
1999	11,495,000	+9.3%
2000	11,151,000	-3.0%
2001	17,604,000	+57.9%
2002	16,250,000	-7.7%
2003	17,857,000	+9.9%
2004	16,578,000	-7.2%
2005	19,096,000	+15.2%
2006	20,073,000	+5.1%

Source: Taxation and Trade Bureau, Federal Government

The growth in the number of wineries has a variety of indirect effects. As indicated in Chapter 5, businesses have been formed to serve the wineries in the area by providing winery supplies and services. As the concentration of wineries grows in these regions, increasing numbers of allied industries will be attracted to these communities to serve their needs. As the Washington State wine industry continues to grow and mature, its structure and economic impact will inevitably grow more complex.

INDUSTRY EMPLOYMENT

Wineries employ full and part-time workers labor for bottling, storage, maintenance, and winemaking needs as well as hospitality, finance, sales and marketing functions. Some wineries also employ seasonal labor. 1,555 people are directly employed by wineries (Table 1).

Employment at wineries has grown significantly, in line with the tremendous growth in production volume over the past decade. As Washington's wine industry grows, there is likely to be particular growth in sales and marketing professionals.

DISTRIBUTION CHANNELS FOR WASHINGTON WINE

Although the largest wineries sell the majority of their wine through wholesalers, the primary distribution channel for small and medium sized Washington wineries is direct to consumer out of tasting rooms. Medium sized wineries often augment retail sales with direct sales to local restaurants and wine shops. A significant percentage of wine sold through wholesale channels is sold outside the state.

There are 110 licensed wholesale distributors in Washington, most of which carry some Washington wine. The major distributors in Washington State are privately held, so there is little specific public information available about the distribution tier. With limited input from distributor sources, and using its years of experience in the wine industry, MKF Research estimated the following for this segment.

Distributors in Washington employ approximately 2,006 people that can be attributed to wine business (496 for Washington wine), and they generate revenues of approximately $453 million, of which $112 million represents Washington wine and $37.3 million represents the profits on that wine.

RETAIL DISTRIBUTION

Wine can be sold in a variety of locations across Washington. There are 8,106[4] establishments in the state with a license as a beer and wine merchant. This number includes bars and restaurants in addition to retail stores. Washington wines are well represented at each of the major types of retail establishments: big box stores, major supermarket chains, specialty wine stores and restaurants. 322 retailers in Washington are licensed to receive direct shipment of wine from wineries.

[4] Washington Liquor Control Board

CHAPTER 5 - ALLIED INDUSTRIES IN WASHINGTON

This chapter discusses the impact of the wine, grape and grape juice industry on a variety of industries which either provide products or services to the grape and wine industry or benefit directly from the presence of related facilities and services. These include: tourism, trucking, equipment and supplies, testing, education and research. It estimates employment, wages and revenues and provides additional economic data where available.

TOURISM

Table 5.1

Direct Employment	**2,516**
Total Wages	**$68,345,000**
Total Revenues	**$237,628,000**

Source: MKF Research

Tourism is an increasingly major element in the overall economic impact of wineries in Washington. It is estimated that over 1.7 million visitors visited Washington wineries in 2006. Supporting these visitors is a diverse labor force of approximately 2,500 employees with total wages of over $68 million.

According to the 2006 Washington State Statewide Travel Impacts & Visitor Volume report prepared by Dean Runyan Associates, the overall average spending of Washington visitors was $97 per day per person. The average daily spending for visitors who spend at least one night in a hotel increases to $162. MKF Research estimated the total spending for tourists who visit wineries was over $237 million in 2006. This is a significant increase from $18.9 million in 2000, with the number of visitors increasing from 350 thousand to over 1.7 million. Compounded with an increase in average spending per visitor from only $54 in 2000, overall total spending has increased over twelve times from the level of 2000.

Tourism Walla Walla recently released preliminary results of a yearlong tourism survey designed to gauge where visitors are coming from, why they're visiting and their demographic information. A surprising result was that, of the visitors who flew to the area, 23 percent came from California, the same percentage as from Seattle. Many of the visitors to Eastern Washington wine country spend at least one night in the area as well. The average amount spent by overnight visitors was $245, a significant increase from the $162 attributed to all statewide tourists in the Dean Runyan report.

The Washington winery tourism industry is not without its challenges. Many of the regions are far from metropolitan areas, requiring tourists to spend one or two nights in the area. In the case of Walla Walla, there is simply not enough lodging to support the influx of tourists in the summer months.

WINEMAKING EQUIPMENT, SUPPLIES AND SERVICES

Table 5.2

	In WA	Outside WA
Direct Employment	100 employees	160 employees
Total Wages	$12,203,000	$9,190,000
Total Revenue	$47,030,000	$46,534,000

Source: MKF Research

The number of significant in-state suppliers or distributors of winemaking equipment, supplies and services is relatively small, given the proximity of the state's wine regions to California and Oregon. To protect the confidentiality of included suppliers, we have consolidated the data for multiple suppliers. Types of businesses which exist in Washington include a bottle producing facility, a producer of synthetic corks, providers of lab services, mobile bottling services, warehousing and transportation services and a producer of packaging supplies. There are hundreds of other small local vendors utilized for a variety of products and services whose impact is difficult to quantify and, as such, were not included in this report.

Wineries generally bottle and sell wine in 750ml bottles, which are packaged in bundles of 12, or "cases." Bottling supplies consist of glass bottles, corks, capsules, labels, and cardboard boxes. Cost for a typical configuration of these supplies is around $10/case, but can easily be in excess of $15/case. Small wineries generally do not purchase their own bottling equipment, instead relying on mobile bottling services. There are two mobile bottling companies providing service to many wineries in Washington, although one of them is based in Oregon.

Glass is the most common container for wine, and increasingly, the bottle shape and color are becoming important marketing devices as well. Washington State has one major glass production facility located within the state that services the wine industry. A second facility is currently under construction just outside of Seattle.

One of the leading worldwide producers of synthetic corks is based in Washington.

Many of the very small wineries purchase their labels from suppliers in the state, while larger wineries tend to purchase them from national or international suppliers. Due to a lack of complete data and the competitive and shifting market among label printers, the in-state impact of label purchases is hard to quantify and, therefore, not included in this report.

Barrels generally have a useful life of four to six years, and most wineries buy a certain percentage of new barrels every year. In contrast, stainless steel tanks have a useful life of 25 years. For many wineries, barrels may be the second most expensive item in their budget after grapes. Wine barrels are made predominately from French oak and American oak and are assembled in France and the United States. Very little of what is spent on barrels goes to firms within Washington State, making the economic impact from cooperage minimal and difficult to quantify.

There are multiple large trucking firms which provide grape and finished wine transportation throughout the state for the largest wineries. Most wineries and growers provide their own trucks and labor. Many wineries store wine on premise and do not require warehousing services. However, there are two large storage facilities providing wine storage to a large number of wineries.

Lab services have historically either been provided out of state or by individuals with the appropriate equipment. Two California-based laboratories have labs in the Walla Walla area utilized by many wineries.

Vineyard equipment is generally bought locally through dealers who specialize in farming equipment but not necessary vineyard equipment.

VINEYARD SUPPLIES

The majority of vineyard supplies and chemicals are purchased locally through farm supply businesses. MKF Research estimated the annual costs of vineyard supplies and chemicals average $475 per acre, for a total of over $26M of annual supplies purchased to service all 57,000 planted acres in the state.

NURSERIES

While there are many nurseries in Washington supplying the industry with Vinifera vines, there are only three Washington State Department of Agriculture certified nurseries growing and selling Vinifera vines specifically for the Washington wine industry. Because of the limited number of wine grape suppliers and Washington's explosive wine industry growth, most of the plant material was purchased from out of state nurseries which can harbor viruses and pests not native to Washington. To protect the longevity and vitality of industry, the Washington Association of Wine Grape Growers has been taking a lead role in developing a certification program to ensure plant material is clean and free of pests.

Unlike California which is susceptible to phylloxera and therefore has to graft vines onto phylloxera resistant vitis labrusca root stock, Washington vines grow on their own rootstock. This has been advantageous for Washington wine grape growers in the Eastern part of the state because vines growing on their own rootstock have not been as susceptible to the periodic deep freezes that have proved to be detrimental to grafted vines. Washington nurseries also supply other cold winter climate wine growing regions with vitus vinifera rootstock which help mitigate the risk of deep freezes.

MKF Research estimated total employment at nurseries of 38 employees and total revenue of nearly $1.9 million.

EDUCATION

Washington State University (WSU) has been the major source of Washington grape and wine education and research, with a sizeable faculty second only to University of California, Davis among other American universities. WSU works closely with Washington's network of community colleges including Walla Walla Community College, Yakima Valley Community College, Wenatchee Valley Community College, and South Seattle Community College. WSU, the various community colleges as well as Central Washington University have developed curriculum around aspects of viticulture and enology to support the immense need for training and research, although efforts have not always been well coordinated, resulting in duplication or gaps in specific curriculum. The state is currently undertaking a second needs assessment with regard to the future education needs of the state with regard to viticulture and enology.

Educational institutions in Washington are responsible for 34 full-time equivalent jobs focusing on grape and wine education and research. Total wages are in excess of $1.9 million.

WINE INDUSTRY ORGANIZATIONS

The Washington Wine Commission, Washington Wine Institute, and Washington Association of Wine Grape Growers are important organizations in the Washington State wine industry. Washington Wine Commission funding is generated by assessments collected from the state's wineries, grape growers, and wine sales. The Washington Wine Institute and the Washington Association of Wine Grape Growers are funded predominantly by their members.

The Washington Wine Commission, a state agency created in 1987, is responsible for the promotion and development of the Washington wine industry, representing over 500 wineries, 350 wine grape growers and 30,000 vineyard acres. Directed by a board of directors, the Commission provides a marketing platform for the industry and raises awareness of Washington wines and the state's wine regions so that the industry may achieve long term success. The Commission carries out a variety of programs and activities at the local, national and international level.

The Washington Association of Wine Grape Growers is the industry trade Association organized to provide advocacy for owners of wine grapes in Washington State. The Association advocates for the business interests of Washington wine growers/producers whether new or seasoned. The membership-based group is focused on enhancing the positive business environment that allows continued growth and production of world-class, Washington-grown wines including work on Vinewise, the Washington guide to sustainable viticulture, support for cold hardiness work, an annual suggested price list and market analysis, grape-dating service for buying and selling grapes and bulk wine, training growers to be Washington wine ambassadors, support for the Washington Viticulture and Enology Education Consortium, representing the industry on issues at the federal and state level including water, minimum wage indexing, drift, plant quarantines and plant improvement efforts.

The Washington Wine Institute is the voice on regulatory and legislative issues that affect the Washington wine industry. The Institute has a full-time contract lobbyist working on their behalf in Olympia. This lobbying organization represents wine producers and associates on all Washington State and key federal legislative and regulatory issues impacting the industry. Through the combined efforts of their team in Olympia, Board, Executive Director and the input of members, the Institute is able to work with the Washington Legislature to pass important laws that will improve the way in which wineries can promote, sell and distribute wine. The Institute is a not for profit corporation that is solely funded by dues from member wineries, growers and non-winery associate members.

The annual budget of these several industry organizations totals nearly $3.5 million. In addition to unpaid volunteers, 13 people are employed by these organizations comprising total wages of $830,000.

CHAPTER 6 - OTHER ECONOMIC BENEFITS

This chapter discusses other benefits derived from the grape and wine industry, including tax revenues, financing revenues, charitable contributions, and other indirect and induced economic benefits not specifically addressed elsewhere in this report.

TAX REVENUES

The wine, grape and grape juice industries generate significant tax dollars, benefiting federal, state and local governments. Tax dollars are raised through sales taxes, excise taxes, income taxes, estate and gift taxes, payroll taxes, property taxes and other business taxes and fees, such as occupational taxes, licenses, and import duties.

Table 6.1
Estimated Tax Revenues

Tax Type	In WA	Outside WA
Federal tax revenues		
Excise	$ 27,158,000	$ 4,013,000
Payroll	72,216,000	30,396,000
Income	61,146,000	26,501,000
Other	36,358,000	10,905,000
State tax revenues		
Sales	85,930,000	20,141,000
Payroll	454,000	712,000
Property	36,783,000	17,941,000
Income	-	6,095,000
Other	21,998,000	12,650,000
Total	$342,043,000	$129,354,000

Source: IMPLAN, MKF Research

This chapter discusses other benefits derived from the wine industry, including tax revenues, financing revenues, charitable contributions, and other indirect and induced economic benefits not specifically addressed elsewhere in this report.

CHARITABLE CONTRIBUTIONS

MKF Research estimated wineries and growers throughout the state of Washington to have donated nearly $3 million to charity in 2006, including wine, employee time and cash. For industry and non-industry alike, wine has become an increasing attractive fundraising vehicle. The amount of charitable contributions is likely underestimated as many wineries do not track in-kind contributions, which are often substantial.

We were unable to track charitable contributions beyond wine and grape producers to include the distributor, retail and restaurant industries in the state.

The 2006 Auction of Washington Wines raised $1.9M for the Seattle Children's Hospital and Regional Medical Center and the Washington Wine Education Foundation by auctioning wine donated by Washington State wineries. Since it started 20 years ago, the auction has raised over $19 million for Children's Hospital.

The 2006 Celebration of Washington Wines raised $139,000 for the Viticulture and Enology programs at Washington State University by auctioning wine donated by Washington State wineries. Since it started in 2001, the auction has raised over $1 million.

Entwine, a benefit and auction for ArtWalla, the Walla Walla Valley Wine Alliance and Walla Walla Community College Foundation, raised $250,000 in 2006. Now in its 4th year, Entwine has raised over $1 million for these Walla Walla organizations.

The auction at the Washington Association of Wine Grape Growers' 2006 annual convention raised $63,000 for the Washington Wine Industry Foundation and an additional $31,000 was raised for scholarships.

The 15th annual Washington Wines Festival in Seattle in 2006 raised more than $210,000 for Yakima Valley farm workers and the Washington Wine Education Consortium.

DIRECT, INDIRECT AND INDUCED EFFECTS (IMPLAN)

The wine and grape industry has ripple effects on Washington's economy. Economic impact studies estimate the impact of an industry in a defined geographic region by identifying and measuring specific concrete and economic events, such as the purchase of goods and services.

IMPLAN is the acronym for "**IM**pact analysis for **PLAN**ing." IMPLAN is a well established and widely used economic model that uses input-output analyses and tables for over 500 industries to estimate regional and industry-specific economic impacts of a specific industry.

The IMPLAN model and methodology classifies these effects into three categories, Direct Effects, Indirect Effects and Induced Effects.

Direct Effects are economic changes in industries *directly* associated with the product's final demand. Thus, direct effects consider the direct employment and spending of wineries, vineyards, distributors and immediately allied industries.

Indirect effects are economic changes – income created through job creation in industries that supply goods and services to the directly affected industries noted above. For example, the purchases of electricity and gasoline by wineries and of cash registers purchased for a tasting room.

Induced effects are the effects of these new workers spending their new incomes, creating a still further flow of income in their communities and a flow of new jobs and services. Examples are spending in grocery and retail stores, medical offices, insurance companies, and other non-wine and grape related industries.

MEASURING THE FULL ECONOMIC IMPACT OF THE WASHINGTON WINE AND GRAPE INDUSTRY

Washington's wine and grape industry has a "multiplier" effect, extending in a broad network of economic benefits to Washington as well as nationwide. The wine and grape industry becomes income for other workers and firms, who spend more money on other goods and services.

Table A tabulates the full $4.72 billion in national economic benefit derived from the Washington grape, grape juice and wine industries.

APPENDIX - ABOUT MKF RESEARCH

MKF Research LLC is the leading research source on the US wine industry. We continue to strive to raise the bar on the quality of information and analysis available to the wine industry.

MKF Research LLC conducts original research on the business of wine and wine market trends, publishes a number of industry studies and provides business advisory services and custom business research for individual companies and investors. MKF Research LLC also conducts a number of industry seminars on its research work including the annual invitation-only MKF Research Executive Wine Summit as well as various smaller open workshops on key industry issues.

MKF RESEARCH LLC CUSTOM PROJECTS

The major part of MKF Research LLC's business is providing confidential custom consulting to wine industry enterprises, investors and suppliers. Recently, MKF Research LLC consulting projects have included:

- Feasibility, market studies and due diligence;
- Consumer and trade surveys and focus groups;
- Market analyses, marketing strategy development and market, brand and financial and operational benchmarking;
- Economic impact studies for a variety of wine and vineyard related businesses and public and private organizations in the industry; and
- Market and strategic studies of potential new import and export products.

MKF Research LLC conducts the leading research on Winery Direct Sales and Winery Direct consumers and the benchmarking of winery direct activities and has expanded its consumer and trade research capabilities to among the best in the industry.

In 2005 MKF Research LLC was the principal consultant on the Wine Institute's first consumer research in twenty years, a large-scale survey of wine consumers conducted by Yankelovich Inc., whom MKF Research LLC introduced to the wine industry. The report produced by MKF Research LLC, ***Wine Institute Market Research: Implications for California Wineries***, is available to members of the Wine Institute.

MKF RESEARCH LLC PUBLICATIONS

MKF Grape Trends (annual)

By combining the crush and acreage reports into one easy-to-use quick reference guide, MKF Research LLC's ***Grape Trends*** provides, in one source, all the information needed to make informed decisions about California's grape supply for production planning. Provided in electronic form, ***Grape Trends*** includes a complete summary of current, past (since 1997) and projected tons, prices, and bearing acres for all of California's major grape growing regions and counties for seven major varietals: *Chardonnay, Sauvignon Blanc, Cabernet Sauvignon, Merlot, Syrah, Zinfandel,* and *Pinot Noir.*

Economic Impact Reports

MKF Research LLC has completed the first study of the Impact of Wine, Grapes and Grape Products on the American Economy, for Wine America, the Wine Institute, Winegrape Growers of America and the National Grape and Wine Initiative.

Economic Impact Studies published by MKF Research LLC include the following, are available for purchase from MKF Research LLC:

- ***Economic Impact of Wine and Winegrapes in Tennessee, 2007***
- ***Economic Impact of Wine and Winegrapes in the Paso Robles Appellation and Greater San Luis Obispo County 2007***
- ***Economic Impact of Wine and Winegrapes on the State of Texas 2007***
- ***Impact of Wine, Grapes and Grape Products on the American Economy, 2006***
- ***Economic Impact of California Wine 2006***
- ***Economic Impact of Virginia Grapes and Wine 2005***
- ***Economic Impact of Wine and Winegrapes in Michigan 2005***
- ***Economic Impact of Wine and Winegrapes in North Carolina 2005***
- ***Economic Impact of Wine and Winegrapes in Illinois 2005***
- ***Economic Impact of Michigan Grapes, Grape Juice and Wine 2005***
- ***Economic Impact of New York Grapes, Grape Juice and Wine 2005***
- ***Economic Impact of Pennsylvania Wine and Winegrapes 2005***
- ***Economic Impact of Wine and Vineyards in Sonoma County 2005***
- ***Economic Impact of Wine and Vineyards in Napa County 2005***
- ***Economic Impact of California Wine 2004***
- ***Economic Impact of the Washington State Wine and Winegrape Industries 2001***
- ***Economic Impact of California Wine 2000***

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ABOUT MKF RESEARCH

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Frank, Rimerman + Co. LLP, CPAs

Frank, Rimerman + Co. LLP, founded in 1949, is the largest, locally-owned provider of accounting and consulting services in California. With offices in San Jose, Palo Alto, San Francisco and St. Helena and over 170 professionals, Frank, Rimerman + Co. LLP offers strategic business and information consulting services, tax consulting and planning, audit and financial reporting, accounting services, litigation and valuation services.

Frank, Rimerman + Co. LLP continues to build its wine industry practice, based in St. Helena (formerly the CPA practice of Motto, Kryla and Fisher), committing the full resources of this major professional services firm to the industry.