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Economic Impacts of Agriculture in Skagit County, WA

**A baseline assessment prepared by
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and
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American Farmland Trust**

**For and in cooperation with
Skagitonians to Preserve Farmland,
Washington State University Skagit County Cooperative Extension, and
Economic Development Association of Skagit County**

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Executive Summary

Skagit County agriculture is a substantial contributor to the local economy. Best estimates, using traditional economic analysis, place the total combined economic output and value-added* economic impacts of this industry at over \$500 million annually. There are also important non-traditional economic impacts of local agriculture – impacts such as agriculture’s incremental contributions to tourism, wildlife viewing, fisheries, hunting and recreation. Some of these non-traditional values have been credibly estimated and those estimates suggest additional economic impacts of another \$100 million annually.

Total known economic impacts of Skagit County agriculture, therefore, totals approximately \$600 million annually. There are at least 3,300 people engaged in full-time equivalent employment tied directly to agricultural activities, and at least 5,650 people total engaged in employment generated overall by the local agriculture industry.

Any estimates of non-traditional economic impact are probably very conservative. Unequivocal statistical information by which to quantify some of the additional impacts of agriculture (e.g. cultural, environmental, quality of life, recreational, tourism.) is often not available. But while they cannot be easily quantified, it is clear that these additional impacts, when translated into economic terms, would be quite substantial. They may very well equal or exceed the dollar impacts we can estimate from known sources of information. So it is safe to assume that the long-term economic impacts of Skagit County agriculture are actually substantially greater than the \$600 million annual figure we are currently able to calculate.

In addition, there is a positive fiscal impact of agricultural land uses on Skagit County local governments. For every \$1 collected in taxes on agricultural lands in Skagit County, only 51 cents in community services is provided by governments, thus producing a 49 cent surplus in revenue to support government services provided to other local taxpayers. By comparison, for every \$1 collected in taxes on residential lands in Skagit County, governments must provide \$1.25 in community services. Skagit County farmers thus provide a significant tax benefit for other local taxpayers.

Skagit County agriculture is of great value to the local economy, to the fiscal health of local governments, and to the social and environmental health of the Skagit County community.

* “Value-added” refers to those economic activities that add market value to a farm product after it has been initially produced by the grower.

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1. Project Overview:

What is the economic impact of the Skagit County Agriculture Industry?

At first glance, this question seems simple. Add up the market value or total sales for products generated by this industry; work out the appropriate multipliers to estimate indirect impacts in production, processing, marketing, distribution, etc.; and, estimate total dollar impacts on the economy. A closer look, however, reveals difficulties with this approach.

First of all, current, accurate local data on agricultural sales and production are difficult to find. Much of the best information is out of date and is based on national surveys such as the Census of Agriculture – surveys that are not tailored to elicit information fully describing the unique conditions in Skagit County.¹

Second, this traditional approach to evaluating the impact of other industries omits important economic values contributed by the agriculture industry – values that are not currently reflected in the price of products sold in the marketplace. The economic impact of losing these “un-priced” values is clearly substantial yet quantifying them is extremely difficult. Were agriculture to disappear or greatly diminish, how would we measure their loss? What would be the cost of providing these values in some other way? Just because farmers do not yet get paid for creating these values, it would be a mistake not to consider them.²

Skagitonians to Preserve Farmland (Skagitonians), Washington State University Skagit County Cooperative Extension (Cooperative Extension), and the Economic Development Association of Skagit County (EDASC) are developing an economic development strategic plan for Skagit County agriculture. As a step in this process, American Farmland Trust assisted by providing the following services:

First, AFT completed an economic profile of Skagit County agriculture providing a compilation of some of the best available information, including information obtained locally from a variety of resources by Skagit County Cooperative Extension in conjunction with findings of the Skagit County Critical Areas Ordinance Draft Programmatic Environmental Impact Statement completed by URS Corporation and dated February 2003.

Second, AFT completed a traditional economic impact analysis.³

¹ The most comprehensive national resource is United States Department of Agriculture, Census of Agriculture, 1997. (See <http://www.nass.usda.gov/census>), but it is incomplete in capturing conditions in Skagit County. Dyvon Havens, Faculty with Washington State University Cooperative Extension, Skagit County, has gathered excellent local information referenced in this report – probably the best available. Her 1999 statistical report “1999 Skagit County Ag Stats” is referenced at several points in these materials. This report is available online at: <http://skagit.wsu.edu/Agriculture/images/1999%20final.pdf>. Also, see the excellent economic summary contained in the Skagit County Critical Areas Ordinance Draft Programmatic Environmental Impact Statement, February 2003, infra note 9.

² The valuation of so called “economic externalities” provided by environmental services, for example, is the subject of increasing study by economists seeking to better understand the impacts of human activities on longer-term human economies. Two good, recent general references are: Nature’s Services: Societal Dependence on Natural Ecosystems, edited by Gretchen C. Daily (Island Press, 1997); and, The New Economy of Nature: The Quest to Make Conservation Profitable, Gretchen C. Daily and Katherine Ellison (Island Press, 2002). For an increased understanding of the environmental contributions of agricultural lands, see: The Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems, edited by Dana L. Jackson and Laura L. Jackson (Island Press, 2002).

³ This analysis, and the economic profile, were performed by AFT Community Economic Specialist Andy Andrews. The impact analysis was based upon market value information and an economic model provided by Minnesota

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Third, AFT, Skagitonians, Cooperative Extension, and EDASC assembled and presented the above information to a focus group of knowledgeable local experts in business, banking, real estate, economics, tourism, the environment, government, community development, and agriculture.⁴ This group was asked to evaluate the information, to suggest ways in which it might fail to fully and correctly capture the economics of Skagit County agriculture, and to help identify economic and other impacts the economic data do not reflect.

Fourth, AFT was asked to capture the results of these studies and discussions by producing this report.⁵

2. Advisory “Focus Group” of Experts on Skagit County Agriculture

AFT, Skagitonians, Cooperative Extension, and EDASC convened a diverse group of knowledgeable local experts in various aspects of agriculture and of communities influenced by the local agriculture industry. This group was presented with the economic information that had been assembled by AFT and Cooperative Extension and was asked to comment upon it, providing more current information where possible, to suggest reasons for apparent statistical anomalies, and to generally provide a reality check for the information.

The group was also asked to provide input on some of the more difficult-to-quantify impacts of agriculture, many of which are non-monetary, but which, nonetheless, have substantial long-term economic impact on the local community. These impacts affect a number of community values, including tourism, recreation, open space, cultural heritage, and the environment. Environmental issues include impacts on water quality, flooding, aquifer recharge, wetlands, biodiversity, and a variety of wildlife issues, including impacts on species listed under the Endangered Species Act or protected under the Migratory Bird Treaty Act and other laws.

This group met on February 12, 2003 at the offices of Skagitonians to Preserve Farmland in Mt. Vernon, WA, and engaged in an intense and highly productive discussion. Participants included:

- Maynard Axelson Skagit County farmer, with the Washington Brant Foundation
- Charlie Boon, former dairy farmer and a realtor with ReMax Realty
- David Britt of the Wild Iris Inn in LaConner, WA
- Ellen Bynum, Membership & Contributions Coordinator of Skagitonians
- Jim Clarke, principal, Brandmarker marketing consultants, and co-owner John L. Scott Realty Anacortes
- Mike Davison, Wildlife Biologist with the Washington Department of Fish and Wildlife
- Rich Doenges, Director, Skagit County Farmland Legacy Program
- Peter Goldfarb of the White Swan guest house in Mt. Vernon, WA
- Dyvon Havens of Skagit County Cooperative Extension
- David Hedlin, third generation Skagit Valley farmer and member of Skagitonians Board
- Herb Hinman, Agriculture Economist, Washington State University
- Ken Kadlec of Skagit Farmers Supply

IMPLAN Group (1725 Tower Drive West, Suite 140, Stillwater, MN 55082, Phone: 651-439-4421. Their website can be found at: <http://www.implan.com>).

⁴ The economic profile and economic impact analysis contained in this report was completed by AFT Community Economic Specialist Andy Andrews. See Appendix B. The focus group discussion referred to in this report was completed prior to the Critical Areas Ordinance Draft Programmatic EIS document becoming available.

⁵ Writing of this report was completed by Don Stuart, Pacific Northwest Regional Director for AFT. See Appendix B.

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- Jim Koetje, realtor with Skagit Valley Properties, Mt. Vernon, WA
- Norm Mitchell, President, Skagit County Cattlemen's Association
- Kris Molesworth of the North Cascades Institute
- Marv Omdahl, former dairy farmer and Skagit State Bank Director
- Bob Rose, Executive Director of Skagitonians to Preserve Farmland
- Mike Shelby of Western Washington Agriculture Association
- Bill Shepard, WSU Cooperative Extension
- Don Stuart, Pacific Northwest Regional Director for American Farmland Trust
- Bill Vaux of the Economic Development Association of Skagit County, former County Commissioner, with Port Gardner Timber
- Stuart Welch of the Rexville Store

The following report has been informed by the discussion that resulted from this meeting. See, especially, section **6-a** below where this discussion is summarized.

3. Economic Profile of Skagit County Agriculture

Economic data in this report were assembled from the following primary resources:

- The United States Department of Agriculture conducts a Census of Agriculture every five years. The most recent survey for which data were available at the time of this report was the 1997 Census.⁶
- There was also data available from Minnesota IMPLAN current as of 1998.⁷
- Additional and locally specific information, as indicated below, is available from Washington State University Skagit County Cooperative Extension which tracks local agriculture statistics.⁸
- Further information is also included from the Skagit County Critical Areas Ordinance Draft Programmatic Environmental Impact Statement (Critical Areas Ordinance EIS) dated February 2003.⁹

Despite the limitations of the available data, however, a reasonably close estimate can be made of the condition of Skagit County agriculture, and trends are revealed by comparing information from past surveys. These show:

⁶ This material can be found at the USDA-NASS website at: <http://www.nass.usda.gov/census/>.

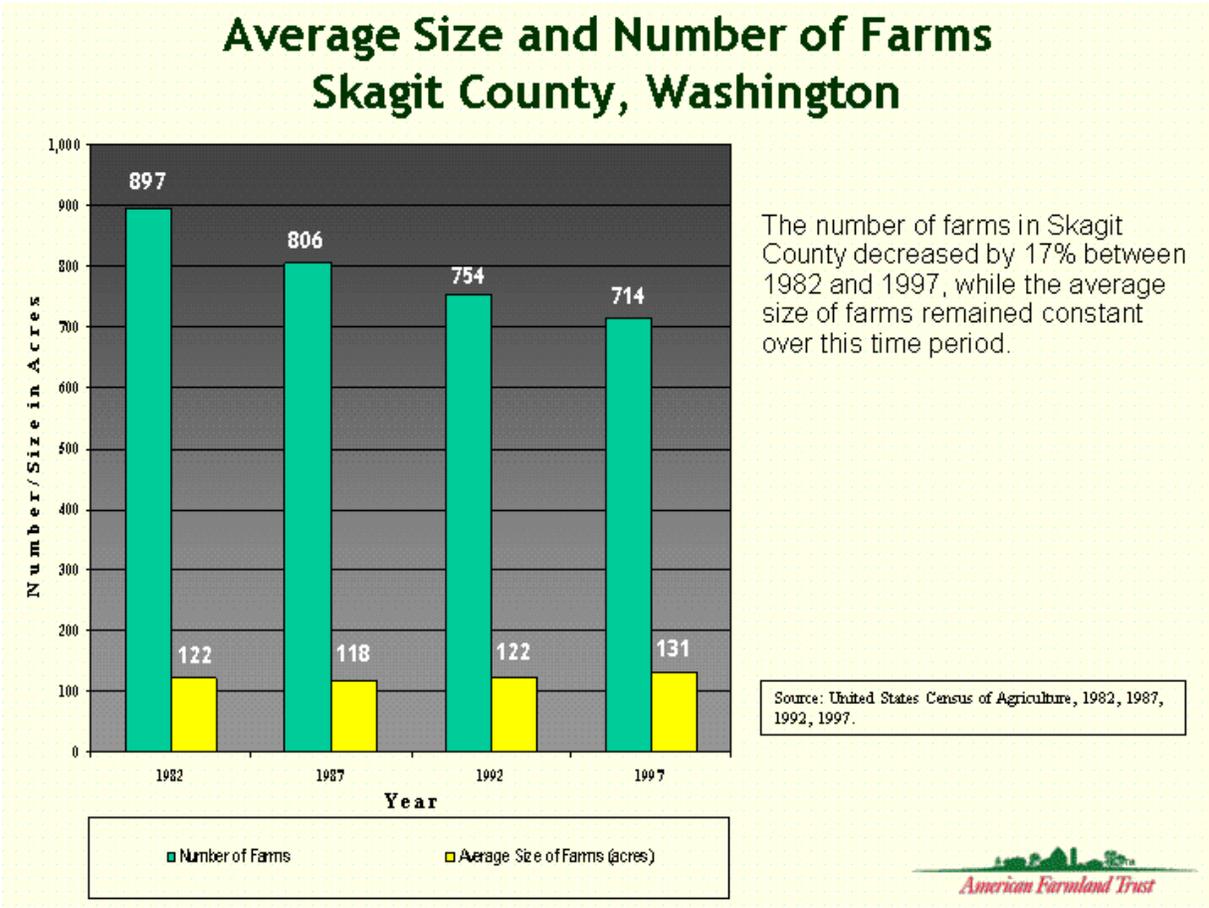
⁷ See supra Note 3, above.

⁸ Dyvon Havens, Faculty with Washington State University Skagit County Cooperative Extension, provided the Cooperative extension data shown in this report. This data for 1999 is on line at: <http://skagit.wsu.edu/Agriculture/images/1999%20final.pdf>.

⁹ Skagit County Critical Areas Ordinance Draft Programmatic Environmental Impact Statement, February 2003, Skagit County Planning and Permit Center, URS Corporation, Century Square, 1501 4th Avenue, Suite 1400, Seattle, WA 98101-1616, Tel: 206.438.2700.

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a. Size and Number of Farms: The number of farms in Skagit County has shown a steady decline over time, with the size of farms holding relatively steady, perhaps with a slight recent increase. Note that USDA/NASS expanded the definition of farms somewhat in 1997,¹⁰ thus somewhat increasing the number of farms that would be reflected in the totals for that year.



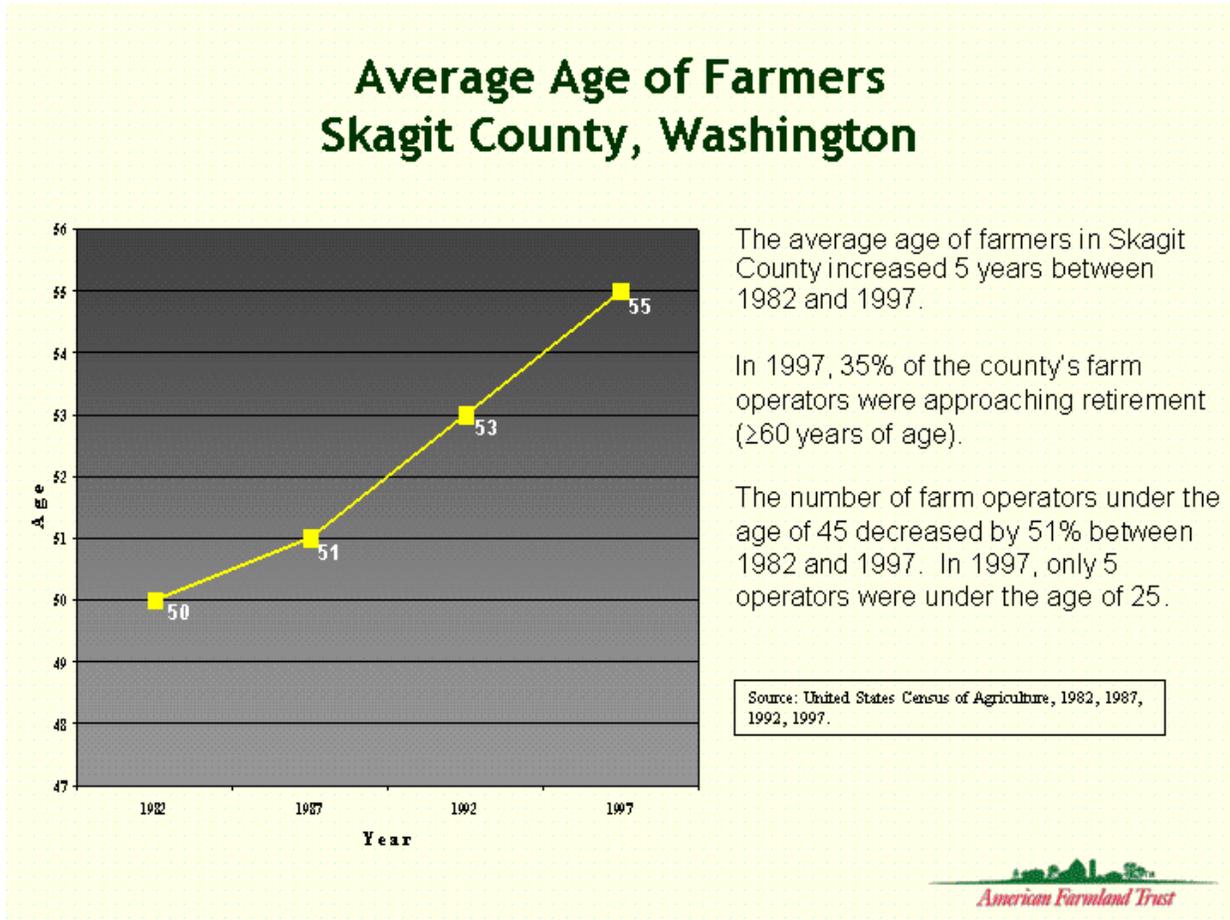
Source: United States Census of Agriculture, 1982, 1987, 1992, 1997. In 1997 the National Agricultural Statistics Service (NASS) expanded the definition of agriculture. Users of the census should take this into account when comparing 1997 data with previous census data. Land use data provided by the Census of Agriculture does not track farmland conversion. For data on agricultural land use trends, planners, concerned citizens and conservation professionals should use the National Resources Inventory (NRI). The NRI is compiled by the USDA Natural Resources Conservation Service. It tracks all land use changes, including conversion to developed uses, for a given reporting period.

**“ Other” includes pastureland and rangeland as well as land in house lots, ponds, roads, wasteland, etc.

¹⁰ See *What changes were made to the report forms since the 1997 Census?* FAQ, http://www.nass.usda.gov/census/census02/preliminary/census_faq.htm#6.

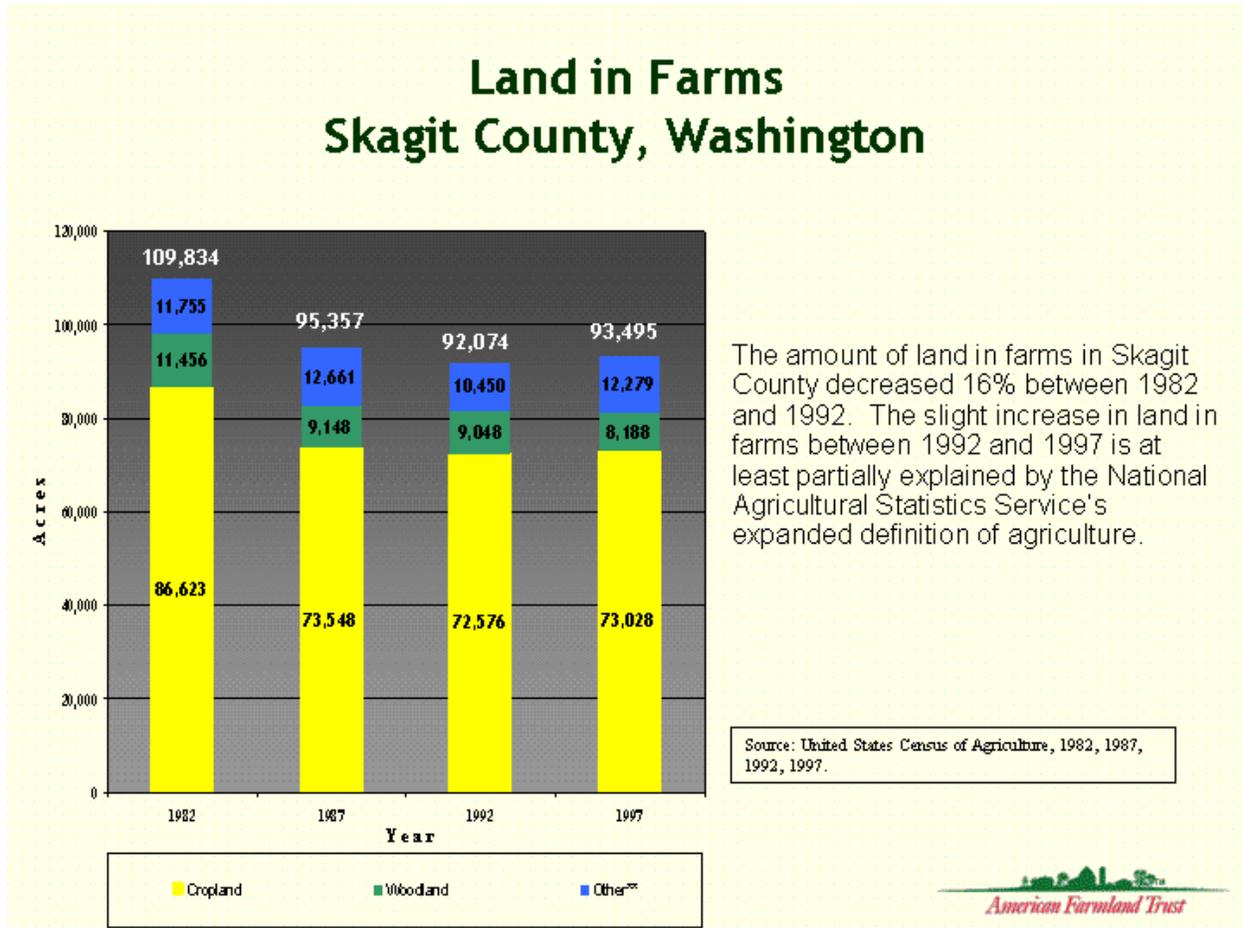
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b. Age of Farmers: The average age of Skagit County Farmers has steadily increased in recent years, rising to 55 in 1997. The trend line suggests it may have reached 57 by 2002. This increasing average age is significant in that it reflects reduced entry into farming by younger farmers, it presages an increasing rate of farm sales and, thus, possibilities for conversion of land to non-farm uses, and it may anticipate a reduced rate of long-term investment in farming.



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c. Land in Farms: The amount of land in farms in Skagit County is also declining. The slight apparent increase in the 1997 acreage is probably a reflection of the change in the definition of agriculture instituted by NASS that year – the likelihood is that acreage is probably continuing to decline due to land conversion. Cooperative Extension has also gathered figures for acreage in various crops through 2000.¹¹



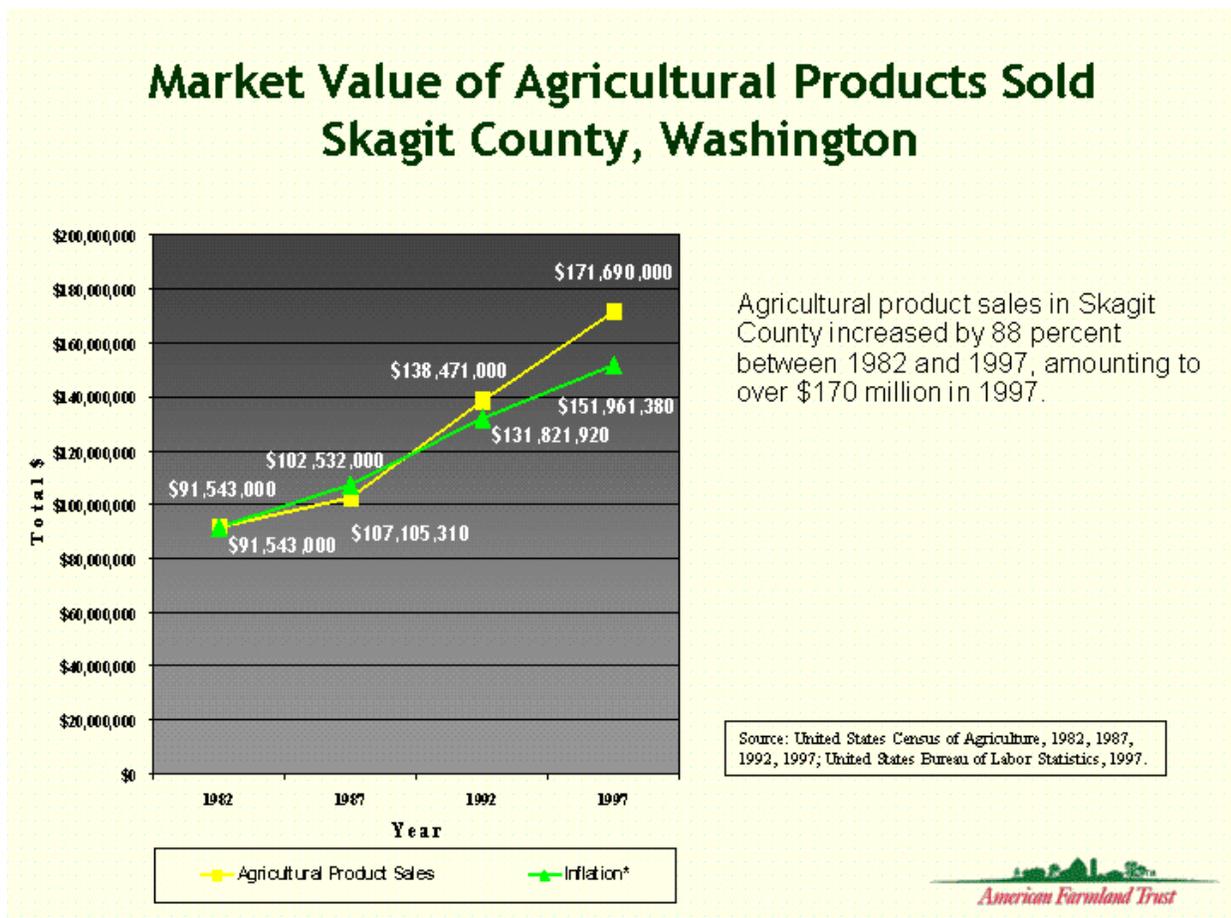
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¹¹ "1999 Skagit County Ag Stats" is available on line at: <http://skagit.wsu.edu/Agriculture/images/1999%20final.pdf>.

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d. Market Value of Agricultural Products Sold: The market value of agricultural products sold, so-called “farmgate value,” has shown a steady increase over the years as farmers slowly intensify their productivity in the face of declining prices. Note that this statistic reflects the value of products sold, not the net farm income. The numbers shown on the chart below were taken from Census of Agriculture data and are not corrected for inflation. In order to provide a better feel for the trend, an inflation-corrected line has been added to the graph. This line shows how the 1997 value of \$171 million exceeds the inflation-corrected 1992 value by \$20 million.

The 1997 Census of Agriculture data reflect \$171,690,000 in Skagit County agricultural sales in 1997. Cooperative Extension’s figures show a larger, and probably more accurate, figure of \$216,329,869 for that year, increasing to \$235,308,595 in 1998, \$242,992,859 in 1999, falling off to \$227,351,000 in 2000,¹² but rising again to \$261,312,281 in 2001.¹³ Also see the economic report in Critical Areas Ordinance EIS.¹⁴



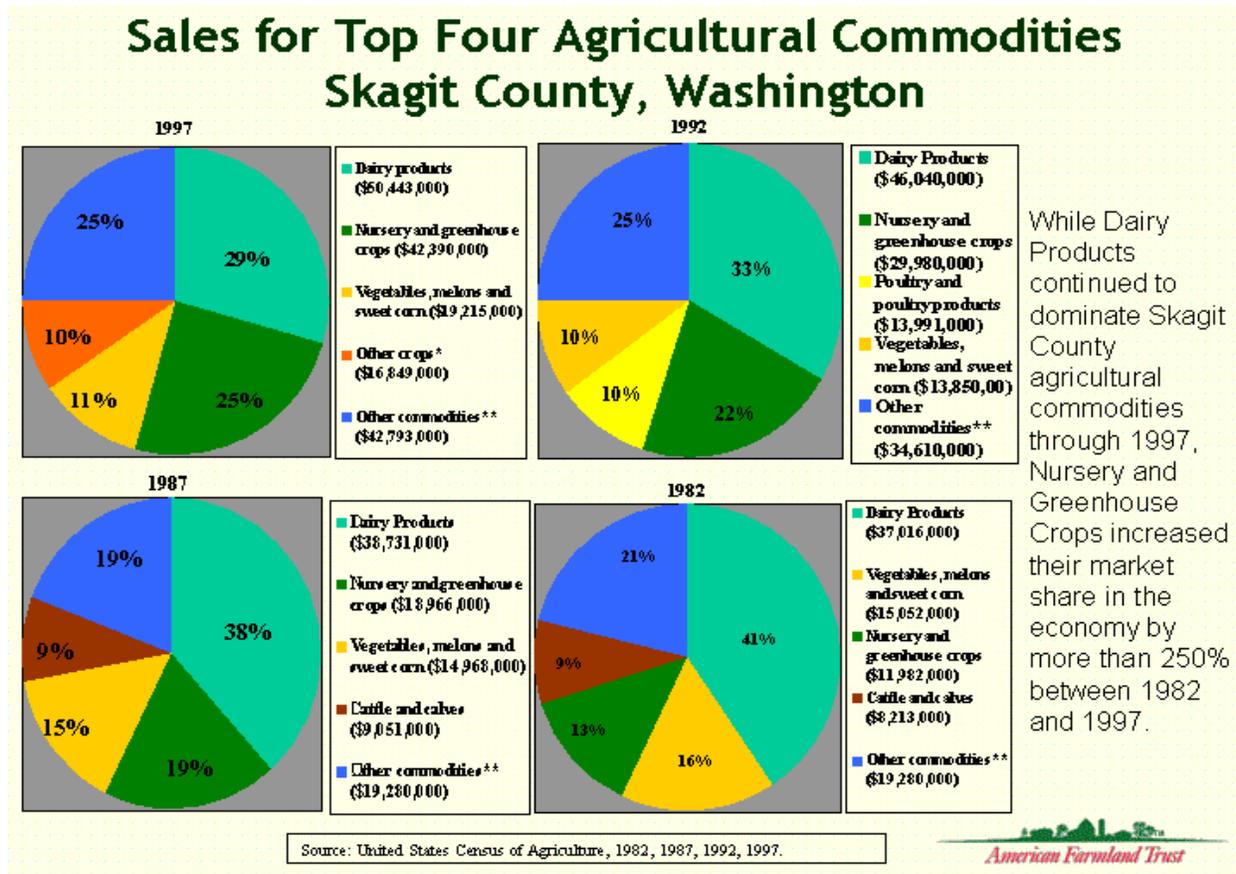
“The inflation curve is based on the Consumer Price Index (CPI), which, according to the United States Bureau of Labor Statistics, “is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.”

¹² Skagit County Ag Stats, Supra note 1.

¹³ Preliminary figures from Dyvon Havens, WSU Skagit County Cooperative Extension. See also supra note 1.

¹⁴ Critical Areas Ordinance EIS, Supra, note 9, vol 2., pg. 7.

e. Sales of Top Four Agricultural Commodities: Skagit County has an unusually diverse agriculture industry. This diversity continues to be reflected in the sales of “other commodities” shown on the below chart. The growth in the nursery and greenhouse industry reflects the growing urban populations in and surrounding Skagit County. Note that this information is based on sales of agricultural products and does not reflect processing or other post-harvest value-added activities.¹⁵



While Dairy Products continued to dominate Skagit County agricultural commodities through 1997, Nursery and Greenhouse Crops increased their market share in the economy by more than 250% between 1982 and 1997.

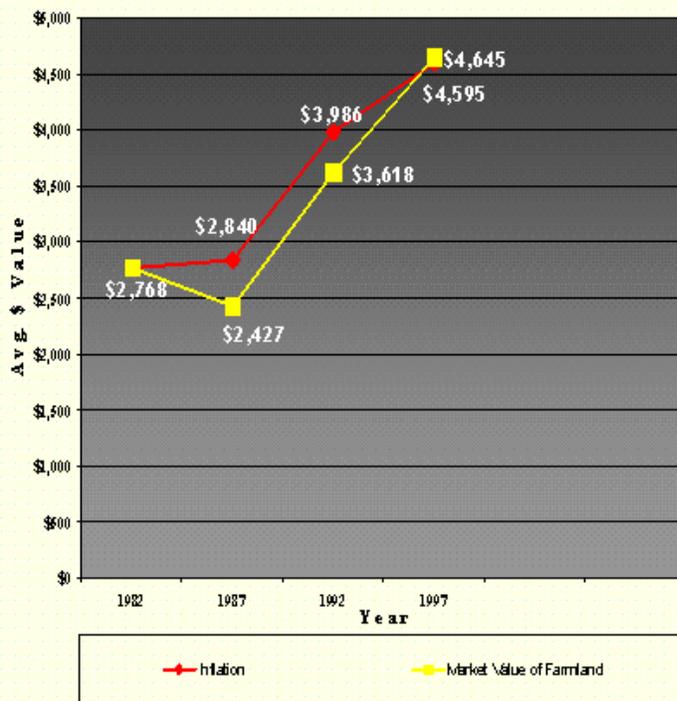
”Other crops” refers to other crops that do not fit into prelisted categories, including, broccoli, cauliflower, vegetable seed crops, etc.
 ”Other commodities” refers to all other agricultural commodities that make up the county’s agricultural economy.

¹⁵ Skagit County Ag Stats, supra note 1.

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f. Value of Land and Buildings: The value of land and buildings on farms in Skagit County has remained steady when corrected for inflation, but appears, on average, to be significantly higher than what one would anticipate in strictly agricultural production value. This value is probably a reflection of development pressure throughout Skagit County. These average figures may also underestimate the pressure to sell for development since the lands that grow in value the most also probably tend to sell and to fall out of this average.

Average Per-Acre Market Value of Land and Buildings Skagit County, Washington



Between 1982 and 1997, the average per-acre market value of land and buildings on farms in Skagit County increased by 68%, mirroring inflation.

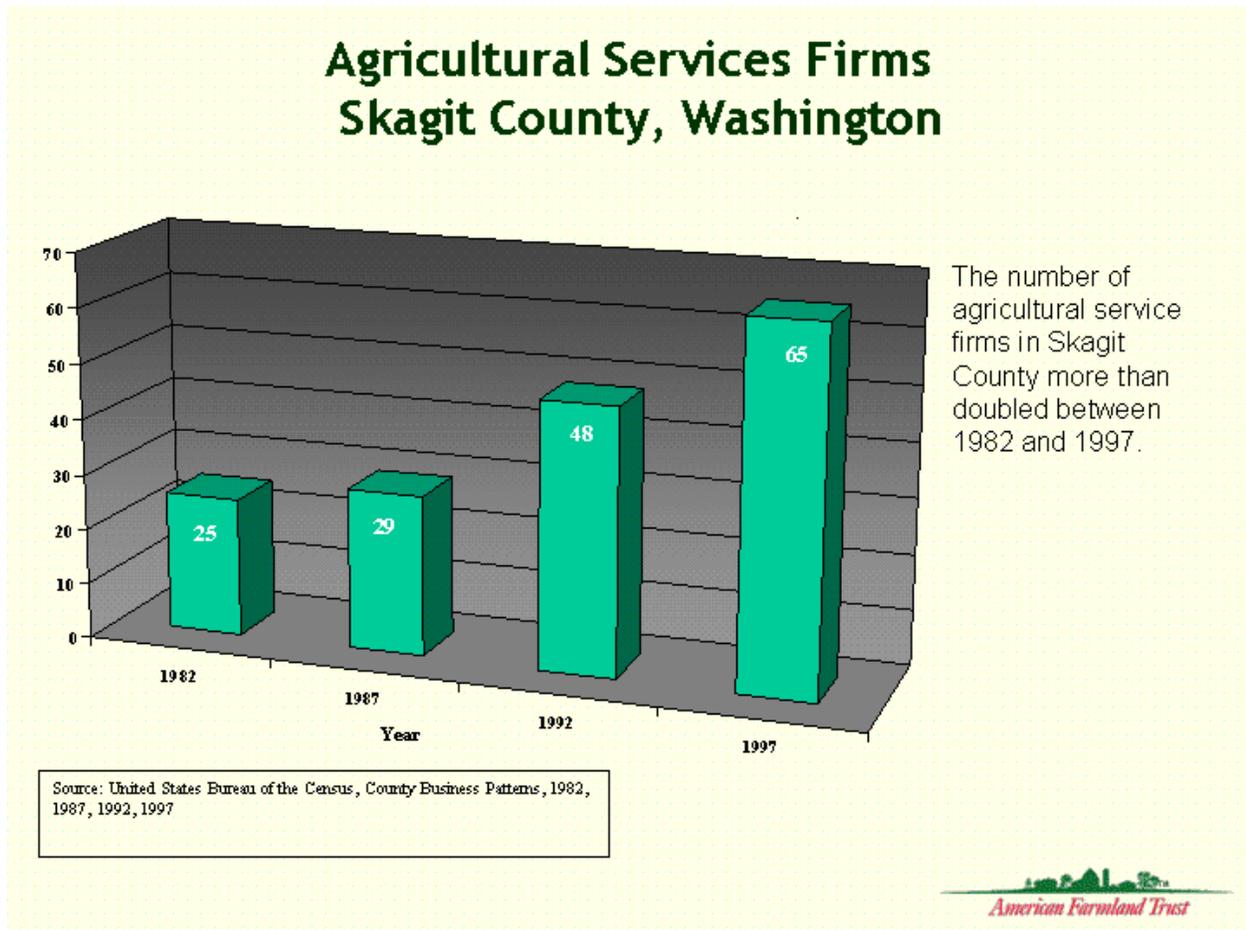
Source: United States Census of Agriculture, 1982, 1987, 1992, 1997; United States Bureau of Labor Statistics, 1997.

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The inflation curve is based on the Consumer Price Index (CPI), which, according to the United States Bureau of Labor Statistics, "is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services."

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g. Agricultural Service Firms: As shown by U.S. Census figures, the number of agricultural service firms in Skagit County has steadily grown since 1982. These figures may seem confusing since they include crop services, veterinary and other animal services, gardeners and others associated with the nursery business. Many of these may be more related to nearby urban growth than to rural agriculture. Moreover, these figures do not include suppliers of agricultural implements and products. Nor do they include processors of agricultural food and fiber.

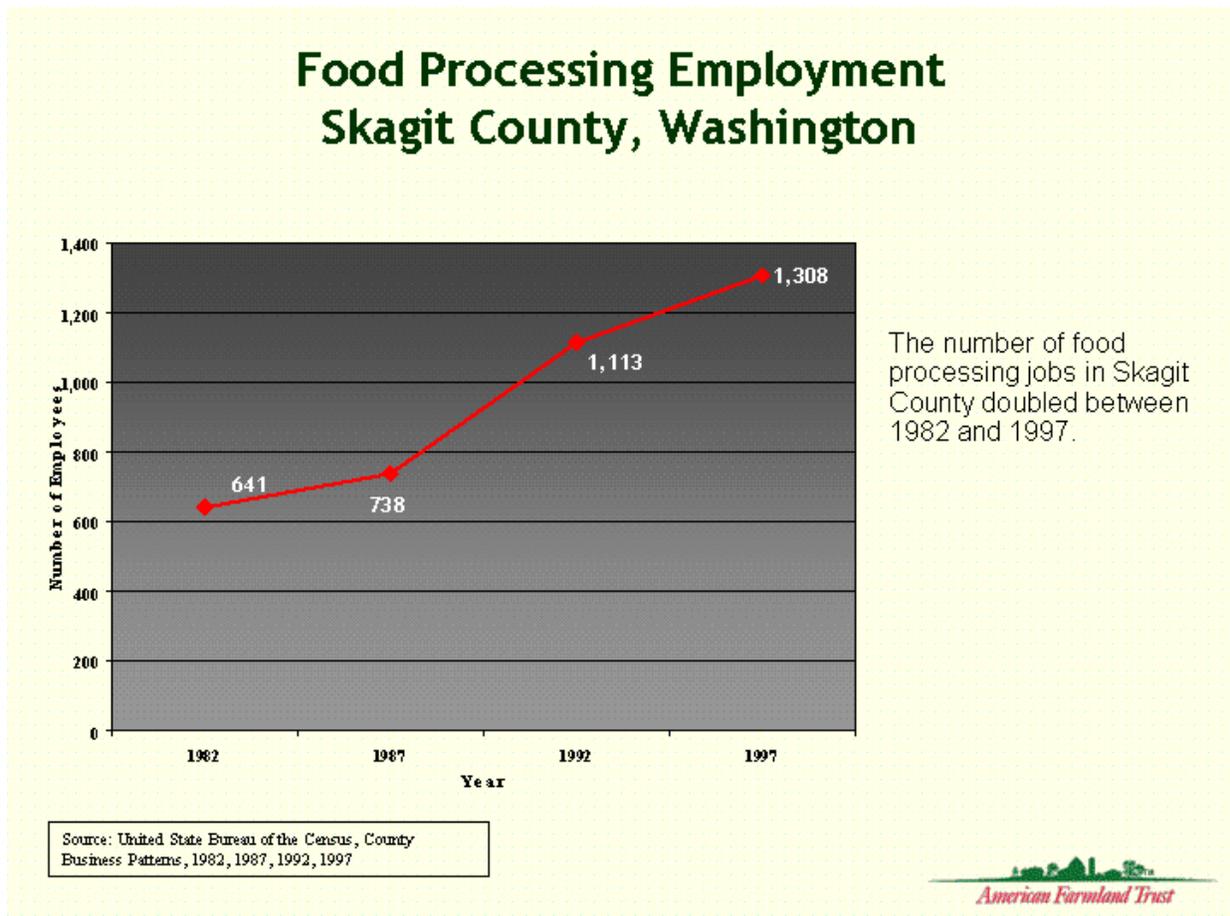


Agricultural services consist of crop services, veterinary services, other animal services, and landscape and horticultural services.

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h. Food Processing Firms: Food processors are critically important economic infrastructure for local agriculture. When a processor leaves, the farmer has lost a market (sometimes the only practical market) for that crop. This sometimes affects both the ability to produce that crop and the ability to produce other crops that may be profitable and desirable rotation crops. Traveling great distances to find a new processor can be impractical, so retaining processors in the local marketplace is critically important to this industry.

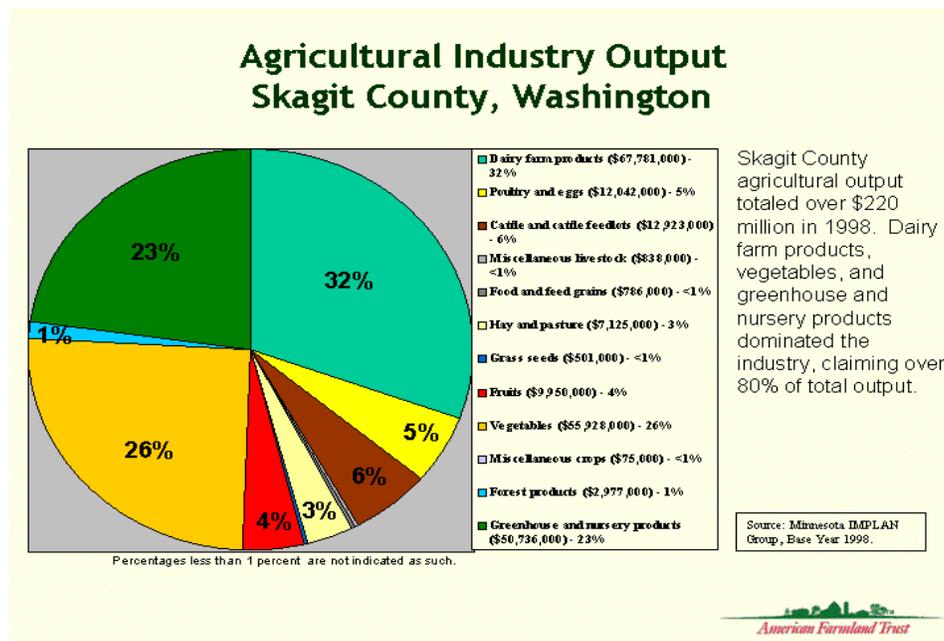
While the reported number of food processing firms in Skagit County seems to have remained relatively constant over time, recent losses, since 1997, may have had a substantial impact. National Frozen Foods, for example, the last major local processor of peas and carrots, closed its doors in 2001. Note that this information may not include some processing by farmers who are processing their own farm production.



Food processing businesses include food and kindred products manufacturing, including meat products (meat packing plants and poultry slaughtering and processing), preserved fruits and vegetables, grain mill products, prepared foods, bakery products, sugar and confectionary products, and miscellaneous food and kindred products

i. Agricultural Industry Output: IMPLAN¹⁶ data place total value of agricultural production at \$220 million in 1998, rising to \$227 million in 2000,¹⁷ and \$230 million in 2002.¹⁸ Unlike Census of Agriculture data, which is based on surveys of farm businesses and tracks sales, IMPLAN output data is based upon statistical estimates of the value of production for known acreages devoted to specified agricultural crops and activities. Since they are all acquired in a somewhat different way, the results from Minnesota IMPLAN, from the USDA-NASS Census of Agriculture, and from Cooperative Extension all tend to confirm the general accuracy of the data. A few observations about the 1998 data shown on the chart below:

- At \$50,736,000 and 23 percent, the figures for greenhouse and nursery products seem somewhat lower than might be expected. Note, however, that these figures do not include landscape and horticulture services. Only direct agricultural products are included.
- The \$9,950,000 figure for fruits also seemed low to our focus group, with one local producer large enough to account for more than that alone. The explanation seems to be that value-addition by producers is not included in these figures. Only the actual dollar value of the crop, as produced, is considered in these numbers. This is agricultural output only. Subsequent value addition through processing, for example, is not reflected in this analysis.
- The miscellaneous category seemed low to some of our reviewers, considering the growing horse industry in Skagit County. Only horses actually sold, however, are reflected in these numbers. These numbers do not reflect all of the other business transactions that support a prospering horse industry. Horse industry output would add to these totals.
- These numbers do not include the forestry or forest-products industry. They do, however, reflect agricultural trees – such as Christmas trees or wreaths.



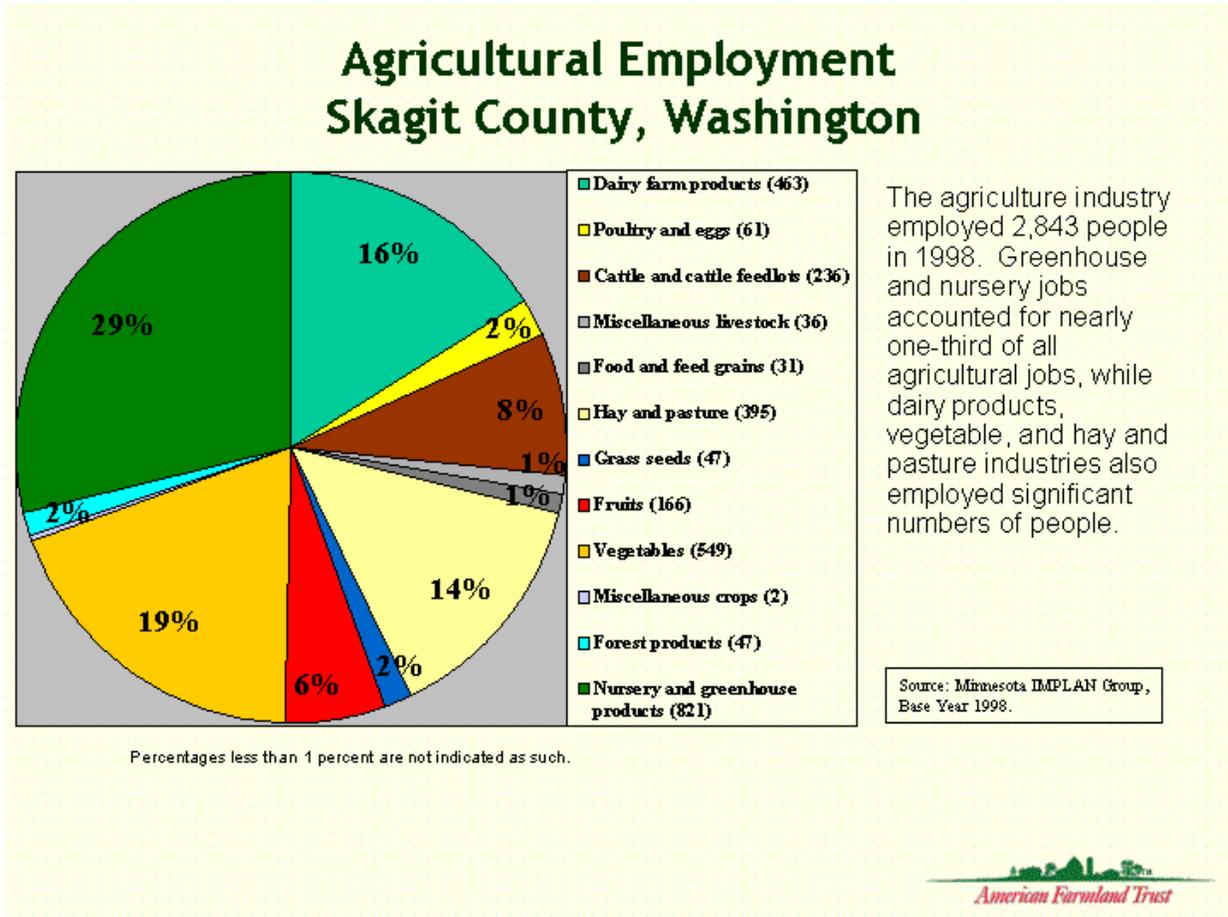
Output is total industry production for a given year. It is equal to shipments plus net additions to inventory.

¹⁶ IMPLAN is an economic modeling service and data resource. Minnesota IMPLAN Group (1725 Tower Drive West, Suite 140, Stillwater, MN 55082, Phone: 651-439-4421. See their website at: <http://www.implan.com>).

¹⁷ Critical Areas Ordinance EIS, supra note 9, vol. 2, pg. 7.

¹⁸ *Ibid.* The 2001 figure appears to be \$261,312,28. See note 13, supra and accompanying text.

j. Agricultural Employment: IMPLAN data on agricultural employment is generated in the same way as agricultural industry output – using statistical estimates of employment for known acreages devoted to specified agricultural crops and activities. Keep in mind that this is “agricultural” employment, and does not include employment impacts in food processing, farm supplies, or other supporting or distribution businesses dealing with farms or farm production. It would not, for example, have included the employment, subsequently lost, with the departure of National Frozen Foods from Skagit County.



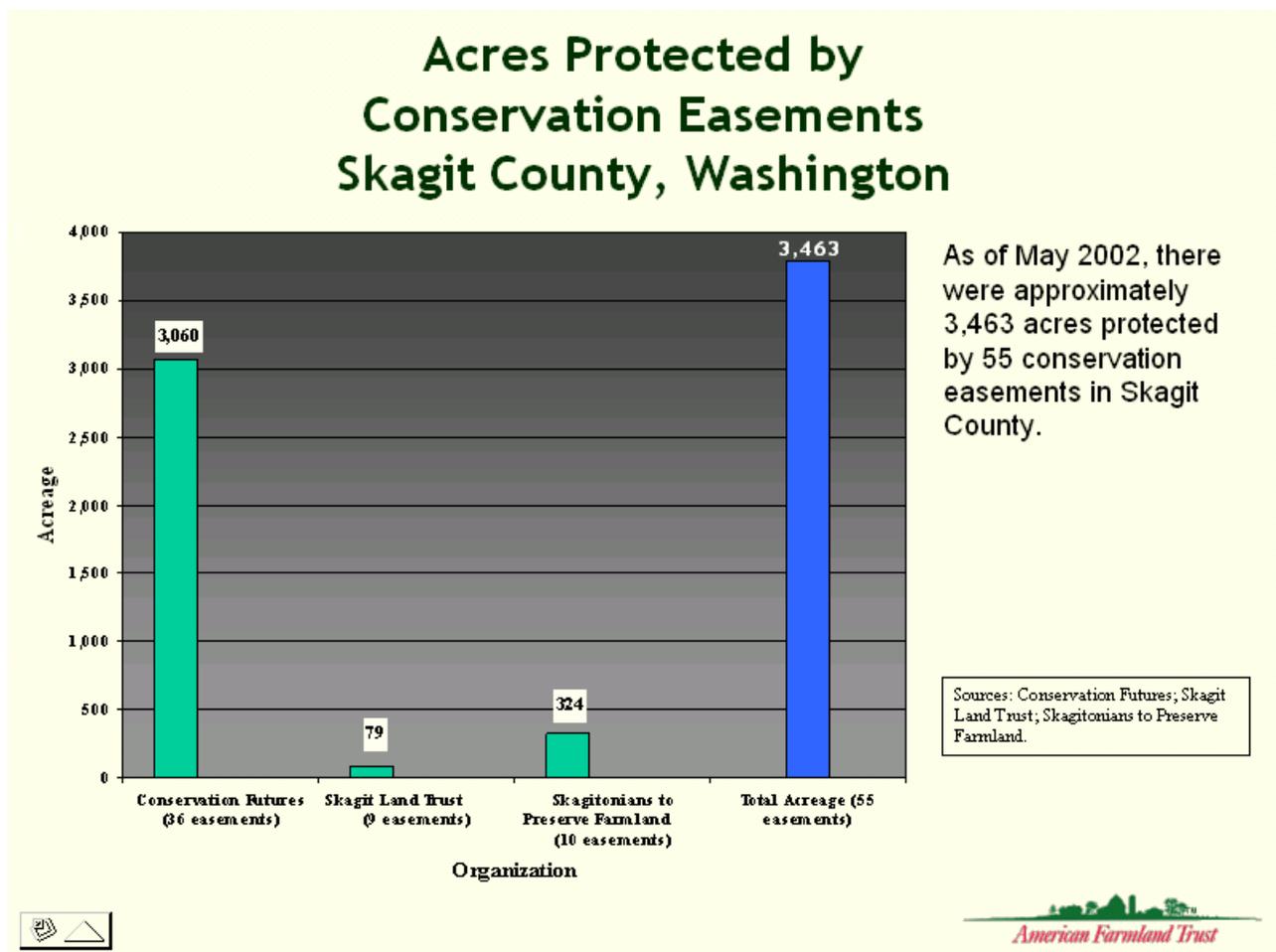
Employment numbers are full- and part-time annual average employment.

According to the Skagit County Critical Areas Ordinance Draft Programmatic EIS completed in February 2003, by 2001, Skagit County agricultural employment had increased to 3,300 people, or 8% of the workforce.¹⁹ This placed agriculture as the fifth ranked employer in the county – considerably higher than in the state as a whole.²⁰

¹⁹ Critical Areas Ordinance EIS, supra note 9, vol. 2, pg. 6.

²⁰ *Ibid.*

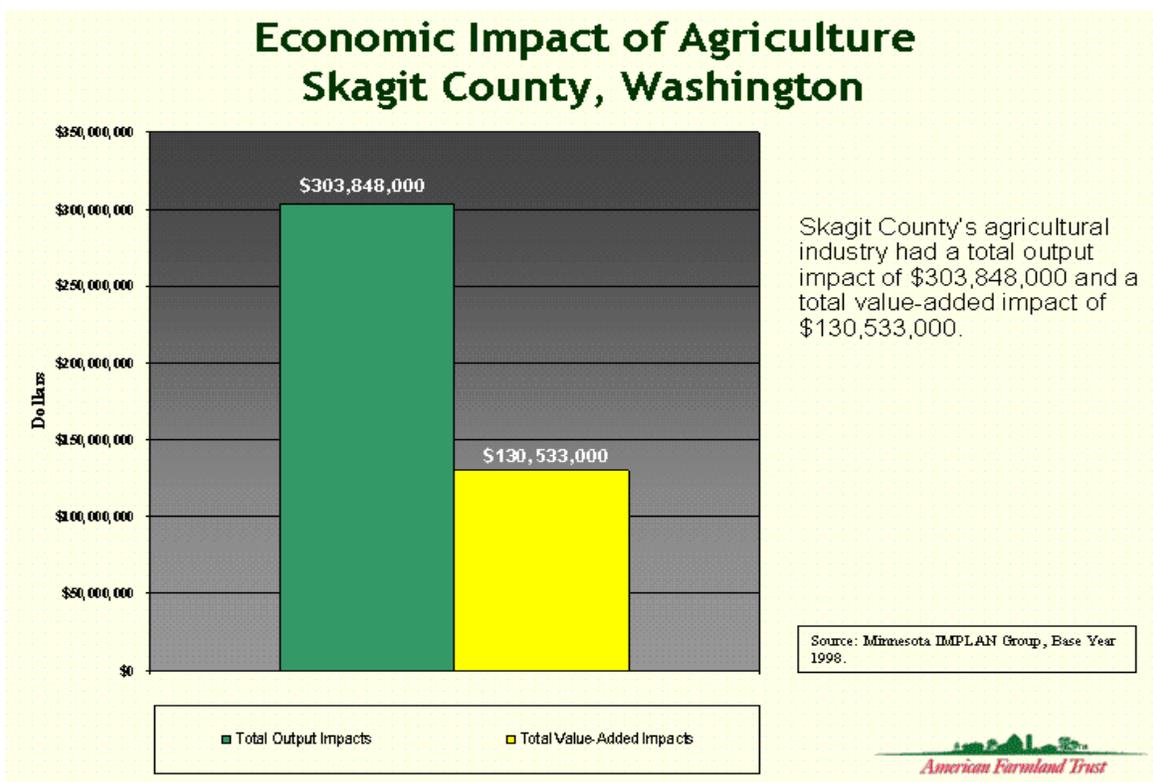
k. Acres Protected by Agricultural Conservation Easement: Skagit County's farmlands are vulnerable to rising development pressure from its more urban neighboring counties and from local growth. One of the tools the County is using to protect their highest quality agricultural lands is the agricultural conservation easement. The County can purchase such easements from willing landowners who choose to restrict their land for agriculture. The "Conservation Futures" easements shown below were acquired through revenues from a special property tax authorized by the Skagit County Commission in 1996 using the Washington State Conservation Futures program, a local option tax. The local program charged with acquiring these easements is the Skagit County Farmland Legacy program. As of May 2003, the total acreage in this program was 3,060 acres. Skagitonians held 324 acres. Skagit Land Trust held 79 acres in agricultural easements. Thus, as of May 2003, over 3,463 total acres had been protected for agriculture through county and private non-profit, land trust programs.



4. Traditional Economic Impacts of Skagit County Agriculture

As a second step in our project, AFT performed a traditional economic analysis of Skagit County agriculture based upon Minnesota IMPLAN models. This analysis compares favorably with and reinforces the analysis done for the Critical Areas Ordinance Draft Environmental Impact Statement based on 2000 data.²¹

a. Output and Value-Added Impact: Using the IMPLAN model for economic impacts, AFT calculated total output impact for Skagit County agriculture in 1998 at \$303,848,000. This supports more recent data reported for 2000 showing economic output impact at \$370 million.²² Total value-added impact for 1998 was \$130,533,000. While these two figures represent largely independent impacts on the local economy, taken together, 2000 output and 1998 value-added impact come to over \$500 million in traditional economic impacts from local agriculture. Output includes impacts of investments in producing the farm product (e.g. farm implements, seed, fertilizer & chemicals, support services.). Value-added impact estimates economic impact after production is complete. Value-added also includes farm proprietor and employee wages, business taxes, and rental income received by farmers. The 1998 data is charted as below:



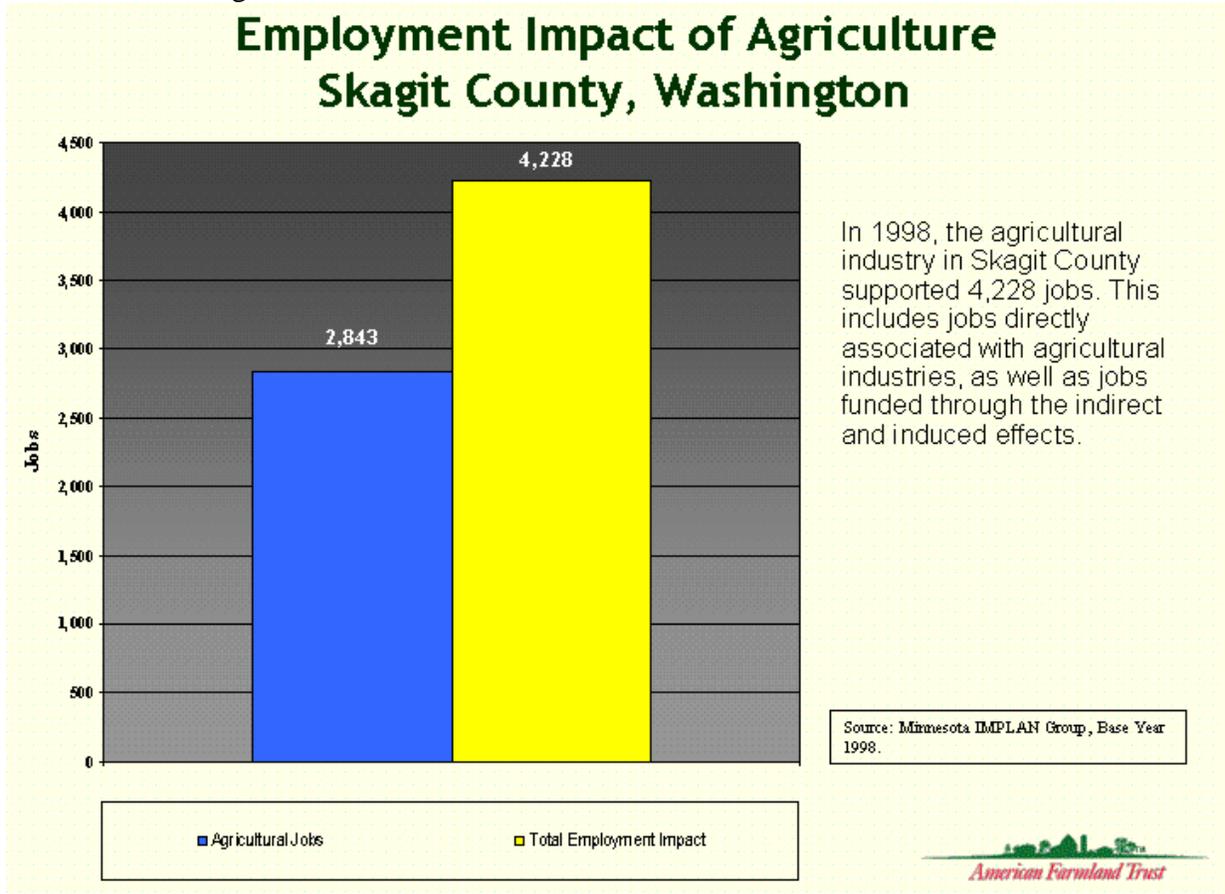
Total output impacts include direct output as well as indirect and induced effects. Value-added impacts include proprietors income, employee compensation, other property income, and indirect business taxes, as well as the additional amount that is generated through the indirect and induced effects. Direct output is total industry production for a given year. It is equal to shipments plus net additions to inventory. Indirect effects describe the interaction of local industries purchasing from local industries and induced effects are the interaction of institutions—typically household spending.

²¹ The Critical Areas Ordinance Draft Programmatic EIS reports direct and secondary effects at approximately \$370 million for 2000 (p. 14). Table 4 of that report shows total direct and secondary output totaling \$444 million (p. 17).

²² Critical Areas Ordinance EIS, supra note 9, vol. 2, pg. 18-19.

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b. Employment Impact: The same analysis using IMPLAN modeling produced an employment impact of 5,650 full-time jobs in 2000, of which 3,300 were directly in agriculture.²³ In 1998, this employment impact was 4,228 full-time jobs of which 2,843 were direct agricultural jobs.²⁴ The following chart reflects the 1998 data:



Indirect effects describe the interaction of local industries purchasing from local industries and induced effects are the interaction of institutions—typically household spending.

²³ Critical Areas Ordinance EIS, supra.

²⁴ Note that this is prior to the job losses resulting from the closure of National Frozen Foods in 2001.

5. Fiscal Effects on Local Tax Revenues

In 1999, AFT completed a cost of community services (COCS) study of Skagit County for Skagitians to Preserve Farmland.²⁵ COCS studies compare average municipal costs and revenues for different categories of land use. Our 1999 study found that for every \$1 paid in taxes by farm and forestlands in Skagit County, those properties receive 51 cents in community services. By comparison, for every \$1 paid in taxes by residential development properties, those properties receive \$1.25 in community services. Commercial and industrial development also pay more in taxes than they receive in community services, receiving, respectively, 34 cents and 29 cents in services for every \$1 paid in taxes.

The findings suggest that residential development must be balanced with commercial, industrial, and natural resource land uses for Skagit County to maintain fiscal stability. Otherwise, the County may be unable to continue the same level of service without raising taxes. Special attention is needed to natural resource lands because they tend to be converted to housing first and most frequently. Unlike industrial and commercial lands, acreage in natural resource use is usually shrinking – and as it shrinks, it constantly shifts the fiscal balance away from surplus and toward deficit.

Skagit County is a half-hour commute south to Everett, WA, and a one-hour commute to Seattle, WA, with similar distances to Bellingham, WA, and Vancouver, BC to the north. Because it is so near these rapidly growing urban and employment centers yet still retains a relatively rural, agricultural setting, its farmers are facing significant development pressure. Much of this is residential development pressure created by from long-distance commuters, retirees, and recreational property buyers. The 1999 COCS study strengthened the Skagit County community's determination to continue efforts to protect local farmland by improving understanding of how farmland can be a good fiscal investment for local governments and taxpayers.

6. Non-Traditional Economic Impacts of Agriculture:

The financial contributions of agriculture as an industry are only a part (albeit an important part) of the issue. When we lose agricultural businesses, we also lose farming as a valued contributor to the quality of life in our communities, to our landscapes, and to the environment. It is important, therefore, to consider the probable alternatives to agriculture and to think about the impact they would likely have on our quality and cost of living.

a. Some basic facts about the Skagit River Watershed and Skagit County Agriculture:

To help place this county in perspective, it is worthwhile to know some basic facts about the significance of the Skagit Valley Watershed and about Skagit County's farms:²⁶

- The Skagit River is 120 miles long.
- The Skagit Watershed drains over 1,700,000 acres of land.
- Skagit County contains approximately 93,000 acres of active agricultural land.²⁷
- The Skagit is the largest watershed in the Puget Sound Basin, providing over 30 percent of all

²⁵ The full study report is available as a .pdf document online at: http://www.farmland.org/pnw/Skagit_County_COCS.pdf.

²⁶ The information below, unless otherwise indicated, was taken from the Skagit River Journal website, at: <http://www.geocities.com/skagitjournal/SkagitRPresent.html>.

²⁷ USDA/NASS Census of Agriculture, 1997. See: <http://www.nass.usda.gov/census/census97/profiles/wa/wap029.pdf>.

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fresh water that flows into Puget Sound.

- The Skagit Watershed is home to eight species of seagoing fish, comprising about 30 percent of all anadromous fish entering Puget Sound.
- The land within the Skagit watershed is 82 percent forest, 15 percent rangeland and farmland, 2 percent lakes or streams and 1 percent developed areas.
- The watershed is home to more than 250 wildlife species, including 174 birds, 73 mammals, 25 fish, 17 amphibians and 10 reptiles.
- The Skagit River supports one of the largest wintering populations of bald eagles in the continental United States.
- The Skagit watershed boasts 394 glaciers, 387 lakes, 35 major tributaries, 5 dams and 32 towns.
- About half of the world's beet and Brussels sprout seed are grown in the Skagit Valley as are 50 percent of the U.S. supply of cabbage, parsley, and parsnip seed, and 90–100 percent of the U.S. supply of Chinese cabbage, Chinese kale, Chinese mustard and Brussels sprout seed.²⁸

In other words, while this report focuses almost entirely on economic impacts upon and within Skagit County, the actual impacts of losing Skagit County's farms would potentially be felt throughout the Puget Sound area and the Pacific Northwest, and in some respects, throughout the country.

b. Identifying the non-traditional economic impacts of agriculture:

On February 12, 2003, our discussion/focus group, described in **section 2**, above, was asked to consider these issues and to help identify and describe some of the non-traditional impacts for the agriculture industry in Skagit county. This group was asked to consider the following:

- What comments are appropriate on the economic profile and economic impact materials contained in this report?
- What are the impacts on Skagit County tourism?
- What are the fiscal impacts?
- What are the environmental impacts?
- What are the quality of life impacts?
- How are these issues interdependent and what are the economic and other relationships?

This discussion was led by Bob Rose, Executive Director of Skagitonians to Preserve Farmland. The following is a summary of the resulting comments of this group and represents an informed view of the local farming industry from people in a position to understand its impacts. (The full outline of questions discussed by the group is included in Appendix A.)

Comments on the hard data: Members of the group commented that United States Census of Agriculture is poorly designed for the needs of a diverse agricultural community like Skagit County. It fails to capture a good part of the value of local agriculture production – the whole farm production of a substantial farming operation can, as it does for one of the participants, fall in the “other” category in the USDA-NASS Census. It is difficult to accurately capture the diverse crops and farming styles found in the Skagit Valley with a standard, national survey.

²⁸ 1999 Skagit County Ag Stats, (Washington State University Skagit County Cooperative Extension, compiled by Dyvon Havens, Horticulture Agent. Supra note 1).

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The 714 farms listed in the statistics seemed a high number to participants. The feeling was that many of these were probably small farming operations.²⁹ It was also noted that the combined production of these small farms is a substantial contributor to total production. Many of these 714 farms may be intensive operations, producing a large dollar value per acre, even though the acreage and total dollar sales may be small. It was also noted that there are advantages to having many farms in a community and many products in the market. This diversity helps support the local farm economic infrastructure and provides incomes spread broadly through the farming community. These farms are important even if they only represent a 2nd income for many of the people involved.

The increase in direct market agriculture – goods sold at roadside stands, farmers markets, or in ag tourism operations, is not captured well in traditional ag statistics. Yet, nationwide, this is the most rapidly growing segment of the agriculture industry. This is a direction increasingly taken by farmers in areas with rising urban pressure, and these sales are substantial contributors to the local economy. The ag statistics reflected in these reports, therefore, probably understate the real economic impacts of agriculture.

Tourism: Tourism generates substantial revenue for Skagit County annually. Every April, for example, between 300,000 and 500,000 people attend the annual Skagit Valley Tulip Festival, an event made possible by Skagit County tulip and other farmers. It has been estimated that this event generates an annual direct economic impact of \$15.3 million plus secondary impacts of \$6 million and \$0.9 million in labor income.³⁰ This activity and revenue would not be possible without farms and farmers.

Agriculture is a central necessity for the success of the local tourism industry, creating an authentic, identifiable sense of place that can be appreciated by tourists year round. Fewer and fewer communities can boast this local rural authenticity. Agriculture puts a face on the community.

Owners of bed and breakfast (B&B) operations commented that even a small, 3-room B&B operation, for example, may easily serve 800 to 1000 individuals each year. A slightly larger one would easily serve 2,500 people. An overnight stay will almost certainly result in the purchase of dinner at a local restaurant, as well as other spending in the community.

These revenues would not be possible were it not for the scenic values provided by our farming operations.

The group also noted that tourism is more of a burden than a benefit for most farmers. Traffic jams occurring during tulip season, for example, can be a substantial inconvenience. Yet the economic value of this tourism is a definite benefit to the community and results, at least in part, from the presence of an authentic agriculture industry.

The focus group also discussed the likely relationship between tourism and growth. At \$4,500 per acre average value (land and buildings), an average 40-acre farm would sell for \$180,000. This is easily within reach for a great many urban earners who are capable of bidding these prices up well above what a farmer can afford to pay. (Skagit County's agriculture zoning parcel size is 40 acres.)

²⁹ The Census of Agriculture treats \$1,000 in total farm sales as the minimum financial qualification for a "farm."

³⁰ Critical Areas Ordinance EIS, supra note 9, vol. 2, pg. 22.

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This creates a double threat. Urbanites come here as tourists and then stay because they like it so much. Demand for real estate is going to get stronger and stronger as it becomes easier for people to live and recreate at longer distances from employment centers.

Skagit Valley is a jewel caught between the two huge metropolitan areas of Seattle and Vancouver, BC. Its farmland provides, in effect, a park that urban residents can come to and play in that is only a short drive away. This is a huge asset that needs to be valued appropriately.

Culture, Open Space, Quality of Life: Members of the group commented that local agriculture provides important connections between people and their food – a connection increasingly tenuous with less than 2 percent of our population engaged in agriculture nationwide. Farmers markets, for example, provide an important link between an increasingly urban population and their food supply. The absence of local farmers and the loss of farmers markets would subject people to increasingly industrial and monolithic food sources and deprive us of opportunities to directly relate to those who produce our food. It would be difficult to replace or to substitute for this loss. Our food system is not set up to deal with local product, so as we lose local product, it becomes more and more difficult to make these direct connections that are so important to our quality of life.

It was suggested that the same aesthetic values that contribute to tourism also improve quality of life for local residents, increasing the desirability of living in Skagit County. The group believes that without local agriculture, the quality of life in Skagit County would greatly diminish. These values also enhance property value for every resident and landowner in the county. While property values go up as population pressure increases, an important component of property value is the desirability of the property (e.g. views, surrounding open space.) and the desirability of the community (e.g. a rural, agricultural community with abundant wildlife, recreation, limited traffic, slow rural pace.)

Participants referred to studies that show a positive linkage between open space and health thus reducing health care costs. This was a benefit of local agriculture in addition to the health advantages of fresh, safe, locally grown food.

Skagit County also has a strong dairy industry. This sector of agriculture plays an important role in supporting the agriculture infrastructure 365 days a year. Like the rest of local agriculture, dairy farmers are a powerful link to an agricultural heritage that is a part of our history and culture and is an important part of the identity of this community. The loss of these cultural roots would have a profound impact on the community and on its self-perception. Once lost, this would be impossible to replace.

Environmental Benefits: The focus group also discussed the substantial environmental values provided by farms that are not generally captured in economic statistics, but whose loss would result in incalculable financial cost to all of us. Well-managed farmlands detain and prevent flooding. They recharge aquifers protecting fresh water supplies and improving low summertime stream flows. This, in turn, improves stream temperatures and water quality. Well managed farms also filter surface waters, removing non-point pollutants and improving water quality. And they provide habitat and wildlife migration corridors, linking our public lands together in a comprehensive network as well as linking them with rivers, streams, estuaries, and other waterways.

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These environmental services have an important long-term economic value even if that value is not recognized in the current marketplace.³¹

The group expressed the belief that many opportunities for protecting environmental values generally disappear or become costly once lands are urbanized. A study last fall by the National Marine Fisheries Service found that 88 percent of coho returning to two restored urban streams in Seattle died before they could spawn. In contrast, the death rate for coho returning to a rural stream near Darrington was less than one percent.³² Nearly every criteria for healthy salmon habitat—water quality, aquifer recharge, flood detention, or riparian health—becomes largely unattainable when farms are developed.³³ For example, impervious land cover exacerbates runoff and pollution, with parking lots generating almost 16 times more runoff than a meadow of comparable size.³⁴

It was also suggested that there is a delicate balance between the environment and agriculture in Skagit County. A sizable percentage of the currently productive farmland in the Skagit Valley is below high tide and is protected by floodgates in areas of environmental sensitivity. These sensitive areas often end up the places that remain for agriculture after less vulnerable areas with higher development value have long since been committed to non-agricultural uses. Thus the environmental burdens of the farmers who end up there are, indirectly, everyone's responsibility.

It was also pointed out that Skagit County is an excellent place to conduct environmental education at the landscape level. It is one of the few places left in Western Washington where one can teach about wildlife values, see birds and wildlife in near-natural habitat, teach environmentally sustainable gardening, and otherwise educate on ecological issues. Local environmental education agencies themselves contribute economic value to this community that would not be a usual part of the calculation of the economic benefits of farms.

Recreation, Fishing, Hunting, Wildlife Viewing & Eco-Tourism: It was estimated by one of the participants that there may be at least \$500,000 in annual direct sales in Skagit County resulting from hunting and fishing and other outdoor recreation. Probably the figure is higher; a recent report estimates the economic output of marine recreational fishing alone, on Skagit River stocks, at \$9.4 million.³⁵ There are hunters that pay \$2,500 for a single guaranteed hunt for birds on private lands. This is a potential source of revenue for landowners and is also an indicator of economic value and potential future business.

Additionally, wildlife viewing is a huge, growing industry. Bird watching and gardening are currently America's two largest leisure time activities, with wildlife viewing representing the largest total spending (more than gardening). The dollar value both of the actuality and of the potential for future value from this activity could easily dwarf the dollar productivity of normal agricultural production alone.

³¹ See, generally, Nature's Services: Societal Dependence on Natural Ecosystems, edited by Gretchen C. Daily (Island Press, 1997).

³² *Seattle Post-Intelligencer* (February 6, 2003).

³³ Pricing Growth, 1000 Friends of Washington, Nov. 2001, pp 10-11

³⁴ U.S. Department of Housing and Urban Development, State of the Cities Report.

³⁵ Critical Areas Ordinance EIS, *supra* note 9, vol. 2, pg. 28.

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Overall, wildlife viewing is an estimated \$2.2 billion industry in Washington.³⁶ A substantial portion of the value and potential in this industry has to be generated in places like Skagit County, places with such a strong wildlife habitat. Much of this habitat, much of the opportunity to view wildlife, and much of the future business potential here, is provided by our farmers.

Skagit County farmers actively support and encourage wildlife. They provide the open fields and spaces for wildlife to migrate and to collect. They often plant crop rotations designed to provide feed for wild birds like snow geese – often sacrificing other production values to do so, acting out of their own respect for wildlife and sense of community spirit. They provide off-street parking for tourists to view the birds. They do this even though the visitors who come to see the wildlife often make their farming activities inconvenient and create a variety of problems. Wildlife can be thought of as a crop much like cattle, corn, or carrots. It is often easier for a farmer to stop the active support of wildlife, and doing so often makes farming easier. Yet the farmers continue to support wildlife – a service that would end if agriculture substantially diminished in Skagit County or if the public does not understand the issue and does not support farmers. If it were possible to translate the value of the wildlife into financial opportunities for the farmers who support them, the economic position of agriculture would be greatly enhanced. These uncompensated values need to be included in our consideration of the economic impact of Skagit County agriculture.

c. Quantifying non-traditional economic impacts of agriculture:

The non-traditional economic impacts identified by the discussion group are difficult or, at times, impossible to quantify. But that doesn't mean they do not have economic value. Many of these values may well be large enough that they are every bit as economically significant as crop production and direct market impact. How can we begin to get at least a general feel for the dollar impacts of some of these non-traditional economic values?

An excellent review of the current state of knowledge on this topic was provided in the Skagit County Critical Areas Ordinance Draft Programmatic Environmental Impact Statement of February, 2003.³⁷ Some of the important data compiled in that report, include the following:³⁸

- **Tulip Festival:** The annual Skagit County Tulip festival brings between 300,000 and 500,000 visitors to the county every year. Direct spending by these visitors in 2000, when an estimated 350,000 visited the county, amounted to \$14 million, accompanied by \$2.8 million in wages, \$192,000 in local tax revenue, and \$848,000 in state tax revenue.
- **Agro-tourism:** The estimated direct economic impact of agro-tourism activities amounts to \$15.3 million annually. Secondary impacts of agro-tourism include \$6 million in output and \$0.9 million in labor income.
- **Commercial and Tribal fisheries:** Commercial and Tribal fisheries on Skagit River and Samish River salmon stocks produce direct and secondary economic impacts of \$1.9 million annually.
- **Recreational fisheries:** Marine recreational fisheries on Skagit and Samish stocks produce direct and secondary output of \$9.4 million annually. Freshwater recreational fisheries on these stocks produce direct and secondary output of \$1.5 million annually.

³⁶ See note 34, below.

³⁷ See note 9, supra.

³⁸ The following materials are taken from Critical Areas Ordinance EIS, supra note 9, vol. 2., pgs. 21-33. See note 9, supra.

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- **Wildlife watching:** With roughly 500,000 persons visiting Skagit County annually for wildlife viewing, expenditures by wildlife-watchers provide direct and indirect economic impact of \$43.2 million annually.
- **Hunting:** Some 5,339 hunters spent an estimated 36,400 days hunting in Skagit County in 2001. The total economic output for this activity has been estimated at \$4.2 million.

Together, the above activities alone represent an additional \$100 million in indirect economic effects of local agriculture. All of them would either disappear or be dramatically affected by the reduction or loss of Skagit County agriculture. Farmers are not compensated for providing these and other important values. Rather these services are a part of their stewardship on their own lands. There is no market mechanism that financially supports their continuation – rather their existence is largely taken for granted.

d. The need for further research and some informed speculation:

There is obviously a need for further research to better define and measure the values agriculture contributes to this local community. Without such research, there is a clear danger that policy decisions will ignore them and the magnitude of their loss will not be appreciated until it is too late. Even the estimates we do have seem still to understate these impacts.

It is worthwhile, therefore, to struggle for at least a general notion of how these values might be measured in dollars. This suggests that we might engage in a little informed speculation. For example:

1. If about 30,000 of the 103,000 current residents of Skagit County³⁹ owned a home with an average value of \$100,000, all this residential real estate would have total value of about \$3 billion. If the existence of Skagit County's agriculture industry adds an average of only 1% to these property values, that would mean that agriculture currently contributes some \$30 million in market value to local residential properties alone.
2. If the total current-use taxable value of agricultural lands in Skagit County amounts to \$100 million⁴⁰ a levy rate of \$10 per \$1000 in value⁴¹ would produce tax revenue of \$1 million per year. Given the \$.49 per \$1 surplus generated by these lands (shown by the 1999 COCS study), the tax surplus generated for Skagit County local governments would approach \$500,000 annually.
3. If the 5-year direct government cost of salmon recovery projects on the Skagit River, currently estimated at \$54 million,⁴² were just doubled because of the loss of agricultural lands to development, that would add \$54 million to those direct governmental expenditures in the next 5 years. This does not include the much larger indirect costs that would also be borne by the public through more rigorous environmental regulation of their activities.

³⁹ According to the Skagit County website, the current population is 103,478.

<http://www.skagitcounty.net/common/asp/default.asp?d=Home&c=General&p=about.htm>.

⁴⁰ Multiplying the values reflected in section 3-f, above, Per-Acre Value of Land and Buildings, and section 3-c, Land in Farms, taken from the 1997 USDA-NASS Census of Agriculture, the total 1997 value of land and buildings in Skagit County Agriculture is \$434,284,275. ($\$4,645/\text{acre} \times 93,495 \text{ acres} = \underline{\$434,284,275}$ in total 1997 value of land and buildings).

⁴¹ See Skagit County website demographic information on local taxes located at:

<http://www.skagitcounty.net/common/asp/default.asp?d=Home&c=General&p=about.htm>.

⁴² Marina Parr, Price Tag to Much for Skagit County?, Skagit Valley Herald (03/25/01), <http://www.salmoninfo.org/news/skagit.htm>.

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4. If 500 bird hunters who might otherwise have paid \$1,250 each to shoot a game bird in Skagit County,⁴³ instead went elsewhere to spend this revenue because the farm needed to generate this revenue was unavailable here, that would be a future loss to the Skagit County economy of **\$500,000**.

The above examples suggest a few ways in which one might think about the problem of valuing this industry. These examples highlight how little we actually know about what we will lose should farming disappear. Yet even these examples probably ignore some of the truly significant costs that would be suffered were agriculture to disappear.⁴⁴

7. Conclusions:

The combined annual economic output⁴⁵ and value-added⁴⁶ impacts of Skagit County agriculture are \$500 million and rising.⁴⁷ With the real dollar value of production rising over time in the face of an eroding land base, this is clearly an industry that has a capacity for growth. There are at least 3,300 people engaged in full-time equivalent employment directly in agricultural activities, and at least 5,650 people, engaged in employment generated overall by the local agriculture industry.

The fiscal impact of agricultural land uses on Skagit County local government is positive. For every \$1 collected in taxes on agricultural lands in Skagit County, only 51 cents in community services is provided by governments, thus producing a 49 cent surplus in revenue to support government services provided to other local taxpayers. By comparison, for every \$1 collected in taxes on residential lands in Skagit County, governments must provide \$1.25 in community services. Skagit County farmers thus provide a significant tax benefit for other local taxpayers.

Moreover, traditional economic and fiscal analyses probably greatly underestimate the real economic impacts of agriculture. This is an industry whose effect on the economy is difficult to measure in the same way one measures impacts of most other industries. Nonetheless, there have been credible estimates made of some of these non-traditional annual impacts, including:

- Tulip Festival - \$17.8 million
- Agro-tourism - \$22.2 million
- Commercial and Tribal fisheries - \$1.9 million
- Recreational fisheries – \$9.4 million saltwater; \$1.5 million freshwater
- Wildlife watching – 43.2 million
- Hunting - \$4.2 million

These suggest that at least another \$100 million annually must be added to any traditional economic analysis. Moreover, while unequivocal statistical information to quantify some of the additional impacts (e.g. cultural, environmental, quality of life, recreational, tourism, etc.) is not available, there is sufficient basis to conclude that additional “non-traditional” economic impacts of Skagit County agriculture may very well equal or exceed the output and value-added impacts produced through traditional economic analysis.

⁴³ In our focus group discussion on 2/12/03, it was indicated that \$2,500 for a guaranteed bird hunt on private land is currently being paid by many hunters in other locales.

⁴⁴ See, generally, authorities cited at supra note 2.

⁴⁵ \$370 million in 2000.

⁴⁶ \$130 million in 1998.

⁴⁷ See section 4-a above.

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Thus Skagit County's agriculture industry contributes over \$500 million annually in local traditional economic impacts plus at least another \$100 million annually in non-traditional impacts for a conservative total local economic impact of over \$600 million annually. Given that most of the non-traditional impacts cannot be reasonably measured and are, therefore, not included in these calculations, the real impact of Skagit County agriculture on the local economy is probably a great deal higher.

APPENDICES:

- A. Issues for discussion by Economic Impact Focus Group**
- B. AFT Staff Profiles – Andy Andrews, Don Stuart**

Appendix A

Issues for discussion by Economic Impact Focus Group

- Review and comment on the economic profile and economic impact materials and to consider:
 - a. Are they complete? (What contributions by the ag industry are missing? What seems under or over-reported? What is poorly described or seems mischaracterized? Etc.)
 - b. What other components of agriculture ought to be considered in evaluating the economic contributions of the industry?
- Impact on Skagit County tourism:
 - a. What do we know or believe to be true about the contributions of Skagit County agriculture to the county's tourism industry? Hotels, restaurants, gas stations, other?
 - b. What would be the impact if agriculture disappeared – both economic and social?
 - c. How can we describe the “values” can be placed on the availability of Skagit County's tourism (both economic and social)? For whom are these values important, both inside and outside the county? Is there existing literature or are there other credible sources of authority or documentation that could help make these values more concrete?
 - d. What specific examples, people, or ”cases” exist in Skagit County of people for whom tourism supported by local agriculture is (or was) important? Who are the people involved? Where are they? Can we contact them or use their stories in our report? Are photos or other graphic representations possible?
 - e. To what extent can we quantify these values in dollar terms? Is there a logical way to do this or even to form a credible speculation about such quantities?
- Fiscal Impacts:
 - a. What, if any, impact has the Cost of Community Services Study had?
 - b. To what extent might it be possible to extrapolate some fiscal contributions to government that have resulted from lands that have stayed in agriculture rather than falling to recreational, retirement, or other residential development for which no strong, local, industrial development has emerged.
 - c. Are there other ways in which the existence of agriculture contributes to the fiscal health of Skagit County?
- Environmental Impacts:
 - a. What environmental values (aquifer recharge, fish & wildlife habitat, water quality protection, flood water detention, etc.) do agricultural lands provide that will be lost when these lands fall to development?
 - b. How can we describe these values in concrete terms?
 - c. What specific examples, people, or “cases” exist in Skagit County of the importance of any of these values? Who are the people involved? Where are they or where can this be seen? Can we contact the people or use their stories in our report? Can any of this be demonstrated graphically or in photos?
 - d. To what extent or in what way can we quantify these values? What literature exists that might help us assign dollar figures to the values themselves?
 - e. How might we assign dollar values to the fiscal savings they represent for government in what would otherwise be costly new environmental infrastructure to support new population and development?
- Quality of Life Impacts:

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- a. What quality of life contributions (open space, cultural heritage and rootedness, community self-identity, community external identity, etc.) do Skagit County farms provide?
 - b. How can we best describe these values in concrete terms?
 - c. What specific examples, people, or “cases” exist in Skagit County of the importance of such values? Who are the people involved? Where are they or where can this be seen? Can we contact the people or use their stories in our report? Is there anything that could be photographed or otherwise graphically demonstrated?
 - d. Is there literature in existence in Skagit County or from elsewhere that can be referenced to highlight or demonstrate these values?
 - e. Can dollar values be assigned here? What are the tools? Is there literature on this?
- Interdependence and economic and other relationships:
 - b. How might the removal of any one component of the network of economic or social relationships from the overall Skagit County agriculture support structure have a ripple effect and create more damage than what might otherwise be anticipated?
 - c. What are the social relationships, institutions, places, systems, that exist within the ag community or between the ag community and other parts of Skagit County that might be vulnerable and whose loss might have significant consequences?
 - d. To what extent is there an “exchange economy” within the Skagit County ag industry?
 - i. Do farmers trade services, products, land, equipment, or other values between themselves and with others in the community?
 - ii. How might we place dollar values on these exchanges?
 - iii. Is there literature upon which to base estimates/speculation about these dollar values?
 - iv. How might we describe these values and exchanges in concrete terms?
- Are there specific examples, people, cases, etc. that we could reference or describe? Who are the people with whom we could communicate to learn more?

Appendix B **AFT Staff Profiles**

Andy Andrews

Andy Andrews is an economic specialist for American Farmland Trust. In this role, he conducts fiscal and economic analyses for communities that are trying to build support for farmland protection. His work includes build-out analyses, Cost of Community Services studies and agricultural industry profiles. He helps develop, deliver and manage these projects. He is currently overseeing a series of studies on the Delmarva Peninsula in the mid-Atlantic, as well as other studies throughout the country.

Prior to coming to AFT, Andrews worked in Dutchess County, N.Y. He helped the county's Environmental Management Council inventory and map cultural, historic and scenic resources for the Town of Stanford, N.Y. He also assisted the county's Department of Planning and Development in creating a database of historical sites and conducting a rental housing survey.

Andrews also worked for New Hampshire 20/20, an organization that provides training to elected town officials, focusing on how to involve the public in governmental processes. He worked on an organic dairy farm in New Hampshire and served as an apprentice at a sustainable forestry school in Nova Scotia.

Andrews has a bachelor of science degree from Virginia Military Institute and a master of science degree from Antioch New England Graduate School.

Don Stuart

Don Stuart is director of American Farmland Trust's Pacific Northwest Regional Office. He works with communities and farmers in Washington, Oregon and Idaho to establish programs for farmland protection and stewardship. He also oversees research projects, policy initiatives and land projects in the region. He is working with several groups to increase support for farming and environmental enhancement, raise public awareness about the common values shared between farmers and environmentalists, and engage urban and rural leaders in forums to develop farmland protection and stewardship strategies. He also is developing a major research project to define and measure the "critical mass" of farm infrastructure needed in a community to sustain a healthy agricultural economy.

Prior to joining AFT, Stuart was the executive director for the Washington Association of Conservation Districts. At the association, he worked with state legislators, farm groups and environmental groups to create programs and policies designed to improve water quality and habitat for salmon and other wildlife and strengthen the delivery of conservation services for private agricultural landowners.

Stuart has also been owner, builder, and skipper of an Alaska commercial fishing vessel, executive director of a commercial fisheries trade association, manager of a statewide initiative defense, a United States Congressional candidate, author-publisher of a legal education research index, and a Seattle attorney.

He attended Washington State University and the University of Washington, where he received a bachelor of arts degree in political science in 1965 and a law degree in 1968. He is a native of Washington state and lives in Seattle.