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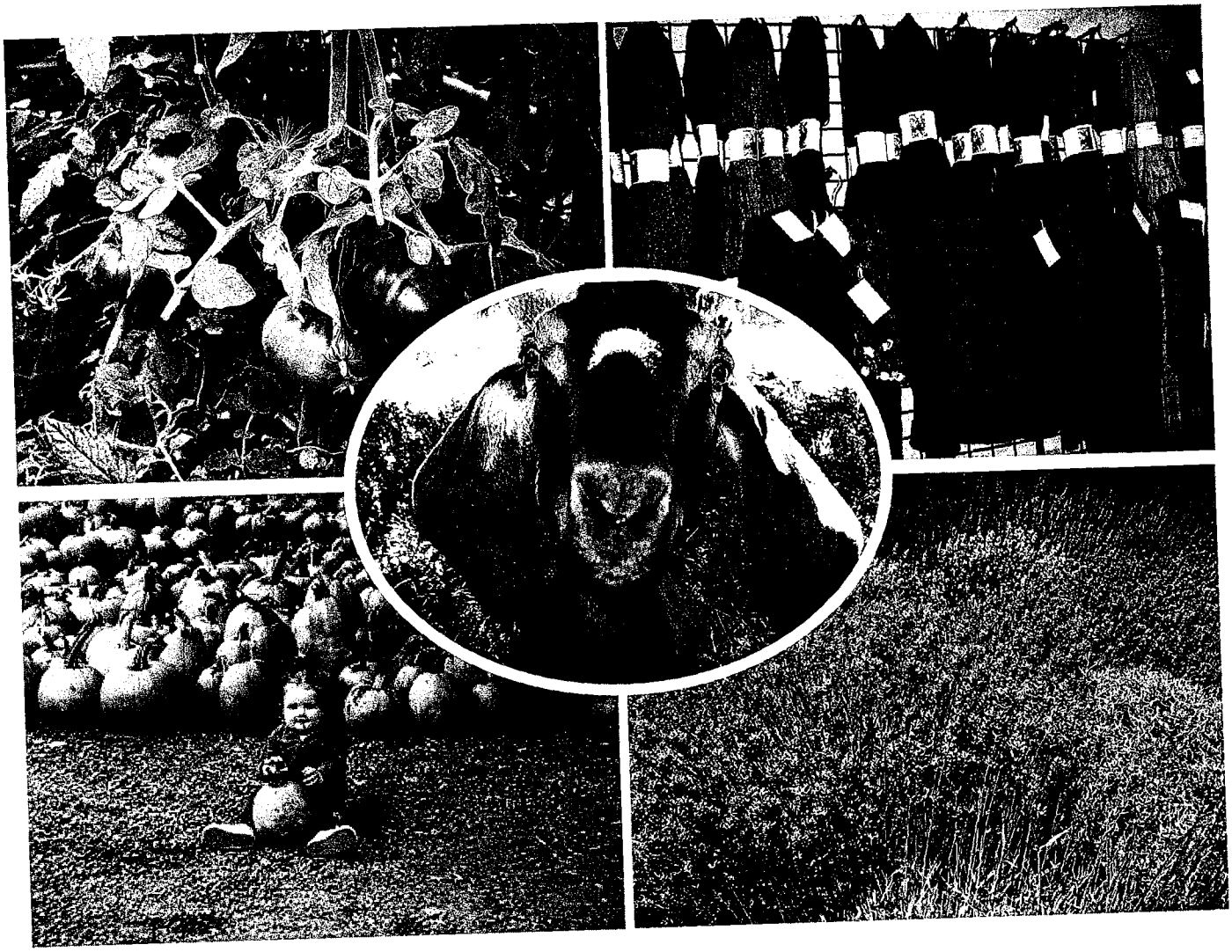
2010-084

FARMS Report

ATTACHMENT A.

Future of Agriculture, Realize Meaningful Solutions



December 2009

King County
Department of Natural Resources and Parks
Water and Land Resources Division

FARMS Report

Future of Agriculture, Realize Meaningful Solutions

December 2009

This report was prepared jointly by

King County

Department of Natural Resources and Parks
Water and Land Resources Division
Agriculture Section
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http://www.kingcounty.gov/environment/wlr/agriculture-program.aspx

and the King County Agriculture Commission.

Partially funded by the King Conservation District.

KING COUNTY AGRICULTURE COMMISSION - 2009

Mission Statement:

The King County Agriculture Commission, working with citizens, agricultural producers and public officials shall actively influence regional policy to preserve and enhance agricultural land; support and promote a viable agricultural community; and educate the public about the benefits of local agricultural products.

The Agriculture Commission gives farmers the opportunity to take an active role in land use decisions and in the development and evaluation of policies, regulations, and incentives that affect commercial agriculture in King County. The commission consists of up to 15 members who are appointed by the County Executive. Eight of the commissioners must be engaged in the business of producing an agricultural product for market in commercial quantities. All members serve three-year terms.

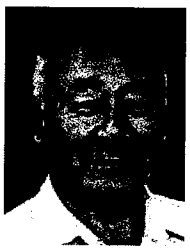
The Agriculture Commission represents the diversity of the agricultural economy, various agricultural operations, and the regions of King County. Besides farmers, the commission includes others experienced in support activities such as agricultural real estate, food and feed processing, wholesale and retail marketing, direct marketing, and finance.

Commissioners meet once a month to discuss and make recommendations on issues brought before them by neighbors, landowners, private sector organizations, and staff from the county, Washington State University Extension, the King Conservation District, and other federal and state agencies. Through subcommittee meetings and field trips that are open to all interested people, the commission strives to meet the priorities that are determined by input from the agricultural community. In addition, they are happy to speak about King County agriculture to groups and agencies.

KING COUNTY AGRICULTURE COMMISSION - 2009

Nancy Hutto *Chair*
Operates an apiary based in the North Bend area and sells directly through mail order, farmers markets and fairs.

Micheale Blakely
Operates a mixed organic vegetable/animal farm in the Snoqualmie Valley. She operates a CSA and sells at many local farmers markets.



Ben Kodama
Now retired from producing greenhouse ornamentals, Ben brings a rich history of farming in this region.

Bob Tidball
Operates a small U-pick berry farm near Kent and has been a strong advocate for farmland preservation.

Roger Calhoon
Operates a mixed vegetable farm in the Sammamish Valley and is involved in U-pick and on-farm marketing.

Grant Davidson
Manages several farmers markets in Woodinville, Lake Forest Park, and Bellevue.

George Irwin
Operates a cattle ranch in the Enumclaw area and markets the animals mainly as breeding stock.

Ewing Stringfellow
Operates a Christmas tree farm and markets custom grass fed beef on his North Bend cattle ranch.

Judy Taylor
Operates a small livestock farm in the upper Green River Valley and uses the fiber from her animals to make finished rugs and wall hangings.

Larry Pickering
Lives on farm in the Snoqualmie Valley and is a veterinarian for the equine industry.

Ward Roney
Has farmed in the Snoqualmie valley for many years. Ward brings a wealth of experience and knowledge about farming in the county.

Bob Vos
Raises Limousin cattle on the Enumclaw Plateau. Bob is a strong advocate for farmers and property owners in the county.

PROLOGUE

A message from the King County Agriculture Commission

As King County farmers we have a lot going for us right now. Local food is gaining in popularity. From chefs to home cooks, more people are looking to local food because it is considered safer, superior in taste and quality, and healthier than mass produced and processed food. Urban and suburban residents are becoming more interested in how food is grown. More residents want to visit farms, pick their own food, and stop at roadside farm stands.

Within the cities, farmers markets are becoming important neighborhood amenities. Direct sales are placing products at the doorsteps of residents. Restaurants and grocery stores advertise their use of local agricultural products. The fruits and vegetables grown by King County farmers are a key element in overcoming challenges related to public health, carbon emissions, and climate change.

King County livestock and dairy farms are selling products that meet residents' demands for meat and dairy products that are organic, humanely raised, or hormone and antibiotic free. Customers with requirements specific to cultural or religious customs are turning to King County farmers. Pasture lands are being recognized for their benefits to the environment. Horse farms continue to provide recreational activities and economic benefits.

King County residents support local agriculture. Survey results show that the majority of the county's residents buy local products at least once a year, appreciate the numerous benefits provided by agriculture, and want the county to continue assisting farmers. This support is reflected in sales as the county's agricultural revenue has grown consistently over the last decade according to the U.S. Department of Agriculture's *Census of Agriculture*. During that same period, King County has risen to thirteenth of the 39 counties in Washington in terms of sales. The number of farmers markets has jumped from 12 to 41.

Despite these positive trends, agriculture in King County is facing a future that is uncertain. Agriculture in King County is as vibrant as it is today because of the efforts of King County Agriculture Commissioners, county programs and staff, agencies such as the King Conservation District and Washington State University Extension, farm advocates, and residents. The combined leadership and support provided by these organizations and programs has slowed the vast conversion of farmland that occurred in the last century. However challenges still remain. There are many issues that threaten the vitality of agriculture. These must be addressed so that a strong agricultural community can survive in King County.

The mindset of a farmer is durable. A farmer loves the land and the work he or she does. Each farmer is connected to the soil at their feet, the rain that falls on their crops, and the water that fills their troughs. Many have worked the land for decades and watched over the years as once distant cities have moved closer to their fences. Today farmers are threatened by forces beyond their control that often did not exist when many of them started their careers.

Population growth remains a major threat to local agriculture. As Washington State's most urban county, much of King County's farmland is adjacent to cities and urban areas. For farms this proximity brings increased traffic, nuisance complaints from residential neighbors, and proposals for alternative uses of the land. The potential, real or perceived, of rezoning farmland for urban uses can fuel speculative buying by developers and has pushed up land values. In addition, upslope development can exacerbate the effects of floods that inundate farmland, sicken livestock, reduce milk production, and damage buildings and equipment.

Climate change has the potential to profoundly affect farming in King County. These effects may include increased severity of winter flooding, higher summer temperatures, reduced availability of water for irrigation, increased pest risk, and changes in the types of crops best suited for growing in this area. While the viability of agriculture will depend upon its ability to adapt to climate change, agriculture can play a role in reducing the impacts of climate change. For example, best management practices, such as the use of cover crops and modified tilling methods, can mitigate the effects of climate change by retaining soil moisture and mitigate greenhouse gas emissions by sequestering car-

bon. Because of the shorter distance to market, locally produced food may reduce greenhouse gas emissions. The county's Comprehensive Plan calls for the county to prevent, mitigate, and adapt to climate change. For the agricultural community, this involves considering both how industry practices affect the climate as well as how future weather patterns will affect farming. For additional information on the impacts on agriculture from climate change see Appendix G.

Some of the federal, state, and county laws that protect water quality, wetlands, and threatened or endangered species may unintentionally function as a barrier to economically viable agriculture. Both agriculture and fisheries are threatened by growth and development. Interest groups supporting agriculture and salmon recovery share many common goals and must find ways to work together or the futures of both are at risk. Numerous efforts are underway to show that farms can provide improved water quality and habitat.

Farmland is increasingly unaffordable to new farmers. The Farmland Preservation Program and designation of the Agricultural Production Districts have preserved farmland, but have also made farmland an amenity that is attractive for large estate homes and other non-farm uses. As the current generation of farmers enters into retirement, it will take effort to ensure that the transition in ownerships keeps the land in agricultural production.

It is critical that King County, the cities, urban and rural residents, and the agricultural community continue to support local agriculture through policies, programs, regulatory support, and funding. Solving persistent problems and addressing new issues and threats will require a cooperative effort at all levels. Many of the threats to local agriculture are complex and involve numerous varied and important interests.

The agricultural community's hope is that King County's leadership in protecting agriculture will continue into the future. Things are going in the right direction with more farmers farming and more people benefiting from their products and services. In order to maintain this positive direction, we need to address the challenges facing agriculture in King County. The future of agriculture is dependent upon finding long-term solutions that can create a stable, predictable, and profitable agricultural industry in the county. We have accomplished much in the last few years, but there is hard work remaining.

Many of the challenges identified in this report do not have easy answers. Keeping farmland affordable, increasing food production, ensuring there will be a new generation of farmers, and reducing impacts from adjacent urban land uses are all challenges for which we have not identified solutions. We call for more effort and for getting others involved in the discussion

Critical Issues and Recommendations

This report describes a series of issues that are critical to the future of local agriculture. Each recommendation will entail work, coordination, partnerships, and funding to achieve.

I. Water

The management of water is critical to the survival of agriculture now and in the future. Farmers are challenged by too much water in the wet season, which causes wet fields and damaging floods, and by not enough water in the dry season for irrigation and stock watering.

Recommendations

- King County and the Agriculture Commission should continue to work with farmers, regulators, tribes, Water Inventory Resource Areas (WRIAs), and other stakeholders to streamline the permitting process for agriculture drainage maintenance while maintaining standards for environmental protection. The goal is a single, simple permit process that integrates the different levels of regulations. The process should allow farmers the ability to apply for permits and do the work themselves as needed at a reasonable cost.
- The Agriculture Commission and staff from the Agriculture Program, flood management, and DDES should continue to work together to implement the recommendations of the Farm Flood Task Force and to continue exploring ways to allow productive agriculture in flood zones while maintaining public safety. The options should consider incentives as well as regulatory changes.
- King County should address the need for agricultural irrigation by working with the Washington Department of Ecology, fisheries interests, and others to develop policies and, if needed, recommend legisla-

tive changes that could increase access to water for farmers in King County while improving the efficiency of water use.

II. Marketing and Economic Development

Promotion and marketing support is crucial for small farmers, whether they are selling directly to consumers or wholesalers. On their own, small farms do not have the resources or knowledge necessary for effective marketing and promotion. The increase in farmers markets over the past few years has been impressive, but continued success will require overcoming some of the challenges they face. Development of infrastructure and services at a scale that small farmers can access to expand their business will take cooperation and support.

Recommendation

- The Agriculture Commission and King County should work with cities and other stakeholders in 2010 to determine the best ways to provide for and fund marketing and economic development services similar to those that King County has been providing. Funding might include increased support from the cities, King Conservation District, other counties, and participating farmers.

III. Keeping Farmers Farming

Two of the most frequently mentioned topics in public meetings and surveys were land affordability and the regulatory environment. Farmers must be able to afford the land in order to farm and be able to develop the infrastructure required to create a profitable operation. Whether it is farm pads, barns, or processing facilities, farmers need a simple, cost effective, and easy to navigate regulatory environment to accomplish this.

Recommendation

- Establish and staff a new public-private task force to address the difficult issues of land affordability, farm succession, and new farmer support. This task force should report back to the King County Agriculture Commission, Executive, and County Council, with recommendations.

IV. Farmer Succession

According to the 2007 Census of Agriculture, the average King County farmer is almost 56 years old. Fewer younger people are entering agriculture as a career. Training and mentoring programs are important activities if there are going to be more farmers farming in the future.

Recommendation

- King County staff and the Agriculture Commission should work to develop a regional public-private coalition to guide and promote the intergenerational transition of farmers. The county should work with these groups to ensure political and financial support for these transitions, including sustaining the regional availability of experts, financial and political support of Washington FarmLink, the intergenerational transfer of farmland ownership, and the availability of credit.

V. Farm City Connection: the Food System

Over the past 40 years, the success of agriculture in King County has depended on the vigorous support from many active citizens who understood that it would take a combination of land use policies, financial support, and forward-looking programs from the county to ensure that farmland would remain in production and farmers would have the tools to be viable. In the 1970s, the campaign to save Pike Place Market and the passage of the farmland preservation bond initiative focused attention on these issues and galvanized political will to recognize the importance of agriculture to the county's future. In the early 1990s, a new style of neighborhood farmers market started in Seattle, which set the stage for increased visibility of farmers in the city and the beginnings of a renewed interest in locally grown food for all residents in this region. Today the value of local agriculture is even more appreciated than before while the continued growth of the urban population puts more pressure on agricultural land. Nurturing the farm-city connection is crucial to ensure the success of local agriculture, a healthy rural environment, and a better quality of life in the region.

Recommendation:

- Sponsor a conference or other public event in 2011 to promote the farm-city connection and better understanding of the food system. Seek co-sponsorships and planning assistance from a broad spectrum of governments, agencies and organizations.

PROLOGUE

VI. Financial and Inter-local Support

Commercial agriculture struggles to sustain itself economically in a metropolitan area like King County without government support and intervention—particularly in the face of changing competition and more profitable land uses such as industrial, retail and residential. A strategy that reconciles the financial reality created by shrinking budgets while preserving agriculture and its benefits is required.

Recommendations

- Enter into inter-local agreements with cities adjacent to agricultural areas to address the impacts of urbanization on agriculture, to preserve the rural environment, and retain agricultural uses.
- Broaden the base of financial support for local agriculture to include the county, the cities of King County, and other entities to develop sustainable financial support for agriculture, including evaluating new public-private partnerships.

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B. Kara Martin Thesis: Farmer's Perceptions of Farming in King County: The Challenges, Industry Trends and Needed Resources and Services
C. Consumer Opinion Survey
D. Community Partners Survey and Summarized Results
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K. Sno-Valley Tilth statement on the Future of Agriculture
L. King County Agriculture Programs
M. Postcard of meeting notice
N. Agriculture Friendly Regulations
O. Rural Economic Strategies

Layout: Sandra Kraus & Laurel Preston, Visual Comm. Specialists,
King County DNRP GIS, Visual Communications & Web Unit

File: 0912_FARMSreport.indd LPRE

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Introduction

The King County Agriculture Commission and the Department of Natural Resources and Parks (DNRP) hereby present the *FARMS Report (Future of Agriculture, Realize Meaningful Solutions),* to discuss the findings of our 2009 study on the future of agriculture in King County. The study's principal focus was to determine what measures should be taken to ensure the continued success of the agricultural economy in King County and to make recommendations to reduce barriers and provide needed support. It is our intention that it be used as guidance to King County and other agencies for the next ten or more years to help realize a viable future for agriculture.

This report is in response to Ordinance 16172, adopted in July 2008, which directed DNRP and the Agriculture Commission to prepare a report on the future of agriculture in the Agricultural Production Districts (APDs) of King County. The authors of the report are the Agriculture Commission and staff from the department's Agriculture Program. When we use first person in the report it refers to the combined voice of the commission and the Agriculture Program staff. We worked closely together to gather and analyze information, to develop recommendations, and to give a voice to the agricultural community.

The Department of Development and Environmental Services (DDES) and the King Conservation District (KCD) provided input throughout the process. We also asked for and responded to comments from relevant programs in King County. These programs and agencies may not necessarily agree with all elements of this report.

The report includes a description of agriculture in the county and in each of the APDs. Following that, we describe the major issues facing agriculture in King County today and recommend actions to address them. Most of the discussion and recommendations are about obstacles and challenges. Although we tried to include references to progress made, we did not necessarily include descriptions of all the programs and actions that have been successful and should be continued (for a description of the King County Agriculture Program see Appendix L).

Farming, like any other business, is affected by factors that cannot be controlled, such as commodity prices, the effects of climate change, and oil prices. The recommendations in this report apply to those factors over which the county may be able to affect the outcome.

Many of the issues identified in this report are addressed by the King County Comprehensive Plan (KCCP). As the primary policy document for all land use and development regulations in unincorporated King County, the KCCP provides direction, guidance, and actions for agriculture and the APDs. Policies from the current KCCP applicable to the *FARMS Report* are included within the text or as recommended actions.

The report focuses on the APDs, as called for in the ordinance, but we recognize the importance of agriculture in the broader rural area as well. There is a significant amount of agriculture occurring in the rural area outside the APDs. Most of the recommendations in this report are applicable to agriculture throughout the county.

The appendix includes multiple documents that provide additional background and detailed information gathered for the report. Individual appendix documents are referred to throughout this report. Due to their combined length, they are not included within this document. They are available on the web at www.kingcounty.gov/ag.

I. Study Approach

Using existing work as a foundation, the Agriculture Commission and the Agriculture Program sought input from farmers, partners, and the public through meetings and surveys and gathered data from various sources. The results of these efforts were used to frame the issues and to make recommendations.

Ten Year Vision

The *FARMS* study built on efforts already underway. In 2007 and 2008, the Agriculture Commission drafted a *Ten Year Vision* to guide its annual priorities. The development of the vision involved hearing from many individuals and groups: local farmers, agencies and partners, flood-affected farmers in the Snoqualmie Valley, Sno-Valley Tilth, and experts on climate change. The *Ten Year Vision* was ready for larger circulation when the King County Council asked for this report. The *Ten Year Vision* can be found in Appendix A. The Agriculture Commission and staff decided to use the *Ten Year Vision* as a starting point and organizing framework for an expanded effort that led to the findings and recommendations in this report.

Farm Meetings and Surveys

An important element of the *FARMS Report* was hearing directly from farmers and the public regarding the future of agriculture. In early 2009 we held public meetings in each of the Agricultural Production Districts (APDs) and on Vashon-Maury Island. Each meeting was facilitated by an Agriculture Commissioner from the area who was familiar with the attendees and the issues particular to that APD. Participants were asked about their operations and plans for the future and to provide their opinions on the *Ten Year Vision*. More than 200 people attended these meetings.

Farmers could respond to a written survey that was distributed at the meetings. The survey was also available online. Ninety farmers responded to the written survey.

A University of Washington graduate student, Kara Martin, compiled the comments from the meetings and the responses to the surveys. She analyzed the results for her master's thesis. Kara's thesis, including all the verbatim comments from the meetings and farmer surveys, is included as Appendix B.

A separate questionnaire for non-farmers was provided at the meetings. Although the majority of attendees at the meetings were involved in agriculture, about 30 non-farmers responded to the questionnaire. In addition, the farmers from Sno-Valley Tilth asked their customers to submit their opinions regarding the future of agriculture in the county. About 220 people responded to this request.

Consumer Opinion Survey

King County contracted with a consultant to gather opinions from the county's residents on farming in the county. Conducted in March 2009, the survey consisted of 450 telephone interviews. The results of the survey are statistically accurate within a plus or minus 5 percent certainty for King County as a whole and for ascertaining differences between urban and rural areas. The complete survey results are located in Appendix C.

Community Partner Survey and Meeting

The Agriculture Commission and staff work is done in partnership with many organizations. We surveyed these organizations to learn what they believed were the most important issues for the future of farming in the county, their work program priorities for the next five to ten years, and what they thought were the most important roles for the county. Thirty-two organizations responded to the survey. Many of them participated in a follow-up meeting to review the *Ten Year Vision*, discuss opportunities for local farming, identify overlaps and gaps in service to local farmers, and determine ways the Agriculture Program can be most effective. The Community Partners' Survey and summarized results can be found in Appendix D.

Research and Analysis by Agriculture Program

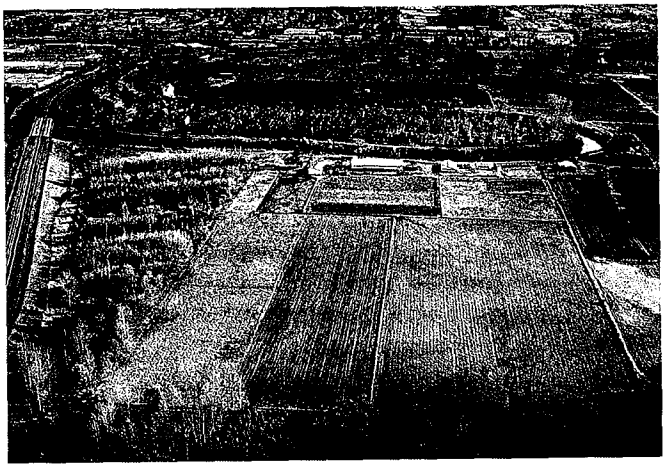
Agriculture Program staff conducted a land use survey of the APDs, which identified the types of agriculture occurring on every parcel. The survey was conducted using aerial photos in combination with driving along roads and recording land uses. The mapping was conducted in 2003, 2006, and 2009. In 2003 staff also surveyed the rural area to identify the amount of agriculture outside of the APDs. The 2003 survey was different as it limited parcels to a single land use, in contrast to the later surveys that recorded multiple land uses on a single parcel when appropriate. The results of the 2006

and 2009 Land Use Surveys can be found in **Table 1**. Detailed descriptions of the land use categories can be found in Appendix E.

In order to determine which APD properties are owned by farmers, staff reviewed the Assessor's records of property owners. Based on their familiarity with the farmers in the county, they were able to identify for each property whether the owner is a farmer. The results are covered in the description of the APDs.

Staff conducted an informal study to determine how much food could be grown in the APDs. Using U.S. Department of Agriculture Economic Research Service consumption data and production estimates from Washington State and Oregon State universities, staff estimated the amount of food King County could produce on an annual basis. The study and results can be found in Appendix F.

II. Agriculture in King County



King County has some of the best farming conditions in the country: highly productive river bottom soils, temperatures that provide for an almost year-round growing season, and rains that reduce the amount of irrigation needed. The combination can result in record crop output. For a number of years, Carnation Farm held the national record for milk, butter fat, and protein production. In 1940, King County produced the most lettuce of any county in the nation. Before World War II, Japanese and Italian farmers produced a bounty of crops in the Kent Valley, on Vashon Island, and on the land where the City of Bellevue is located. The Kent Valley was once an extensive stretch of productive farmland.

Despite the near ideal growing conditions, agriculture in the county declined in total acres in production during the last half of the twentieth century. From a high of 150,000 acres in the mid-1900s, agriculture in King County now comprises less than a third of that amount. The climate and landscape that have supported flourishing agriculture have also drawn large numbers of people to the central Puget Sound region. The resulting growth and development have often been at the expense of farmland, which has been displaced in favor of industrial, commercial, and residential uses.

Actions that Preserved Farmland

Concern over the continuing decline in agriculture led to the county getting directly involved in the preservation of farmland through the efforts of concerned citizens, many of whom were galvanized working for the preservation of the Pike Place Market in the 1970s. In 1979, King County voters approved a $50 million bond issue to purchase development rights on prime farmland. The resulting Farmland Preservation Program (FPP) has since purchased, from willing farmers, the development rights on more than 13,000 acres.

The work of preserving local agriculture continued with the 1985 designation of approximately 41,000 acres in five Agricultural Production Districts (APDs). Following passage of the State's Growth Management Act (GMA), King County designated the APDs as agricultural lands of long-term significance. In 1993, the Livestock Management Ordinance was passed, supporting the raising and keeping of livestock in a manner that minimizes impacts to water quality and salmon habitat.

In 1994, the county completed the first major Comprehensive Plan update after the adoption of the GMA. The plan included policies to meet the GMA mandate to protect and enhance agriculture. One of the policies called for the creation of the Agriculture Commission. Following the adoption of the 1994 Comprehensive Plan, the county commissioned a study to develop strategies to preserve working landscapes in rural King County. The resulting *Farm and Forest Report* detailed strategies necessary for the survival of agriculture in King County and still serves as a guiding document for agricultural programs. The county has addressed nearly

Comprehensive Plan policy R-602

The Agriculture Commission shall advise the King County Executive and Council on agricultural issues and programs, including, but not limited to:

a. Existing and proposed legislation and regulations affecting commercial agriculture;
b. Land use issues as they impact agriculture; and
c. Ways to maintain, enhance and promote agriculture and agricultural products in the region.

King County shall continue to support the Agriculture Commission with staff and other resources.

all of the recommendations of the *Farm and Forest Report* and continues to improve polices and regulations for commercial farming.

Residents Support Local Agriculture

Support for King County agriculture continues to be very strong. The survey of local residents showed that both the rural and urban populations are aware of the county's agricultural industry and what it produces. A majority of respondents take actions to support agriculture and want it to succeed. Results from the survey are highlighted below (the full survey and results can be found in Appendix C).

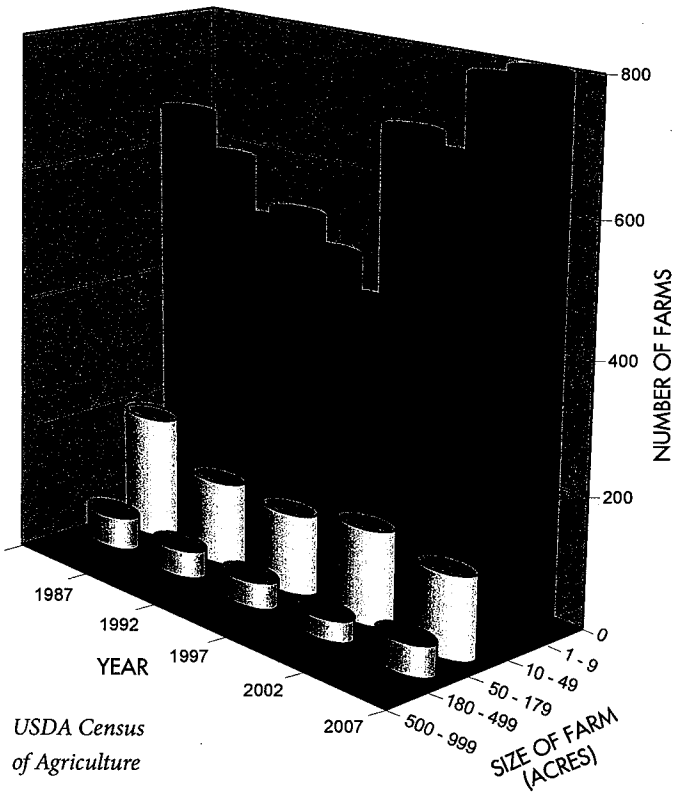
- *Having farms and farming in King County and being able to purchase food produced on farms in King County are important to most county residents.* Seventy-five percent of King County residents rated having farms and farming in King County as extremely important (a four or five on a five-point scale). The same percentage of residents said purchasing fruits or vegetables and enjoying the rural scenery and landscape of farming were extremely important. Twenty-three percent of residents gave the same ranking of importance to visiting horse farms or riding horses.
- *Purchasing food produced on farms in King County is a fairly common practice for many residents.* Sixty-two percent of residents purchased food produced on a farm in King County at least once a month. Eighty-five percent did the same at least once a year. These residents usually made these purchases at a farmers market or a grocery store. Residents found the following benefits to be extremely important in their decision to purchase local food: freshness of the food (75 percent), safety (71 percent), local farmers' practices to protect the environment—including fish, wildlife, and water quality (64 percent), and the environmental benefits of not having food transported long distances (60 percent).
- *Most residents want the county to continue its support for farmers in King County and using land for food-producing agriculture.* Eighty-five percent of residents said they agree or strongly agree with the statement, "King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices." Forty-five percent of residents said the amount of land used for all types of agriculture in King County should be increased. Fifty-three percent said the amount of land should be kept about the same.

Local agriculture offers many benefits. With the increased incidences of food borne illnesses, shoppers are becoming more wary of the industrial food growing and distribution system. This system's reliance on mass production and processing does not provide consumers with the ability to know the origin of their food. Local food, especially when sold directly, allows consumers to not only know the source of their food but often to know the farmer personally.

Farm Size in King County

Smaller farms are becoming more viable as many of the local products in high demand can be profitably grown on fewer acres. From an average of 35 acres in 1982, farm size in the county has dropped to an average 28 acres. This decrease in the size of farms has been matched by an increase in the number of farms, growing from 1,091 in 1987 to 1,790 in 2007. **Chart 1** shows that farms smaller than 50 acres are the vast majority of all farms in the county.

Chart 1
Number of Farms by Size



USDA Census of Agriculture

Production and Sales in King County

Although the number of large farms has decreased, King County agricultural sales have increased. **Chart 2** displays the value of agricultural production for the past six U.S. Department of Agriculture (USDA) *Census of Agriculture* reporting cycles. During this twenty-five year period, the value of production in King County has doubled even as farm size has been decreasing.

The growth can also be seen in relation to other counties within the state. From a ranking of seventeen in 1992, the 2007 census indicated that King County now ranks thirteenth out of the state's thirty-nine counties. Only two counties in western Washington (Skagit and Whatcom) are ranked higher than King County. The value of the county's agricultural production is higher than most counties in the northeastern and southeastern parts of the state, including Spokane County. King County agriculture is growing and playing a larger role in Washington State's agricultural production.

King County Products

King County produces an incredibly wide variety of livestock and produce (for a list see Appendix H). Many of these products can be produced and sold profitably at a smaller scale. **Chart 3** shows the sales figures for the past twenty years in the county's major product categories. For all years reported, the county's three largest categories are livestock, dairy, and nursery.

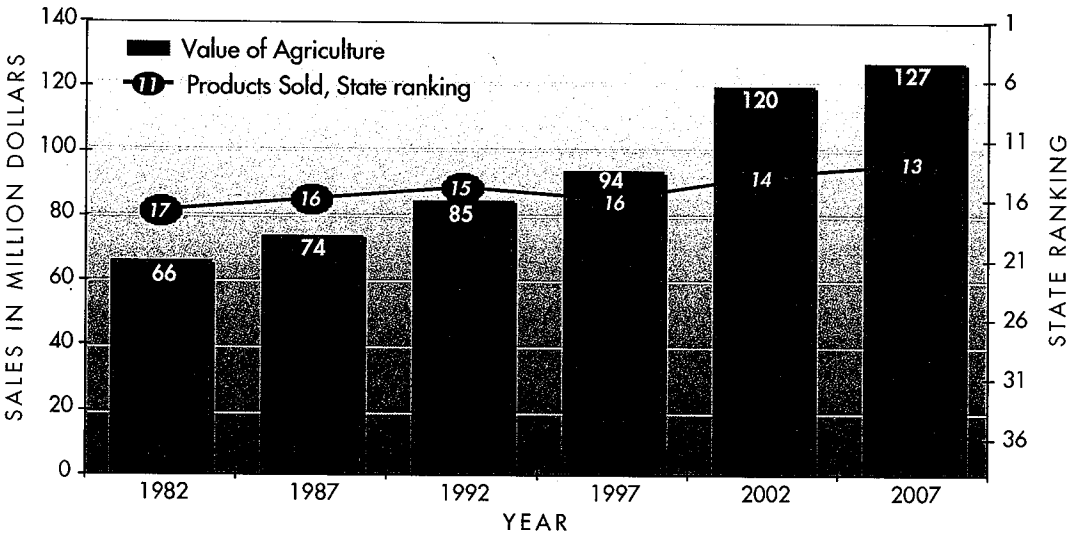
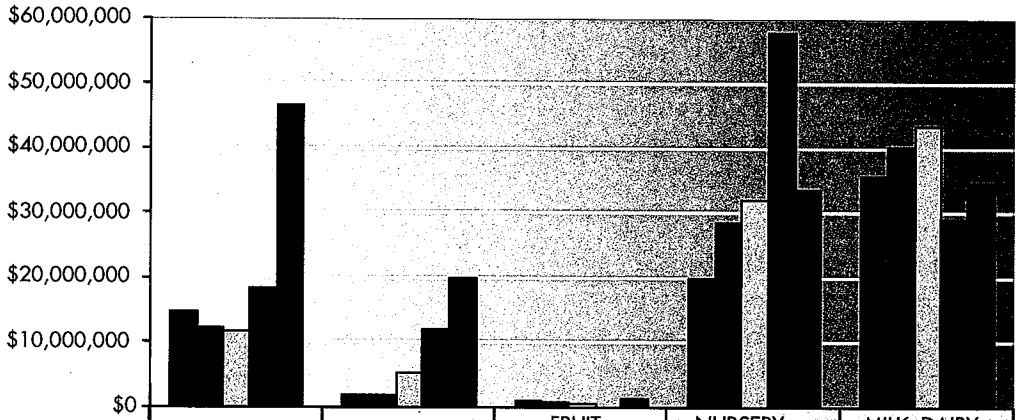


Chart 2
Value of Agriculture Products and State Ranking

USDA Census of Agriculture



	LIVESTOCK	VEGETABLES	FRUIT, BERRIES	NURSERY, XMAS TREES	MILK, DAIRY PRODUCTS
1987	14,688,000	1,989,000	954,000	20,114,000	35,733,000
1992	12,330,000	1,981,000	691,000	28,677,000	40,420,000
1997	11,629,000	5,320,000	460,000	31,944,000	43,634,000
2002	18,444,000	12,141,000		57,897,000	29,009,000
2007	46,838,000	20,000,000	1,293,000	33,686,000	34,735,000

Chart 3
Market Value of Agricultural Crops Sold

USDA Census of Agriculture

(2007 Vegetable figures estimated from other sources.)

Livestock

Livestock operations are the largest segment of King County's agricultural industry, both in sales and acreage used. Livestock sales include cattle, dairy products, hogs, sheep, horses, and aquaculture. Livestock sales in 2007 were $81.5 million, about 64 percent of the agricultural sales in King County. In the past twenty years, livestock sales have increased by over 300 percent.

Although cattle and dairy farms remain the largest component of the livestock industry, the growth also includes horses, alpacas, and other small livestock. For horses alone, the 2007 *Census* reported 671 farms with 6,941 animals, placing King County first in the state and twenty-sixth in the nation. But even this high total is deceptive as the *Census* does not report animals kept by owners who have no intention of making a profit. Including these non-commercial horses raises the total from 8,000-17,000 (*Horse Industry In King County*), making horses a sizable and valuable part of King County agriculture.

The exception to the growth of the livestock industry is dairy products, as both the number of large dairy farms and dairy sales have declined dramatically. The remaining large dairies have grown in terms of herd size as they have taken over production from closing dairies, but still face difficult challenges. Milk prices can fluctuate dramatically, creating uncertainty and price levels that force farmers to sell at a loss. As milk prices are federally controlled and not determined by local demand, this is an especially difficult problem to address. Dairies are locked into large volume contracts with receiving companies and it is challenging to develop alternative marketing methods for milk and related value-added products.

A major issue for all livestock farmers has been the dramatic rise in feed costs. Numerous factors have caused this increase: high fuel costs, volatile commodity prices, and competition with other industries. As a solution to these costs, farmers can employ techniques to supplement livestock feeds, such as rotational grazing and baling of local hay. But these also have become difficult due to reduced acreage for pastureland, rising land costs, and poor drainage.

Other pressures on livestock production include manure disposal and encroaching residential development. In the Enumclaw Plateau APD, which contains the majority of the county's livestock industry, farmers rely on leasing land for grazing and manure disposal. The development of a digester to process manure is considered by some dairies as essential to their continued operations as more properties are converted to residences.

Rankings for King County Agricultural Products

WASHINGTON STATE

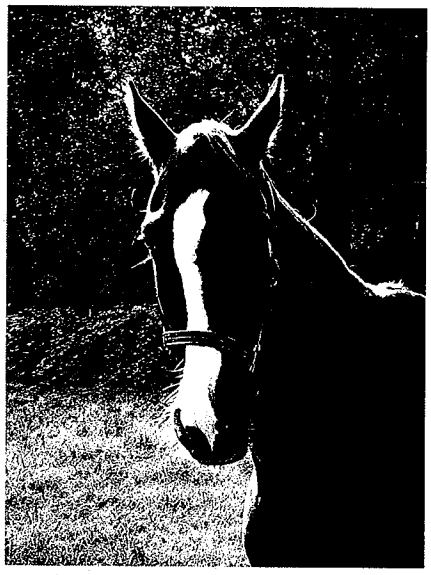
Horses	1
Alpacas	1
Laying Hens	9
Dairy and Beef Cattle	13

UNITED STATES

Alpacas	1
Horses	26

USDA Census of Agriculture

In spite of the many challenges facing livestock owners, there are a number of exciting opportunities that can keep the livestock industry successful and growing in King County. Many consumers are eager to obtain and willing to pay a premium for meat products that are grass-fed, local, humanely produced, or free of antibiotics and hormones. Managers at farmers markets, restaurants, and cooperatives have commented they have difficulty finding enough sources of locally-produced, USDA-inspected meat. In an attempt to better capture this lucrative market, in January 2009 the King County Council passed a motion supporting the Puget Sound Meat Producers Cooperative and its effort to develop a



Comprehensive Plan policy R-210

King County supports the raising and management of livestock and the production of related value-added products. The management of livestock and the lands and structures supporting the raising of livestock, should be consistent with industry best management practices and with county, state, and federal regulations related to the specific industry.

USDA-inspected mobile slaughter facility. Less than a year later, this facility has begun operations, filling an important infrastructure need for King County livestock producers.

The demand for specialty processed meat for ethnic and religious groups continues to grow and offers sales opportunities for sheep, goat, and cattle farmers. The customers who purchase these meats have specific cultural or religious requirements that must be considered by the farmer. For example, unlike traditional livestock marketing in which the farmer butchers on a scheduled and periodic basis, animals are selected live by the customer and are processed to be available for consumption within a very short period of time. DDES is currently working with an applicant in permitting such a facility.

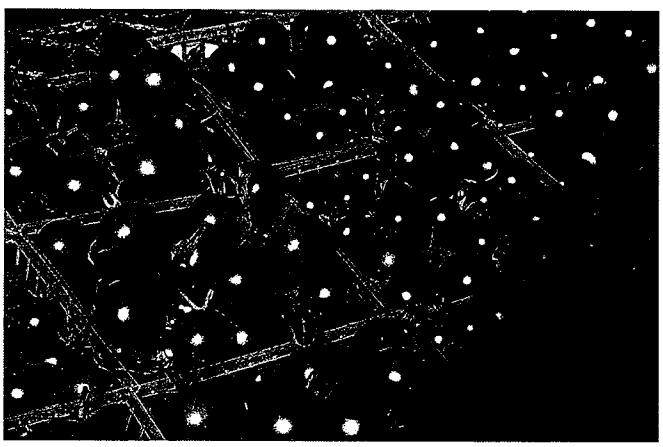
Horticulture

Horticultural crops grown in the county include vegetables, fruits, nursery, flowers, and Christmas trees. The region's mild climate and excellent soil is conducive to growing a wide variety of these products (for a list see Appendix H). With the long growing season, many local farmers can get two or three crops off the same ground in a single year. In 2007 farmers reported about $55 million worth of horticultural items sold, representing about 40 percent of the county's total agricultural sales.

The number of farms producing fruit and vegetables increased from 209 in 2002 to 271 in 2007. The Land Use Survey conducted by staff showed an increase between 2006 and 2009 in the acreage used for fruits, vegetables, and flowers. Although the number of flower growers is not known, the crop is important to many small farmers. Numerous varieties can be grown with minimal water and thrive in soils where vegetable crops may not grow as well. Approximately 60 Hmong farmers rely on flower sales for their income.

Nursery items, including Christmas trees, represented about 25 percent of the county's total agricultural sales in 2007. Some of these farms sell directly through on-site retail or U-Cut operations. For those dependent solely upon the wholesale market, competition from imports poses challenges to profitability.

Many crop farmers are expanding their markets by incorporating livestock and poultry into their operations. Using animals as part of the crop rotation helps to cycle nutrients and improve soil fertility. The animals also offer an additional source of revenue from the sale of meat, stock, dairy products, and eggs. Farmers import manure from nearby livestock farms to use as fertilizer. This also provides a benefit to the livestock farmer who is able to get rid of a waste product.



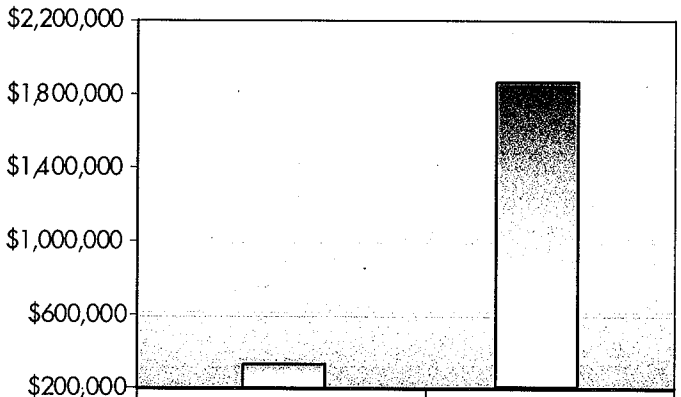
Agri-tourism

Agri-tourism is playing an increasingly important role in the agricultural landscape of the county. The demand for activities such as weddings, on-farm dinners, educational tours, and corn mazes is increasing. Some farmers turn to agri-tourism as a way to increase revenue, others out of necessity because they cannot make a living from their products alone. As shown in **Chart 4**, the number of farms engaged in agri-tourism activities increased 300 percent between 2002 and 2007. Agri-tourism activities are expected to increase and become a vital source of revenue for the agricultural industry.

"The increased promotion of farms for urban entertainment is absolutely necessary for both educational purposes and for many, their bottom line. However, it is not something that interests all farmers and I fear that the more traditional farmer may disappear in King County. The county does need to make sure though that regulations continue to be adjusted to allow for these newer retail type endeavors. Small businesses of all kinds need to be allowed to prosper in King County".

Green Valley farmer comment

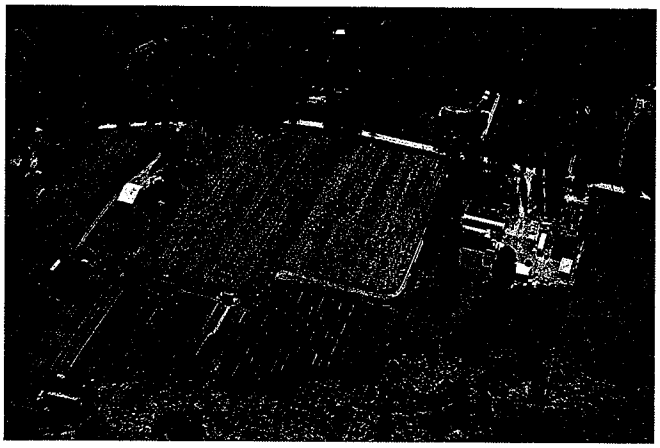
Chart 4
Number and Value of Farms Reporting Agri-tourism Activities



	2002	2007
FARMS	9	26
VALUE	326,000	1,849,000

III. Agricultural Production Districts

King County's Agriculture Production Districts (APDs) have some of the best soil and growing conditions in the county. Designated during the 1985 King County Comprehensive Plan (KCCP) update, the five APDs represent the last remaining areas of clustered farmland in the county. They are protected by a combination of Comprehensive Plan policies, land use and zoning regulations, and the Farmland Preservation Program (FPP). The 41,000 acres within the APDs represent only three percent of the county's total area, but contain most of the county's commercial agriculture. The five APDs are the Enumclaw Plateau, Snoqualmie, Upper Green, Lower Green, and Sammamish.



The results of the 2006 and 2009 Land Use Surveys are summarized in **Table 1**. Livestock/Forage, which includes land used for both grazing and livestock feed production, remained the single largest land use in the APDs, using over one-third of all the acres. Adding Horse acres results in nearly half of all APD acres being used for animal production. From 2006 to 2009, acres used for Livestock/Forage and Horse grew by 25 percent. As horses were not categorized separately in 2006, it is not possible to determine how much of this growth was in livestock or horse acres. The biggest increase was in Market Crops acreage, which grew by 50 percent.

Table 1
2006 and 2009 Land Use Survey (Acres in Each Category)

	ENUMCLAW PLATEAU		UPPER GREEN		LOWER GREEN		SNOQUALMIE		SAMMAMISH		TOTALS	
CATEGORY	2006	2009	2006	2009	2006	2009	2006	2009	2006	2009	2006	2009
Livestock/Forage	9,967	8,539	674	399	197	124	4,308	4,869	47	5	15,192	13,936
Managed Grassland	1,034	364	108	35	22	16	785	184	43	24	1,991	623
Corn	370	-	34	-	91	-	331	-	0	-	825	-
Market Crops	122	176	184	245	506	820	1,138	1,584	230	313	2,181	3,138
Unmanaged Grassland	1,490	1,250	223	179	125	67	1,009	612	84	22	2,931	2,130
Nursery	36	34	5	5	68	68	247	173	57	56	413	336
Tree Farm	81	120	52	55	9	9	419	448	13	18	575	650
Managed Orchard	58	42	0	0	0	0	1	0	0	0	60	42
Unmanaged Orchard	29	6	0	0	0	0	0	0	0	0	29	6
Grapes	0	3	0	0	0	0	0	0	0	0	0	3
Sod Farm	0	0	0	0	0	0	0	0	381	365	381	365
Forest/Upland	4,213	3,860	1,662	1,641	130	85	2,368	1,754	27	7	8,400	7,347
Sports/Recreation	89	119	34	56	0	0	182	310	141	173	446	658
Too Wet to Farm	35	21	0	0	111	73	276	213	0	0	422	307
Marsh or Wetland	0	33	1	0	46	40	905	1,208	0	0	951	1,281
Other	2,628	2,369	407	488	114	101	1,936	1,957	95	43	5,179	4,958
Horse	-	3,723	-	397	-	0	-	1,248	-	57	-	5,425
TOTALS		20,659		3,500		1,403		14,560		1,083		41,205

The other category to see a major change was Managed Grassland, which is field grassland that is mowed but not used for grazing or haying. From 2006 to 2009 the acreage in this category was reduced by over 65 percent. Most of these acres were used for Livestock/Forage and Horse in the 2009 survey. This greater utilization of farmland for pasture or hay may be a result of higher costs for feed grown elsewhere.

Enumclaw Plateau APD

Located between the Green and White rivers in southeastern King County, the Enumclaw Plateau is the largest of the county's five APDs. At over 20,000 acres, the Enumclaw Plateau contains approximately half of all the designated agricultural land in the county. Unlike the other APDs, it is not in a river valley and is less affected by floods. Its location in the southeastern corner of King County is more remote than the other APDs. However, it is not immune to the pressures and impacts of urbanization.

The majority of land in the APD is used for agriculture but only about 26 percent of the acres within the APD are owned by farmers. This means that much of the farmland is being leased by farmers. Depending upon the long-term objectives of the non-farmer property owners, the future agricultural use of these leased properties is uncertain.

King County currently zones land within the APDs with minimum lot sizes of either ten or 35 acres. Even with these limitations, large parcels may be subdivided and sold for home sites, reducing the amount of agricultural land in the APD. If enough agricultural land is lost to residential development, the reduction in the amount of available grazing land will threaten the ability of livestock and dairy farmers to continue operating.

Livestock/Forage is the single largest land use in the Enumclaw Plateau APD, comprising approximately 40 percent of the total acreage. Acres for Horse comprise about 18 percent. Also at 18 percent, the Forest/Upland acres are mostly vegetated steep slopes at the northern and southern edges of the APD above the Green and White rivers.

Although the Unmanaged Grassland category, which consists of uncut grassland, decreased between the 2006 and 2009 surveys, six percent of the APD remains in this unused, nonagricultural category and remains a potential source of greater agricultural production. Managed grassland saw a sizeable decline between the two surveys as more land is being used for livestock, horses, and related grazing and haying.

ENUMCLAW PLATEAU APD		
Size	**Percent in FPP**	**Percent Farmer Owned**
20,659 acres	24%	26%
Top Land Uses		
Livestock/Forage		40%
Forest/Upland		18%
Horse		18%
Other		11%

The plateau's views and rural lifestyle are attractive to non-farmers for residential purposes. Pre-existing small lots allow denser residential use of land within some parts of the APD. Some older neighborhoods appear more suburban than agricultural or even rural, with cul-de-sacs and lot sizes under a quarter acre. These developments have an adverse effect on agricultural production due to increased traffic and nuisance complaints, factors that will be more challenging with additional residential development in and near the APD. As the City of Enumclaw continues to grow, traffic through the district will also increase and may put further pressures on agricultural uses.

The farmland of the Enumclaw Plateau was formed 5,600 years ago by the Osceola Mudflow, which originated in avalanches of hydrothermally altered rock from the summit of Mount Rainier. The resulting impermeable soils are unsuitable for agriculture unless drained. Once drained, they form a healthy pasture base, but can leave farmers with drainage maintenance and challenges related to wetland regulations.

Snoqualmie APD

At over 14,500 acres, the Snoqualmie APD is the second largest in King County. Extending south from the northern edge of the county, the APD runs along the Snoqualmie River Valley to Fall City. The City of Carnation breaks the APD into two portions. The northeastern portion of the APD circles around the western and northern edges of the City of Duvall.

As in the Enumclaw Plateau APD, Livestock/Forage is the largest land use at one-third of the total acreage. An additional eight percent is used for Horse. Unlike the Enumclaw Plateau APD, Market Crops is a sizable land use with 11 percent of the APD's acreage being used for produce and flowers. The acres of Market Crops in the

Snoqualmie APD are nearly equal to the acres in this category in all the other APDs combined. The APD also has an additional three percent used for Tree Farm, the majority of which is used for growing hybrid poplar trees.

From 2006 to 2009, more acres within the APD have been put into agricultural production, including two percent added to Market Crops. Approximately four percent of the APD's acres remain in Managed Grassland and Unmanaged Grassland and could likely be used to increase production in the valley.

The APD's location in the river valley results in a considerable amount of land being used for non-agricultural purposes, such as water bodies and adjacent forested lands. The Other category, which includes rivers, roads, and residential-only properties, comprises nearly 13 percent of the APD's acreage. Adding in land uses such as Forest/Upland, Too Wet to Farm, and Marsh or Wetland results in over one-third of the APD being unused or unavailable for farming. Additional non-agricultural uses are Sports/Recreation, which includes golf courses, parks, and ball fields.

One of the challenges to agriculture in this APD is the recent increase in flooding that has occurred in the past several years. The frequency and severity of these floods had negative impacts on livestock, crops, equipment, and farmer income. The perception among many farmers is that these floods represent a new long-term trend. Approximately 75% of the Snoqualmie APD is classified as floodway.

As in the Enumclaw Plateau APD, many areas of the Snoqualmie APD are not economically sustainable for agriculture unless the land is drained. The presence of protected species, such as Chinook and Steelhead, makes maintenance of agriculture drainage difficult and expensive. Additional challenges facing the Snoqualmie APD include the conversion of farm sites for large estate homes and finding sites for farmer and farmworker housing.

Upper Green APD

Extending west from the Enumclaw Plateau, the Upper Green APD runs along the Green River from Flaming Geyser State Park to the City of Auburn's eastern edge. With 3,500 acres, it is the third largest APD in the county. Approximately 900 acres in the Upper Green APD are enrolled in the FPP. Although the preserved acreage includes forested uplands or other areas not suitable for agriculture, most of it is on the valley floor and in active production.

Due to the steep slopes from the river to the plateau and forested areas along the Green River, the largest land use within the APD is Forest/Upland. Nearly half of the APD is in this land use category. The second largest category is Other (14 percent), which predominately consists of residential only properties, roads, and water bodies.

The two largest agricultural categories are Livestock/Forage and Horse (each with 11% of the APD). Market Crops are found on seven percent of the APD, mostly in the western part.

Changes from 2006 to 2009 have been minimal. Livestock/Forage and Horse acres have increased. As horse farms were not categorized individually from livestock and forage in the 2006 survey, it is not possible to determine which category has seen the most growth. The acres in Market Crops also increased slightly over the three year period.

SNOQUALMIE APD		
Size	**Percent in FPP**	**Percent Farmer Owned**
14,560 acres	33%	44%
Top Land Uses		
Livestock/Forage		33%
Other		13%
Forest/Upland		12%
Market Crops		11%

UPPER GREEN APD		
Size	**Percent in FPP**	**Percent Farmer Owned**
3,500 acres	26%	49%
Top Land Uses		
Forest/Upland		47%
Other		14%
Livestock/Forage		11%
Horse		11%

Southeast Green Valley Road is the only road through the APD, with access at the eastern and western ends. Vehicles and bicycles compete with farm equipment on the winding road. As with the Enumclaw APD, the area has the feel of a quiet rural setting—yet with easy access to cities and urban amenities. The City of Black Diamond has plans for a development at the eastern edge of the APD, which may result in increased traffic, potential slides associated with upslope clearing and development, and greater potential for farms to transition to large estate homes.

As with the Snoqualmie APD, a large segment of the APD is located within the floodway and is susceptible to flooding. The Howard Hanson Dam upstream of the APD has minimized the flood risk for many years. However, the recent determination that the dam is compromised raises the risk of catastrophic flooding until repairs are completed. Other challenges for agriculture in the Upper Green APD include loss of farmland to residential development, levee setbacks for flood hazard reduction, and mitigation sites for salmon recovery projects.

Lower Green APD

Located along the Green River between the cities of Kent and Auburn, the Lower Green APD is bisected by State Route 167. Each of the two islands of the 1,400 acre APD are completely surrounded by urban area. The Lower Green APD is the last remnant of agriculture in the valley that was once extensively farmed.

Approximately 75 percent of this APD is in the FPP. The FPP properties form the core of the district and provide a strong incentive for King County to maintain this area for agricultural use. The Comprehensive Plan states that the Lower Green APD is a regionally designated resource that is to remain in unincorporated King County, rather than be annexed by Kent or Auburn.

LOWER GREEN APD		
Size	Percent in FPP	Percent Farmer Owned
1,403 acres	75%	52%
Top Land Uses		
Market Crops		58%
Livestock/Forage		9%
Other		7%
Forest/Upland		6%

The majority of the APD is used for Market Crops. This land use category has increased since 2006. The next largest category is Livestock/Forage, using nine percent of the APD. Although there are fewer residential-only acres than in the other APDs, Other uses make up seven percent of the APD. Another five percent of the APD is categorized as Too Wet to Farm, although this is three percent less than in 2006.

Comprehensive Plan policy R-651

The Lower Green River Agricultural Production District is a regionally designated resource that is to remain in unincorporated King County. The Lower Green River APD functions as an urban separator between the cities of Kent and Auburn. King County may contract with other jurisdictions to provide some local services to this area as appropriate.

The Lower Green's urban location creates issues that affect agriculture in the APD. Runoff from neighboring development has resulted in severe drainage issues in the APD. Other urban pressures include trespass activities, traffic, dumping, light pollution, and theft. These problems require constant monitoring and enforcement.

The future of this APD is tied to the timeline for fixing Howard Hanson Dam and the degree to which alternative flood management strategies are needed. If levee setbacks are proposed for the farmland between Kent and Auburn there may be some benefit to farmers as well as urban residents, but a significant amount of existing farm acreage could be lost.

Sammamish APD

The 1,000 acre Sammamish APD is the smallest of King County's Agricultural Production Districts. It is located along the Sammamish River and is bordered on three sides by the cities of Woodinville, Kirkland, and Redmond.

Approximately 75 percent of the APD is enrolled in the FPP. As with the Lower Green APD, almost all of the properties that are suitable for farming in the Sammamish APD have been preserved. The FPP has played an important part in ensuring that the APD is protected.

SAMMAMISH APD		
Size	Percent in FPP	Percent Farmer Owned
1,083 acres	75%	32%
Top Land Uses		
Sod Farm		34%
Market Crops		29%
Sports/Recreation		16%
Horse		5%

Although only 32 percent of the APD is owned by farmers, the majority of the APD is farmed. Sod Farm and Market Crops are the two main uses of the APD, comprising over 60 percent of the total acreage. Sports/Recreation uses 16 percent of the APD because of existing facilities that predated the agricultural land use designation. Unlike the other APDs, very little is used for Livestock/Forage or Horse.

Strong support from nearby residents has helped to preserve agriculture in the Sammamish APD. The high level of agriculture in the APD is a testament to these efforts. Remaining threats are pressures from the urban areas surrounding the APD. The area's views, low flood risk, and bike trail along the Sammamish River make the APD desirable for alternative uses. Fortunately, these benefits also make the APD attractive for agri-tourism.

Agriculture in the Rural Area

Outside of the APDs approximately 20,000 additional acres are used for agriculture. As in the APDs, the majority of these acres are used for livestock and horse production. Vegetables and flowers are a smaller land use. Unlike the APDs, the rural area is not zoned specifically for agriculture and does not have the land use limitations of the APDs. Agricultural uses tend to be smaller operations interspersed with residential only and other uses. The King County Comprehensive Plan recognizes that agriculture occurs outside of the APDs, is vital to the preservation of rural King County, and should be encouraged. Although this report focuses on the APDs, most of the recommendations offered are applicable to agriculture in the Rural Area as well.

2009 Agriculture Land Use - Enumclaw APD
VC File: 0912_AllUenumclaw.AI LPRF
ENUMCLAW
Green River
White River
Tapps Canal
SE 400TH ST
SE 416TH ST
SE 436TH ST
SE 440TH ST
264TH AVE SE
247TH AVE SE
228TH AVE SE
212TH AVE SE
AUBURN-ENUMCLAW RD SE
ENUMCLAW-BLACK DIAMOND RD SE
VEAZIE-CUMBERLAND RD SE
OWNERSHIP
Farmer-owned Parcels
Ag. Production District
Water
Cities
Streets
King Co. Parcel Boundary
2009 AG. LAND USE
Forested, Upland
Horse
Livestock, Forage
Managed Field, Grassland
Market Crops (Produce)
Marsh or Wetland Preserve
Nursey
Orchard
Unmanaged Orchard
Other (roads, residential, water bodies, etc.)
Sod Farm
Sports, Recreational
Too wet to farm
Topsoil Production
Tree Farm
Unmanaged
0
0.5
1 Miles
N
King County
Produced December 2009
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2009 Agriculture Land Use - Snoqualmie APD

OWNERSHIP

- Farmer-owned Parcels
- Ag. Production District
- Water
- Cities
- Streets
- King Co. Parcel Boundary

2009 AG. LAND USE

- Forested, Upland
- Horse
- Livestock, Forage
- Managed Field, Grassland
- Market Crops (Produce)
- Marsh or Wetland Preserve
- Nursery
- Orchard
- Unmanaged Orchard
- Other (roads, residential, water bodies, etc.)
- Sod Farm
- Sports, Recreational
- Too wet to farm
- Topsoil Production
- Tree Farm
- Unmanaged

N

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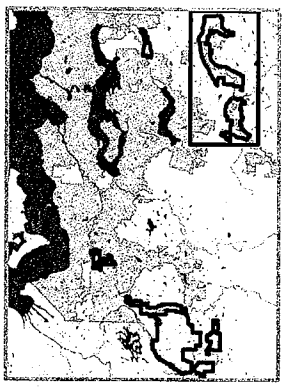

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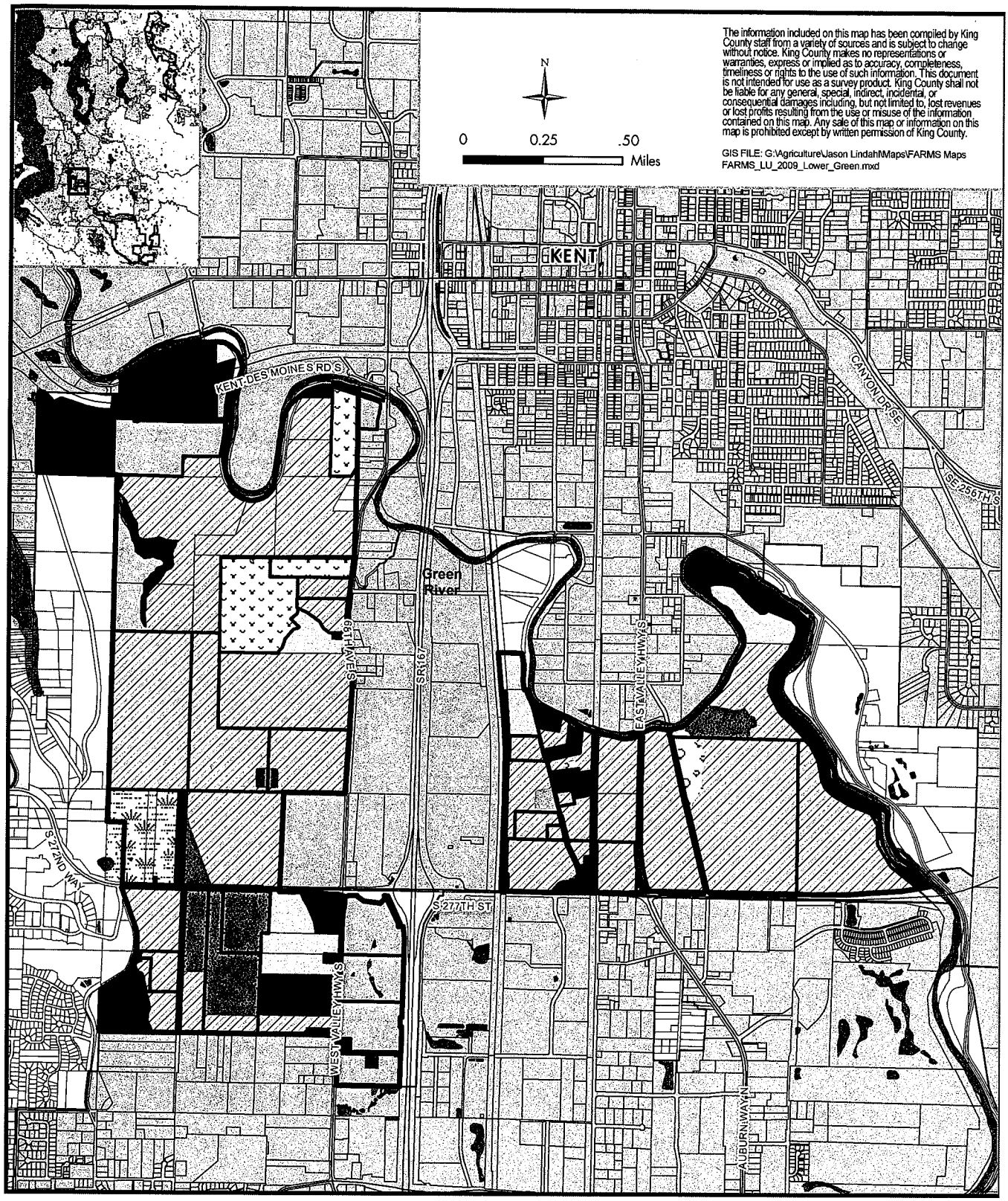
King County

Produced December 2009

2009 Agriculture Land Use - Upper Green APD



VC File: 0912_ALUlowerGreen.ai LPRE

2009 Agriculture Land Use - Lower Green APD

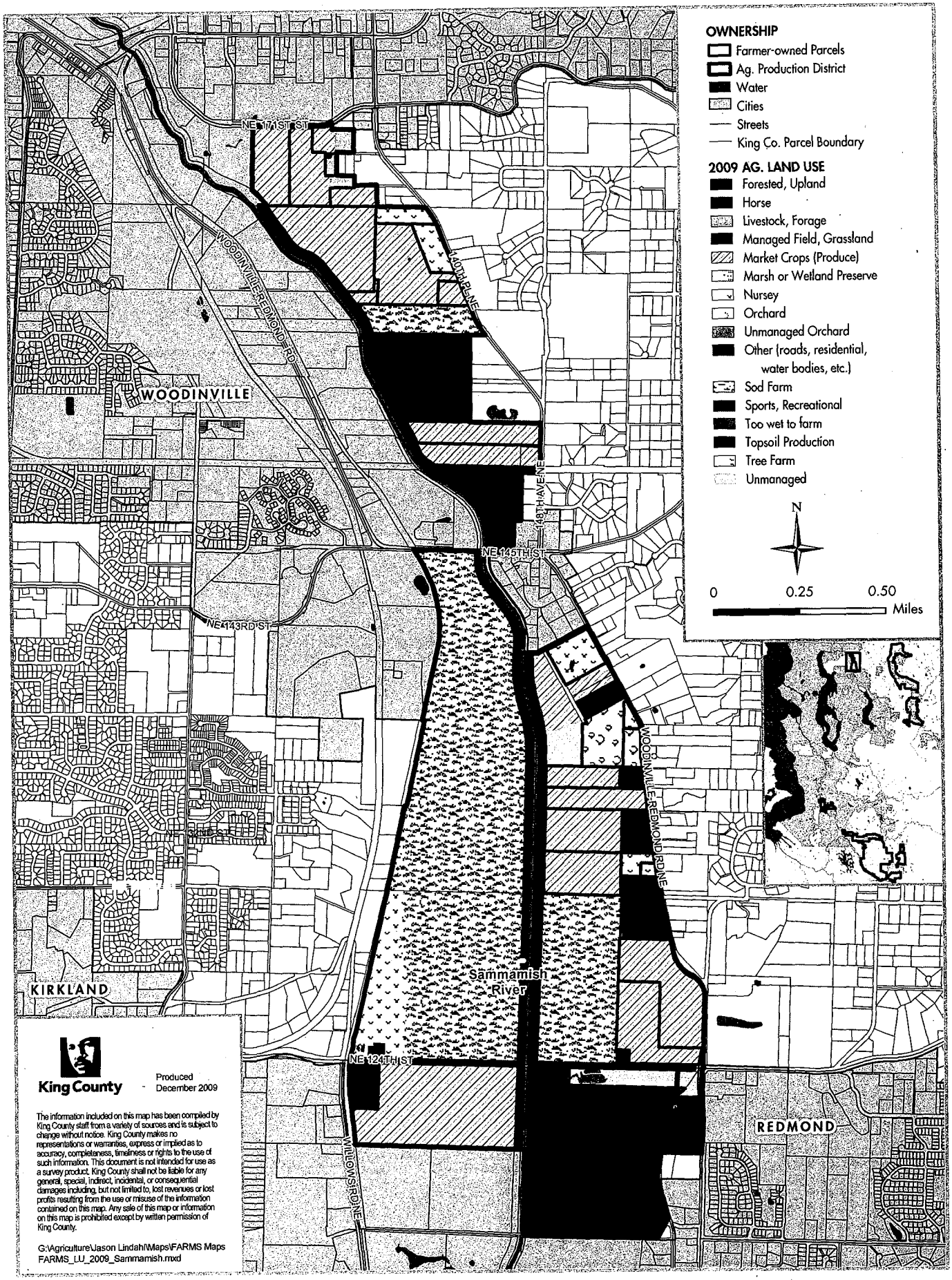
OWNERSHIP

- Farmer-owned Parcels
- Ag. Production District
- Water
- Cities
- Streets
- King Co. Parcel Boundary

2009 AG. LAND USE

- Forested, Upland
- Horse
- Livestock, Forage
- Managed Field, Grassland
- Market Crops (Produce)
- Marsh or Wetland Preserve
- Nursey
- Orchard
- Unmanaged Orchard
- Other (roads, residential, water bodies, etc.)
- Sod Farm
- Sports, Recreational
- Too wet to farm
- Topsoil Production
- Tree Farm
- Unmanaged

King County



2009 Agriculture Land Use - Sammamish APD

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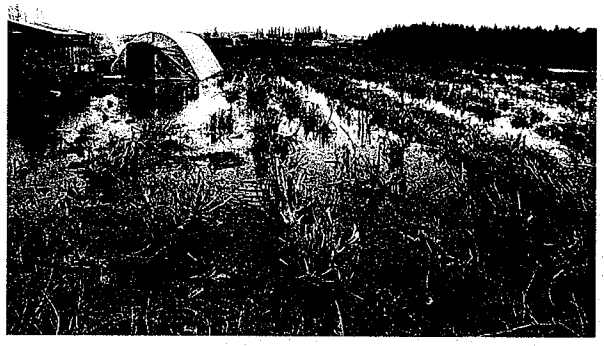
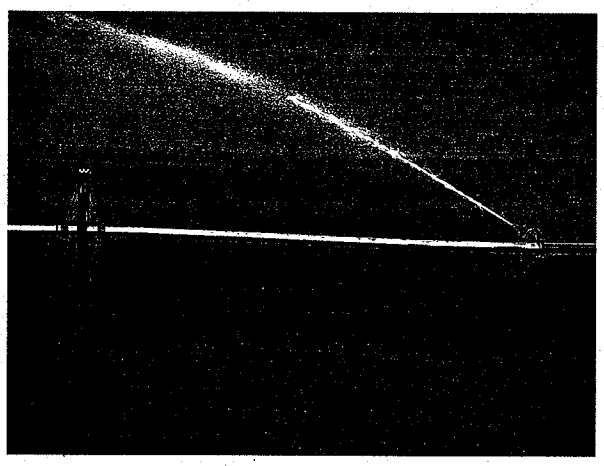
IV. Recommendations

Issue Topic I: Water

The management of water is critical to the survival of agriculture now and in the future. Farmers are challenged by too much water in the wet season, which causes wet fields and damaging floods, and by not enough water in the dry season for irrigation and stock watering.





Recommendations

- King County and the Agriculture Commission should continue to work with farmers, regulators, tribes, Water Inventory Resource Areas (WRIAs), and other stakeholders to streamline the permitting process for agriculture drainage maintenance while maintaining standards for environmental protection. The goal is a single, simple permit process that integrates the different levels of regulations. The process should allow farmers the ability to apply for permits and do the work themselves as needed at a reasonable cost.
- The Agriculture Commission and staff from the Agriculture Program, flood management, and DDES should continue to work together to implement the recommendations of the Farm Flood Task Force and to continue exploring ways to allow productive agriculture in flood zones while maintaining public safety. The options should consider incentives as well as regulatory changes.
- King County should address the need for agricultural irrigation by working with the Washington Department of Ecology, fisheries interests, and others to develop policies and, if needed, recommend legislative changes that could increase access to water for farmers in King County while improving the efficiency of water use.

Drainage

Over 300 miles of watercourses flow through the Agricultural Production Districts (APDs). These include naturally flowing streams, streams that have been channelized to provide drainage, and constructed ditches. Many of the watercourses originate in upland areas outside the APD, carrying water and sediment into the APD. Many of them support fish, including endangered Chinook salmon and steelhead, for at least part of the year, and provide important habitat. Many farms were originally established in the early 1900s by draining wetlands or diverting watercourses to make the land suitable for agriculture. The watercourses are now part of a drainage system that is crucial for agriculture.

Over several years, sediment accumulates and blocks the outlet of the drain tiles, preventing drainage of the fields. Excess water in the soil greatly reduces the productive capacity of farmland. Without proper drainage, farm equipment cannot operate, many crops cannot be grown, the growing season is shortened, and livestock cannot graze. Some fields have become simply too wet to farm.

Prior to the 1990s, the removal of vegetation and accumulated sediment from the watercourses was a maintenance activity that farmers routinely conducted to keep their drainage systems functioning properly with little regulatory oversight. If these activities are not done properly, they can have a devastating effect on aquatic life, habitat, and water quality. As the impacts of these activities became understood, new regulations were adopted by the federal, state, and local governments to protect water quality and habitat for water dependent-species. The result is that the process to obtain approval to perform regular maintenance to keep the drainage systems functioning properly can be time consuming and expensive. The current maze of regulatory requirements and the associated costs of compliance has resulted in a huge backlog of unmaintained drainage systems.

Urban and rural development in the upland areas adjacent to the APDs can also add to the problems faced by farmers. Even with contemporary stormwater management controls, clearing and development result in more water and sediment coming down the streams during storms, creating the need for more frequent drainage maintenance.

"My plan in 2009 and 2010 is to farm organic green beans but beyond this it will depend on what can be done to the land to make it usable for other vegetable crops or specialty crops. For example; can I ditch, dike, contour, level, etc. for nursery crops, cranberries, blueberries, high value vegetables etc. because if not; then I may be limited in what can be done with the land to keep the farm viable. Currently I must grow something that is a very quick/short season crop to mature like green beans because of the drainage issues and the restrictions put on cleaning ditches by the county/state (these are causing me to be disadvantaged compared to farmers in other counties)."

Snoqualmie Valley farmer comment

At the public meetings, many farmers expressed concern over drainage issues and the complicated regulations. In 1999 King County began its Agricultural Drainage Assistance Program (ADAP) to help farmers with ditch maintenance. Through the program, King County had assisted farmers with project planning permitting, mitigation, and construction oversight.

Comprehensive Plan policy R-649

Maintaining the viability of farmlands is a high priority for King County. Within the Agricultural Production Districts, measures to protect threatened or endangered species shall be tailored to ensure working farms can continue to operate.

Farmers appreciate the county's efforts with ADAP, but are still frustrated with the permitting process, which they find to be difficult to understand, time-consuming, costly, and full of uncertainty. Each drainage project is different, but many involve Washington State Department of Fish and Wildlife, King Conservation District, and the King County Department of Development and Environmental Services (DDES). Depending on the site and level of risk to fish, the project may also require interaction with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, or the National Marine Fisheries Service. The farmer may need engineered plans and ecological and archeological studies for the permit applications. Although some sites are relatively easy to maintain, most require strict practices to remove water and fish and to prevent erosion. Mitigation plantings are often required, followed by three years of monitoring and maintenance to ensure that the plantings survive.

The county recognizes the need to simplify the process. In 2009, the county initiated a process that includes farmers, fish interests, and regulatory agencies to consider options for streamlining the permitting process while maintaining environmental protections. A successful outcome will allow farmers to return wet fields to productive agriculture while protecting fish and water quality and improving fish habitat to the largest extent possible. One goal is to allow the farmers to do the maintenance work themselves. Even if this goal is achieved, farmers will still need technical and financial assistance to ensure that ditch maintenance activities meet the farmers' needs while protecting endangered species and habitat. This is a high priority issue for farmers and the county.

Action: Continue the work initiated in 2009 to streamline regulatory requirements into a single, simple permit that integrates the different levels of regulations.

Action: Develop sustainable financial and technical assistance for agricultural drainage maintenance.

Action: Work with regulators, farmers, and salmon recovery forums to link drainage projects and salmon enhancement priorities on agricultural land.

Alluvial Fans

Many of the streams in the APDs originate in upland areas and descend through steep, narrow ravines before reaching the floodplain. At the point where a stream leaves its ravine and flows onto the floodplain, the slope decreases quickly, dramatically reducing the stream's ability to carry sediment. The sediment is dropped at this point. Over time the sediment builds up and eventually blocks water flow. In time, often during unusually high flow, the stream will jump the banks and create a new channel. The deposition and migration of the channel results in a fan-shaped deposit known as an alluvial fan.

Alluvial fans form the highest ground in the floodplain and have historically been used for the construction of houses and farm buildings. Unfortunately, they are inherently unstable and when an event causes a change in the channel, the new channel can flood fields and buildings. Keeping the stream in its channel requires extensive, ongoing maintenance. In the past, landowners removed the accumulated sediment and rebuilt the stream channel to prevent the stream from forming a new channel over fields or home sites.

Alluvial fans also often provide some of the best available spawning habitat in a tributary stream. In some heavily altered streams, the alluvial fan may represent the only remaining area suitable for spawning. Because of the impacts to habitat, farmers are no longer allowed to remove the sediment from the channel. As a result of this limitation, several farms in the Snoqualmie Valley have incurred damage to fields and buildings from flooding due to alluvial fan action.

Assisting the affected farmers became an Agriculture Commission priority in 2007. The 2008 Comprehensive Plan introduced policies to support this effort. It was subsequently taken on as a high priority initiative by the King Conservation District (KCD) under its Best Available Science and Engineering program. An informal group of Agriculture Commissioners, KCD supervisors, landowners, and county and district staff have combined resources to attempt to find solutions for farmers affected by alluvial fans. Initial work has found that it is very difficult for a landowner to obtain a permit to clear sediment from a channel in an alluvial fan or to address the damage after a stream migrates (Albro Alluvial Fan Study, 2009, King County). A more extensive scientific study to look at alternatives is needed.

Any solutions to alluvial fans should meet the operational needs of farmers while still protecting and, if possible, improving fish habitat. These solutions will require pilot projects for testing. The Washington Department of Fish and Wildlife, the Army Corps of Engineers and other groups will have to be brought in as part of any solutions.

Action: County departments should work with state and federal regulatory agencies, the King Conservation District, the Water Resource Inventory Areas, the Agriculture Commission, and landowners to:

- implement and monitor a variety of model projects to manage alluvial fans
- develop a workable permit or other mechanism so that farmers can conduct maintenance activities
- provide technical assistance to landowners to help implement long-term remedies at a reasonable cost.

Flooding

Attendees at the public meetings overwhelmingly stated that the fate of agriculture will be determined by the future of flooding in the Lower Green, Upper Green, and Snoqualmie APDs. Farmers in floodplains expect to suffer occasional damaging floods, but the frequency and severity of floods in the Snoqualmie APD in the last several years have caused extreme physical and psychological hardship. The increased risk of floods in the Green River Valley if the Howard Hanson Dam is not repaired rapidly may result in similar hardships for the farmers in the Upper and Lower Green APDs.

Major floods have devastating consequences for farms, some of which are long-term. Floods can wash away or severely compact soils. Large amounts of debris, which the farmer is responsible for removing, remain on a farm after a flood. In an urban area, floods might leave soil contaminants such as automotive fluids, cans of paint or solvents, dumpsters, or human waste. Animals can drown, suffer injury, or get sick. On dairy farms, milk production levels may be reduced and can take up to a year to return to normal. Buildings, crops, homes, and fences are damaged or destroyed. No farmer can easily recover from these damages.

Recognizing the impacts from severe flooding, King County took significant steps to support farmers after the November 2006 flood, including convening the Snoqualmie Flood Farm Task Force. The task force developed 16 recommendations, many of which have been implemented, including code changes and funding assistance to help Snoqualmie landowners address flooding. About 20 farmers have built elevated farm pads to keep livestock, equipment, and supplies above the predicted 100-year flood elevation. Significant staff efforts in the Water and Land Resources Division, DDES, and County Council have been allocated to this undertaking. Although the farm pad effort does not address all of the flood issues, it shows the county is serious about protecting agriculture.

A number of the recommendations in the Flood Farm Task Force report (see Appendix I) remain to be implemented. The recommendations and the farm pad assistance should be evaluated for potential implementation in the two Green River APDs. Many farmers feel the county needs to better respond to their fears about future floods. The county's approaches to flood recovery and floodplain management should continue to take agricultural needs into account.

The Federal Emergency Management Agency (FEMA) provides grants to elevate homes and agricultural structures. Even with such support, farmers are not fully compensated for the effects of flooding on farms. Raising barns is typically too expensive to qualify for FEMA grants. Farm Service Agency (FSA) aid is targeted to flood recovery for commodity crops, which do not include fresh produce. King County Solid Waste focuses on residents, not businesses, when providing vouchers for free dumping services after a flood. Although they extended some flexibility to include farmers in the last Snoqualmie flood, diminishing resources may mean this will not be available in the future. These services also do not address the fact that the majority of post-flood debris on farmland can be collected only when the fields are dry enough to access, which may be weeks or months later and after emergency clean-up programs have ended.

". . . raising our houses may be helpful, but we are not just residents. Who is going to raise my farm?"

Snoqualmie farmer comment

Farmers also perceive a severe imbalance in how they and agricultural lands are affected by flood regulations because in many cases entire farms are located within the floodplain. They live under some of the most progressive, and therefore most stringent, flood management standards in the nation—which severely restrict construction in the floodplain. These regulations are intended to ensure that construction in the floodplain does not create problems for others. However, in areas like the Snoqualmie and Green River valleys, where almost the entire APD is located within the floodplain, these regulations present significant challenges for farmers.

Although the 2008 code changes were a huge step in accommodating agriculture, except for the construction of a limited number of farm pads, farmers are not allowed to construct buildings or other infrastructure in the floodplain unless they remove an equivalent volume of material at the same elevation elsewhere in the valley. It is very difficult for farmers to build field access roads because of restrictions on fill. For example, one farm had to take out a field access road because the one-foot layer of fill used in its construction was illegal. Limits on what can be built on farm pads need to be addressed. That same farm had to move its headquarters off-farm because it was not allowed to locate its office on its existing farm pad. One dairy farmer indicated he

had 47 cows that could not be milked for over 50 hours because his milking parlor was under water. As a result, the cows became sick and their milk could not be sold. This situation and its potential impact on long-term production capacity could have been avoided if he had a milking parlor on his farm pad.

In the Snoqualmie APD, a group called Neighbors Against Flooding is fighting the current proposed revision to Puget Sound Energy's facilities at Snoqualmie Falls. This project will reduce flooding in the city of Snoqualmie, but will increase flooding downstream by one-half an inch. Puget Sound Energy has said the impact of the additional rise in floodwaters on farmers downstream is insignificant. To the farmers in the valley, though, if that one half inch enters their barn or home it is very significant. The farmers feel that they are asked to accept incremental increases as having a "negligible effect" while they are not allowed to build anything in the floodplain that has any effect.

Many landowners think that helping agriculture is the best way to provide for the long-term safety of maximum flood conveyance in the floodplain. They do not want development there and recognize the necessity of limiting fill in the floodplain. Agriculture is acknowledged as one of the few potentially compatible uses of a floodplain, so farmers look to the county to provide them some degree of accommodation to work and live in that floodplain.

King County established The Flood Control District that includes an advisory board with member jurisdictions and one rural citizen who represents unincorporated area councils. Agriculture interests should be represented on the advisory board because the regulatory and flood management decisions have an impact on agriculture. Three of the APDs are the primary areas of flood conveyance in unincorporated King County. The Flood Control District should increase its work with farmers to maintain this conveyance capacity while protecting agriculture and the farmers who live in these floodplains. Flood management projects, such as levee setbacks, that are proposed in the APDs need to be designed in collaboration with agricultural as well as other interests. Depending on their scale and location, levee setbacks could significantly reduce agricultural acreage. If setbacks are needed, projects should be designed to benefit agriculture as well as flood management.

Action: Continue implementation of the recommendations in the Farm Flood Task Force Report. Reconvene the task force or similar group to report progress on implementation and develop additional recommendations, if needed. Expand the task force to address the Green River agriculture concerns as well.

Action: Continue to provide the best possible flood warning information to farmers and provide it in all appropriate languages.

Action: Continue to offer assistance to mitigate potential flood hazards and damages, diminish flood losses, and reduce recovery costs.

Action: Partner with appropriate county departments and other agencies to provide more support to farmers for removing debris and repairing damaged farmland after floods.

Action: Add farm representation to the Basin Technical Committees and find a way to ensure that agricultural interests are represented at the Flood Control Advisory Committee.

Action: King County should work with the state and cities to increase consistency in regulations across jurisdictions to reduce flood impacts to agricultural operations.

Action: Work to remove hazardous materials from the floodplain so they are not mobilized during a flood, potentially contaminating fields and injuring livestock.

"The future of farming in the area will be determined by how we deal with flooding."

Snoqualmie Valley Farmer comment

Water Availability

The seasonal pattern of rain and drought are characteristic of western Washington. Heavy rains create many challenges for agriculture, such as overwhelming drainage problems and flooding. However, too little rain during critical times of the year can provide just as big of a challenge. Access to water for irrigation and other on-farm needs, particularly during dry periods, is critical to the future of farming in King County.

How much water is needed for crops?

Water needs vary depending on the specific crop. On average, crops typically require 325,851 gallons of water per acre each year. (This is known as an acre foot—enough water to cover an acre of land in a foot of water.)

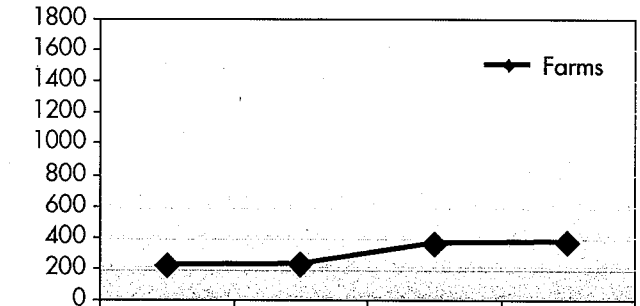
The irrigation season is about three months (or 12 weeks) long, so the average crop needs about 27,154 gallons per acre weekly. (Also known as an acre inch—or enough water to cover an acre of land in an inch of water weekly.)

The water use in any given year depends upon that year's weather—primarily whether it is a hot summer and how much rainfall there is before and during the growing season.

Trends indicate that water availability will become increasingly important in the future. As more farms convert to high-value crops, such as vegetables and berries, the need for water to irrigate during growing seasons will become more critical and economically essential. Climate change could make this even more challenging in the future, since most climate models suggest that summers in western Washington will be warmer and stream flows lower. The competition for dwindling supplies with other important water uses, such as the recovery of endangered and threatened fish, will continue to grow.

Use of irrigation has increased slightly in King County. As shown in Chart 5, the number of farms irrigating has gone up by 66 percent from 221 in 1992 to 366 in 2007. As the total number of farms in the county increased during that same period, the percentage of farms that irrigate remained at 20 percent.

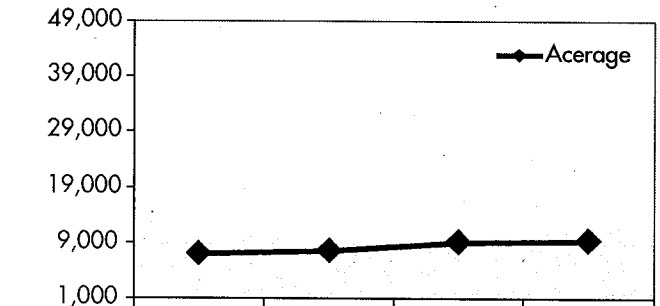
Chart 5
Number of farms irrigated in King County



	1992	1997	2002	2007
FARMS	221	225	356	366

During the same period, the acres of farmland in the county being irrigated increased 21 percent, from 7,000 acres in 1992 to almost 9,500 acres in 2007. As a percentage of total farmland, the irrigated acreage increased from 17 to 19 percent.

Chart 6
Acreage Being Irrigated



	1992	1997	2002	2007
ACERAGE	7,076	7,542	9,156	9,461

We estimate that the average water need is one foot of water for each acre of irrigated land. Assuming this amount, given the increase in irrigated acres there has been an increase of 2,500 acre-feet of water being used for on-farm irrigation in the county in the past 15 years. The two most likely sources of water are either groundwater wells or direct withdrawals from nearby streams.

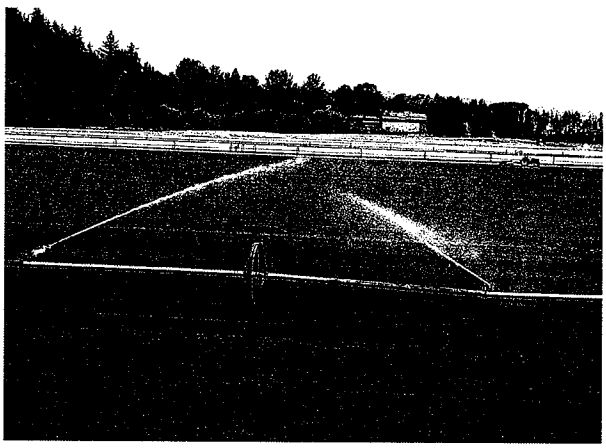
State law requires a state issued-water rights certificate for any diversions of water from streams or lakes and any withdrawals of groundwater over 5,000 gallons per day. Based on work by staff in 2008, it is apparent that few farms have a water rights certificate. Many farmers may be using water under a legally vested right represented by a claim, but have never had the claim recognized. Some legally-issued rights may have been partly or completely lost due to a lack of use for a period of time. Some farms may have a right that is not large enough to irrigate water-intensive high value crops.

This uncertainty of water rights may make most of the farms vulnerable to not having enough water in the future.

There are some options for farmers without water rights, each of which has challenges:

- ***Use Public Water System Water***
  Some farms that are close to urban areas may be able to use city or water system water as a regular or an emergency source of irrigation water. This method can be prohibitively expensive or hard to obtain or both. Although rates vary from water system to water system, a typical water utility charge would be about $2,500 for an acre foot of water. A 10-acre farm could be paying an extra $25,000 a year for water, putting them at a competitive disadvantage with other farms that do not incur this cost. Many farms do not have access to urban water supplies or equipment and cannot use this option.
- ***Truck Water***
  Hauling water is an option that some farmers have used on rare occasions. A large tanker truck can haul only about five to six thousand gallons. It would take five to six loads to deliver enough water to irrigate one acre a week. In addition to the monetary cost of fuel and maintenance, the environmental impact would be very high.
- ***Transfer water rights***
  If a farmer can find a seller or person interested in leasing a valid water right in the same source for surface water transfer or the same body of public ground water for a ground water right transfer, it might be possible to have water rights transferred.

  The process of transferring is relatively straight forward and the Department of Ecology has prioritized change decisions over other water right decisions. Alternatively, a cost recovery option is available to ensure a timely decision on the application to change a water right. There could be detrimental impacts to existing rights (for example, to stream flows) that would likely be challenged by environmental groups or tribes in a surface water change decision. The state is exploring how to make transfers or changes to water rights easier with the creation of a water bank or exchange, possibly on a temporary or short-term basis. Legislation to implement such a program, ESSB 5583, was signed into law.
- ***Grow crops that need less water***
  Growing crops that need less water may be an option for some growers. Considering the high cost of land and other factors, including consumer demand, farmers need to grow high value crops. Most of these need a lot of water. In the future, crops with better drought resistance may be developed.



- ***Water Conservation methods***
  There are methods to reduce the amount of water needed to grow a crop and most farmers strive to reduce their water consumption. For example, drip irrigation requires less water than sprinkler irrigation. There are ways to enhance the soil so it holds more water and reduces the need to irrigate as often. Unfortunately, under state water rights law, farmers can lose a portion of their water right if they fail to use the entire right. This is a disincentive for conservation. There may be potential partnerships with other organizations to create incentives to overcome these issues and encourage conservation.

There are some approaches that could be explored to solve these problems. These approaches should be explored collaboratively with WRIA groups and other fisheries interests because both fish and agriculture need water at the same time. Groundwater withdrawals may or may not affect in-stream flows.

- ***Explore water reuse***
  Using reclaimed water for agricultural irrigation may be possible for farmers in the Sammamish APD, where King County plans to construct a reclaimed water pipe to deliver water from the Brightwater treatment plant. Assuming the costs are low enough, farmers in that area may be able to take advantage of this resource. The King County Wastewater Treatment Division is developing a reclaimed water Comprehensive Plan that will determine if and how the existing reclaimed water program should expand. The Comprehensive Plan will consider potential areas

of use, which could include agricultural and other outdoor irrigation.

- ***Increase storage capacity***
  Developing tools to allow various forms of rain harvesting may be an answer for some growers. One example is to allow farmers with large enough farms to collect and store rain or flood water and use it during the dry season. As the climate of this region changes to wetter winters and drier summers, it will be important to allow more flexibility in developing storage systems that allow better water access during the dry months. This could also serve other purposes, including groundwater recharge and water for fire suppression and wildlife.
- ***Modify state water rights relinquishment laws***
  Relinquishment is a statutorily prescribed process to recognize the apparent forfeiture of a water right because of nonuse or partial nonuse for five or more years. This "use it or lose it" requirement is to ensure that limited water resources are put to maximum beneficial use for all of Washington's citizens and water rights are not stockpiled for speculative purposes. There are limited exemptions for crop rotations in agricultural water rights law. There are many reasons why a farm may not be irrigated in a five-year period. Since our APDs are zoned for agriculture, the water right should not be relinquished when a farm is brought back into agricultural use after non-farmer ownership. One way to do this is to exempt agricultural use within the APDs from the general relinquishment provisions.
- ***Expand the groundwater exemption in ways compatible with other water management goals***
  Current law allows groundwater to be used for small or very specific uses without obtaining a water right. Generally, the allowed uses are capped by a limitation on volume (5,000 gallons per day), acreage (1/2-acre of noncommercial land), or type of use (stock watering). Various legislative attempts have been made to increase the existing limitations under this statute or expand the uses exempted from having to obtain a water right. Any expansion should consider and balance the needs of fish protection and other water management goals of the county.

Action: The county shall work with federal, state, local, and private agencies to ensure and maintain adequate water for the needs of agriculture. Assessments of future surface and groundwater availability for agriculture should consider projected impacts of climate change (2008 Comprehensive Plan policy R-665).

Action: Encourage the use of reclaimed water for irrigation at a reasonable cost.

Action: Work with the Department of Ecology and other appropriate groups to evaluate and develop upslope multipurpose reservoirs to capture winter rains for agricultural irrigation, fire suppression, and wildlife watering.

Action: Work with the appropriate agencies to develop innovative ways to modify the relinquishment laws to help farmers keep their water rights.

Issue Topic II: Marketing and Economic Development

Promotion and marketing support is crucial for small farmers, whether they are selling directly to consumers or wholesalers. On their own, small farms do not have the resources or knowledge necessary for effective marketing and promotion. The increase in farmers markets over the past few years has been impressive, but continued success will require overcoming some of the challenges they face. Development of infrastructure and services at a scale that small farmers can access to expand their business will take cooperation and support.

Recommendation

- The Agriculture Commission and King County should work with cities and other stakeholders in 2010 to determine the best ways to provide for and fund marketing and economic development services similar to those that King County has been providing. Funding might include increased support from the cities, King Conservation District, other counties, and participating farmers.

As the size and types of farms in the county have changed, there has also been a change in how farmers sell their products. Small farms do not have the volume to sell to large-scale processors or grocery chains. Selling directly to the public has become the most profitable and in many cases, only option for small farms. Farmers in King County can sell directly to small retail grocery stores, restaurants, farmers markets, and via websites. Some operate U-Pick farms, where customers visit the farm and pick the crops themselves. The benefits of U-Pick include harvest cost savings for the farmer and lower prices and an enjoyable experience for the customer. Another direct sales option is Community Supported Agriculture (CSA), or subscription farming. A CSA consumer purchases a share of the farm's produce at the beginning of the season and then receives a box of produce on a regular schedule. This gives farmers money when they most need it and can reduce or eliminate the need to take out operating loans. The CSA members, or subscribers, assume some of the risk of farming. The number of CSA farms has grown dramatically from less than a handful in the Puget Sound region a few years ago to at least 15 in King County today.

"We are both 68 years old and plan to farm until we die. We would like to see farmers markets in every neighborhood and community."

Maple Valley farmer comment

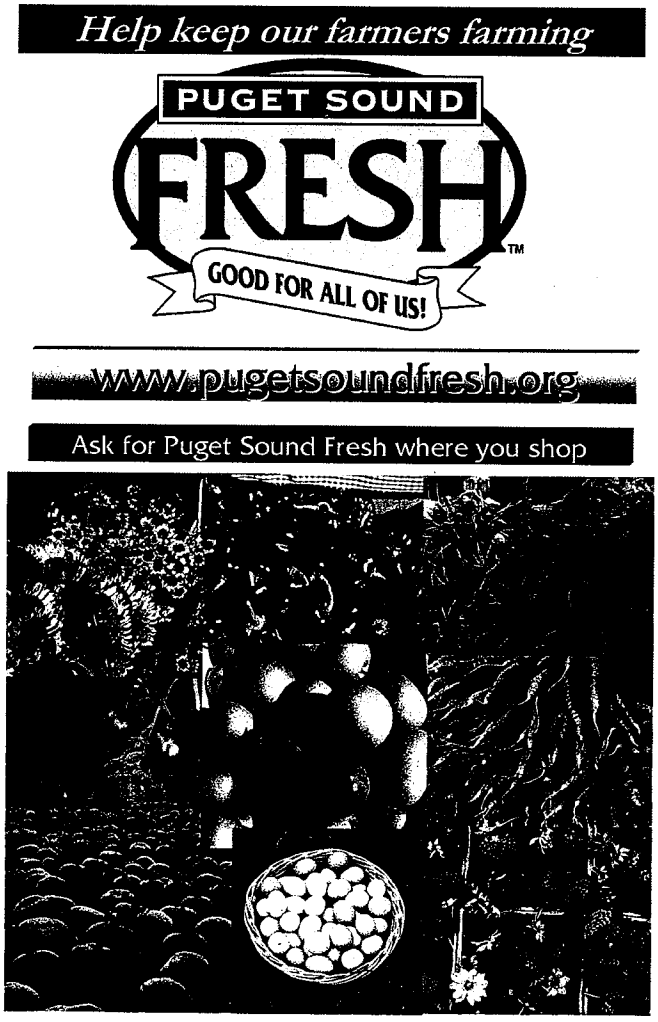
Puget Sound Fresh

The majority of King County's farms are small, family-run operations that do not have the resources to develop marketing outlets and promotional campaigns. One of the barriers to successful farming identified in the *Farm and Forest Report* was the need for better marketing and promotion. Responding to this need, King County created and funded Puget Sound Fresh, a regional marketing program that promotes food grown in the twelve counties around the Puget Sound and educates consumers about the advantages and reasons to buy locally grown food.

In 2002, King County began contracting with Cascade Harvest Coalition (CHC) to run the program. The county continues to maintain the website and provide staff support. Through grants, volunteers, and free publicity, CHC leverages the county's funding approximately five times. Over the past 11 years, Puget Sound

Fresh has developed a regional brand identity that has significantly increased the visibility and demand for local food. The program's website provides information on farms, farmers markets, and locally grown food. It has also built a network that connects farmers, retailers, chefs, and consumers.

Puget Sound Fresh builds support and identity for local farm products however they are marketed, but the program is perhaps most important in providing visibility and promotion for farmers who want to sell directly to the public. For example, it provides marketing funds to farmers markets. The Puget Sound Farm Guide (100,000 copies), with maps showing all participating farms, is particularly important for U-Pick and on-farm sales. The Community Supported Agriculture (CSA) Directory (20,000 copies) helps to raise consumer awareness about CSAs. Puget Sound Fresh also reaches over 250,000 residents at more than 50 community events per year, manages the Eat Local for Thanksgiving campaign, and publishes the "What's Fresh" e-newsletter.



Puget Sound Fresh is valued by the farmers in King County and is considered essential to viable local agriculture. The challenge is how to continue to fund it and other marketing efforts.

Action: Continue to support Puget Sound Fresh and related marketing activities through broad public-private regional financing.

Farmers Markets

For many farmers, selling at a farmers market has kept them in business because they can get the full retail value of their products. In contrast, they get a very small percentage of the retail price of their products if sold at a grocery store. This may not be enough to cover their costs without additional subsidies. Farmers market managers assume the costs of promoting and operating the market so that farmers can focus on growing and selling.

King County is home to seven of the top ten farmers markets in Washington State. Several farmers markets in Seattle have been on lists of the ten best farmers markets in the country. One of the first actions of Puget Sound Fresh was to provide start-up funds to new farmers markets. In 1998, Puget Sound Fresh provided $15,000 each to the Columbia City and West Seattle farmers markets. Since then, this small investment has returned millions of dollars to farmers throughout Washington State. In 2008 alone, these two markets generated over two million dollars in sales by Washington farmers and small food producers.

The growth of farmers markets in King County has been dramatic. In 1996 there were a dozen farmers markets. By 2009 the number had grown to 41, nearly one-third of all the markets in the state. These markets generate $25 to $35 million in annual sales, nearly 50 percent of the state's total farmers market sales. Over 60 King County farmers sell their products at these markets.

Farmers markets benefit more than just farmers. Nearly every community in the county has expressed interest in having a market because they provide fresh food, create a sense of community, and lure more customers into a local business district. Sales from these venues keep more dollars circulating in the local economy than grocery store sales. For every $100 spent at a grocery store, $25 stays in the local economy. In comparison, for every $100 spent at a farmers market, $62 stays in the local economy (Viki Sonntag, Why Local Linkages Matter, 2007).

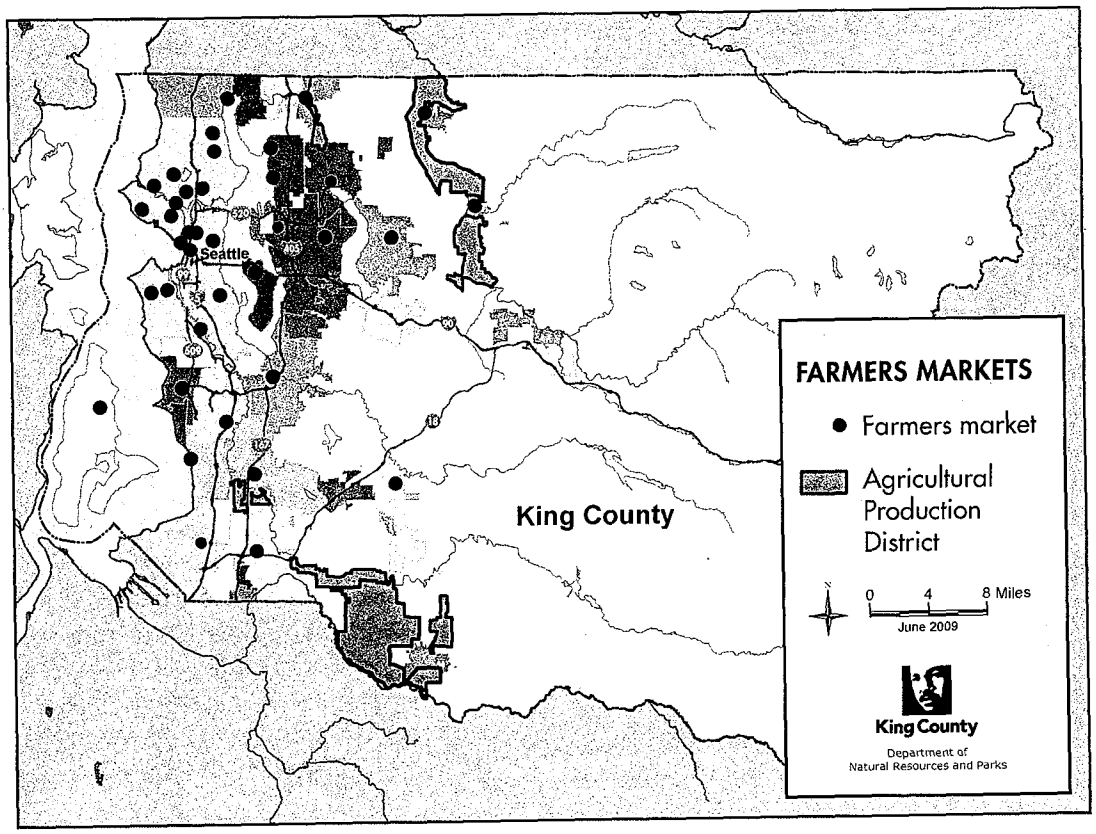
Comprehensive Plan policy R-517

King County should explore ways of creating and supporting community gardens, farmers markets, produce stands and other similar community based food growing projects to provide and improve access to healthy food for all rural residents.

King County has supported the initiation and growth of farmers markets through direct grants, technical assistance, and revision of policies and codes. About 10 years ago, King County created a Health Department Task Force comprising representatives from Public Health, Washington State University, Washington State Department of Agriculture, and market managers to figure out how to allow farmers to sell more products at farmers markets. As a result of this collaboration, farmers are now able to sell fresh and frozen meat, dairy products, and seafood at the markets.

Public Health has also worked closely with market managers to develop a set of food safety practices to implement and monitor at farmers markets, which reduce health risks and help keep the cost of market and vendor permits as low as possible. This ongoing collaboration is important to the success of farmers markets.

Building on the success of the task force, King County continues to facilitate solutions to problems common to all farmers markets. The county's Agriculture Program organizes and facilitates quarterly Farmers Market Manager Forums that focus on regulations, marketing, and operational issues. These meetings provide an opportunity for managers to learn about health regulations and food safety practices. They talk with each other about marketing strategies, staffing and vendor



issues, and business operations. The forum is particularly helpful for managers of new markets to learn from the experience of more seasoned managers.

Despite their success, farmers markets still face many challenges. Many are located in parking lots that are threatened with development. Farmers markets do not generate sufficient income from stall fees to cover all costs of operation. There is a lack of training and education for market managers and farmers, especially for starting a new market. Most markets can take only cash payments because they do not have the equipment to accept credit, debit, or the electronic cards that have replaced food stamps. Furthermore, with the increase in the number of farmers markets, there is competition among them for farmers and customers. Additional work is needed to better understand what factors make a farmers market successful and what is needed for continued success.

Action: Continue the King County Farmers Market Managers Forum and collaboration with Public Health.

Action: Actively participate in ongoing efforts to research and develop policies and strategies that will strengthen the county's farmers markets, including critical issues of profitability, secure locations, health and zoning code regulations, marketing, and electronic payment systems.

Action: Work with stakeholder organizations to help expand the regional support network for farmers markets and managers.

Action: Support efforts to make farmers markets as accessible as possible to all people by ensuring markets have technology for accepting electronic card payments, supporting the Women Infants and Children (WIC) and Senior Farmers Market Nutrition Programs, making sure the new WIC food package is expanded to all farmers markets, and supporting new programs that help more people shop at markets.

Infrastructure and Support Systems

As the county and region has urbanized and agriculture has changed, many of the traditional support businesses and services for farmers have disappeared or are not appropriately scaled for today's farmers. There are few remaining businesses that sell and service farm equipment, stores that sell feed and farm supplies, large animal veterinarians, or food processing plants. Another problem is that existing wholesale, transportation, and distribution systems are based on moving large volumes of product, well beyond what small farmers can generate. Smaller scale systems and cooperative efforts among many organizations need to be developed to allow small farmers access to the full range of markets.

One example of lost infrastructure is the disappearance of USDA or WSDA certified slaughter facilities, which are necessary for producers to sell meat and poultry to grocery stores, restaurants, or at farmers markets. A successful response is the Puget Sound Meat Producers Cooperative, which has just begun operating a USDA certified mobile slaughter facility that travels to member farms. It took diligent effort by the member livestock farmers, funding from Pierce County Conservation District, and technical assistance from other agencies, including King County and WSU Extension, to get it going.

Comprehensive Plan policy R-608

King County should encourage infrastructure and services that support resource lands management and resource-based businesses. These should be sited in close proximity to designated Agricultural and Forest Production Districts and Designated Mineral Resource Sites when adverse impacts and incompatibilities can effectively be mitigated.

A more specialized slaughter service may be offered by several prospective small businesses trying to get established in King County. These will provide custom slaughter of livestock in accordance with cultural and religious standards, such as halal certification. These slaughter facilities will be a potential market for producers of goats, sheep, and other livestock. The Department of Development and Environmental Services (DDES) is working with permit applicants to help address the specific issues and needs of these businesses.

Farmers can increase profits by processing their produce into jams, salsas, ciders, or other value-added products. However, the cost of establishing a commercial kitchen to process these products makes it difficult for farmers to develop them on their own. There are currently few small-scale commercial kitchens within King County available for farmers to use. Additional kitchens could expand the ability of small farmers to bring new products to market.

Selling products wholesale or to large institutions, such as schools, hospitals, and prisons, is difficult for small farmers for many reasons, such as volume of product. The ability to access these markets could help some small and mid-sized farm businesses. New systems are using the internet to provide smaller farmers the opportunity to consolidate their products for wholesale or other volume buyers. For example, the Puget Sound Food Network and Food Hub are two new web-based systems that put buyers in touch with producers, with the goal of increasing the production, distribution and consumption of local food. Users will be able to efficiently research, sell, or purchase local food. Another mechanism to open institutional markets to local farmers is through public policy.

Another example of the need for a cooperative approach is the development of a dairy manure digester on the Enumclaw Plateau. Many of the dairies do not own enough land to adequately dispose of their manure and must lease additional land. As conversion of farmland to residences continues, the land available for lease will become more difficult to find. Without alternative manure management options, farmers will have difficulty continuing operations. Dairy manure can be processed in an anaerobic digester to produce methane gas, which can generate heat or electricity. In addition to making a sellable product from waste, use of this methane can reduce emissions of greenhouse gases. The dairies in King County are too small to generate enough manure on a single farm to make a digester cost-effective. King County hopes to partner with a private business in the development of a digester that would serve multiple farms.

Along with King County, many farmers, organizations, conservation districts, WSU Extension, and entrepreneurs are all working on ways to improve farmers' access to a variety of markets and meet other infrastructure needs. County support should be in permit assistance or in examining codes and polices to make sure they support successful business development.

Action: Agricultural processing, packing and direct sales are considered agricultural activities and should be allowed at a size and scale appropriate to the zone in which they are operating. King County shall work with local and state health departments to develop regulations supporting these activities (2008 Comprehensive Plan policy R-569).

Action: King County should promote local food production and processing to reduce the distance that food must travel from farm to table (2008 Comprehensive Plan policy R-674).

Action: King County should consider adopting procurement policies that would encourage purchases of locally grown fresh foods (Comprehensive Plan policy R-673).

Action: Continue to support development of a manure digester.

"King County appears to be trying to improve the probability that farming operations will survive and prosper. Please keep the vision alive. I hope that the King County Ag Commission along with WSU extension will put together the types of educational programs that I now have travel to Snohomish County to get.

Thank you for all the changes you have already made, keep up the good work."

Snoqualmie Valley Farmer comment

Issue Topic III: Keeping Farmers Farming

Two of the most frequently mentioned topics in public meetings and surveys were land affordability and the regulatory environment. Farmers must be able to afford the land in order to farm and be able to develop the infrastructure required to create a profitable operation. Whether it is farm pads, barns, or processing facilities, farmers need a simple, cost effective, and easy to navigate regulatory environment to accomplish this.

Recommendation

- Establish and staff a new public-private task force to address the difficult issues of land affordability, farm succession, and new farmer support. This task force should report back to the King County Agriculture Commission, the Executive, and County Council, with recommendations.

King County has been proactive in preserving farmland, encouraging agriculture, and supporting farmers. Actions like the Farmland Preservation Program (FPP) and the designation of the Agricultural Production Districts (APDs) created continuous areas of land protected for farming. The work of the Agriculture Commission, program staff, and non-governmental organizations and residents continue to provide support that encourages farmers to farm and keeps farmland in production.

Although this work has helped to reverse the loss of agriculture in the county, there are limitations to many of these programs and support activities. Many farmers feel land is unaffordable to new farmers, alternative uses and policy objectives threaten to take more land out of production, and regulatory barriers limit their farm's productivity.

Preserving agricultural lands for agricultural use has not always ensured the land is actively farmed. Additional work is necessary to keep land affordable and fend off the conversion of agricultural land to non-agricultural uses. On the other hand, farmers need to be able to diversify their sources of income, so flexibility in zoning regulations is needed to allow them to earn money from agricultural-related activities, such as tourism, weddings, barn dances, and other events that rely on the agricultural setting for their value.

Keeping Farmland Affordable and Farmed

The FPP was approved and funded by King County taxpayers to keep farmland preserved. This was done by purchasing development rights on agricultural properties. By removing some of the development potential, the program's goal was to maintain affordability by limiting what the land could be used for. The program encourages the property owner to keep the farmland in agricultural use, but there is no requirement that the land be farmed.

The 2006 APD Land Use Survey conducted by the Agriculture Program staff showed that 74 percent of acreage enrolled in the FPP was being farmed. In contrast, only 39 percent of the acreage on non-FPP properties within the APDs was in active production. In terms of affordability, between 1980 and 2008 the average price per acre of vacant farmland enrolled in the FPP and consisting of 10 acres or more was $4,000 less per acre than non-FPP properties.

Despite these successes, farmland within the county remains unaffordable for many farmers. As is the case for all types of land, the cost of both FPP and non-FPP properties is significantly higher in King County than in neighboring counties. According to the 2007 Census of Agriculture, the average per acre value of farmland with associated buildings in King County is 2.5 times

higher than in Skagit County and 1.5 times higher than in Snohomish County.

One of the largest impacts to farmland affordability has been the use of farmland, including protected farmland, for large estate homes. The FPP program limits the number of houses but does not limit the size. The average home size in the APD was 2,000 square feet in 1999. Of the vacant agricultural parcels purchased in the last ten years, 22 of 24 new homes built on these parcels were at least twice that size. Some were as large as 15,000 square feet. Farmers who are looking for land to farm are competing with buyers interested in the same land for large estate homes.

Comprehensive Plan policy R-646

Agriculture should be the principal land use in the APDs. Permanent new construction within districts shall be sited to prevent conflicts with commercial farming or other agricultural uses, and nonagricultural uses shall be limited. New development shall not disrupt agriculture operations and shall have a scale compatible with an active farming district.

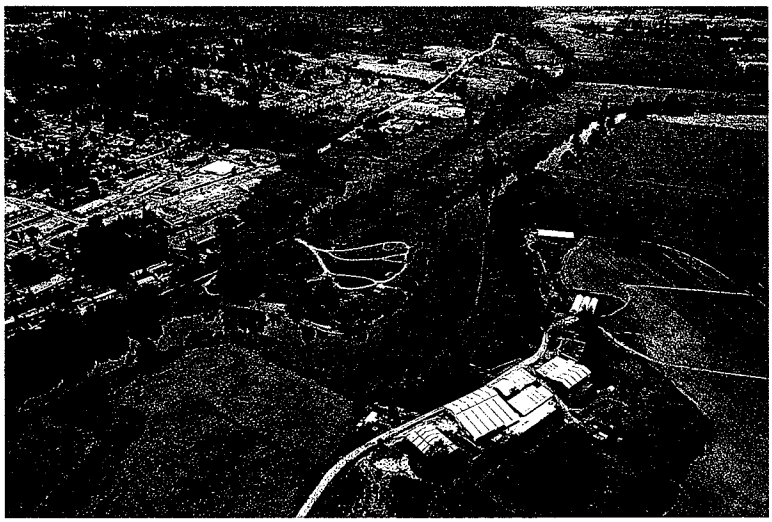
This problem is not limited to King County. As described in the nationwide study by the U.S. Department of Agriculture (USDA) covering the effectiveness of farmland preservation programs, conversion to large estate homes is universal and is negatively affecting the affordability of farmland in the long run. The study found the success these programs had in reducing land value was providing a savings to buyers who were purchasing land for large estate homes. According to the *Farmland Protection: The Role of Public Preferences for Rural Amenities* / AER-815:

> "In essence, the new landowner obtains land for his large-lot "mansion" at agricultural use value and does not pay the "development value" that would be required to obtain a similar lot that had not been preserved. When this happens, it effectively precludes the land from ever being farmed again, since most farmers will not have sufficient financial capital to purchase land for farming with significant non-farm improvements to the house and landscape. In such cases, taxpayer money was used to retain land in large-lot residential uses."

The Agriculture Commission recently dealt with the issue of farmland affordability and keeping it in active production during its work on updating and revising the covenants that are placed on FPP properties. As part of this process, the commission considered restricting the size of residences on preserved properties, a controversial issue upon which the commission was split. Instead, the Agriculture Commission recommended and the County Council approved an optional restriction, allowing the farmer to agree to limits on the size of residences.

The Agriculture Commission and King County discussed whether the FPP covenants should require that the preserved property be farmed, but decided that such a requirement would be very difficult, if not impossible, to enforce. Instead, it was decided to include with the covenants a statement strongly encouraging the owner to farm the preserved property or to lease it for farming. See Appendix J for more details regarding the commissions' work on updating the FPP covenants.

In order to ensure that farmland covenants are followed, it is essential that the county conduct regular monitoring of the FPP properties. Statistics compiled by FPP staff show that within the 3-year period of 2006–2008, 15 percent of the FPP properties visited had at least one covenant violation. The most frequent violations involved dwelling units, non-permitted commercial activities, the storage of junk vehicles or other waste products, and exceeding the amount of non-tillable surface permitted by the covenants. The enabling legislation for the FPP requires King County to hold the development rights in trust on behalf of the citizens of the county. Periodic monitoring of the preserved properties is necessary to uphold this obligation by ensuring that the development rights interest the county holds is



not compromised. We very strongly recommend that King County maintain adequate staffing so that FPP properties can be periodically monitored and any covenant violations resolved.

"Sprawl is removing farm land. The land is becoming so valuable that it can't be passed on as a farm."

Sammamish Valley farmer comment

The threats posed by alternative uses of farmland are not limited to FPP properties. The Agriculture Commission and staff have spent many hours responding to proposed projects that would convert farmland to other uses. The proposals have included using farmland for soccer fields, ball fields, trails, hot air balloon landings, heli-pads, airstrips, educational facilities, churches, convention centers, summer camps, and mitigation projects. Success in preventing conversions has been achieved when proposed uses were specifically not permitted in the zoning code, were clearly opposed by the farming community and the public at large, or were violations of the GMA and could be defeated in court. Unfortunately, though, when these proposals fail, many of the owners of these properties often leave the land fallow and not maintained.

Without the active monitoring of threats by the Agriculture Commission, staff, and supporters of local agriculture, many threats and illegal activities on agricultural land would go unnoticed. Even with such attention, many threats or violations are not caught until long after they have occurred and caused permanent damage to the agricultural land.

Code violations can be appealed by the landowner, resulting in a long process that may allow the current use to continue. This can cause neighboring landowners unfamiliar with the process to perceive that the county is allowing the illegal use or is not pursuing code violations. For many farmers, the length of time that can occur between observation of an illegal activity and cessation of that activity is a source of frustration.

Keeping farmland affordable and in active production is an issue that remains challenging, complex, and difficult to solve. Many of the possible solutions, such as stronger FPP covenant requirements or regulatory restrictions, are controversial and split members of the agricultural community. Despite these challenges, the issues demand further study to assure that we can maintain and enhance local agriculture.

Action: Monitoring compliance with the FPP covenants should be a priority for King County.

Action: King County shall continue to implement the objectives of the FPP. Protection of property purchased under the FPP shall be a high priority when balancing conflicting interests such as locating transportation, active recreation or utility facilities (2008 Comprehensive Plan policy R-641).

Action: King County should purchase additional development rights to farmland in the Agricultural Production Districts as funding becomes available (2008 Comprehensive Plan policy R-643).

Action: In addition to enhancing the FPP, the county should develop more innovative solutions and incentives to keep agricultural land affordable and profitable for active farming (Comprehensive Plan policy R-643).

Encouraging Food Production

Few places in the country have the combination of favorable growing conditions found in King County: mild climate, long growing season, relatively low need for supplemental irrigation, and rich soils. The APDs have the capacity to produce 100 percent of the 27 most commonly-eaten fruits and vegetables on only one third of their acreage. If all of the farmable acreage in the APDs were in production, local farmers could produce over 50% of the caloric needs of county residents. (See Appendix F.)

Encouraging an increase in food production is a challenge. As this report points out in numerous sections, there are many competing uses for land in the APDs that are more lucrative than food growing and may cause a loss in food growing capacity.

King County encourages agriculture in the APDs but does not require it. Furthermore, not all agriculture results in food production. Raising horses, especially thoroughbreds and other valuable breeds, has always been a profitable part of King County's agricultural industry. The beautiful bouquets of flowers sold at Pike Place and neighborhood farmer markets have become a symbol of local agriculture. The nursery industry is one of the most valuable segments of the local agricultural economy.

Conclusion

As described in this report, more people are farming in King County and a greater number of residents are benefiting from King County agricultural products. We believe that local agriculture is well-supported throughout the county. This is due in large part to considerable investments of resources from public and private entities to educate the public and ensure farming remains profitable.

There is still a lot of work to be done. King County agriculture will improve and grow only with programs that address the underlying needs for land, water and profitability.

The five topic areas that have been described will continue to challenge farmers as population increases. As this report shows, the vast majority of people in King County value and benefit from local agriculture. How we address these issues together will determine the future of agriculture.

Water

Farmers cannot grow crops or raise animals when there is too much water on their property. They also cannot farm when there is too little water for irrigating crops or watering livestock.

Upslope clearing and storm water runoff threaten many of the county's agricultural areas. Addressing this issue must involve a partnership between cities and the county to agree on how development occurs and how the runoff is managed.

Major floods threaten the future of the Snoqualmie, Upper Green, and Lower Green APDs. Agricultural interests must work in partnership with appropriate agencies to plan for flood protection and recovery. We must make sure that farmers, their land, and their infrastructure are protected to as great a degree as possible.

As farming increases, the need for irrigation and stock watering will continue to grow. At the same time, fish use the same resource and will need to be protected. Fish and agricultural interests need to form a coalition to determine all feasible means of finding water for farms while protecting valuable fish and other natural resources dependent on water.

Marketing and Economic Support

Accessing a market to sell a product is the only way a farmer can make a living. Before farmers are willing to invest in their farm, they need to see a future in which local agricultural markets exist and thrive. Agriculture cannot survive in King County if it is not a profitable enterprise.

The Puget Sound Fresh program has resulted in increased access to markets and helped local farmers be more competitive. The growth in farmers markets and other mechanisms for selling directly to consumers has created opportunities for farmers. However, funding for these efforts is uncertain and will take partnerships across jurisdications.

Land Affordability and Regulations

The residential real estate market and urban pressure for competing land uses is changing the character of our APDs. We need to explore mechanisms that control non-farm uses on agriculturally zoned land. Many other regions have similar issues. We need to continue to look at how other jurisdictions are managing this issue. We need to continue support for the Farmland Preservation Program. Although not without its own challenges, the program has proven to reduce some of the pressure to convert farmland to non-farm activities.

King County has taken major strides in recent years to improve permitting and regulations for agriculture. Despite these efforts the process of procuring basic infrastructure remains either time-consuming and expensive or prohibited outright. Frequently farmers report that the county's regulatory system is unsuited to facilitate the permitting of needed infrastructure. This uncertainty causes farmers to be hesitant to invest in their farm's infrastructure or expand operations. We must develop procedures that encourage farming enterprises while discouraging non-farm development.

Farmer Succession

If land is too expensive and resource access is limited, who will be able to afford to be the next generation of farmers? We must work with WSU Extension and other appropriate entities, such as Washington FarmLink, to develop programs that help the next generation of farmers access the land and develop the skills needed for successful farming.

Farm-City Connection and the Food System

As urban pressures increase can the county's agricultural industry continue to thrive? Farmers need continual and increased public support in the future. Continuing partnerships with organizations interested in food access and security will be critical to the future of agriculture in King County.

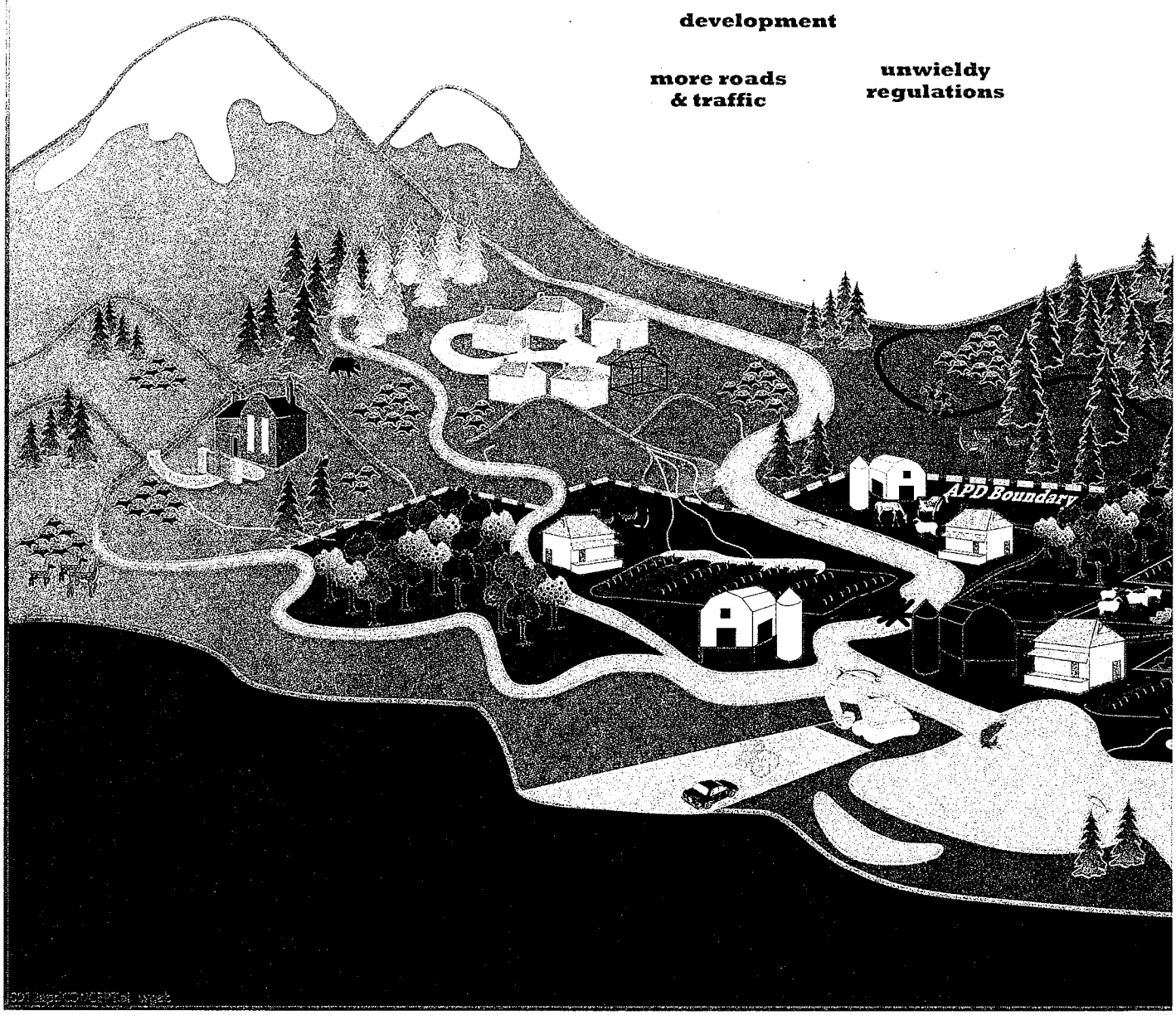
Funding and Inter-local Cooperation

In an urbanized county ways must be found to partner with cities and other regional entities to keep agriculture going. Our challenges are not unique to this county alone. We need to work together with the entire Puget Sound region to solve our common concerns. King County has been a leader regionally in promoting and keeping local agriculture. We need to be a regional leader in urging the coalition for a larger effort.

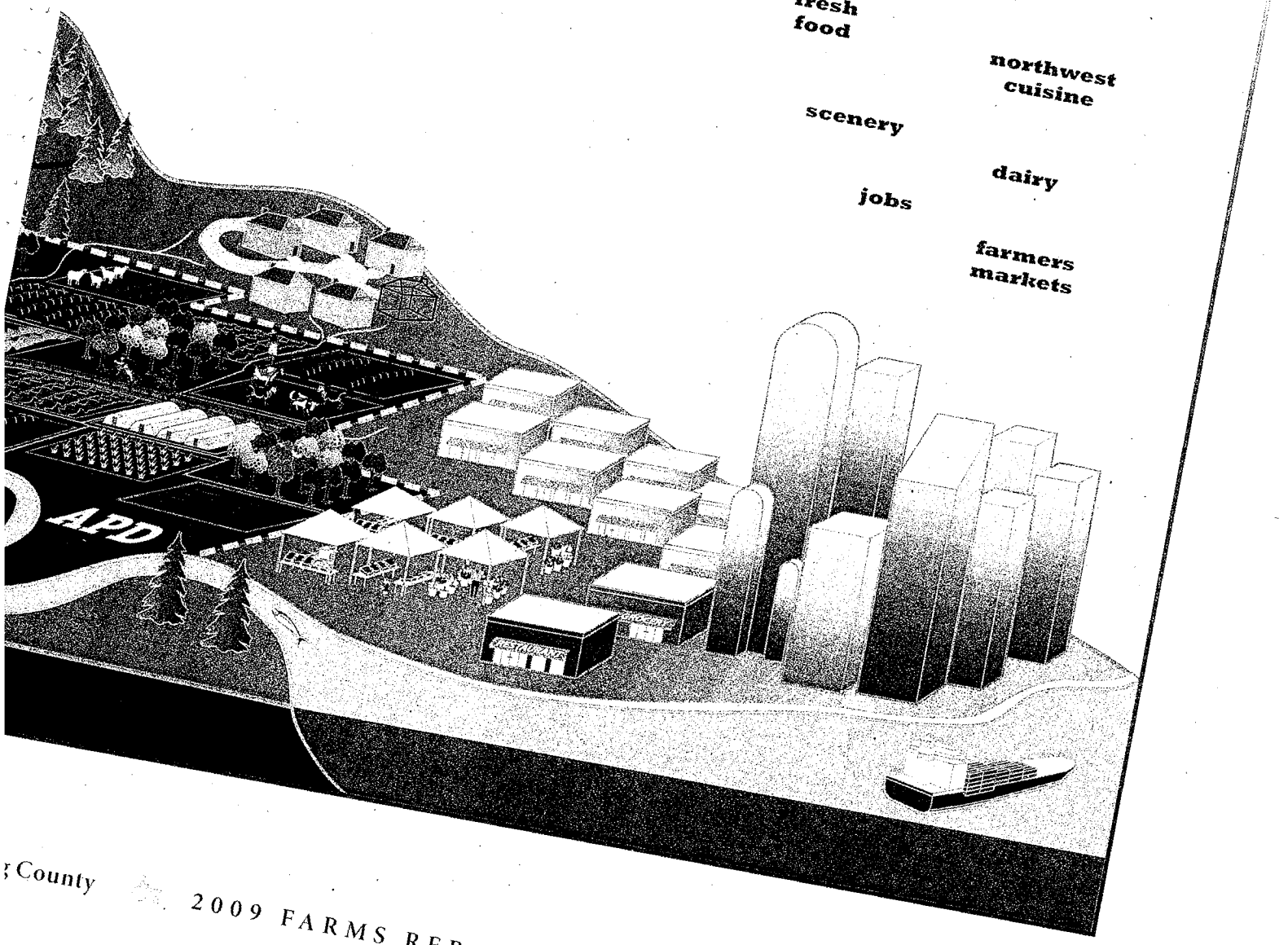
The wave of the future

Sustaining King County's

Threats to the Agricultural Production Districts



Agricultural Production Districts (APD) and Harvesting their Bounty



Appendix A.

Ten Year Vision

King County Agriculture Commission
10 Year Vision

Introduction

King County has some of the best conditions for farming in the country, if not the world: highly productive river bottom soils; a large population interested in local food production; a climate that provides temperatures for an almost year round growing season; and rains that leave relatively small irrigation requirements. Carnation Farm once had the world record for milk production; two Snoqualmie Valley families had the national record for milk production on individual farms. The City of Bellevue exists where there was once a bounty of strawberry yields produced by Japanese farmers before World War II. In 1940, King County produced the most lettuce of any county in the nation. This climate is what made Whidbey Island set the national record for bushels of wheat produced per acre. As one farmer has said: "With every inch of rain that drops here, I get an extra ton of corn and it doesn't cost me a dime..."

King County has a remarkable history of public actions to preserve farmlands and markets and to encourage farming within the county. In the 1979 voters approved the Farmland Preservation Program (FPP) while at the same time fighting to preserve the Pike Place Market. The FPP has successfully preserved almost 13,000 acres of prized farmland for this and future generations. In 1985, the King County Comprehensive Plan designated approximately 40,000 acres as Agricultural Production Districts, where much of commercial farming occurs. The Current Use Taxation is another program that has proven to be an important way to ensure that farmland remains in agricultural use.

The Agriculture Commission was established in 1994 to support active oversight of these lands by the County, and to promote a healthy agricultural economy. Among it's many accomplishments, the Commission played a critical role in establishing the Puget Sound Fresh and Farmlink programs and continues to find ways to enhance local markets and develop opportunities that encourage a new generation of farmers. Through these efforts, a good base of land has been preserved for farming.

But more work is needed. Good farmlands not preserved continue to be lost to new development, and farming can be difficult in a rapidly urbanizing county. While the urban area provides a thriving market potential, it also poses many threats to local agriculture. Major steps need to be taken to insure that the county's efforts provide the basis for increasing local food production in a world where the benefits of local food supply are increasing on a daily basis.

Goals:

Overall goals

1. To preserve agricultural lands within King County's Agricultural Production Districts and Rural Areas; and

2. To promote and nurture the business of farming in King County for this and future generations.

10 year goals.

The Vision **More Farmers Farming**

1. Promote Access to Farmland

How might we achieve the goal?

- Conduct an economic analysis of purchasing additional development rights on lands where development rights have already been acquired by the County to reduce sub dividing
- Draft criteria suggesting that applicants be asked to describe how farming will continue on their land for the foreseeable future
- Give farmers who agree to participate in the farm link/farm mentoring program, which matches new farmers with retiring farmers (described below), special consideration in the evaluation of the property
- Work on ways to keep FPP land in active farming, especially when FPP land changes hands.
- Include a sizable amount of funds to acquire additional development rights in King County in next major funding initiative for the purpose of acquiring more farmland.
- Utilize clustering, transfer of development rights, and density bonuses to encourage landowners to keep their lands in agricultural use
- Work on home size issues as related to affordability on Ag zoned land.

2. Support Intergenerational Transfer of Farmland and Ag Knowledge

How might we achieve the goal?

- Develop a partnership with FarmLink and other appropriate groups to find farmers for County owned land
- Link the FPP program and FarmLink more closely
-
- Increase support and funding for the FarmLink Program
- Develop a "mentoring" program which would provide an opportunity for experienced farmers to share their knowledge and resources with new farmers.
- Work with the existing high school and other vocational programs to create training programs for new farmers.

3. **Develop a demonstration farm (or several farms on smaller sites) to serve as testing sites for research and technical assistance on high intensity urban fringe farming. The farm(s) would also provide public education to teach citizens about farming.**

   How might we achieve the goal?

   - The public benefits could include: making land available to beginning farmers, skills training for beginning farmers, promotion and training of sustainable agricultural practices, public education about organic farming or other conservation practice

4. **Expand the existing tax incentive programs to provide further benefit to farmers**

   How might we achieve the goal?

   - Require that land (already or ASAP) be enrolled in Current Use Taxation (CUT) program to be eligible for the Farmland Preservation Program.
   - Work with Assessor's office to develop a marketing program for CUT
   - Work with the Assessor's Office in an advisory role to develop policies that improve agriculture activities.

The vision — Our Farmers will Have More Market Opportunities

1. **Develop new food markets and using Puget Sound Fresh as a tool**

   How might we achieve the goal?

   - Increase farmers markets and CSAs as needed
   - Develop cooperatives for small farmers to access institutions
   - Develop scale appropriate slaughter facilities for livestock owners
   - Facilitate emerging ethnic specialty markets

2. **Develop secondary markets for added farm revenue:**

   How might we achieve the goal?

   - Biofuels
   - Manure
   - Agro-tourism

3. **Expand partnerships with other counties in the Puget Sound Region**

   How might we achieve the goal?

   - Focus on Farming with Snohomish County
   - Puget Sound meat project
   - Puget Sound Fresh

4. **Continue to provide education related to agriculture**

   How might we achieve the goal?

   - Continue to work with the Cooperative Extension Service to make sure King County farmers have dedicated agents for horticulture and livestock, and sufficient resources from a statewide dairy team
   - Fund an endowment that would provide grants to conduct specific research, technical assistance and education programs that would benefit local farmers: energy efficiency, waste stream markets, ethnic products, etc…

The Vision

Our Regulations will be more Farm and Food Friendly

1. **Continue to look at regulations**

   How might we achieve the goal?

   - Continue regulatory reform, with a particular emphasis on the cost of building permit fees, the time it takes to acquire building permits for farm-related structures, and drainage maintenance.
   - Continue to streamline permits and coordinate regulations among local, state and federal agencies.
   - Allow temporary housing for farm workers.
   - Continue to review proposed policies and regulations prior to adoption, and existing policies and regulations that have a substantial impact on farmers
   - Analyze how upslope regulations and innovative technologies could reduce field inundation and improve drainage.
   - Enhance the Agricultural Ditch Assistance Program (ADAP, aka, Fish and Ditch) to reduce costs and lead times.

2. **Continue to identify additional ways in which the zoning code could be amended to preserve the integrity of the farmland while allowing greater flexibility to farmers in developing commercial uses that support agricultural production.**

   How might we achieve the goal?

   - Continue to develop more flexible ways to enhance on site sales of agricultural products.

3. **Expand services that help farmers receive better, more efficient service from King County.**

   How might we achieve the goal?

   - Continue problem solving, workshops and outreach by Ag Permit Team
   - Expand farmbudsman services.
   - Provide direct access to KCD farm planners…

4. **Assistance in completing permit processes at the local, state, and federal level**

   How might we achieve the goal?

   - Information about available tax incentive programs;
   - Assistance in working with the Conservation District to complete farm plans.
   - Provide information about available grants, loans, or other forms of governmental assistance.
   - Provide information about regulatory requirements.
   - Cooperate with other regulatory agencies to improve and streamline regulations

5. **More closely monitor the activities in the Agricultural Production Districts**

   How might we achieve the goal?

   - Increase GIS mapping of activities and uses
   - Increase communications with land owners
   - Work with other agencies to coordinate efforts to encourage more farming in the APDs

The Vision

The Threats to Agriculture will be Diminished

1. **Look for ways to adapt to and help reduce the effects of climate change.**

   How might we achieve the goal?

   - Develop innovative ways to increase the water supply (Water storage ponds, reclaimed water etc.) for irrigation.
   - Improve drainage systems through the APDs
   - Develop growing techniques that are more adaptable to climate variations (i.e. greenhouses)
   - Improve programs that allow farmers to protect themselves from wildfires

2. **Develop a regional effort to reduce the impacts of growth**

   How might we achieve the goal?

   - Educate cities and agencies on the importance of agriculture
   - Encourage participation of Ag interests when projects such as road expansions are being planned
   - Encourage participation of Ag interests on planning boards
   - Partner with neighboring counties and the State to coordinate policies and regulations
   - The remaining prime farmlands in the Urban Growth Area should be evaluated for their potential value for food production. Those areas that could continue to perform small-scale agricultural activities, such as market gardens, livestock operations, community pea patches, or as educational or research farms, shall be zoned for agriculture.
   - Create Right To Farm legislation

3. **Expand a regional effort to enhance Ag**

   How might we achieve the goal?

   - Focus on Farming
   - Develop programs with NW Ag Business Center
   - Continue to support Puget Sound Fresh

4. **Clearly define what Agriculture is**

   How might we achieve the goal?

   - With other counties, organizations and the State to develop a vision of what Ag is.
   - Work with local farmers to define Ag uses

SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
Easy access to a large market	Too much land underutilized	Increased market access (more CSAs, farmers markets)	Land speculation growth of cities
Lots of direct marketing opportunities	Too much wet land; Flooding	Developing new products (value added)	Lack of capital for beginning growers
Mild climate allows for a long growing season	Lack of infrastructure	Selling to institutions (schools, restaurants etc.)	High cost of land
Diverse crop and animal production	Regulatory issues	Agritourisim	Availability of water for irrigation
Best soil in the country	Traffic issues	Educational opportunities (school tours)	Conversion of ag land to non ag uses
Lots of technical assistance	Lack of labor	Grass fed meats	Mansions?
There is still enough land to provide a significant amount of food for County residents	No affordable worker housing	Cideries	Horses?
Ability to charge what the product is worth	More expensive to get into farming	Ability to address food safety concerns (putting a face on food)	Urban Sprawl
Selling directly to the consumer	Lots of small parcels	Sheep and goats for ethnic markets	Flooding
Good grass growing	Funding programs (Farmlink)	Biofuels?	Large scale restoration projects?
Puget Sound Fresh	Lack of understanding about Ag in the County (many people think there is no Ag; or more than there is; or that we have large exports, etc)	Climate change	Transportation projects.
Strong consumer interest in local food			Obstacles to Drainage
			Mitigation Projects
			Climate change

King County

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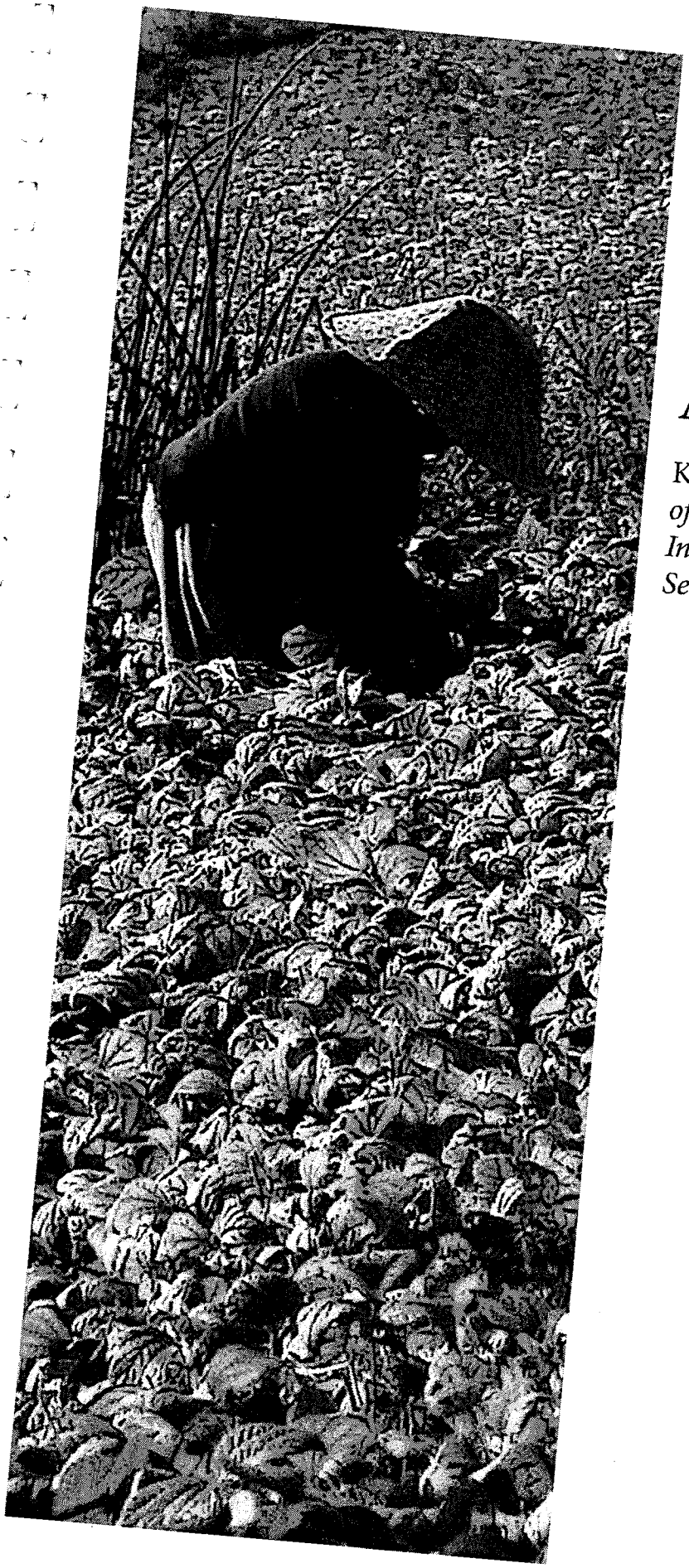

Appendix B.

Kara Martin Thesis: *Farmer's Perceptions of Farming in King County: The Challenges, Industry Trends and Needed Resources and Services.*

Appendix B 2009 FARMS REPORT

Farmers' Perceptions of Farming in King County:

The Challenges, Industry Trends and Needed Resources and Services

Prepared by Kara E. Martin
Department of Urban Design and Planning, University of Washington
May 2009

Ag • ri • cul • ture (noun)

[Date: 15th century; Etymology: Middle English, from Middle French, from Latin *agricultura*, from *ager* field + *cultura* cultivation]:

The science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products.

–from Merriam-Webster Dictionary

Special thanks to:

Branden Born, University of Washington, Department of Urban Design and Planning

Don Miller, University of Washington, Department of Urban Design and Planning

Steve Evans, King County, Department of Natural Parks and Resources

This report is submitted in partial fulfillment of the requirements for the degree of Master of Urban Planning at University of Washington. For further information please contact Kara Martin at karaemartin@yahoo.com.

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Executive Summary

On July 1, 2008 the King County Council adopted Ordinance 16172 calling for a study be conducted "to address the future of agriculture" in the County's zoned agriculture production districts (APDs). The King County Agriculture Commission with the aid of the King County Ag Programs staff within the Department of Natural Resources and Parks (DNRP) was charged with the task of completing this report dubbed the *FARMS Report* or *Future of Agriculture: Realize Meaningful Solutions Report* by January 1, 2010. The Ordinance 16172 also required the farming community's input to be included in the study's planning process. As a result, the County held five public meetings and conducted a mail-in and online survey to collect the input of local farmers. This professional project of a University of Washington graduate student is a contribution to the larger *FARMS Report.* This report focuses specifically on identifying the farmers' perceptions of farming in King County based on the collected feedback.

A combination of quantitative and qualitative analysis of the farmer's survey responses and public meeting comments are categorized into three general themes: (1) major challenges farmers confront, (2) emerging trends in farming and (3) needed resources and services to keep farming viable in the county. The themes identified reflect the perceptions of farmers through the compilation of comments from 89 surveys and over 170 public meeting participants. A comparison of the findings to Washington State's *The Future of Farming: Strategic Plan for Washington Agriculture 2020 and Beyond* (2009) and King County's *Forest and Farms Report* (1996) demonstrate that the barriers farmers identified are not longstanding and necessarily unique to King County. The report also reviews commonly used agriculture protection regulations and policies in United States and takes a historical look at the rural landscape in King County and agriculture programming implemented in King County over the past several decades. The report findings are solely based on the farmers' perceptions which are not necessarily in alignment with the general public's views on agriculture. Their views and opinions are at times contrary to other county priorities. For example, some farmers expressed deep

frustration with environmental regulations which they believe are an infringement on their property rights and impede their operations. However, agriculture is a major contributor to environmental issues (i.e. poor water quality, polluted soils, habitat destruction, etc.) and County, State and Federal regulations have been established to protect this public interest. Further compounding the issue, there is also a paradox within themes identified. While farmers are concerned with the protection of property rights, they at the same time feel the county should be more invested in agriculture through providing financial assistance and other resources for farmers. Herein lies the challenge of striking a balance between justifying public support for agriculture and protecting the private business interests of farmers. This report offers an opportunity to expand the discussion and debate about the future of agriculture in King County.

In the face of increasing budgetary constraints, the County has begun to question their role in agriculture protection programming. In the fall of 2008, staff supporting the King County Ag programs was slated to be cut from the County's annual budget. Fortunately, the Agriculture Commission, representatives of organizations and agencies greatly impacted by the decision (i.e. neighborhood farmers' markets) and residents, both urban and rural, spoke out against the cut at a series of public hearings. As the County continues to determine its future role in agriculture, it should consider the challenges farmers confront as described in this report. Farmers' ability to comprehend the intricacies of the local regulations and maneuver through the permitting system are dependent on the support and assistance the local government provides. Conversely, as a regulatory body, the County itself needs to increase its understanding of farming operations and related land use needs. For example, agricultural commercial buildings are used differently than commercial buildings in urban settings and thus universal codes, largely tailored for urban uses, can be a hindrance to farming operations and their overall economic viability. Without the appropriate staff and programming focused on agriculture *within* the local government, these needs will easily be overlooked. Over thirty years ago the County recognized the economic and cultural significance of its agriculture sector and sought to protect it through what is now a comprehensive program. To remove its support now

would be to the detriment of not only the farmers as well as the urban population but also farming communities in metropolitan areas throughout the country who turn to King County as a leader and pioneer of agriculture protection.

Chapter 1: Introduction

For over forty years, King County and its residents have recognized the importance of keeping farming viable in the county.[1] With public support, local planning and policymaking has worked to protect some of the most fertile lands for agriculture from being developed and has promoted the business of farming. However, due to an intricate web of regulatory control at multiple governmental levels (i.e. federal, state and county), financial constraints, encroaching development from the urban fringe, and rising environmental concerns, King County farmers are challenged today to remain in the agriculture industry. On July 1, 2008, the King County Council adopted Ordinance 16172. The resulting report will address the viability of farming in the county and the continued protection of farmland. Section 9 of the ordinance provides the details of this request:

> A. The department of natural resources and parks and the King County agriculture commission shall convene a planning process to address the future of agriculture in the agricultural production districts ("APDs"). Participants in this planning process should include representatives from the department of development and environmental services, the King Conservation District and property owners representing a diversity of interests in the APD.
>
> B. By no later than January 1, 2010, the department and the agriculture commission shall provide the council a report relating to the future of agriculture within the APDs, as well as recommendations for legislation regarding the allowed size of agricultural accessory buildings.

The County's Agriculture Commission, with the aid of the King County Ag Programs staff within the Department of Natural Resources and Parks (DNRP), is charged with the task of completing this report dubbed the *FARMS Report* or *Future of Agriculture: Realize Meaningful Solutions Report.* The Agriculture Division's FARMS study team has identified six main questions to be addressed in the report. The questions are:

1. What specific agricultural activities will most likely contribute to the economic stability of the county's farm sector?

[1] The terms "County" and "county" are frequently used throughout this report. "County" refers to the government entity and department and services provided by the jurisdiction; "county" refers to the general public, providing a geographic boundary.

2. How can we continue to preserve the agricultural lands within the APDs and rural areas in the future?
3. How can we nurture and promote the business of farming for the future?
4. What should be the allowed size of an "agricultural accessory building?"
5. What is the role of King County and other agencies (i.e. King Conservation District) in supporting farming in the future?
6. What are the potential funding sources, and how might these and existing funding sources be allocated to support agriculture in the future?

Recognizing the report's potential impact on the farming community, the county agriculture commission and staff have sought the opinions of the farming community through a series of public meetings and a questionnaire. As a component of the larger *FARMS Report*, this report provides an analysis of the primary data collected from these two survey instruments.

This report's methodology (*Chapter 3*) is a combination of quantitative and qualitative analysis of farmers' feedback. Through compiling the open-ended comments collected from the surveys and noting frequencies, the farmers' comments are broken into three general themes: (1) major concerns and challenges, (2) emerging trends or adaptations in the farming industry and (3) needed resources and services. The findings (*Chapter 4*) provide a synopsis of each theme identified and are solely representative of the farmers' feedback. A discussion (*Chapter 5*) follows that draws comparison between the report's findings to two studies of similar focus: Washington State's *The Future of Farming: Strategic Plan for Washington Agriculture 2020 and Beyond* (2009) and King County's *Forest and Farms Report* (1996).

The analysis of farmers' perceptions is complemented by background research (*Chapter 2*) in an effort to provide context to the identified themes. This context is developed through constructing a timeline of King County's role in preserving farming and farmland and describing current land use and farm operation conditions. Additionally, this section includes a discussion of farmland preservation efforts at the local level throughout the United States.

The findings in this report are intended to provide the King County Council, the Agriculture Commission, the Department of Natural Resources and other county departments (e.g. Department of Development and Environmental Services) and non-governmental agencies (e.g. King Conservation District) with a critical look at the farmers' perspective of the future of the agriculture industry in the county. The information can assist the County as they determine what the local government's potential role is in preserving farms and farming.

Chapter 2: Background

This chapter reviews commonly used agriculture protection regulations and policies in United States and takes a historical look at the rural landscape in King County and agriculture programming implemented in King County over the past several decades. This background research provides the context for the findings presented later in the report. The research familiarized the author with King County's past and current agriculture sector which was critical in analyzing the farmers' survey and public meeting comments.

While King County, Washington is more known for its thriving metropolitan areas and industrial sector, agriculture has also played a significant role in its 150 year history. Founded in 1852, King County saw little agriculture activity until the arrival of white settlers. By 1946, the county contained over 6,400 acres of farmland (Washington State, 1956). Primarily serving the local growing metropolitan population, the county had numerous dairy cooperatives as well as vegetable and fruit producers. During World War II, war-supporting industries such as Boeing flourished, and the county saw a population increase from 505,000 in 1940 to 733,000 in 1950. This 45 percent increase was the beginning of population growth that would cause remarkable changes to today's rural landscape.

Along with several other metropolitan counties (i.e. Carroll County, Maryland) throughout the United States, King County turned to land use planning as a mechanism to protect farmland from being further developed as early as the 1960s. Before providing a historical account of King County's agriculture protection efforts and existing farmland conditions, a discussion of the land use controls designed to protect farming is first presented.

Overview of Agriculture Protection Programming

In addition to development pressure and rising land values common in the past century, farmers near the urban fringe face a unique set of challenges in contrast to farms not near a metropolitan area. The "urban fringe" is part of a metropolitan county or region that is sparsely developed (less than two houses an acre) through low-density

development of houses, road, commercial structures and utility. This landscape often caters to urban users, such individuals working in the city while "living in the country," while providing the impetus for further growth (Heimlich and Anderson, 2001, p. 2). The close proximity to concentrated urban land uses (i.e. 10-40 miles) and the blurred line between urban and rural in which there is a mix of nonfarm neighbors dispersed in large open spaces predominantly used for agriculture purposes create conflicts between the different land users. Daniels and Bowers note several problems that are well-known to farming communities near the urban fringe across the country. They are as follows (1997, p. 5):

1. Developers bid up land prices beyond what farmers can afford and tempt farmers to sell their land for development.
2. The greater number of people living in or next to the country side heightens the risk of confrontation between farmers and non farmers.
3. Complaints increase from nonfarm neighbors about manure smells, chemical sprays, noise, dust, and slow-moving farm machinery on commuter roads.
4. Farmers suffer crop and livestock loss from trespass, vandalism, and dog attacks. Stormwater runoff from housing developments washes across farmland, causing erosion, and competition for water supplies increases.
5. As farmers become more of a minority in their communities, nuisance ordinances may be passed, restricting farming practices and in effect making farming too difficult to continue.
6. As farms are developed, farm support businesses are pushed out. Remaining farmers stop investing in their farms as they expect to sell their land for development in the near future.
7. Open space becomes harder to find, the local economy changes, and rural character fades.

What is apparent in this set of problems is that farming near the urban fringe is a two-pronged issue. First, as described in the previous section, the farmland itself is under threat of being converted into non-farm uses, as evident from the declining supply of farmland. Second, agriculture as a business is threatened as farming communities compete with urban interests and operations became less and less profitable. The public meeting comments and survey responses collected for this study reveal that the problems outlined by Daniels and Bowers are challenging King County farmers today. For instance, farmers are concerned about increasingly high costs of land, incompatible land uses nearby, loss of

infrastructure and businesses supporting farming, and low priority of rural interests and needs in a predominantly urban county *(see Chapter 4)*.

In the wake of the declining amount of prime farmland in urban areas, local governments have designed and implemented a range of land use tools and policies to protect farmland as well as lessen the impact of urbanization on farming operations. Tools such as agriculture zoning, differential tax assessment programs, transfer and purchase of development rights (TDR/PDR), and right-to-farm laws first came into use in the 1970s. Table 2 provides a description of the various tools utilized by local governments to protect farmland and also notes which tools are utilized in King County. Today, these tools are have become commonplace for metropolitan farming areas across the nation working to protect their agriculture sector.

Table 1: Land Use Tools for Agriculture Protection[2]

Tool	Description	King County
Agriculture Districts	A voluntary formation of a district by landowners. Landowners sign a petition to enroll land in a district for a designated amount of time. Landowners in the district may receive incentives such as tax relief, exemption from local nuisance ordinances and limitation of extension of public services (e.g. sewer). No restrictions are placed on land uses.	Not applied.
Agriculture Zoning	Zoning designed specifically to limit development and promote agriculture uses. Regulates minimum lot sizes, permitted land uses, setback and subdivision requirements. Definition of agriculture uses varies according to each zoning ordinance.	In 1985, the King County Comprehensive Plan designated approximately 40,000 acres as "agriculture production districts." The five districts are managed within the County's zoning ordinance.
Comprehensive Planning	Plan guiding a community's long-term growth. The goals and objectives can include agriculture protection measures.	Mandated by Washington State's Growth Management Act, the King County Comprehensive Plan includes a rural element to conserve and enhance the county's rural communities and resource lands including agriculture.
Conservation Easement	A voluntary legal document that restricts specified activities to protect open space uses such as farming. The easement is perpetual and runs with the land. Easements are granted by property owner to a conservation agency or government agency.	Four land trusts exist in King County. They include: Cascade Land Conservancy, PCC Farmland Trust, Save Habitat and Diversity of Wetlands Organization, Vashon-Maury Island Land Trust

[2] Descriptions written by author. Sources: Coughlin, 1981; Daniels and Bowers, 1997; Toner, 1978.

Tool	Description	King County
Differential Assessment	Property tax breaks provided wherein farmland is valued for its current use rather than highest and best use. The difference in assessed value between the highest and best use and the agriculture use determines the tax break. There are three types of differential assessment: pure preferential, deferred taxation and restrictive agreements.	Washington State adopted the Open Space Taxation Act in 1970 allowing the County Assessor to value property at current use.
Purchase of Development Rights (PDR)	Voluntary sale of a piece of property's development rights in which the development rights are designated to a receiving area. The land sold from the PDRs is restricted to agriculture uses.	County established the Farm Preservation Program in 1979 through a $50 million voter-approved bond. 95% of the property must remain undeveloped. Over 13,200 acres have been protected to date.
Right-to-Farm Legislation	Legal protection for farmers from nuisance suits for standard farming practices such as odors, noise and slow machinery on roads.	There has been effort to adopt a county right-to-farm law. Other Washington counties (i.e. Snohomish) have such ordinances.
Transfer of Development Rights (TDR)	Voluntary sale of a piece of property's development rights to a government agency or land trust. Land is restricted to agriculture uses.	Due to the locally supported PDR program, TDRs have not been utilized for farmland protection.

Widely adopted by metropolitan areas throughout the country, these land use tools vary from being incentive-based through tools encouraging producers to stay in the business of farming (i.e. tax breaks) to regulatory-based tools limiting and controlling development. Though some tools, such as agriculture zoning, are more commonly used than others, it is critical to note that no single tool alone can successfully protect the agriculture sector. Daniels and Bowers emphasize it is, a *package* of tools and policies designed to address the specific needs of the community that increases the success of an agriculture protection program (p. 103). Furthermore, an integrated approach that recognizes the competing and supporting interests within a metropolitan region, such as ensuring housing and employment opportunities, providing utilities and public services, protecting environmentally sensitive areas and remaining fiscally secure, contribute to a program's success (Coughlin, 1981, p. 26; Toner, 1978, p. 4).

Without the support of the general public and local officials, farmland protection programming derives little success for the farmer. While protecting farmland and

agriculture activities are the primary goals of these programs, secondary objectives such as protecting natural habitats, preserving agrarian heritage and providing recreational opportunities also play a role in generating the much-needed political will for successful agriculture protection programming. A host of studies analyzing the effectiveness of agriculture preservation programming note the importance of considering the array of private and public benefits in program development (Deaton et. al., 2003; Duke and Aull-Hyde, 2002; Lynch and Musser, 2001; Kline and Wichelns, 1996). The impact of secondary objectives on farming is evident in this study from the public meeting comments and survey responses. Farmers noted emerging trends in their operations to meet local market demands such as developing "agriculture tourism" opportunities and adopting conservation management practices such as salmon recovery efforts *(see Chapter 4)*. Though the list of tools shown in Table 1 were first developed by local governments over thirty years ago and still remain the primary tools used farmland protection today, planning practitioners and scholars are continually evaluating their effectiveness and seeking ways to meet the range of goals while maximizing the public and private benefits.

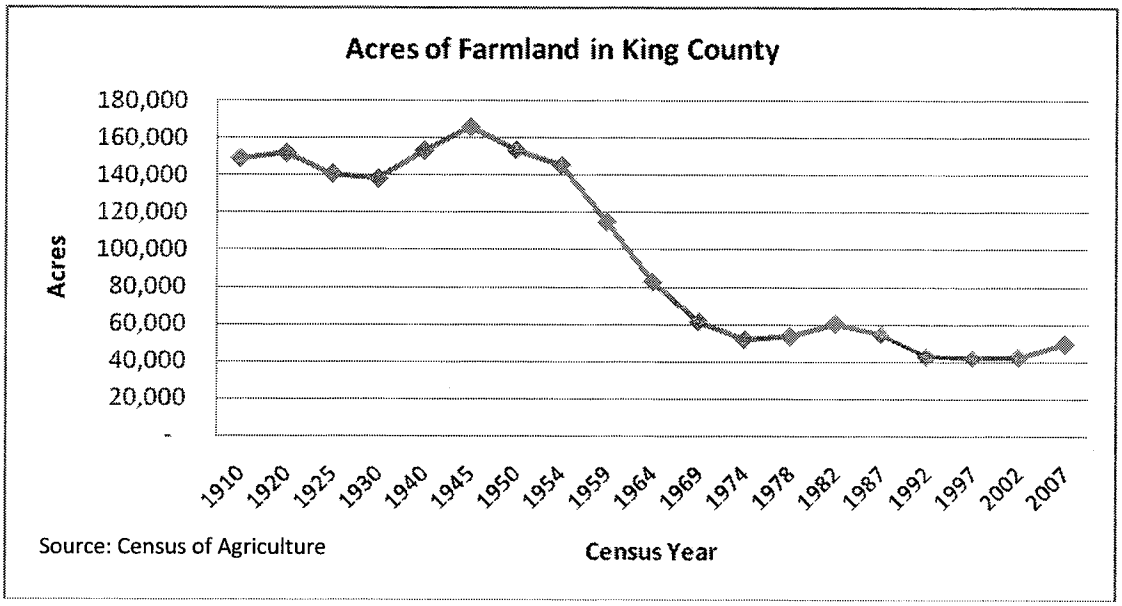
King County's Changing Rural Landscape

The first half of the twentieth century saw a continual growth in King County's agriculture land base. Land originally cleared for logging purposes was sold off in 10-, 20- and 40- acre plots to farmers that primarily produced for the local population. Land that was cultivated for farmland was primarily located near the new settlements, due to the accessibility, and in valleys where the soil quality was most fertile and required little irrigation. By 1945, King County reached a peak of 6,495 farms cultivating 165,635 acres (U.S. Census of Agriculture); however, by 1954, the county lost nearly 20,000 acres to non-agriculture uses. Referring to the nine-year decline, Washington State Department of Agriculture reported "... area in farms and number of farms have been decreasing. This indicates some abandonment of farming for other employment, and the increasing use of some land for residences and industrial purposes. In recent years considerable farmland in the Duwamish, Green and Sammamish Valleys has been taken out of agriculture" (1956, p.

28). According to the Census of Agriculture, the amount of farmland continued to decline over the next few decades. The post-WWII boom in population led to two-thirds of farmland being consumed by sprawling development within a thirty-year period (Calthorpe and Fulton, 2001, p. 160). During this severe loss in farmland from 1945 to 1974, King County's population more than doubled. In order to accommodate the growth, existing municipalities expanded and 15 new suburban communities incorporated (Reinartz, 2002, p. 9).

Figure 1 depicts the county's increase and decrease of farmland over the past century.[3]

Figure 1

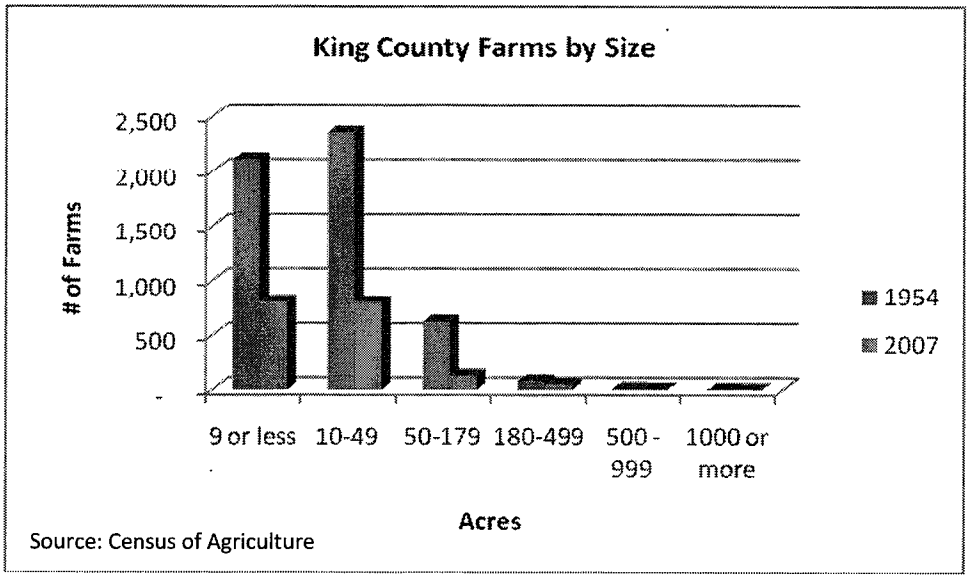


In 1945, agriculture land accounted for 12 percent of the county's land mass. As of 2007, it has been reduced to four percent. Figure 2 provides a comparison of the number

[3] The Census of Agriculture has changed the definition of a "farm" nine times since 1850 when it was first established. The number of farms and acreage in farms has varied as a result. The current definition, last revised in 1974, is "a farm is any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year" (USDA, 2007, p. vii). However, the Census also states: "this includes farms with sales of less than $1,000 but having the potential for sales of $1,000 or more. Some of these farms had no sales in the census year. It provides information on all report form items for farms that normally would be expected to sell agricultural products of $1,000 or more." In general, data prior to 1974 is not fully comparable to 1969 and earlier census years.

farms according to their size between 1954 and 2007 and shows that the loss severely impacted smaller size farms that accounted for a majority of the farms. Overall, there has been a 65 percent decrease in the number of acres farmed since the mid-1940s.

Figure 2



King County recognized early on the detrimental effect sprawl was having on the county's stock of agriculture land and began implementing farmland protection measures in the 1960s to thwart sprawl from consuming more land. These efforts are evident between 1974 and 2007 when the amount of farmland declined by only 14 percent—the portion of county land used for agriculture purposes remained at four percent for over thirty years (see Table 2).

Table 2: Historical Trends of Acres Farmed and Number of Farms

Farms	1945	1954	1974	2007
# of farms	6,495	5,181	1,022	1,790
Acres of farmland	165,635	145,111	51,368	49,285
% of total county land	12%	11%	4%	4%

King County's Agriculture Protection Programming

The 1960s saw the first formal efforts to protect farming in King County. The *King County Comprehensive Plan* in 1964 by identified areas for continued agriculture use by stating the goal of "protection of certain agricultural flood-plain, forest and mineral resource areas from urban type development" (p. II-4). Soon to follow, in 1965 the Puget Sound Governmental Conference (PSGC) formed through electing officials and the adoption of a regional comprehensive plan that included four policies concerning preservation of agriculture. Providing a springboard for farmland preservation programming at the local government level, the policies focused on promoting local governments to adopt agriculture zoning, endorsement of a current use taxation program and establishing guidelines for preserving a supply of farmland based on soil quality and other conditions appropriate for agriculture.

Over the next ten years several studies were conducted at the regional and county level to evaluate the land use and economic conditions in regard to agriculture. The first of those studies was published in 1974 by PSGC; the *Regional Agriculture, Land Use Technical Study* focused on farming conditions and issues in King, Kitsap, Pierce and Snohomish counties. Examining the regional costs and benefits of agriculture and what means are necessary to keep agriculture viable, this early study's purpose resembles many of the similar concerns that today's *FARMS Report* intends to address. Additionally—and perhaps more importantly—the study highlights that, in order for the agriculture sector to remain viable, successful programming includes a two-pronged approach: the preservation of farmland and the promotion of agriculture activities. According to the study:

> ...the maintenance of agriculture involves two separate endeavors: the maintenance of a land base and the use of that land base. The preservation of prime agricultural land without promoting agricultural use will result in extensive tracts of idle, unproductive land. Conversely, the promotion of agricultural activity would be a pointless gesture without an adequate land base for the activity. (PSGC, p. 73)

The interest of preserving farmland was not solely government interest. Through the rise of public concern, the King County Council adopted a series of ordinances and motions by the King County Council calling for further protection measures. They include:

- Ordinance 1096 to establish a policy that "Class II and III soils having agricultural potential and other classified or unclassified land presently being farmed shall be reserved for current and anticipated needs" (1/10/1972)
- Ordinance 1839 "to preserve prime agricultural lands and significant other farmlands in the open space system" by setting criteria for preservation and implementation policies (11/05/1973)
- Motion 2251 to establish a moratorium on the further development of county agriculture land (12/22/1975)
- Motion 2252 for the "development of policy and programs which protect King County agricultural lands" (12/22/1975)
- Ordinance 3064 establishing eight agricultural districts in which the approval of permit applications, new sewer connections and public projects did not adversely affect agriculture in the districts (1/31/1977)
- Ordinance 4341 calls for elections to authorize the "issuance of general obligation bonds" for the acquisition of development rights of farmland meeting the County's eligibility requirements (6/18/1979)

As a result of increasing public and government interest, the County's Office of Agriculture was directed to research, develop and implement programming to address the problems confronting farmers. For example, Motion 2252 prompted the Department of Planning and Community Development to conduct the *King County Agriculture Study: Economic Factors Affecting King County Agriculture Production* (1976); the study provides extension documentation of the economic conditions and trends in agriculture. Soon to follow was the *Purchase of Development Rights to Retain Agricultural Lands: An Economic Study* conducted during the ordinance 2251's moratorium on development, informing the County to consider placing a bond issue in support of a PDR program (1978). As a result, a

$50 million voter-approved bond[4] was passed in 1979, and the County PDR program, Farmland Preservation Program, was established. Throughout the 1980s the County acquired development rights to protect 12,600 acres of farmland through the program. County efforts to pr :ect farmland expanded when the 1985 King County Comprehensive Plan designated ap oximately 40,000 acres as Agriculture Products Districts (APDs). The APDs are intended co be long-term designations in which agriculture should be the principal land use within the APD and land uses adjacent to APDs should be designed to limit conflicts with agriculture. The five areas zoned as APDs (see Figure 3) were determined through the following criteria to increase their potential to remain as agriculture use:

1. Soils are capable of productive agriculture (Class II and III soils);

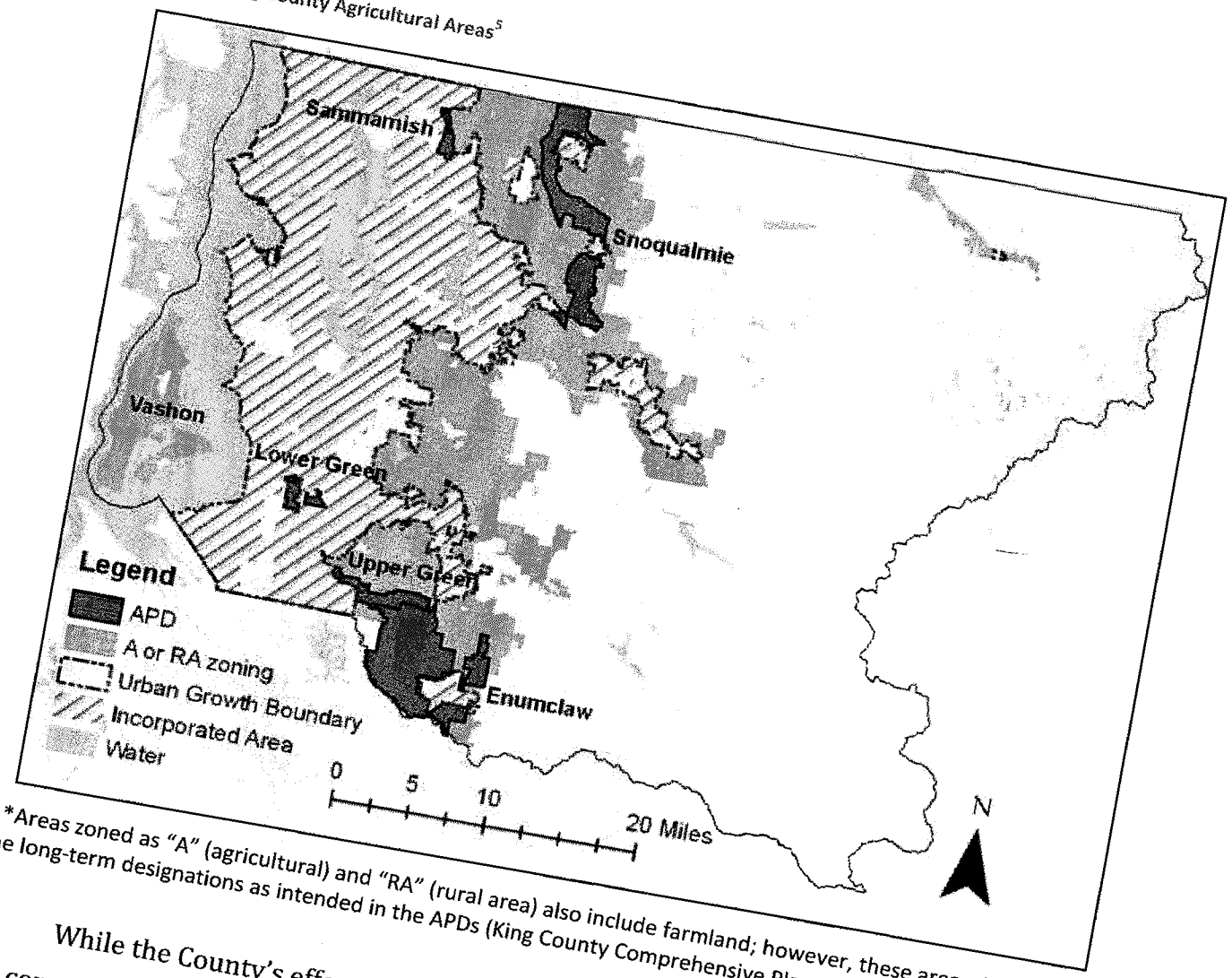
2. Land is undeveloped or contains only farm-related structures;

3. Parcel sizes are predominantly 10 acres or larger; and

4. Much of the land is used for agriculture, or has been in agricultural use in the recent past. (King County Comprehensive Plan, 1985, p. 113)

[4] A $35 million bond was first put on the ballot in 1978 with 59.77% in favor—narrowly missing the 60% required vote. An extensive public-media campaign was conducted by a citizen-based group, *Save Our Local Farmlands Committee,* and the $50 million bond was passed November 6th, 1979 with 62.96% votes (Save Our Local Farmlands Committee, 1979).

Figure 3: King County Agricultural Areas[5]



*Areas zoned as "A" (agricultural) and "RA" (rural area) also include farmland; however, these areas do not have the long-term designations as intended in the APDs (King County Comprehensive Plan 1985, p. 114).

While the County's efforts from the 1960s through the 1980s essentially thwarted the consumption of farmland by protecting a fertile land base from development, a combination of social, economic and regulatory factors have continued to reduce the profitability of farming in the county over the last few decades. Recognizing the need to address these barriers, the County has continually expanded its programming. In 1996, DNRP hired a consulting team to conduct the *Farm and Forest Report*, a study detailing the specific barriers farmers faced and strategies the County could carry out to address those challenges. Many of the barriers described in the report are still prevalent today as evident

[5] Map created by author. GIS layers provided by King County GIS Center through Washington State Geospatial Data Archival (WAGDA).

in the findings section. Informed by extensive community outreach efforts, a series of programs have since continued or expanded. They include:

- *Agriculture Drainage Assistance Program (ADAP):* provides technical and financial assistance for farmers who need agricultural ditch maintenance.
- *Agriculture Commission*: A body of representatives that have expertise and interest in the agriculture sector. Commissioners work directly with public officials, county staff, farm producers and citizens on policies and regulations influencing and impacting farming.
- *Puget Sound Fresh (PSF)*: helps connect farmers to urban consumers and businesses through marketing and promotional activities for direct marketing opportunities (i.e. farmers markets and CSAs[6]). Now managed by Cascade Harvest Coalition.
- *FarmLink*: matches retiring farmers with current or new farmers for mentoring. Now managed by Cascade Harvest Coalition.
- *Livestock Management Program*: assists farmers in meeting the Livestock Management Ordinance (K.C.C.21A.30) requirements of protecting environmental qualities (i.e. water quality) from the impact of livestock.

The above summary of programming is not wholly representative of all efforts being made to protect farming. Other agencies have worked in conjunction with the County or through individual efforts to ensure farming remains a viable sector in the county. Agencies such as King Conservation District, Washington State University (WSU) King County Extension, Natural Resources Conservation Service and the Farm Service Agency, to name a few, have made considerable contributions to the countywide wide effort to protect farming.

[6] CSAs or "community supported agriculture" connect residents directly to farmers through a subscription program where residents pay farmers early in the year and later receive a monthly or weekly supply of fresh produce in the growing season.

King County Farmland Today

Today, there are 1,790 farms cultivating 49,285 acres of farmland in King County (USDA, 2007). The five APDs now total over 42,000 acres—68 percent of the total farmland with 13,200 acres (21 percent of total) permanently preserved through the County's Farm Preservation Program. According the 2007 Census of Agriculture, total acres farmed has actually increased since 2002 by 18 percent (41,769 acres). In addition, the market value of production has also risen six percent to $127,269,000—crops sales account for 36 percent and livestock for 64 percent (USDA, 2007). In fact, King County now ranks 13th in the state in value of production—a jump from 1997's county ranking of 16th. Census figures demonstrate that the agriculture sector has continually expanded through an increasing number of farms, acres farmed and the value of products sold over the past fifteen years (see Figure 4, Figure 6, and Figure 5).

Figure 4

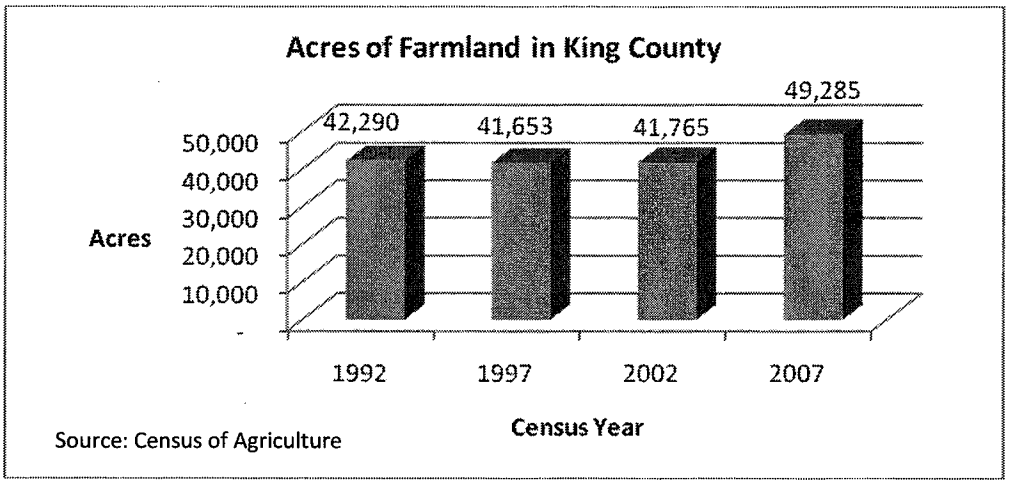


Figure 5

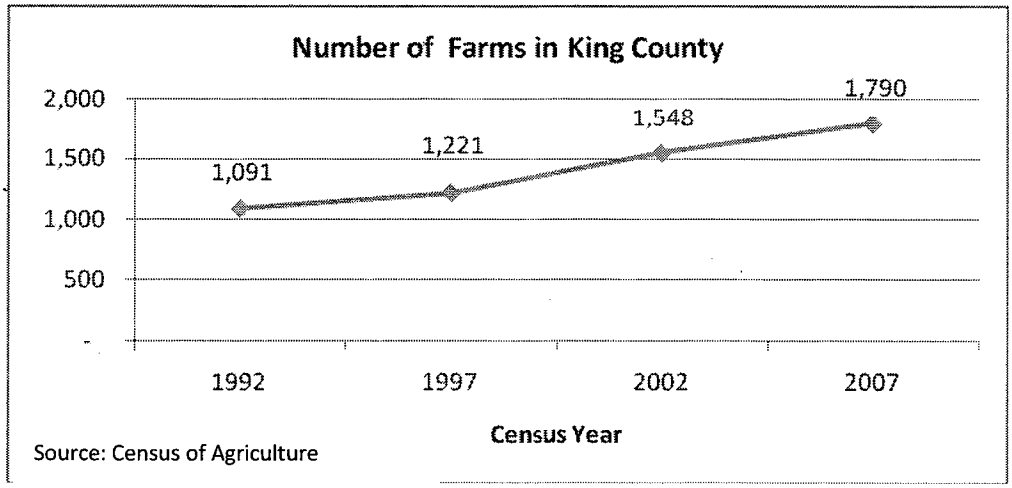
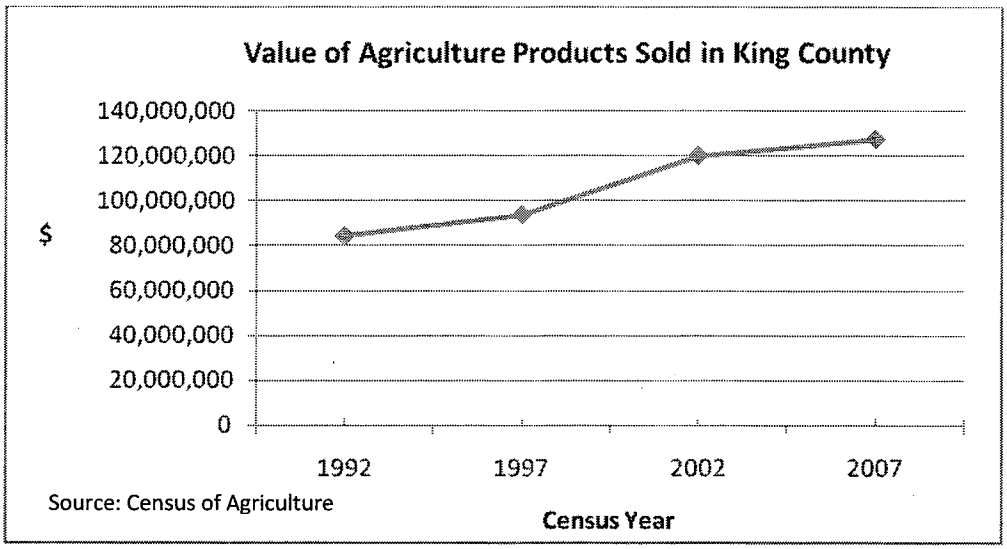


Figure 6



Interestingly, the steady increase of number of farms and acres farmed parallel a spike in the number of farms with lower market values of products sold (i.e. below $50,000). Meanwhile, as seen in Figure 6, the farms with higher market values (i.e. above $100,000) dropped during this same time period. The increase of farms with lower market values may be explained by the rise of small-sized farms entering the market sector (see Figure 8). Though this may suggest that larger farms are being subdivided, there has also been an overall increase in the number of acres cultivated (see Figure 4).

Figure 7

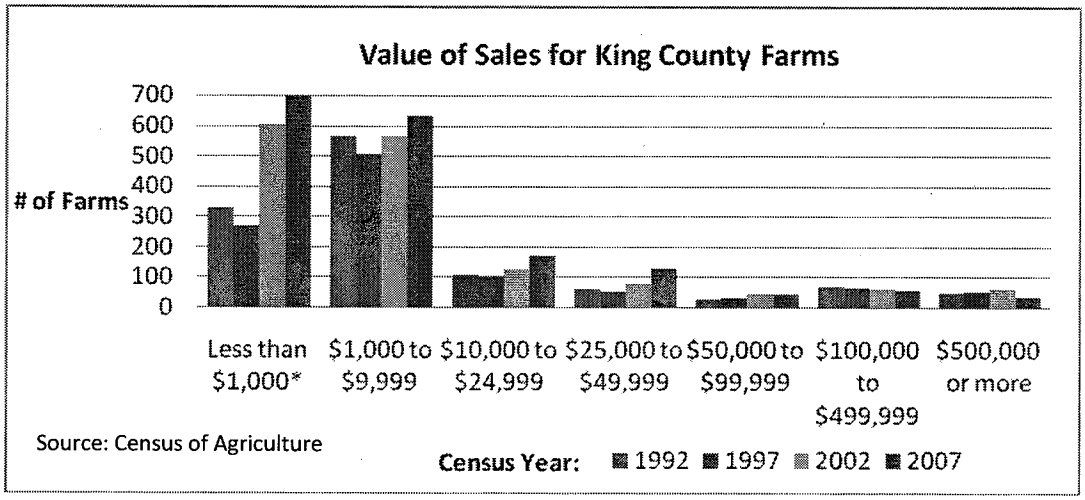
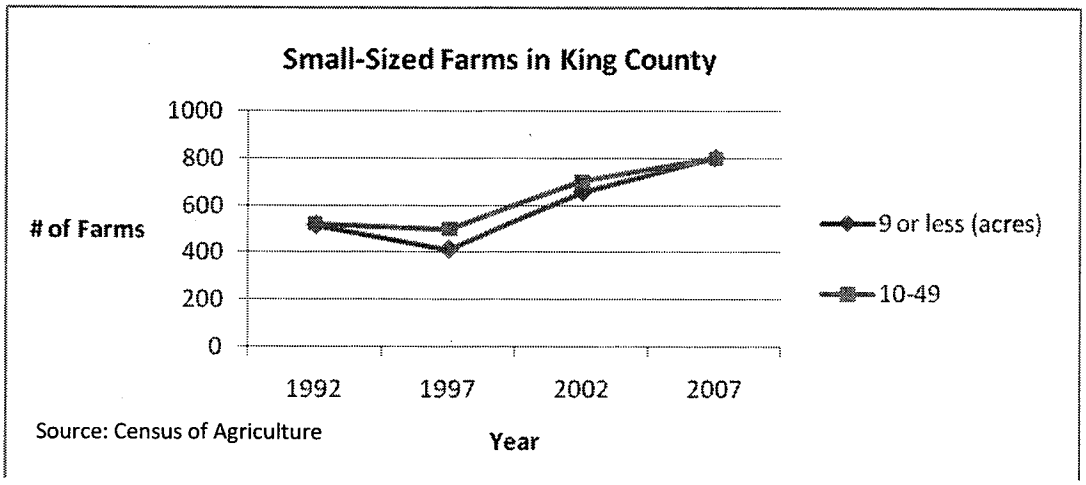


Figure 8



The "new" farmland may be accounted for several reasons such as being previously fallow, cleared forest, or sales being below the Census threshold of $1,000. While the County has protected farmland through land use tools such as agriculture production districts and purchase of development rights, the urban population's demand for locally grown foods has provided an impetus for farmers to actually expand their operations. The growing popularity of the local food movement is evident from the increasing number of farmers markets, CSAs, restaurants and grocers purchasing directly from the farmers.[7]

[7] According to the Puget Sound Fresh's *2009 Farm Guide*, there are currently 39 farmers market, 29 u-pick farms, and seven CSAs in King County, among other direct marketing opportunities.

Chapter 3: Methodology

In an effort to gain an understanding of the farming community's perceptions regarding the future of farming in King County, a combination of quantitative and qualitative analysis was applied. Specifically, content analysis was used to identify themes through a process of interpreting and coding the data (i.e. farmers' comments) and then tabulating frequencies. Prior to this analysis, however, background research was conducted to provide a context of the views and opinions shared by the farming community.

A review was conducted of reports and plans documenting the past and current farmland preservation programming. Informed primarily by government documents, *Chapter 2* provides a background of the County's role in protecting farmland from being converted into nonfarm uses as well as promoting farming activity within the county. Coupled with this historical overview, a profile of today's farming sector is provided through data extracted from the recently released 2007 U.S. Census of Agriculture. This background research was critical in familiarizing me with the county agriculture sector in order to effectively interpret and code the survey responses.

In an effort to incorporate the farming community's input into the FARMS report, King County staff and the Agriculture Commission developed two survey methods to collect community feedback: public meetings and a questionnaire. Five public meetings were held through the months of January to April 2009, one in each of the various farm districts of the county. Four meetings were held in a town near one of the five agriculture production districts; a fifth meeting was held on Vashon Island. By conducting the meetings at the district level, farmers were able to attend the meeting in the localities in which they farmed. As a result, the public comments indicated some district-specific concerns and allowed for cross-comparison between the districts. Table 3 shows the meeting location and the number of meeting participants.

Table 3: Meeting Location and Attendance

Meeting Location	APD Represented	Date	# of Participants
Auburn	Upper and Lower Green	February 12th	27
Carnation	Snoqualmie	January 22nd	54
Enumclaw	Enumclaw	March 12th	41
Vashon	Vashon Island*	April 9th	22
Woodinville	Sammamish	January 8th	22

*Vashon Island is not zoned as an APD.

Each meeting was facilitated by an Agriculture Commissioner—this provided the facilitator with familiarity of the attendees as well as the issues. The facilitator led an informal discussion on the challenges farmers face, how they have adapted their farming operations and what resources they needed to continue farming in King County. Facilitators referred to the open-ended survey questions given to each farmer to guide the conversation (see *Appendix B*). During the discussion, county staff wrote down the comments on poster-sized paper for participants to view. Comments were recorded on laptops to capture as many comments as possible.

A questionnaire was created to provide an alternative method of collecting the farmers' input. The questionnaire included two sets of questions. The first set was designed to learn the general characteristics of the survey respondents and their farming operations while allowing for comparison to countywide figures of the recently released 2007 U.S. Census of Agriculture data. The second series of questions were open-ended and were designed to learn the issues, emerging trends in farming operations, and needed resources for farming in King County. The survey was distributed to all farmers at the public meetings and was also posted online for those unable to attend the meetings. Similar to the public meetings, the surveys were voluntary and reflect the opinions of individuals who were informed of the *FARMS Report* and had the interest and/or ability to participate.

The survey included five open-ended questions in which this analysis focuses on:

- How is your farm operation changing?
- What kinds of resources or services do you need to be a successful farmer in the future?
- What are the trends you think are important to your operation and your industry?
- What are your plans for your farm property in the future?
- What concerns do you have regarding farming in King County?

Thematic content analysis of the collected feedback was used to identify the farming community's perspectives of farming in King County. This form of analysis allowed me to examine the open-ended survey responses and reduce the extensive amount of information into themes. The coding procedure included breaking down the data into "precisely defined terms" or themes through recognizing key words or phrases, tabulating the frequencies, and noting whether the theme was a discussion topic at the public meetings (Leedy and Ormrod, 2005, 142). Based on this method of interpretation and reduction (Creswell, 1994, 154), the following research design was applied:

- *Step 1:* Each questionnaire was assigned a unique identification number (ID) to provide a tracking system. This allows for repeatability and consistency as the researcher can retrace an indentified theme back to the original source of data.
- *Step 2:* A table was created for each of the five open-ended questions on the survey (i.e. questions #14-18). Written responses were then assigned a thematic code according to the content of the response, and the survey's ID was inserted into the table. These responses were then tallied (see *Appendix C*).
- *Step 3:* The survey responses were then categorized into three major themes: (1) challenges and concerns, (2) emerging trends in farming operations and (3) needed resources and services. Each sub-category within these three was given a unique ID,

and the number of survey references was tallied through a new set of tables (see *Appendix D*).

- In order to evaluate the commonalities between the two data sets, I reviewed public meeting notes, and if a topic (i.e. sub-category of three main themes) was discussed it was noted by an "X" as displayed on Table 5, 6 and 7 in *Chapter 4*. Frequencies of public meeting comments were not counted due to the informal structure of the meetings and the difficulty in assessing the significance. For example, a participant may have mentioned an issue which solicited responses from others such as head nods and clapping; however, the issue was not brought up a second time. Therefore, if frequency was used as a measure, this topic would appear to have little prevalence while in reality it was a significant issue.

Figure 9 demonstrates the coding process as outlined above. The appendices include the tables in their entirety as well as all the survey responses collected (see *Appendix C-F*).

Figure 9: Coding Process

Step 1: ID number is entered into table according to theme. See example below:

Question: "How is your farm operation changing?"

Response: "Moving from wholesale to direct marketing" –Survey #5

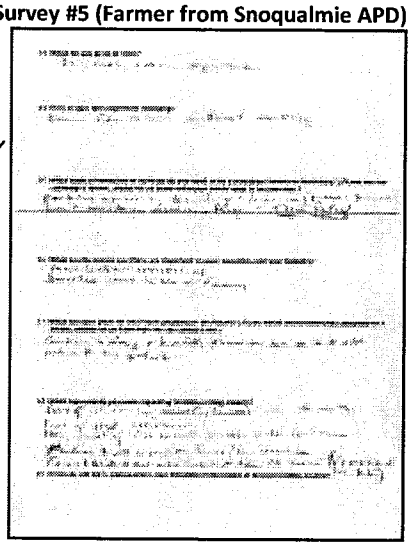
Step 2: Response themes assigned a "Major Theme Code" and all responses are tallied.

Step 3: Responses from total column for each "Major Theme" are entered into the second table.

Example: Major theme "Cater to Local Market" has 86 survey references.

Step 4: "X" indicates when the major theme was discussed at the public meetings.

Survey #5 (Farmer from Snoqualmie APD)



Step 1

Question#14: How is your farm operation changing?
(77 responses of 88 surveys)

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	*Sammamish*	*Enumclaw*	*Lower Green*	*Upper Green*	*Vashon*	*NA*	*Total*
13	No changes in farming operation							37	1
	Changes in types of products sold and marketing schemes								
11	Transitioning to direct marketing techniques	5			43			35	3

From the *Responses by Survey Question Matrix (Appendix C)*

Step 2

Step 3

Step 4

				Discussed Public Meeting				
Major Theme Code	Trends/Adaptations	# References by Question		Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon
11	**Cater to Local Market: Catering to local market demands by diversifying products, using direct marketing, and providing value-added products, organic production, agri-tourism, and educational programming**	#14	17	X	X	X	X	X
		#15	0					
		#16	57					
		#17	12					
		#18	0					
		Total:	86					

From the *Survey and Meeting Themes Matrix (Appendix D)*

Chapter 4: Findings

After four months of collecting surveys and conducting the five public meetings, comments regarding the future of farming from the farming community's perspective were compiled. There were a total of 89 surveys—representing 5 percent of 1,790 farms in the county. In addition, nearly 170 farmers attended the public meetings. Overall, survey respondents and meeting participants together represent 14 percent of the county farmers. Through analysis of the data from the surveys and public meetings as detailed in *Chapter 3*, three themes were identified under three main categories: (1) major concerns and challenges, (2) emerging trends or adaptations in the farming industry and (3) needed resources and services for agriculture to remain a viable industry in the county. Prior to discussing these findings, a look at survey respondent profiles is assessed.

Survey Respondents

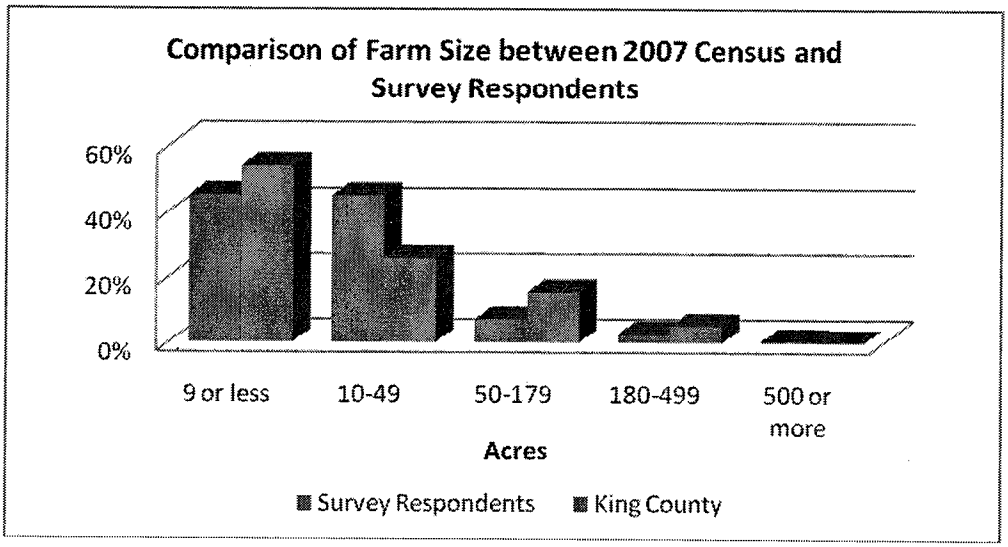
In addition to the open-ended questions, the survey included a series of questions to provide a general profile of the farmer and their farming operations. Utilizing the recent Census of Agriculture 2007 data to design the questions allowed for a comparison of survey respondent characteristics to the Census' countywide figures. As seen in Table 4, there are strong similarities between the survey sample responses and countywide Census figures. For example, farming is the primary occupation for 42 percent of King County farmers—a mere three percent difference from the survey's result of 45 percent. Other similarities include farmer's place of residence and status of land ownership. Minor differences between the sample and Census figures include the size of farms operators represent (see Figure 10).

Table 4: Comparison of 2007 Census King County Figures with Survey Responses

	County	%	Survey	%*
# of Farms	1,790		89	
Farming is primary occupation	753	42%	36	45%
Farm Size (by acres)				
9 or less	802	45%	42	53%
10-49	806	45%	21	27%
50-179	127	7%	12	15%
180-499	48	3%	4	5%
500 or more	7	0.4%	0	0%
Total	1,790	100%	79	100%
Farm Ownership				
Full owner	1,494	83%	55	71%
Part owner	164	9%	6	8%
Tenant	132	7%	17	22%
Total	1,790	100%	78	100%
Residence				
On farm	1,524	85%	57	75%
Off farm	266	15%	19	25%
Total	1,790	100%	76	100%

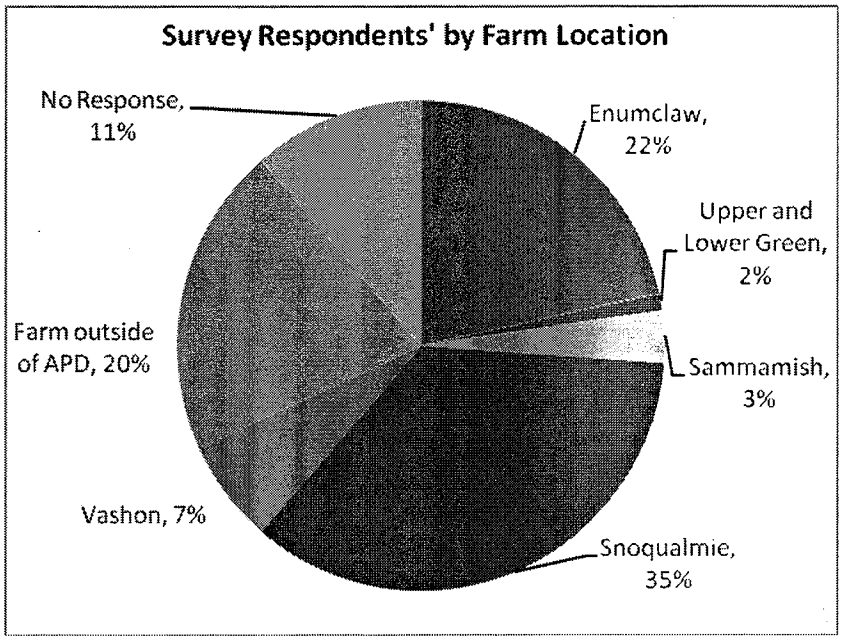
*Based on the number of responses to the survey question, not the total number of surveys.

Figure 10



Based on these general characteristics, the survey respondents' population is relatively reflective of the larger King County population. The Census data is limited to the county, whereas the survey data can be disaggregated by APD. For example, 35 percent of survey results are from Snoqualmie APD farmers (see Figure 11). *Appendix E* and *F* provide all responses to the survey questions. The themes discussed in the following sections are noted as APD-specific or countywide issues. Despite the limitations in the dissemination and collection of the survey (as described in *Chapter 3*), the survey feedback and comments are fairly representative of the King County farming community as whole.

Figure 11



Major Concerns and Challenges

Farmers shared a range of concerns that have a direct impact on their ability to stay in operation. Eight key issues were identified and are largely countywide challenges. Table 5 outlines the main topics followed by a brief description and discussion of each theme. Only three challenges were not discussed at all five public meetings as noted by the shaded boxes in Table 5.

Table 5: Major Challenges Identified by Farmers

Major Concerns/Challenges	# of Survey References	Discussed in Public Meeting				
		Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon
Competing Land Uses	39	X	X	X	X	X
Financial Constraints	35	X	X	X	X	X
Flood Impacts	34	X	X		X	
Local Regulatory Constraints	23	X	X	X	X	X
Low Prioritization of Rural Interests	18	X	X	X	X	X
Definition of Agriculture	17	X	X	X	X	
Environmental Protection Regulations	6	X	X	X	X	
Vulnerability of Next Generation Farmers	5	X	X	X	X	X

Competing Land Uses

> "Ultimately, the [development] pressure destroys agriculture and/or people who just want to keep the land whole." –Enumclaw APD Farmer

Despite County efforts to protect farmland, farmers are concerned with the loss of farmland to development and the associated incompatible land uses permissible under the current zoning regulations. In particular, farmers noted large single family houses or "McMansions" convert fertile farmland into permanent non-agricultural uses and are out of character with the rural landscape. Large-tract homes create fragmentation within agricultural areas[9] and lead to nuisance complaints, localized soil compaction, and increased runoff. The allowance of large-tract homes in agricultural areas pushes up land values, creating financial burdens for those interested in purchasing land or expanding their operations. Closely tied to this issue is the County's legal definition of agriculture which is addressed as a separate issue later in this report.

[9] A contiguous land base for agriculture reduces conflicts and discourages non-farm uses and as a result protects the local farming economy (Daniels and Bowers, 1997, 125).

Farmers' commitment to staying in the business was emphasized by numerous survey references and meeting comments regarding their plans to expand their operating capacity. Several common schemes have been adopted by farmers to essentially increase the volume of sales. They include:

> "We want to expand into other u-pick small fruits and crops and require 2 greenhouses to do salad greens and tomatoes. We want to go from part-time to full-time within the next 5-6 years." – Lower Green APD farmer

- Increasing amount of acres cultivated on existing property or through purchasing more land
- Improving or building infrastructure on property such as housing, barns, critter pads, wells and greenhouses
- Developing agri-tourism and educational opportunities on the farm
- Providing value-added products through on-site processing facilities

Change of Farming Methods

> "[I] have gone from traditional farming and the use of synthetic fertilizers & pesticides/herbicides to organic methods, including crop rotation, winter cover crops, natural pesticides, etc." – King County Farmer

In addition to expanding their capacity, farmers are also altering their farming methods and practices. Influenced by rising public concerns of climate change impacts, use of synthetic pesticides and herbicides, and food safety issues, farmers noted there is stronger demand for organic and locally grown products. Some of the newer methods mentioned include small-intensive farming, permaculture, biodynamic and diversifying crops grown. As seen in *Appendix F*, the survey results demonstrate more environmentally sustainable practices are in currently in use. Fifty percent of respondents use non-certified organic practices,[15] 47 percent use natural fertilizers and 65 percent use cover crops.

[15] USDA accredits "certifying agents" to certify that organic production and handling practices meet the national standards (www.ams.usda.gov). Farmers using organic methods are not necessarily required (or desire) to receive accreditation.

Needed Resources and Services

Though King County farmers have shown resilience by accommodating their operations to meet the market demands and comply with the multiple layers of regulations from the local to federal level, the farmers' comments repeatedly expressed a continued need for farmland preservation programs at the local level to protect farmland from development pressures. They additionally called for measures that promote farming as a business. The call for resources and services are a paralleled response to the challenges outlined earlier in this chapter. The major resources and services identified in the surveys were discussed in each of the public meetings (see Table 6).

Table 7: Needs Identified by Farmers

Needed Resources & Services	# of Survey References	Discussed in Public Meeting				
		Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon
Regulatory Flexibility & Efficiency	54	X	X	X	X	X
Prioritization of Rural Interests	52	X	X	X	X	X
Financial Assistance	26	X	X	X	X	X

Regulatory Flexibility & Efficiency

To overcome regulatory constraints, farmers called for improved regulatory flexibility of allowable land uses and the overall efficiency of the permitting process. Farmers cited the following needs from the County:

- Adapt land use codes to be more sensitive to and supportive of farming operations
- Improve permitting system's efficiency by shortening the length of the process and providing permit assistance
- Provide assistance and user-friendly materials to navigate the regulatory system and understand the role of various agencies involved (i.e. DDES, Public Health, etc.)

> "[Farmers need] More support from County and State regulators making it clear that farming is a valuable pursuit in this area." –Snoqualmie APD Farmer

Of the total 54 survey references, 12 references specifically requested improving the permit system and seven cited allowing flexibility in farm worker housing. Both needs were also specifically brought up in public meeting discussions.

Prioritization of Rural Interests

In addition to regulatory and financial relief, farmers also offered four general areas in which the County can support the local farming industry and thereby prioritize rural interests. They include:

- Technical assistance and educational resources provided by the County's agriculture programming and staff. Specifically, farmers requested services for supporting potential new farmers.

> "[County needs] simplified permitting to allow a farmer to take quick advantage of extra time and money that may not be there by the time permit is issued. Lower permit fees, increased site specific flexibility and much better communication and competency from permitting agency." –King County Farmer

- Infrastructure supporting farming operations such as: drainage assistance and maintenance,[16] recycling program for plastic and twine from straw bales, disposal for dead livestock, feed stores, and processing facilities.
- Promotion of local farms through public awareness and education efforts and expanding direct marketing opportunities.

Financial Assistance

Farmers provided examples of financial assistance that would improve the economic feasibility of farming in King County. They include:

- Lower permit fees
- Tax incentives or re-evaluation of land value assessments to lower taxes (several farmers note the difficulty in building agriculture accessory buildings due to high taxes associated with this type of development)
- Cost-share programming for infrastructure (i.e. building and equipment) improvements
- Promotion of institutions to purchase from producers in the county
- Loan assistance to purchase land, equipment and build infrastructure such as barns.

The challenges, industry trends and needed resources and services described in this chapter are based on the opinions of King County farmers who participated in outreach process. Though the survey and public meeting formats were framed to gain insight of the farmers' perceptions of their future in farming, the findings largely focus on current and ongoing issues that are often viewed as hurdles to their ability to farm in the future. The following section compares and contrasts the themes identified at the APD level as well as to other relevant research to provide further context of the findings.

[16] Though there were only five survey references, drainage maintenance was a significant need according to the public meeting discussions.

In this limited comparative analysis of the reports, there are several characteristics that stand out and are worth considering as the County determines its next steps to addressing these issues. They are:

- All six "burdens" from the County's previous efforts in evaluating the agriculture sector were major issues in this report as well. *The Forest and Farms Report* challenges include: "(I) high cost of land, (II) the low [profitability] of farming, (III) insufficient level of technical support available to local farmers, (IV) need for better marketing and promotion, (V) regulatory requirements and (VI) population growth and conflicts with farmers."
- All five key areas of the State's report were identified as major themes within this report. They include: "(1) make agriculture a priority, (2) eliminate regulatory barriers, (3) protect resources, (4) strengthen support services and (5) harness emerging opportunities" (i.e. local market demand).
- Neither report specifically addressed the impacts of flooding. This suggests that the conditions of flooding, partly exacerbated by surrounding development, are not as prominent an issue for the majority of Washington counties (most of which are rural). Furthermore, *Forest and Farms* not addressing flooding issues indicates this is a temporal issue. This study was conducted during a time of record-breaking flooding which directly impacted the input received. If the meetings and survey had been conducted in the summer or year of no flooding, it may have not been identified as a major issue.
- Neither report discusses the issue of the legal definition of agriculture. This concern may be of a more recent nature as land values have risen and competition for farmland has increased in the metropolitan area.
- Though the State's report addressed financial constraints such as ensuring long-term and short-term credit for farmers, the feedback from King County farmers demonstrates that some of the financial burdens are unique to King County. First, farmers stressed the high land values due the proximity to urban areas and

development pressures. Second, permit fees make it cost-prohibitive for farmers to build the necessary infrastructure for their operations.

The challenges, industry trends and needed resources identified in this report are not intended to be inclusive, nor did the comprehensive four-month, on-the-ground methodology seek consensus. This report, based on the farmers' perspectives, offers an opportunity to expand discussion, debate, and further develop priorities and strategies to address the County's agriculture sector's needs and interests. The input of farmers is invaluable as the County plans for the future of farming in King County.

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	Sammamish	Enumclaw	Lower Green	Upper Green	Vashon	NA	Total
17	Improving urban-rural relations and collaboration (planning w/ community to protect farmland)	7, 10, 21						50	**4**
18	Education/assistance for new farmers	21					92	50	**3**
14	Promotion of local farming and public awareness of farming (i.e. Puget Sound Fresh)	40, 51, 76, 80	89	61	43			50	**8**
16	"Keep Ag subsidies"			61					**1**
2	Increasing development and need for protection of farmland	11		81				34	**3**
1	Frequent flooding	8, 11, 21							**3**
3	Financial constraints: Operation becoming less profitable due to low market prices of product being sold and high expenses (land, equipment, taxes, permit fees)	99		56	53			31	**4**
7	Inclusion and support of horse interests in agriculture			49				29, 70	**3**
	"Responsible breeding- rescue"			64					**1**
7	Agriculture uses should be defined as "food for people"- not equestrian uses							75, 87	**2**

Question #17: What are your plans for your farm property in the future?

(73 responses of 89 surveys)

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	Sammamish	Enumclaw	Lower Green	Upper Green	Vashon	NA	Total
13	Continue to farm	2, 6, 7, 17, 40, 74, 80, 90, 99		54,55, 64, 65,67, 79, 81, 82	78	62	48, 93	24, 28, 50, 52, 58, 69, 87	**28**
11	Cater to local demands, diversify products, focus on high-value products, provide value-added products and provide agri-tourism activities	2, 38			43, 53, 78			32, 58	**7**
11	Provide educational programming for public as well as training for future farmers	10			78		23	35, 50	**5**
22	Stay informed on new and improved practices	74				62		50	**3**
22	Conservation practices	4							**1**
12	On-site processing	5			43				**2**
12	Expanding operations through new activities or new cultivation	8, 12, 13, 16, 38		30	43, 49			29, 35	**10**
12	Build or improve infrastructure on farm	11, 16		20, 30	43, 45		23	71	**8**
13	Lease or purchase property	38		22		60		24, 75, 84	**6**
13	Move residence to farm	16							**1**
	Keep property as whole piece			22					**1**
	Move operation outside of King County	96						34, 37, 84	**4**
13	Prepare for next generation farming the land by partnering with others or with family members	15, 51		65	41, 42, 53			28, 36	**8**
1	Dependent on flooding and drainage issues	21, 95						32	**3**

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	Sammamish	Enumclaw	Lower Green	Upper Green	Vashon	NA	Total
3	Dependent on economy and available resources	21			56				**2**
4	Dependent on regulatory restrictions and financial costs associated	96			54			32	**4**
	Reducing operations until market improves							70	**1**
22	Intensive small scale farming						92, 94		**2**

Question #18: What concerns do you have regarding farming in King County?
(67 responses of 89 surveys)

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	Sammamish	Enumclaw	Lower Green	Upper Green	Vashon	NA	Total
	No concerns			56	45				**2**
1	Development increasing runoff and flooding (including drainage issues)	3, 6, 8, 11, 13, 15, 16, 73						69	**9**
	"Lack of land"			20					**1**
	"Water"	26							**1**
7	*Definition of agriculture*	3, 40, 76, 90	89	49, 82				29, 87	**9**
7-NR	Opposition to horse interests in agriculture	3, 76, 90						87	**4**
7-NR	Inclusion and support of horse interests in agriculture			49, 82				29	**3**
2	Competition from non-farm uses of land- specific concerns include "McMansion" homes being built, minimal restrictions on incompatible land uses, rising land prices, need to protect farmland	2, 5, 6, 7, 11, 26, 40, 74, 85, 90	72	22, 59, 68, 79	42, 78	60, 62	97	18, 24, 50, 70, 71, 75, 83	**27**

Major Theme Code	Response Themes	Survey Responses							
		Snoqualmie	Sammamish	Enumclaw	Lower Green	Upper Green	Vashon	NA	Total
4	Land use regulations and permitting process being too restrictive and inflexible	2, 21		22, 30, 64	43		23, 94	24	**9**
4	Inconsistency in permitting process	3, 7, 90							**3**
5	Restrictions of environmental protection regulations	5, 8, 17		54	53				**5**
1	Impact of flooding	5, 6, 10, 15, 16, 21		54		62			**8**
3	Financial constraints (paying full price for infrastructure, permit fees, taxes, etc.)	7, 10, 11, 14, 21, 74, 96		20, 22, 30, 55, 59, 64	41, 43		92	24, 98	**18**
24	Lack of farmers- need for new generation of farmers	3, 14, 73					97	50	**5**
21	Loss of infrastructure supporting farming (i.e. feed stores, supplies and equipment purchase/repair)	5						71	**2**
9	Lack of government support	16, 21					23		**3**
9	Poor understanding by urban or government of farming needs. Need for promotion of local farming and public awareness of farming	17, 95, 99		22, 56, 79, 81	43, 53			83	**10**
9	Loss of support and programming from King County and other agencies	5, 21, 51, 80			55				**5**
	"Resist livestock registry"						48		**1**
	Quality animal feed and the high costs			59					**1**
17	Expansion of farmers markets						93		**1**

Emerging Industry Trends and Adaptations

Major Theme Code	Trends/Adaptations	# References by Question		Discussed at Public Meeting				
				Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon
11	**Cater to Local Market:** Catering to local market demands by diversifying products, using direct marketing, and providing value-added products, organic production, agri-tourism, and educational programming	#14	17	X	X	X	X	X
		#15	0					
		#16	57					
		#17	12					
		#18	0					
		Total:	**86**					
13	**Continue to Farm:** this includes thinking of next generation that will continue to farm their land	#14	1	X	X	X	X	X
		#15	0					
		#16	0					
		#17	43					
		#18	0					
		Total:	**44**					
12	**Increase Capacity:** increasing amount of land cultivated and adding or improving existing infrastructure).	#14	22	X	X	X	X	X
		#15	0					
		#16	0					
		#17	20					
		#18	0					
		Total:	**42**					
22	**Change of Farming Methods:** to include more sustainable and conservation techniques (including diversifying product and small-scale intensive)	#14	10	X	X	X	X	X
		#15	0					
		#16	9					
		#17	6					
		#18	0					
		Total:	**25**					

Needed Resources and Services

Major Theme Code	Resources/Services	# References by Question		Discussed at Public Meeting				
				Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon
15	**Regulatory Flexibility & Efficiency:** Improve system by adapting codes to meet agriculture needs, technical assistance, and shortened permit process	#14	17	X	X	X	X	X
		#15	0					
		#16	57					
		#17	12					
		#18	0					
		Total:	**86**					
17	**Prioritization of Rural Interests:** Educational resources, technical assistance, support for infrastructure, and promotion of local agriculture	#14	1	X	X	X	X	X
		#15	0					
		#16	0					
		#17	43					
		#18	0					
		Total:	**44**					
16	**Financial Assistance:** Suggestions include cost-share and incentives through lowering taxes and permit fees to purchase land, equipment and building	#14	22	X	X	X	X	X
		#15	0					
		#16	0					
		#17	20					
		#18	0					
		Total:	**42**					

Appendix F: Survey Responses to Questions #14-18

The following tables categorize the all survey responses for each of the five open-ended survey questions (i.e. #14-18). The "APD" column represents where the survey respondent farms. The response rate note in the "Response" column is the percent of surveys of the 89 surveys that responded to that question.

Question#14: How is your farm operation changing?

ID	APD	Response (N=77, 87% response rate)
2	Snoqualmie	way too much sediment setting on property from upstream erosion
4	Snoqualmie	complexities of regulations of farming along shorelines of rivers and streams
5	Snoqualmie	moving from wholesale to direct marketing
6	Snoqualmie	We are growing. We have the capacity to deliver bigger and bigger quantities of quality, local produce to the community. But flooding, in my opinion in part due to development and tight lining upstream are making our beautiful, fertile valley more and more difficult to farm in. But we are going to stay!
7	Snoqualmie	Attempts to capture more value-added $. Diversifying/vertically integrate.
8	Snoqualmie	More difficult to grow crops because of drainage.
10	Snoqualmie	Necessity for year round production, facilities in floodplain without devastation and planning for this. Storage crops for year round sales not able to bank on crops growing fields due to "flood contamination."
11	Snoqualmie	The season for growing is shortening. The cost for flood recovery is rising. The need for structures and pads to raise equipment is becoming required rather than optional.
12	Snoqualmie	We are growing (we hope) to respond to ever-increasing demand for locally grown food by regular people, restaurants, etc.
13	Snoqualmie	Hard to grow, work and market to pay mortgage.
14	Snoqualmie	No longer able to grow over winter. Shortening our farmstand marketing season. Focusing on fewer and most profitable products.
15	Snoqualmie	Shorter selling season/ more concentrated sales season. Farm weddings.
16	Snoqualmie	Every year is a new experience, trying new techniques, learning from mistakes, talking to neighbors (farmers). Every year we are striving to add more infrastructure so that at some time in the future we can farm fulltime before we get too old and tired.
17	Snoqualmie	Trying to survive floods. Economic losses drastic.
20	Enumclaw	We are going backwards at this present time due to low milk pricing and high feed costs.

ID	APD	Response (N=77, 87% response rate)
21	Snoqualmie	The flooding is impacting us more and more every year, beaver issues, longer times getting out on the fields in spring, wetter in fall. We are experiencing more floods per year, and larger flooding than we used to. Have been impacted by flooding more often now in spring time during calving season. Maybe forced to switch from cow/calf raising our own animals to only being able to buy yearlings and have nothing during the winter due to impacts from flooding. This is not something our customers want to do as it's difficult to find grass-fed yearlings to buy. We've also recently noticed it more and more difficult to get al the hay in we need due to weather and likely will need to change to making more haulage and less hay. It is harder to sell, but we do like to as a more optimal feed for cattle. However we have to hire it made as we have equipment for small bales and not the big round bales so it's more expensive. I'd like to hear what others think the reason behind this are: climate change? Global warming? The fact we don't clean rivers out anymore? Development" and what are the trends looking like? Are we just experiencing a phase or is it going to continue to get worse and do we need to change our operation?
22	Enumclaw	Urbanization. Can no longer cover cost of doing business.
23	Vashon	As more people become more aware of where their food comes from, we have a growing demand for product.
26	Snoqualmie	Oak Hills Vegetable Farms was started by my parents in 1952. It was farmed until 2000 in the Roy area of Pierce County. Urban development made it impossible to continue at that site. We follow the political area closely. We were given a good 10 year head start to development plans. We either move to another location or stop. We decided to sell the property off in 5 acre parcels. Place important language into the contracts concerning farming practices. We protect trees, hills and land with attorneys. It worked well and moved on. We took several years off and began planning. We have planted into several areas and now are getting ready to open a new site in King County. Company press release in February 2009. My father and mother, Richard H. and Florence Wheeler are the founders of the Olympia Farmers Market. We are still involved in 6 farmers markets. The farming practice is still the same for us today as it was in 1952. Except we do not use the amount of chicken fertilizer we did in Roy from Wilcox farms. Bottom line is this. If you are not willing to make farming a way of life, you will never stay successful with commercial or small lot farming. It is blood, sweat and tears. But its rewards can be big. When times are tough, the farming minds kick into high gear! See you at all the meetings.
29	NonAPD	Less monies available for environmental education means more emphasis for me on making money from horse camps, clinics, boarding, trail rides, etc.
30	Enumclaw	hard to find farm labor. Too many people don't want to work.
31	No response	it's not tho it is becoming more profitable
32	No response	more higher value crops with greater emphasis on marketing, merchandising, value added and consumer ready products and a diversification of market segments, diversification of crops and selling the farm experience
34	No response	I am a new farmer. I have been doing this for 3 years. My operation is growing.
35	No response	I like the fact that we now have a USDA mobile slaughter unit. That is better for animals. I don't like the fact that not enough people can raise hay or make silage.
36	No response	Changed from conventional to organic dairying
37	No response	it is not

ID	APD	Response (N=77, 87% response rate)
98	NonAPD	cleaner
99	Snoqualmie	Feed is a lot more expensive and also property taxes. Last year the price for 700 to 800 hundred pound cattle was eighty some cents per pound. This is the same price as in the 1980's, yet alfalfa hay in the 1980's was 65 dollars per ton. Last year a ton of hay was nearly two hundred dollars. In Western Washington a cow raising a calf and the calf will consume three tons of hay per year with six months of pasture.

Question#15: What kinds of resources or services do you need to be a successful farmer in the future?

ID	APD	Response (N=71, 80% response rate)
2	Snoqualmie	resources to ag community
3	Snoqualmie	easier, more streamlined, and less expensive well digging and building permitting process
4	Snoqualmie	simpler solutions and permits for replacing a culvert with a bridge for fish safety over a stream to get equipment from one field to another. This should not be so complicated.
5	Snoqualmie	marketing assistance, rebuilding of infrastructure (processing services, etc) permit assistance, regulatory relief. Flood relief.
6	Snoqualmie	Let us put the infrastructure in that we need!
7	Snoqualmie	Irrigation ponds- esp. integrated into current wetlands. Support with other County departments: transportation-- runoff; Health dept: process facilities permit/technical assistance DDES: clearing/drainage- creek clean out (creeks like ditches silt in) FPP on-farm processing at reasonable cost. Need protection from upland development runoff.Drainage help-drain tile install and maintenance.
8	Snoqualmie	Make permit process faster. Help us with ditching. Dam on Middle Fork Snoqualmie.
10	Snoqualmie	Farm worker housing, legislative push through with less fees, less time and less permitting of land use attorney fees, farm buildings. Ability to create heightened land/dykes to protect existing fields and buildings. Flood and drop insurance for multifaceted compounds and diverse crop productions.
11	Snoqualmie	We need DDES/gov reps who can take us through the building/pad process and a lower fee schedule for permits. Control development above the valley floor. Control of clearing above and around the APD.
12	Snoqualmie	Farm worker housing, wells to bring new ground into production, flood protection
13	Snoqualmie	Easier way to get things to sellers. Hard to find outlets, sometimes very picky and hard to work with.
16	Snoqualmie	It is recognized that urban development is slow at this time; however I respectfully request that the County consider doubling the TDR credit.
17	Snoqualmie	A dam. It would also be nice to have the dairy industry back in King County. It has the perfect weather conditions and pastures for milk production. Milk is more flavorable when cows are let out to pasture. Also more profitable.
20	Enumclaw	A methane digester and more land.

ID	APD	Response (N=71, 80% response rate)
21	Snoqualmie	The Snoqualmie Valley is not located in a great area to be able to access any mobile units. Tho there are such in Skagit and Pierce, I have been told the Skagit unit won't come down this far (as well as the co-op is full) and I find it hard to believed we'd be able to schedule the Pierce unit. Nor do I want to really deal with anything that far away and trust the scheduling would work out. I know you can sign on early to almost guarantee use, but not sure it's still worth it and it's still not clear to me how the cut/wrap would work. I'm not interested on have the time to deal with sending folks down south to pick up their orders or doing any deliveries. Also, if the flooding/weather calms down and we don't keep having increasing floods we'd continue as we today and would be fine with our current operation.
22	Enumclaw	Lower taxes. Lower payroll taxes. Lower property taxes. Higher ag product prices.
23	Vashon	We need major mud management/ winter water drainage systems as we are in a valley on Vashon Island. We need much more than $5,000 match from KingConservation.We need a bigger barn to accommodate more feed, cure and store more produce, and to eliminate the many roof lines from little sheds draining water into our pasture.King County permit process is prohibitively expensive and cumbersome. Why will it require a septic review to build a barn? The cost of permit will make the cost of barn construction out of reach for us.A barn will also allow us to offer off season/ on site workshops and classes, which will potentially offer additional farm income, making it possible to make a living on the farm.
24	NonAPD	Need to make it easier to have accessory uses to small farms like retailing, processing, and even unrelated activities that will bring the public to our small farms.
26	Snoqualmie	Soil that is not diseased from improper growing.
28	NonAPD	more land
29	NonAPD	Support for horse raising & keeping in King County.
30	Enumclaw	The biggest challenge with King County is that it is too hard to get permits. They cost too much and take too long to get. We need more cost share and incentives, not more regulations. It is very difficult to develop a farm under the current system. I had to designate my entire farm as a wetland just to get a permit to renovate a barn that was falling down. I need more and better cost share. It takes 90 - 100 days for King County to give me a check. It takes the Feds 2 weeks. The County needs to be more efficient with this.
31	No response	nothing - it's all right here in king co and plenty of land to be successful (well okay maybe more sun so that I can grow better toms)
32	No response	reduced time spent on government interface... more freedom to operate/ less management time and money devoted to regulations as this does not pay one bill. Paying bills and generating profits are generated by sales of goods and services to a diversified customer base seeking high quality products or farm experiences.Needed (not in any order): (a) more time free of government regulations, (b) promotion of farm and product awareness, (c) money/grants and low interest loans, (d) good quality people to be forward thinking and creative as part of the team including employees, lenders, government agencies/agents ... all with a can do attitude!, (e) a reliable source of legal irrigation water, and (f) reliable source of legal productive workers

ID	APD	Response (N=71, 80% response rate)
75	NonAPD	Better weather would help. I could use some help with marketing our unique form of membership farm.
76	Snoqualmie	We will need:- water for irrigation- housing for seasonal workers (and ourselves!!)- storage facilities for tractors, tools, seed, etc.- affordable land so we can own our own farm rather than lease.
78	Lower Green	Availability of affordable farmland close to market
79	Enumclaw	The elimination of wasteful government spending would be a great start if you are asking what resources and conditions I need from King County to be increasingly successful.
80	Snoqualmie	Help with farm plan. I signed the agreement two yearsago and still waiting for a plan.
81	Enumclaw	Keep horses in farm category
84	NonAPD	Simplified permitting to allow a farmer to take quick advantage of extra time and money that may not be there by the time permit is issued. Lower permit fees, increased site specific flexibility and much better communication and competency ~~from~~ permitting agency.
85	Snoqualmie	Continued cooperators with small fruit/berry farms
87	NonAPD	healthy agricultural economy
90	Snoqualmie	Successful farming in the Snoqualmie Valley requiresboth nothing and everything. Currently, my farm leases land from a local landowner. Zoning codes and building restrictions mean that I have to commute to my farm. Being a commuter farmer is fine, but it makes raising livestock (necessary, in my opinion, for true sustainability) near impossible. Allowing farmers to construct permanent living quarters in the valley opens a dangerous can of worms, because non-farmers with money (i.e. equestrian enthusiasts) will surely exploit any regulation that permits, for instance, ag-related structures, dwellings, etc. The problem in the Snoq. Valley is that all the infrastructure farmers are currently using was built back in the dairy farming days, when the farms were 3-400 acres. Now, much of that land has been subdivided, with what seems like mainly equestrian properties occupying the homes and barns, and people like me renting the land that has nothing on it. If real farming is going to happen in the APD (like it should, given the title APD), laws, rules, regulations, etc must be written to ensure that real farmers can live and thrive on their land. When I say "real farmers" I mean farmers who grow or raise a product for humans to eat. Horse boarding, raising hay for horses to eat, shooting clubs, golf courses, sod operations, etc are not "real farmers."
91	Snoqualmie	We need a more cohesive permitting process, especially as it pertains to farm pads and ag buildings.
92	Vashon	business loan, planning loans, product liability/value added food products insurance
93	Vashon	-haven't asked for help thus far. Would like to see a "farms -to-school" with produce on Vashon Island.
94	Vashon	Don't let the gravel mine (Glacier, NW on Maury Island) ruin our aquifer. Farmers markets in small communities need some help with product liability insurance - especially for small businesses, and prepared foods/value added- This insurance can be prohibitively expensive; leaves small farmers markets exposed to frivolous lawsuits, or forced to turn away small producers.
95	Snoqualmie	More support from County and State regulators making it clear that farming is a valuable pursuit in this area. Today we are treated like a nuisance.

Question#16: What are the trends you think are important to your operation and your industry?

ID	APD	Response (N=70, 79% response rate)
2	Snoqualmie	organic, local, slow-food, food safety
3	Snoqualmie	the local food movement
4	Snoqualmie	For the government to streamline its interstation of communication so the farmers doesn't lose so much production time dealing with the government complexities.
5	Snoqualmie	move to direct marketing. Smaller more intensive farming.
6	Snoqualmie	Give schools and government institutions more funding to purchase quality, healthy, local food products. Products that improve you health and your mind. Local growers can't sell their product at cheap industrial prices.
7	Snoqualmie	People want local/organic food- but they'll still only pay so much for it and we can raise only so much of it. --value-added/opportunities needed for farmers. People will pay more for entertainment/rural/farm atmosphere for conferences, weddings, dinners, pumpkin/wagon rides-- maybe these can be integrated into farms, but they should not displace farms and should be carefully planned on a community level.
8	Snoqualmie	More often flooding. Less restrictions on critter pads. More flexible employee housing.
10	Snoqualmie	Continuation of farm to food programs. Continued county support treating farm land differently than urban or rural residential land. Insightful looks at what do for riverbed/ damming/ bank runoff. Stop Snoqualmie River from being dumping ground for developments.
11	Snoqualmie	Ever rising floods. Development around APD.
13	Snoqualmie	Eat local, buy local
14	Snoqualmie	Locally grown movement. Safe food movement. Support your community movement.
15	Snoqualmie	Stable population. Buying local.
16	Snoqualmie	Trends are working favor of small farmers. However, the County needs to be more flexible with temp worker housing, offices in barns, ag structures on farm pads.
17	Snoqualmie	To have federal, state, county and city voters understand the complexities of farming in an over regulated and ignorant government policies that hinder rather than assist agriculture. Example: Gove Dan Evans vetoing dam construction in 1975.
21	Snoqualmie	Trends we're seeing with weather changes are the biggest for us. Also, urban interests in buying local is what's keeping us in business. Continued education, especially in our youth and increases in education all both urban and rural since many of the rural kids now are from urban parents. Increased cooperation between ag/county had been very beneficial to both of us.
23	Vashon	The biggest and most obvious trend is public awareness, desire and appreciation for the source of their food. People either want to learn how to grow more of their own food or know their local farmers and farmer markets.
24	NonAPD	local, organic, specialty farmer's market type crops, public interest in small farms.
26	Snoqualmie	New people will enter the agricultural fields. Due to the economic earthquake we are having in the US. The best thing in the world is tough times. It causes you to think. How can I stay alive!

ID	APD	Response (N=70, 79% response rate)
28	NonAPD	interest in local products is on the upswing --this is very, very good
29	NonAPD	I think that more people will be boarding their horses "at home" to save on the cost of commercial boarding facilities. That means potentially more environmental impacts (mud, manure, over-grazed pastures, etc.) as well as more people interested in how to properly manage livestock on small acreage.
30	Enumclaw	People need to use more local products. We need to even the marketing playing field. It's too easy for Canada to bring sell their products here.
31	No response	organic, no impacts on environment from chems and other types
32	No response	My farming is a diversified integrated farm with growing, packing, sales and distribution in three counties but King county is the most difficult to operate because of the amount of time, effort and money it takes in dealing with the bureaucrats. So for me to be successful I need the ability to move quickly to take advantage of market opportunities... including change of crops and change of methods of farming... so this means regulatory flexibility or changes and the capital to complete the task. The capital comes in the form of money, equipment, personnel, and personal time but if the regulatory burden is too great then the rest will not matter because it can't get done when needed.
34	No response	Land is being cut into increasingly smaller chunks. No one will ever put together large parcels for agriculture, so the trend will be to have smaller and smaller chunk of land and smaller and smaller farms in the urban areas. In eastern Washington it is popular when land is subdivided to add CC&Rs (covenants, conditions and restrictions) that basically outlaw certain agricultural activities in land otherwise zoned agricultural. I need land that has reasonable clear boundaries on its use --- the base county zoning, for instance --and I need my neighbors to not be able to control what I do on my land. I will respond to the market, but I need the flexibility to do things that are common/good/best practice without fear of neighbors being able to block or interfere. King counties current setback requirements for pigs to be 90' from property lines means that you cannot keep pigs on lots less than an acre wide, or smaller than an acre in general. Remember that farms will be getting smaller and smaller as time goes by. Setback will gradually eliminate pigs from the possible farms in King County. Pigs particular are known as "mortgage lifters" -- they are livestock that are a proven winner for urban markets. King County is hostile to small pig farmers.
35	No response	The biggest one is the slow and sustainable food and clothing movement.
36	No response	Producing and consuming more local foods.
37	No response	Sustainable development, local markets, more innovative ways of doing business
38	Snoqualmie	Increased interest in locally produced food and better access to markets for these products. Also increased interest in and prioritization of environmental protection, which is also important but at conflict often with agricultural uses. Would like to see a more case-by-base-oriented balance of these competing priorities.
40	Snoqualmie	Continued promotion and education of the public as to the importance of local farms.
41	No response	Not enough west side farmers for the number farmer markets.
43	Lower Green	Local food awareness, the slow food movement, public education and interest in keeping out food and farms here and healthy
45	Lower Green	buy local, farming without chemicals
46	No response	smaller growers having a market.
48	Vashon	Local and organic food movement expansion.
49	Enumclaw	horse boarding, training

ID	APD	Response (N=70, 79% response rate)
50	NonAPD	King County in cooperation with local business could show a greater encouragement of the smaller/family owned farms. We need to continue the education of future farmers and support the farms in producing a greater diversity of crops and sustainable practices. Support supplementary co-operation between local farms, governmental agencies, educational institutions and businesses such as restaurants, markets, grocery stores to work together to support the local agricultural economy.
51	Snoqualmie	Locally grown food, organic production and customer education of on farm food production systems. Hands on opportunities for interested volunteers. Agritourisim and local school tours.
52	NonAPD	changing technology
53	Lower Green	Increasing opportunities for direct marketing.Increased interest in locally grown farm products.Increased interest in organically grown products.Increase in permitted agriculture related activities on farm.Loss of infrastructure and rising costs.Increasing burden of environmental and ESA regulations.Decreasing availability and increasing cost of farmland.Increasing incompatible land-use in and around Ag districts.
54	Enumclaw	Give back control of land management to the individual landowners and reduce the bureaucracy in government /environmental regulations so that we can make a profit!
56	Enumclaw	development of a local niche, just like the beef/pork/lamb producers who can sell off the farm and get a decent price for their produce. We are been encouraged or forced to take a buy out just to get rid of milk off the market. It's a tiny band aid on a large wound.
58	NonAPD	marketing, buy local
60	Upper Green	lack of anyone who want to labor on a farm
61	Enumclaw	keep ag subsidies. Keep Puget Sound Fresh.
62	Upper Green	Internet- people shop and research farms that way.
64	Enumclaw	responsible breeding - rescue
67	Enumclaw	Marketing/ sales prarlion (sp?)
70	No response	Horses need to be considered livestock, and raising and selling them considered commercial agriculture.
71	Snoqualmie	Buy local
72	Sammamish	Direct to consumer and restaurant sales. Zoning that recognizes the importance of having farm land near population centers.
74	Snoqualmie	LOCAL sales Local food. Teach people how to be more sustainable themselves. Organics...biodynamics.
75	NonAPD	As a member of Sno-Valley Tilth, I strongly endorse the Policy Statement submitted by our organization. I think it is imperative to define agriculture as "food for people" and act swiftly and strongly to ensure a local food supply for King County. I was born here, fell in love with local farmland as a child, and support ALL efforts to protect farmland for farming.
76	Snoqualmie	Tons of support for sustainable local food fromour friends in the cities. People are also taking a closer look at farming practices rather than just accepting that certified "organic" is be-all and end-all. Thoughtful farmers who constantly question their assumptions about sustainability and always aim to do better will have the most credibility with the public as people become more educated about the sources of the food they eat.
78	Lower Green	Organic, local, nontraditional markets (CSAs, restaurant partnerships, on farm events and marketing)

ID	APD	Response (N=70, 79% response rate)
79	Enumclaw	Cutting out the BS and having a direct relationship with customers. Also, trends aren't important. Trends are fleeting.
80	Snoqualmie	Consumer awareness on the importance of buying local.
81	Enumclaw	Constant encroachment by government, development
82	Enumclaw	Farm Plans are important as well as livestock (i.e. Cattle & horses)management

Question#17: What are your plans for your farm property in the future?

ID	APD	Response (N=73, 82% response rate)
2	Snoqualmie	same- no change
3	Snoqualmie	keep growing veggies... if permitting, zoning allows, perhaps a small, once a week farm-fresh restaurant
4	Snoqualmie	poss. Nature conservancy
5	Snoqualmie	continue to do dairy and hopefully process our own milk to add value to our products.
6	Snoqualmie	We are going to keep farming.
7	Snoqualmie	We want to keep growing organic food.
8	Snoqualmie	Expanding as land becoming available.
10	Snoqualmie	To continue farming organic produce while increasing educational opportunities to promote environment and sustainable agriculture.
11	Snoqualmie	To build a home and barn and pad.
12	Snoqualmie	We'd like to bring currently fallow land into production, but we need water (ag well).
13	Snoqualmie	Increased # of greenhouses
14	Snoqualmie	Continue growing food?
15	Snoqualmie	Possible partnering with daughter and son in law
16	Snoqualmie	We want to complete some improvements wherein we can move to and live at the farm. Planning on putting another 5 acres into production this year. We will need to replace our pump house and well components after the January flood.
17	Snoqualmie	Hopefully to continue farming in a lesson flooding situation. We have the best temperatures for crop production but do not do well under water.
20	Enumclaw	Hopefully if we are still in business to have digester put in and milk more cows.
21	Snoqualmie	This is a big unknown for us. Mostly due to the price of land in King County has made it difficult for us to purchase a large piece of property, even in it's located in the flood plain. And, as mentioned above, if we have to change to a seasonal operation due to weather/flood issues we will have change our marketing and/or risk losing clients that want animals born/raised all on the same farm. The bottom line is it depends, if the flooding continues to get worse, we may just quit farming. We could switch to haying/haylage only operation but that's not as profitable nor something we'd really enjoy. The increased costs the last couple years in having to rebuild fences more often, hire crews, and costs for cleaning up everyone else's garbage that comes in all adds to the bottom line. Maybe possibly sell and move to a different climate.
22	Enumclaw	To be able to afford to keep the land whole. Farm/Park/Lease
23	Vashon	Barn; In season workshops and classes; Teaching tours; off season workshops and classes; Food service awareness training; Farm/chef connection

ID	APD	Response (N=73, 82% response rate)
24	NonAPD	On my 7 acres I plan to continue to grow hay and pasture my animals. The property is zoned R4; I would be interested in exploring options to reduce my taxes. We also own an additional 14 acres zoned RA5 nearby. We would be interested in having someone farm this more intensively.
26	Snoqualmie	We will be preparing for the next generation of Wheelers to start farming. Once they go through proper training.
28	NonAPD	I hope to farm it until retirement, I hope my son will want to continue to farm it
29	NonAPD	see question #14
30	Enumclaw	I plan to renovate my barn to double the size of my furrowing operation. County regs make it difficult to expand and it's too expensive. All I want to do is to tear down a building that is falling down and replace it. It's taken months to get a permit for a roof on a manure storage facility. I have spent over $700 for this to date. I want to build a small shop but can't because of septic issues even though I don't plan to have any plumbing in the building.
31	No response	same as is
32	No response	The plan in 2009 and 2010 is to farm organic green beans but beyond this it will depend on what can be done to the land to make is usable for other vegetable crops of specialty crops. For example can I ditch, dike, contour, level, etc for nursery crops, cranberries, blueberries, high value veg. etc because if not then I may be limited in what can be done with the land to keep the farm viable. Currently I must grow something that is a very quick/short season crop to mature like green beans because to the drainage issues and the restrictions put on cleaning ditches by the county/state (these are causing me to be disadvantaged compared to other counties). I would like to devise a longer term plan but cannot do that very well because the county/state one or both does not seem to care about the costs of the regulations that are imposed on the farm operation. I would invite a solution of setting out the objectives to be accomplished with the various agencies and if there is great degree of flexibility of implementing then this would be good for the farmer rather than imposing a strict set of rules and processes that must be followed even if they do not make much sense. (back to cleaning the ditch... if the water does not leave the property during the cleaning then why does it have to be pumped around the dredge point? ...in Skagit and Snohomish county this procedure is not implemented even if the water does leave the property during the dredging.)
34	No response	I am buying land in counties other than King to sell to consumers based mostly in King County. I would much rather operate and sell in the same county, but the current King county land use regime makes this impossible. I operate a blog at ebeyfarm.blogspot.com you are welcome to look at my operation and comment there.
35	No response	Keep going, teach interns how to raise sheep on browse. Get more land. I need help with getting more land. We are a non-profit and teach sustainable and slow food and clothing.
36	No response	We are hopeful that our dairy will continue onto the next generation. If not the next generation we would like to have the dairy continue.
37	No response	I am thinking of moving to Skagit County.

ID	APD	Response (N=73, 82% response rate)
38	Snoqualmie	We'd like to be able to use the non-farmable upland parts of the farm property for a small special-events venue in order to support the farmable sections in the valley (also a zoning issue). We do have 20-30 unfarmed acres that we'd like to make available (mentioned above - needs a bridge) either for us or for another for more farming. Would love to rent this part to an organic farmer.
40	Snoqualmie	Continued use of farm as a farm. I also keep 8 horses as part of Children's Hospital summer camp (35 yr volunteer). The horses are a vital part of 2 other camps (Special Care, Rise in Shine). The farm has been certified salmon safe which means that the management practices are enhancing the salmon stream (#2 salmonid). All manure is composted either in bins or field and cultivated by the Hmong farmers.
41	No response	I'm 78, my wife is 76 - would like to continue for 10 more years and see to a young couple who would continue to farm.
42	No response	I will keep my land for my family farming for the future.
43	Lower Green	I hope to buy the land we are on now and continue to expand and diversify our operations to be sustainable and less risky and variable in the income department. We are also interested in improvements to the building including a commercial kitchen.
45	Lower Green	We want to buy the farm we have been renting for 10 years.
48	Vashon	Continue small farm egg production/sales.
49	Enumclaw	horse boarding and training raising of horses, possible breeding, only if colt turns out like his breeding.
50	NonAPD	To continue best organic practices possible and to educate others in how it is done. To work with others who may not have farms to show them how they can do things to support the greater good of the industry. To educate others regarding smart shopping practices and purchasing agricultural products locally. I intend to continue my education in organic practices and marketing and to stay up to date with what is going on in the agricultural industry.
51	Snoqualmie	The current plan is to transfer farm ownership to my daughter and son in law. They both currently work on the farm part-time and have a strong desire to continue the family tradition.They would be the fourth generation to farm this property.
52	NonAPD	none
53	Lower Green	Transitioning farm to younger generation.Exploring new fruit and veg crops. Exploring value added possibilities.Exploring new market possibilities - restaurant, farmers markets, web. Considering landmarking property and shifting to ag-tourism format.
54	Enumclaw	Continue to raise beef and chickens and other personal produce for ourselves and our friends. We would also LOVE to put a pond in so that we could raise fish as well but haven't even considered asking the county about how to do that for fear of being singled out and regulated to death!
55	Enumclaw	to try and stay in business
56	Enumclaw	I don't know, as it stands now it does not look good, we are hopeful that the manure digester will put some new life into the industry and help us out in some way, but not sure how.
58	NonAPD	Keep on farming and selling local
60	Upper Green	possibly
62	Upper Green	Continue current operations- keep learning and getting better at it
64	Enumclaw	continue to raise horses
65	Enumclaw	In 20 years (when retire) will sell to someone who wants to farm.

ID	APD	Response (N=73, 82% response rate)
67	Enumclaw	Would like to keep and raise cattle 20 years.
68	Enumclaw	losing land to development.
69	No response	Continue to raise a small heard of Friesian horses. Small enough to sustain them during the summer months on the grass I grow.
70	No response	Reduce number of livestock until market improves.
71	Snoqualmie	Add more greenhouses
74	Snoqualmie	Keep learning and growing... :)
75	NonAPD	Unsure. We continue to consider models for sharing our lovely land with others. Most of our property (90%) is in natural vegetation - we farm on less than one acre. We will continue to grow food and livestock, but beyond that, we aren't sure.
76	Snoqualmie	That depends - see comments above.
78	Lower Green	Continue farming, eventually create bed & breakfast and develop on-premises community and university education opportunities - seminars and internships
79	Enumclaw	Farming
80	Snoqualmie	Continue to grow our dairy goat herd. Purchase cow's milk from other local dairies in the valley.
81	Enumclaw	same
82	Enumclaw	I will continue to produce hay and board horses.
84	NonAPD	Limited expansion and few improvements. We are where we want to be. No plans for retirement but at some point may rent out nursery or sell property to enable us to retire. Will probably move out of W. Washington to area with lower costs and less urban environment.
87	NonAPD	Keep growing food for our family
90	Snoqualmie	Due to the high price of homes on acreage in the APD and the restrictive building codes (appropriately so without regulations ensuring that only real farmers may build), I plan on continuing to lease land in the APD to farm and keep commuting there from the city. Because I do not own my land, I have no real plans for any of the major improvements needed to turn my small vegetable farm into a larger operation.
91	Snoqualmie	We are working with Salmon Safe and King Conservation. We'd like to bring in native plants and also do small orchard work.
92	Vashon	intensive, small scale food production
93	Vashon	We are both 38 years old and plan to farm until we die.
94	Vashon	More intensive use of the land.
95	Snoqualmie	No plans with flooding and no recourse to solving the problem.
96	Snoqualmie	I am either going to sell my property off as 4estate sized lots, given that I am only 15 minutes to Microsoft. I would rather create a world class demonstration farm, with a conference center on my rural zoned piece, but I keep thinking about 21 acres, and other projects in my area. I have been told by most of the developers of large scale projects in King County that they will never do another project in King County. I think of Ken Bering who said that over 10 years ago. And these people stood to make large profits. Why should a farmer, looking to make a much smaller profit go through the same aggravation?
97	Vashon	Don't know
99	Snoqualmie	Wanted to farm as long as I was able and not giving up to much of my pension to make the farm work.

Question#18: What concerns do you have regarding farming in King County?

ID	APD	Response (N=67, 75% response rate)
2	Snoqualmie	More competition for land, its use especially from non-farm uses. Lack of flexibility as land owner to deal with everyday issues as farmer. Permitting quagmire.
3	Snoqualmie	Development and logging = bigger floods. Horse farms = more expensive farmland. Inconsistent enforcement of building and zoning codes = only the rich and the scofflaws get to build. Not enough farmers in general to meet demand in our region.
5	Snoqualmie	Loss of infrastructure assisting farmers within the county. Loss of staff assistance. Heavy weight of "fish concerns" us. Other viable land uses. Flooding and its impact on the farms/farm infrastructures. Farms and residents are more important than the sacred "FEMA Flood Insurance Rates."
6	Snoqualmie	Land prices. Over -development on the hillsides and ridges above the farming valleys which is making the flooding worse. FLOODING! (I'm on the Snoqualmie River.)
7	Snoqualmie	Over-development/illegal development--changing the use of ag lands and leading to over-valuation and underutilization as food farms (such as camp, conference/wedding facilities, horses, wineries). Would like to see a states focus on food/forage farming and programs actively supporting that and discouraging other. Farming is not a high $ business, yet farmers are paying full price for land (even FPP land), septic systems, permits, structures. Consider "flood-appropriate farming" in the flood areas? Maybe animal operations and perennial crops should not be in the flood zone.
8	Snoqualmie	Will we be able to adapt to environmental change? Can I get help to drain my land?
10	Snoqualmie	How can we deal with the floods, limited operation with spring floods and early fall floods. Expenses of facilities, labor, materials, dumping and clean up. Lost products to sell at increases labor and infrastructure expenses aren't going to work.
11	Snoqualmie	King County will need decide how to keep farm land and farmers in the area in a real way. King County will need to preserve farmland with the surrounding land that impacts us. The County needs to require builders to maintain their own drainage. To build around our farms seems easier than for farmers to respond to the effects of their building on farms.
13	Snoqualmie	Development sends too much water downhill and into streams and rivers
14	Snoqualmie	We need new farmers to be educated/encouraged. Support processing. If it becomes expensive for farmers to grow the food, our prices will go up. This is a time in our economy when our customers will not support that - money is a concern.
15	Snoqualmie	Increased flooding issue. Continued development at hills surround the valley.
16	Snoqualmie	The Snoqualmie needs to be removed from the KCSDM as being a "receiving body" whereby it is exempt from "detention." The Health Dept needs to get its act together and work with farmers.
17	Snoqualmie	Fish and wildlife have too much authority. Are other government agencies afraid of them? The human factor is supposed to be figured into the equation as well but has not been. Absolutely over regulations over a minority group of people. Urban citizens making the rules do not understand the complexities of agriculture.
18	No response	Land that is being speculated for immense building into condo. Let us turn it into farmland instead it really more economic in the long run.
20	Enumclaw	Lack of land and feed costs.

ID	APD	Response (N=67, 75% response rate)
21	Snoqualmie	I am not convinced the Executive supports farming. I'd like to see King County follow suit more with what Snohomish County (focus on farming, great processes in place, future of ag mapped out) -perhaps this survey is a start to that. It's still very difficult to deal with ditches and ditch maintenance, and expensive. Permitting is still an issue. We cannot deal with any new regulations. Fencing will always be an issue in the floodplains. Any increases in buffers would dramatically impact any farming operation (I realize many are grandfathered in, but that's today, what may happen in the future?) I Know the County has nothing to do with this but the poplar plantations are AWFUL to deal with in terms of the mess and debris they send down, the beavers they bring in. I do not want to see the Ag program at the county dissolved, the program is very important and the staff there are well liked, trusted, and work well with the farmers.
22	Enumclaw	The narrow strip of land between the Cascade Mountains and Puget Sound was beautiful and unique. As each decade passed, more was lost. It is strange that housing developments, strip malls and other development are not held accountable for the permanent nature of their existence. They are named after the things they destroyed- "Deer Run, "Bear Hill," and "Misty Meadow" places that are gone forever. Many of the remaining large tracts of land are owned by individuals. These individuals are not rich corporations that can affect local laws and zoning. Since agricultural lands have not been covered with fill, buildings and concrete, and since many are owned by individuals that can be more easily subdued, the public focuses its frustration there. This is where so many feel they have control. Ironically, this situation leads to impossible regulation and costs. Ultimately, the pressure destroys agriculture and/or people who just want to keep the land whole. A drive down the I-5 corridor shows us that nothing has changed. Large tracts of open space are quickly and permanently being transformed by forces the public seems to have difficulty in controlling. My concern is that people have given up on a solution and are turning a blind eye.
23	Vashon	King County makes all processes prohibitive in expense and complexity. As farmers, we have so little extra time to research proper procedures and protocol. Often we get opposing answers from separate bureaucrats.
24	NonAPD	Land use regulations still seem to make large-lot residential development the only viable economic option for many landowners. We MUST make it easier for rural landowners to make a living on their property. There are some conditional uses that exist, but the time, permitting fees and requirements often make them unrealistic options. We must expand and streamline this if we want a vibrant and sustainable rural economy.
26	Snoqualmie	1. Homes vs. land space; 2. H20 (water); 3. Small acreage areas will become very, very profitable. Planting by the inch.
29	NonAPD	That KC regulations & services support the care & raising of livestock, particularly horses. That the definition "farming" and agriculture includes horses; the boarding, breeding, raising, showing, training or sales of horses. Also horse businesses such as outfitters, camps, clinics, shows, therapeutic riding programs, etc. should be included as agriculture.
40	Snoqualmie	1) Continued development of housing/strip mall, etc.; 2) I am concerned over Department of Revenue and interpretation of ag.; 3) Flooding
41	No response	Taxes- the penalty for agland- 12% compounded annually- for 7 years, is keeping small acreage from being developed and retained as ag/open space.

ID	APD	Response (N=67, 75% response rate)
42	No response	My concern of King County, farm land is only few acres left, but KC didn't protect them, so I hope King County should really get all agency together and solve these problems.
43	Lower Green	Affording the land to do it, restrictions on value adding processing, educating kids and new farmers- everybody should be able to identify food in its growing and unprocessed state.
45	Lower Green	None
48	Vashon	Resist livestock registry.
49	Enumclaw	that it is not in king county's long term plans.
50	NonAPD	That we are losing our farm land to development and we are not encouraging people of all ages to get into the agri-business industry. I am also concerned that there are not enough educational opportunities locally for those who are interested in farming.
51	Snoqualmie	King County appears to be trying to improve the probability that farming operations will survive and prosper. Please keep the vision alive. I hope that the King County Ag Commission along with WSU extension will put together the types of educational programs that I now have travel to Snohomish County to get. Thank you for all the changes you have already made, keep up the good work.
53	Lower Green	Increasing environmental/ESA burden onagriculture can kill agriculture in this county. County government from Council-to-Exec-to-Staff is dominated by city dwellers with little or no rural or agriculture experience. Budget and staffing are overwhelminglydominated by urban/environmental concerns to the detriment of the rural/agricultural population and economy. With continued incorporations of suburban cities, the County's focus should shift to support of their rural/agricultural population, and have the cities cover more of the cost of environmental protection for the impacts they themselves generate.
54	Enumclaw	Hyper-environmentalism run amuck! Get off of our land unless you are willing to purchase it at fair market value. My friends in the dairy industry have flooded this past year because they haven't been able to maintain their own ditch systems. The Bolt decision has done more harm to native salmon and steelhead runs than ANY surface water runoff from ANY farm on this plateau. Reverse Bolt then we can talk about surface runoff. But if you will not then please find other work and LEAVE US ALONE!
55	Enumclaw	cost of doing business here. NRCS helps a lot with free engineering, free technical help and actual money to do things but will they be able to keep helping us.
56	Enumclaw	dairy business will be forced out because the expertise is not in the area to help keep us there. most of the programs from king county and king county conservation district are focused on small farms. NRCS are the only folks left that can relate to the larger producer and help with larger jobs and costs. concerned that king co is ok about letting agriculture go that way and they are not in tune with our needs.
57	Enumclaw	Too much development
59	Enumclaw	I am concerned about losing farms to development. I am concerned about the quality of animal feed. We raise meat chickens and in the book Green, Green, Greenest I read that arsenic can be found in animal feed. This is causing me to go to organic feed at twice the cost. The high cost of feed has risen faster then the price of our hay product.
60	Upper Green	need to keep farms and open space in this county
62	Upper Green	Mansions, Howard Hanson Dam repair
64	Enumclaw	taxes and regulations
67	Enumclaw	Is there going to be a tax on cattle for gas emissions?

ID	APD	Response (N=67, 75% response rate)
69	No response	Water. I have a salmon bearing creek on the property border I have worked with King County to improve the condition of the stream bank but this is all for naught it downstream we are causing the stream to slow and flood my pastures. We continue to build housing in areas which used to flood. There are retention ponds added and said to hand the flood. It doesn't. What can I do about it?
70	No response	That more land will be lost to development, and that land lost for agriculture use.
71	Snoqualmie	Land too expensive, no support system for infrastructure (tractor parts, fertilizers, dairy supplies, etc)
72	Sammamish	Sprawl removing farm land. Land becoming so valuable that it can't be passed on as a farm.
73	Snoqualmie	Not enough protection of land. Trees are being removed/clearcutting is causing too much water run off. Not enough incentives for new farmers to start up. No mentorship program where young can glean from old timers.
74	Snoqualmie	It is so expensive to have land here. I would like to know how to get a property tax break for farming. I worry that we will lose too much farmland and won't be able feed ourselves locally.
75	NonAPD	I believe it is imperative that farmland be protected. We must consider the greater good and the future, even at the expense of individual property rights. I've watched the Green River and Sammamish valleys essentially disappear, and been heartbroken. There are many well-documented reasons for protecting a local foodshed, and we must heed them. I fear the voices of developers and property rights activists thunder too loudly.
76	Snoqualmie	We are concerned that hobby farms and equestrian operations are driving up land prices and wrecking our drainage. Horses are not agriculture. Our neighbors' horses periodically break out of their fences and only pure luck has kept them from doing thousands ofdollars of damage to our crops. As it is, they at least cost us several hours of time with each incident that we stop working to try to round them up or keep them from trampling our vegetable crops.Horses are incompatible with farming. Horse operations should NOT benefit from ag property tax exemptions. Urban dwellers should not subsidize the recreational pursuits of horse owners.King County should define agriculture as "Food for People". Before we take any steps to loosen building restrictions in the Snoqualmie APD, we need to make absolutely sure that these changes will foster, not threaten, our ability to grow more food for the people of King County.
78	Lower Green	Expensive land - loss of human-food agriculture to fuel production and other Nonfood producing enterprises

ID	APD	Response (N=67, 75% response rate)
98	NonAPD	To make it easier to farm in king county by a bigger property tax brake
99	Snoqualmie	Government employees do stupid things and really believe they are doing the right thing. The purchase of property development rights. Take a look at the map and see all the property that floods or has wetlands, yet they bought the development rights.

Appendix G: Summary of Survey Questions #1-12

Question #1: Do you farm or live in an agriculture production district (APD)?

Response	#	%
Yes	61	69%
No	18	20%
No Response	10	11%

Question #2: If so, which one?

Response	#	%
Enumclaw	19	21%
Upper Green	2	2%
Lower Green	0	0%
Sammamish	3	3%
Snoqualmie	31	35%
Vashon	6	7%

Question #3: Are you actively farming?

Response	#	%
Yes	83	93%
No	2	2%
No Response	4	4%

Question #4: Is farming your primary occupation (more than 50% income)?

Response	#	%
Yes	36	40%
No	44	49%
No Response	9	10%

Other Responses for Question #10:

Tilth - Farm Bureau
Seattle Tilth (2)
KC Forestry
Salmon Safe Stewardship Partners (4)
Doesn't know who did farm plan

Question #11: What agricultural practices do you use? (check all that apply)

Response	*#*	*%*
Certified Organic	8	9%
Organic, but not certified	44	49%
Cover crop	41	46%
Natural fertilizer	57	64%
Synthetic fertilizer	14	16%
GM Seeds	0	0%
Organic Pesticides	17	19%
Synthetic Pesticides	6	7%
Other	9	10%
No Response	15	17%

Other Responses for Question #11:

organic micronutrients
Bumble bee hives
Landscape cloth to control weeds w/o chemicals
composted horse manure
biodynamic
"natural," humane handling, appropriate BMPs
bio-diesel, local composted manures
IPM
Intensive/high density

Question #12: How do you sell your farm products? (check all that apply)

Response	#	%
Auction	2	2%
Brokerage	1	1%
CSA	16	18%
Farmers Market	30	34%
Farmstand	21	24%
Grocer	10	11%
Institutions	1	1%
Inter-farm sales	8	9%
Internet	6	7%
Restaurants	18	20%
U-pick	14	16%
Wholesaler	17	19%
Other	6	7%
No Response	15	17%

Other Responses for Question #12:

local community members
Renter does fields
Direct to consumer (2)
Websites
government sales
don't sell
word of mouth (3)
pre-picked orders
Retail
Self-provider to our own restaurant
Individuals
Value Added
from the field
check
camps, small niche grocers
neighbor to neighbor

Appendix C.

Consumer Opinion Survey

King County Department of Natural Resources and Parks

Water and Land Resources Division

SURVEY ON AGRICULTURE IN KING COUNTY

RESEARCH REPORT

May 5, 2009

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Appendix. Questionnaire

King County Department of Natural Resources and Parks
Water and Land Resources Division
SURVEY ON AGRICULTURE IN KING COUNTY
RESEARCH REPORT

May 5, 2009

In order to increase understanding of King County residents' opinions of and experiences with farms and farming in the county, the Water and Land Resources Division, King County Department of Natural Resources and Parks, conducted a survey of county residents. Research results will be used in the report on *Future of Agriculture, Realized Meaningful Solutions (FARMS)* and in policy and program planning relating to agriculture in the county.

This report describes the survey on agriculture in King County. Research objectives are discussed first, followed by research methods, results, and key findings and conclusions. The appendix contains a copy of the questionnaire used in the survey.

Objectives

The information objectives of the survey on agriculture in King County included the following:

- Assess King County residents' opinions of the importance of having farms and farming in King County, and explore residents' impressions of farms and farming in the county;

- Assess residents' opinions of the importance being able to engage in selected activities related to local farms and farming, including purchasing farm food products and visiting farms;

- Examine the frequency with which residents purchase food produced on King County Farms, locations in which the food is purchased, and importance of selected factors in the decision to purchase food from local farms.

- Examine the frequency with which residents visit food-producing and horse farms in King County; and

- Assess residents' opinions of the importance of using and preserving land for agriculture in King County and continuing support for farmers in the county.

Research Methods

Between March 16 and March 26, 2009, a total of 450 telephone interviews were completed with residents of King County. The first 400 interviews were completed with individuals who were randomly selected from lists of county residents; 360 interviews

were completed with residents of urban areas, and 40 with residents of rural areas. Then, an additional 50 interviews were completed with individuals who were randomly selected from zip codes in rural parts of the county and who said they lived in rural areas. Thus, interviews were completed with a total of 360 residents of urban areas and 90 residents of rural areas in King County. The additional interviews with rural residents permitted more accurate assessment of the views of rural residents and comparison between urban and rural residents.

The questionnaire used in the research sought information about residents' opinions of and experiences with farms and farming in King County. It was developed with the input and approval of the King County Water and Land Resources Division. A copy of the questionnaire used in the survey is included in the appendix.

Limitations

If the 450 survey respondents comprised a random sample of all county residents, the maximum margin of error would be expected to be less than ±4.7 percent at the 95 percent confidence interval ($p<.05$). If the 360 residents of rural areas comprised a random sample of the 1,738,195 residents of rural areas, the maximum margin of error would be expected to be less than ±5.2 percent for urban residents at the 95 percent confidence interval. If the 90 residents of rural areas comprised a random sample of the 144,000 rural residents, the maximum margin of error would be expected to be less than ±10.3 percent for rural residents at the 95 percent confidence interval.[1]

Results

The responses to the survey on agriculture in King County are presented below for each of the information objectives addressed by the survey

Since additional interviews were completed with rural residents, there was a higher proportion of rural residents among the survey respondents than is found among the population of county residents. Therefore, the responses of urban and rural residents were weighted according to their actual representation in King County (urban – 92.3%; rural – 7.7%), so that the overall survey results presented below reflect the actual composition of urban and rural residents in the county.

In addition, the survey responses of urban and rural residents were analyzed to identify statistically significant differences between the two groups. When survey results differed significantly between urban and rural residents, those differences are discussed below.[2] Tables detailing responses to all questions in the survey are available separately.

---

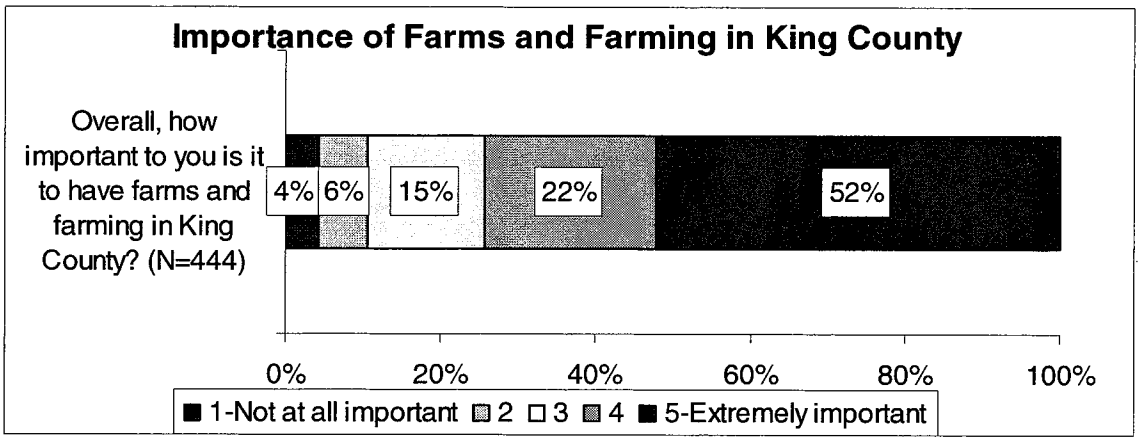
[1] Population estimates are taken from the 2008 Annual Growth Report.

[2] Differences between the responses of rural versus urban residents were tested using a t-test for independent samples or a chi-square test (*SPSS 15.0 for Windows*, Release 15.0.1.1, 3 July 2007). Results were considered statistically significant when the probability of that outcome occurring by chance was less than .05 ($p<.05$).

All of the survey results presented below are based on the number of residents answering each question, which usually was less than 450 since not all respondents answered every question. The number of respondents answering each question is noted in the charts and tables (e.g., N=444).

Importance and Impressions of Farms and Farming in King County

First, King County residents were asked, "Overall, how important to you is it to have farms and farming in King County?" Respondents used a five-point scale, where 1 means "not at all important" and 5 means "extremely important," to answer this question. As the next chart shows, half (52%) of the residents sated that "to have farms and farming in King County" was "extremely important" to them, and almost three-fourths of the residents rated the importance of having farms and farming in King County a 4 or a 5 on the five-point scale where 5 means "extremely important." Unless otherwise noted, percentages do not total 100 in this and subsequent charts due to rounding.



Ratings of the importance of farms and farming in King County provided by residents who live in rural areas did not differ significantly from the ratings provided by residents who live in urban areas.

Next, residents were asked, "When you think of farms and farming in King County, what comes to mind?" The most common responses to this question are summarized in the next table. As this chart shows, residents most frequently said that food crops or farms come to mind when thinking of farms and farming in King County, followed by milk, cheese, and dairy products or farms. Only 12 (3%) respondents said that they didn't know King County had farms, and only 2 (<1%) said that "nothing" comes to mind when they think of farms and farming in King County. Percentages total more than 100 in the following table because some respondents gave more than one answer to this question.

When you think of farms and farming in King County, what comes to mind?

(N=444)

Food crops, farms (fruit, berries, vegetables)	49%
Milk, cheese, dairy products, farms	22%
Disappearing farm lands - concrete, development	18%
A specific town or area (Carnation, etc.)	17%
Small farms, family, not big business	16%
Fresh, local, sustainable products	15%
Open spaces - fields, pastures, acreage, rural areas	15%
Farmer's markets	11%
Livestock	11%
Organic farming, healthy, good for environment	8%
Truck farms - general	8%
Animals - general	7%
Horse farms, stables	6%
Plants, flowers	5%
Gardening - backyard, community	5%
Farm lifestyle, hard work	4%
Chicken farms	3%
Farming is of little, no concern to me	3%
Agriculture - general	3%
Wheat, hay, grain farms	3%
Didn't know King County had any farms	3%

Activities Relating to Farms and Farming in King County

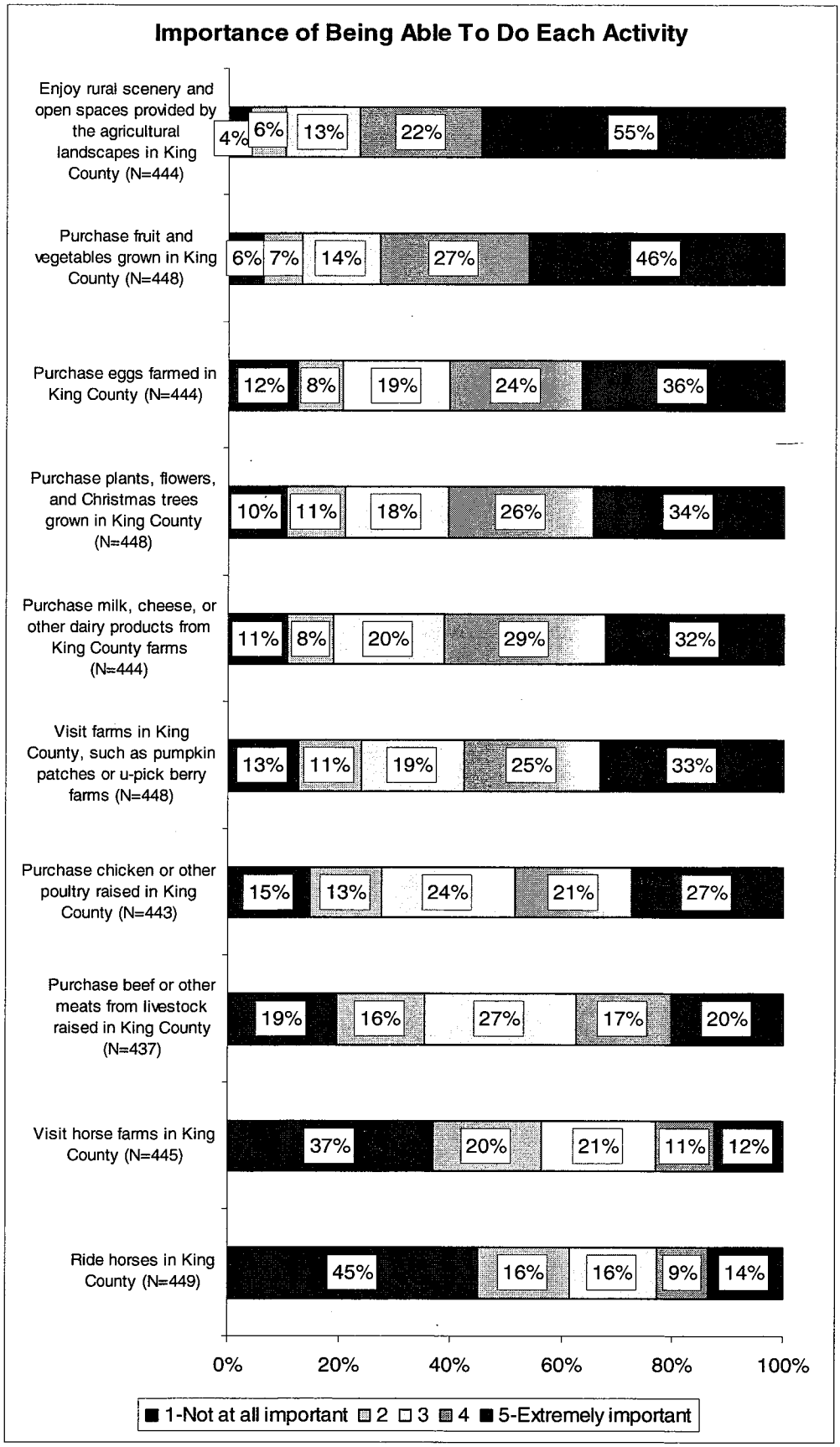
Residents were asked to rate how important it is to them personally to be able to do each of ten activities that relate to farms and farming in King County. As the next chart shows, the activity rated most important was, "Enjoy rural scenery and open spaces provided by the agricultural landscapes in King County." Over half (55%) of the residents rated this "extremely important," and three-fourths (77%) rated enjoying rural scenery and open spaces a 4 or a 5 on the five-point scale where 5 means "extremely important."

Almost three-fourths (73%) of the residents rated "purchase fruit and vegetables grown in King County" a 4 or a 5 on the five-point scale where 5 means "extremely important."

Between 58 and 61 percent of the residents rated four activities a 4 or a 5 on the five-point scale where 5 means "extremely important": "Purchase eggs farmed in King County," "Purchase plants, flowers, and Christmas tress grown in King County," "Purchase milk, cheese, or other dairy products from King County farms," and "Visit farms in King County, such as pumpkin patches or u-pick berry farms."

Purchasing chicken or other poultry and purchasing beef or other meats from livestock in King County were rated somewhat lower in importance (48% and 37%, respectively, rated these a 4 or 5 on the five-point scale).

Visiting horse farms and riding horses in King County were the activities rated lowest in importance by residents (23% rated these a 4 or a 5 on the five-point scale).

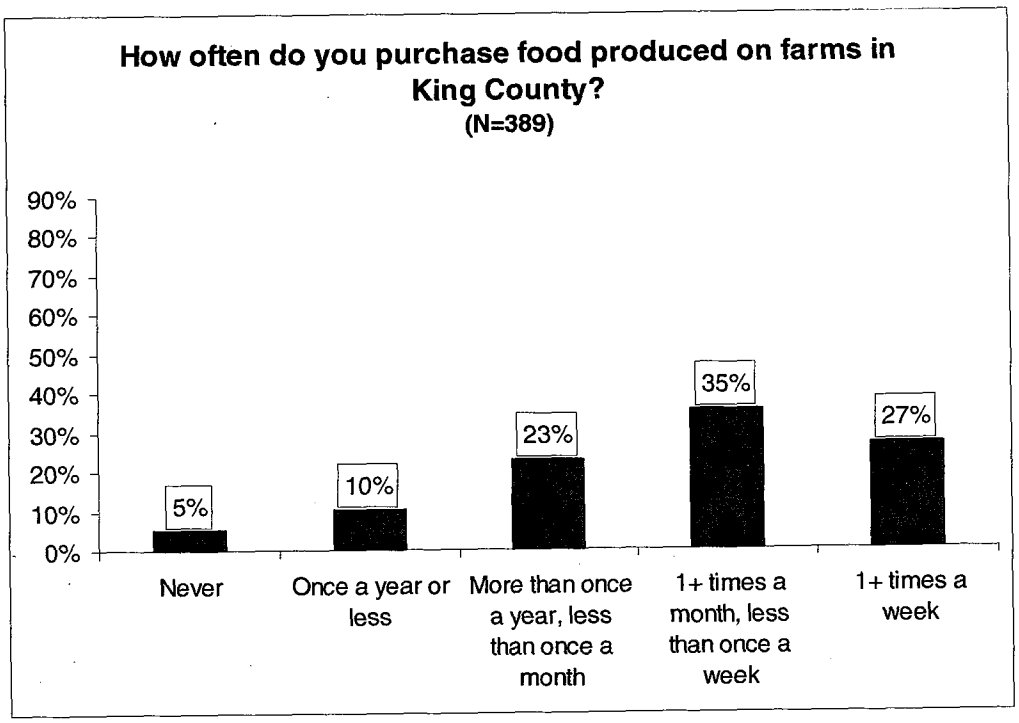

Importance of Being Able To Do Each Activity
Enjoy rural scenery and open spaces provided by the agricultural landscapes in King County (N=444)
4%
6%
13%
22%
55%
Purchase fruit and vegetables grown in King County (N=448)
6%
7%
14%
27%
46%
Purchase eggs farmed in King County (N=444)
12%
8%
19%
24%
36%
Purchase plants, flowers, and Christmas trees grown in King County (N=448)
10%
11%
18%
26%
34%
Purchase milk, cheese, or other dairy products from King County farms (N=444)
11%
8%
20%
29%
32%
Visit farms in King County, such as pumpkin patches or u-pick berry farms (N=448)
13%
11%
19%
25%
33%
Purchase chicken or other poultry raised in King County (N=443)
15%
13%
24%
21%
27%
Purchase beef or other meats from livestock raised in King County (N=437)
19%
16%
27%
17%
20%
Visit horse farms in King County (N=445)
37%
20%
21%
11%
12%
Ride horses in King County (N=449)
45%
16%
16%
9%
14%
0%
20%
40%
60%
80%
100%
1-Not at all important
2
3
4
5-Extremely important

Six of the ten activities relating to farms and farming in King County were rated significantly higher in importance by rural residents than by urban residents:

- "Purchase plants, flowers, and Christmas trees grown in King County,"
- "Visit farms in King County, such as pumpkin patches or u-pick berry farms,"
- "Purchase chicken or other poultry raised in King County,"
- "Purchase beef or other meats from livestock raised in King County,"
- "Visit horse farms in King County," and
- "Ride horses in King County."

Purchasing Food Produced on King County Farms

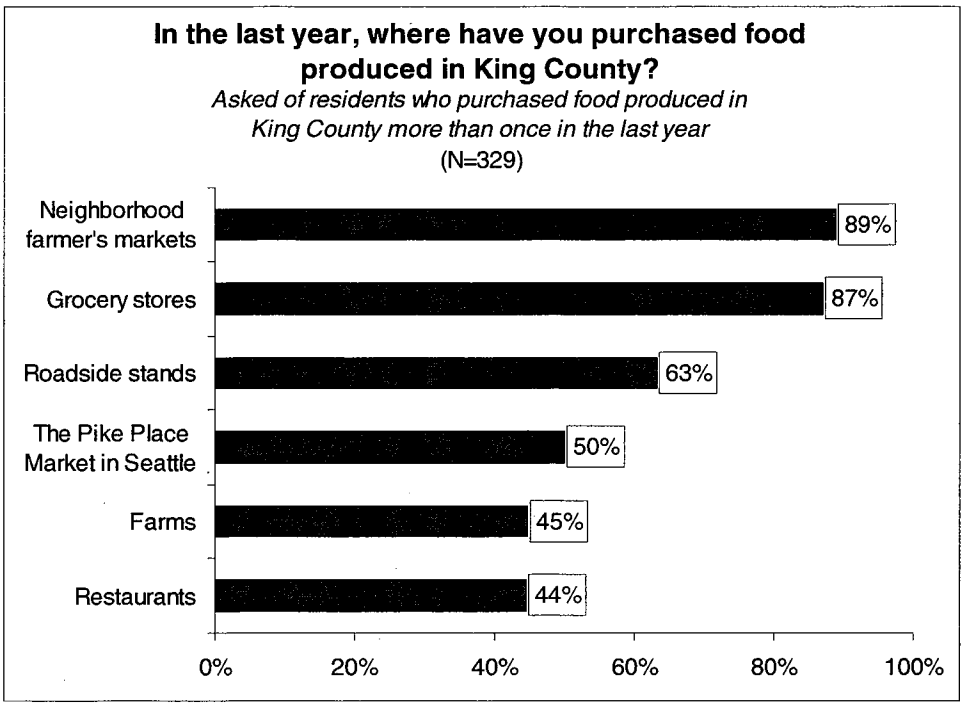
Residents were asked, "How often do you purchase food produced on farms in King County?" Eighty-five percent of the residents who answered this question said that they purchase food produced in King County more than once a year, and 62 percent purchase food produced in King County at least once a month, as shown in the next chart.



Urban and rural residents of King County did not differ significantly in how often they purchase food produced on farms in the county.

The survey respondents who purchase food produced in King County more than once a year also were asked about the places in which they have purchased the food and the importance of several considerations in their decision to purchase food from local farms.

As the next chart shows, most of the residents who have purchased food produced in King County more than once in the last year said that they have purchased it at neighborhood farmer's markets (89%) or in grocery stores (87%). Sixty-three percent said that have purchased food produced in King County at roadside stands, 50 percent at the Pike Place Market, 45 percent on farms, and 44 percent at restaurants.

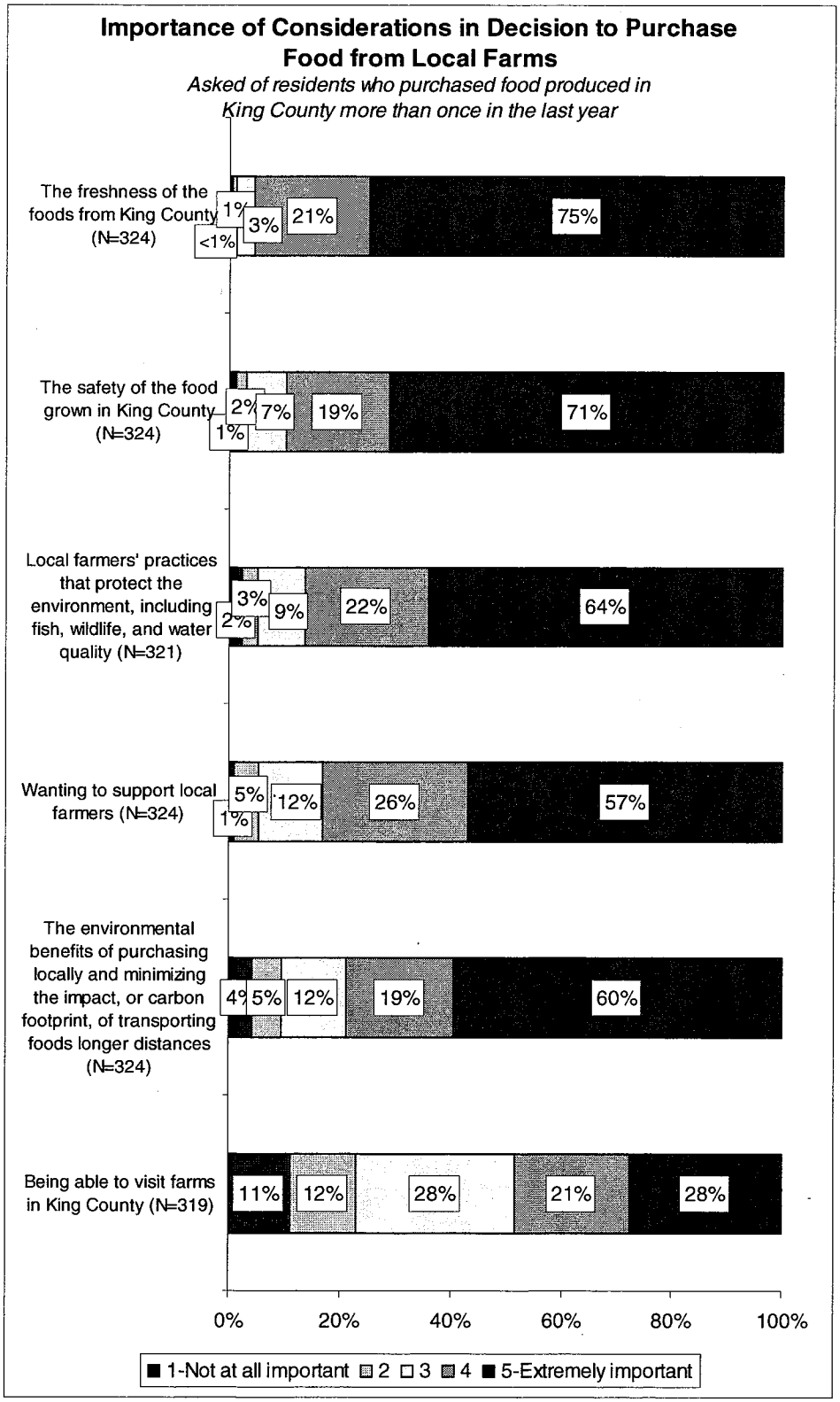


Urban residents were significantly more likely than rural residents to say that they have purchased food produced in King County at the Pike Place Market. On the other hand, rural residents were significantly more likely than urban residents to say that they have purchased food produced in King County at roadside stands. Rural and urban residents' responses did not differ significantly for the other purchase locations.

At least 79 percent of the residents who purchase food produced in King County more than once a year rated five of the six considerations in the decision to purchase food from local farms a 4 or a 5 on the five-point scale where 5 means "extremely important":

- "The freshness of the foods from King County,"
- "The safety of the food grown in King County,"
- "Local farmers' practices that protect the environment, including fish, wildlife, and water quality,"
- "Wanting to support local farmers," and
- "The environmental benefits of purchasing locally and minimizing the impact, or carbon footprint, of transporting foods longer distances."

About half (49%) of the residents rated "being able to visit farms in King County" a 4 or a 5 on the five-point scale where 5 means "extremely important." These results are shown in the next chart.



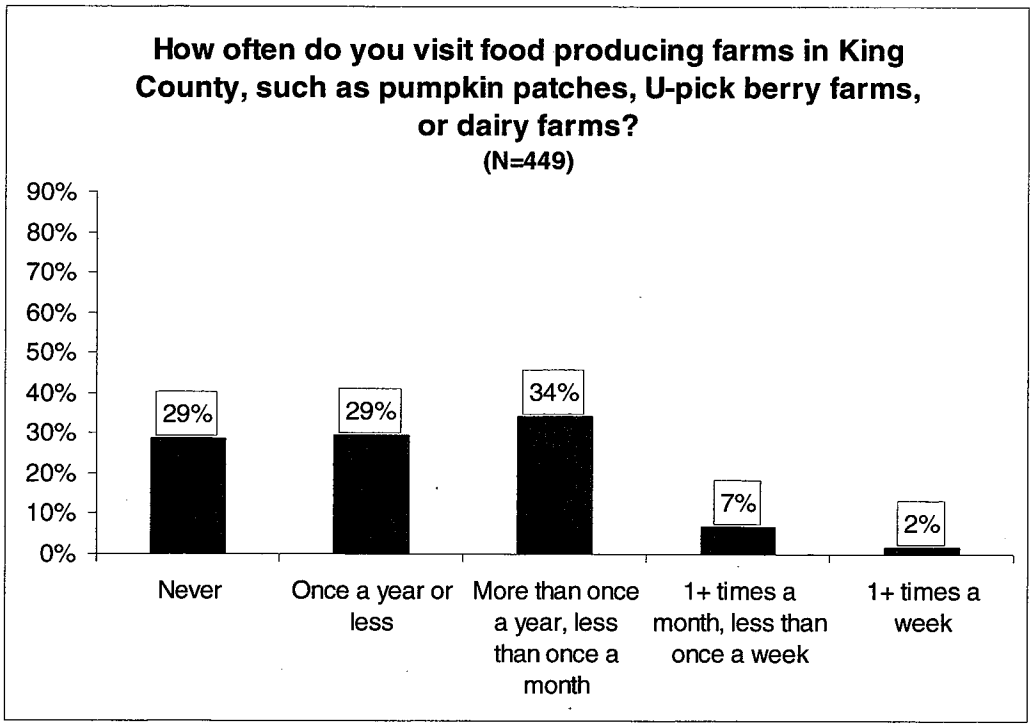
Four of the considerations in decisions to purchase food from local farms were rated significantly higher in importance by rural residents than by urban residents:

- "The freshness of the foods from King County,"
- "The safety of food grown in King County,"
- "Wanting to support local farmers," and
- "Being able to visit farms in King County."

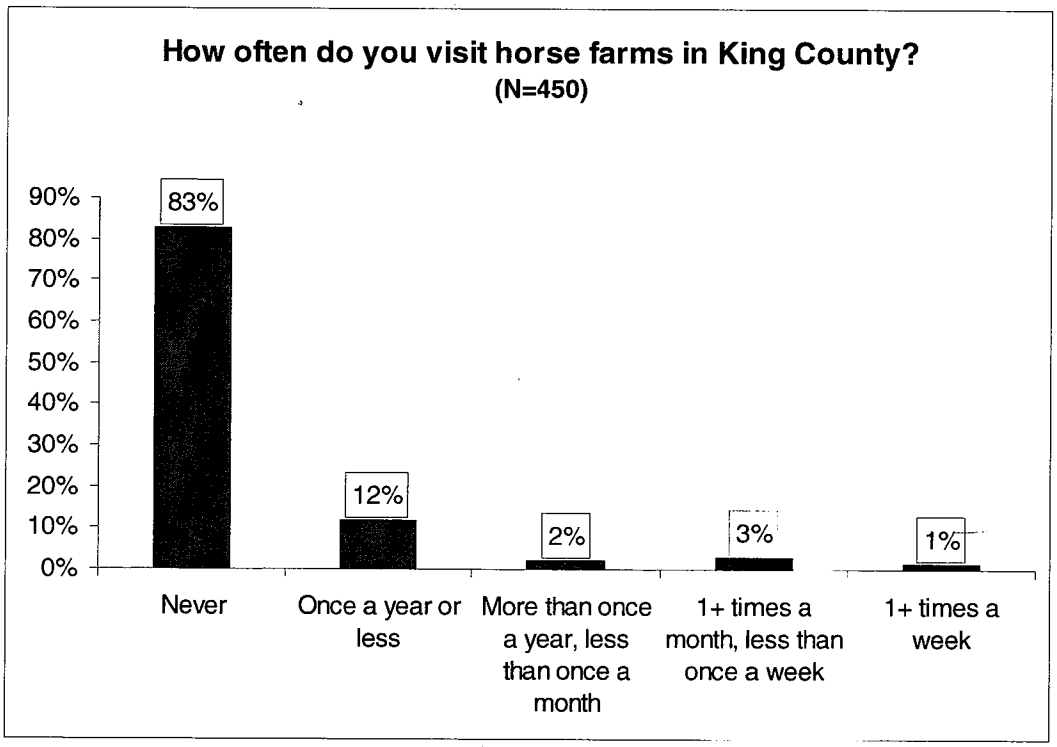
Ratings of the other two considerations, which related to environmental considerations, in decisions to purchase food from local farms did not differ significantly between rural and urban residents.

Visiting Farms in King County

Residents were asked how often they visit food-producing farms and horse farms in King County. As the next chart shows, over 40 percent of the residents said that they visit food producing farms in King County more than once a year.



Just six percent of the residents said that they visit horse farms in King County more than once a year.



Rural residents said that they visit food producing and horse farms in King County significantly more often than urban residents.

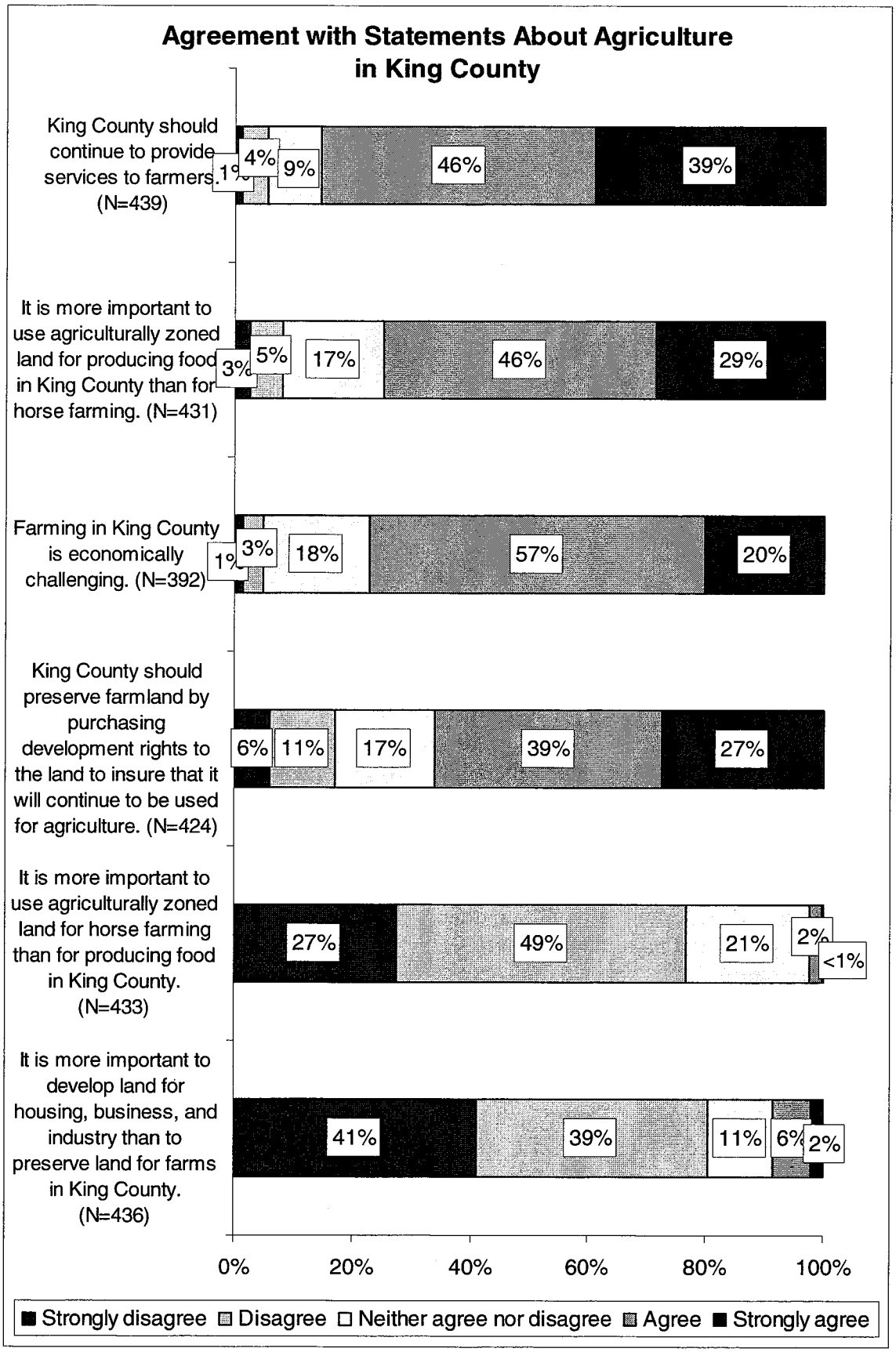
Using and Preserving Land for Agriculture

Residents were asked to indicate their level of agreement ("Strongly agree," "agree," "neither agree nor disagree," "disagree", or "strongly disagree") with six statements about agriculture in King County, which are shown in the next chart.

Eighty-five percent of the residents said that they "agree" or "strongly agree" with the statement, "King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices."

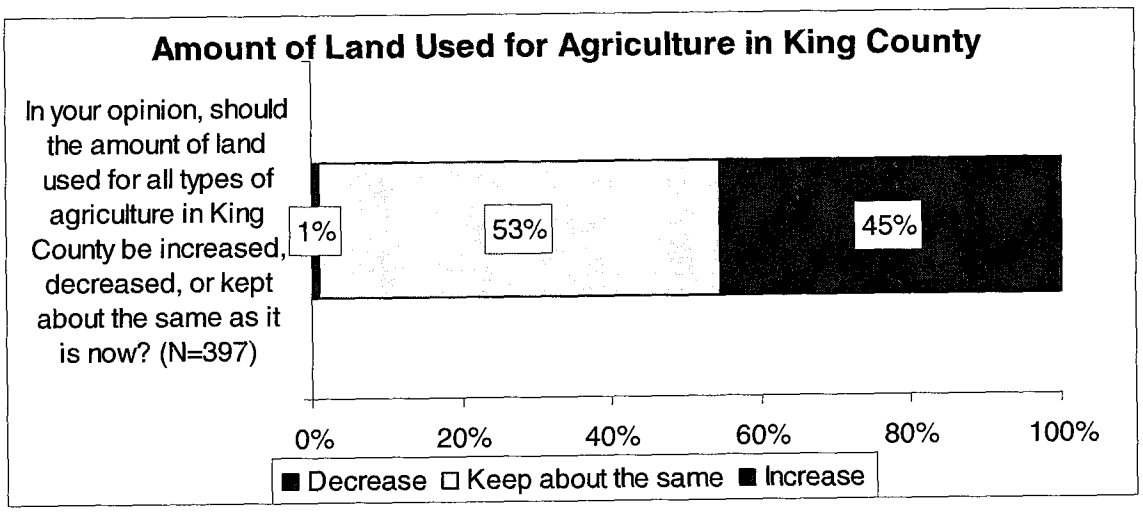
Between 66 and 77 percent of the residents said that they "agree" or "strongly agree" with the statements, "It is more important to use agriculturally zoned land for producing food in King County than for horse farming," "Farming in King County is economically challenging," and "King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture."

Conversely, 75 and 80 percent of the residents said that the "disagree" or "strongly disagree" with the statements, "It is more important to use agriculturally zoned land for horse farming than for producing food in King County," and "It is more important to develop land for housing, business, and industry than to preserve lands for farms in King County," respectively.


Agreement with Statements About Agriculture in King County
King County should continue to provide services to farmers. (N=439)
1%
4%
9%
46%
39%
It is more important to use agriculturally zoned land for producing food in King County than for horse farming. (N=431)
3%
5%
17%
46%
29%
Farming in King County is economically challenging. (N=392)
1%
3%
18%
57%
20%
King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture. (N=424)
6%
11%
17%
39%
27%
It is more important to use agriculturally zoned land for horse farming than for producing food in King County. (N=433)
27%
49%
21%
2%
<1%
It is more important to develop land for housing, business, and industry than to preserve land for farms in King County. (N=436)
41%
39%
11%
6%
2%
0%
20%
40%
60%
80%
100%
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Larger proportions of rural than urban residents said that they "agree" and "neither agree nor disagree" with the statement, "It is more important to use agriculturally zoned land for horse farming than for producing food in King County," while a larger proportion of urban residents said that they "strongly disagree" with this statement. Agreement with the other statements about agriculture in King County did not differ significantly between rural and urban residents.

Forty-five percent of residents said that the amount of land used for all types of agriculture in King County should be increased, and 53 percent said that the amount of land used for all types of agriculture should be "kept about the same as it is now." Only one percent of the residents said that they thought the amount of land used for agriculture in King County should be decreased, as shown in the next chart.



Responses to the question about whether the amount of land used for agriculture in King County should be increased, decreased, or kept about the same did not differ significantly between rural and urban residents.

Key Findings and Conclusions

The results of the survey on agriculture in King County suggest the following key findings and conclusions:

Having farms and farming in King County and being able to purchase food produced on farms in King County are important to most county residents.

- Almost three-fourths of King County residents rated having farms and farming in King County a 4 or a 5 on a five-point scale where 5 means "extremely important."

- When asked about the importance of being able to do specific activities relating to farms and farming in King County, about three-fourths of the county residents rated being able to "enjoy rural scenery and open spaces provided by the agricultural landscapes in King County" and being able to "purchase fruit and vegetables grown in King County" a 4 or a 5 on the five-point scale where 5 means "extremely important." Being able to "visit horse farms in King County" and "ride horses in King County" were the activities rated least important, and 23 percent of the residents rated these a 4 or a 5 on the five-point scale where 5 means extremely important.

- Asking about "farms and farming in King County" brought a variety of images to mind for county residents, but food crops and farms were mentioned most often, followed by dairy products and farms.

Purchasing food produced on farms in King County is a fairly common practice for many residents.

- Sixty-two percent of the residents said that they "purchase food produced on farms in King County" at least once a month, and 85 percent said that they "purchase food produced on farms in King County" more than once a year.

- These residents most often purchase food produced in King County at neighborhood farmer's markets or grocery stores.

- Between 57 and 75 percent of the residents said that the freshness, safety, and environmental benefits associated with foods produced in King County, as well as wanting to support local farmers, were "extremely important" (5 on the five-point scale) considerations in the decision to purchase food from local farms.

Most residents support continuing county support for farmers in King County and using land for food-producing agriculture in King County.

- Eighty-five percent of the residents said that they "agree" or "strongly agree" with the statement, "King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices."

- Between 66 and 77 percent of the residents said that they "agree" or "strongly agree" with the statements, "It is more important to use agriculturally zoned land for producing food in King County than for horse farming," "Farming in King County is economically challenging," and "King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture."

- Forty-five percent of residents said that the amount of land used for all types of agriculture in King County should be increased, and 53 percent said that the

amount of land used for all types of agriculture should be "kept about the same as it is now."

Rural residents rated some activities and considerations as more important and more frequently engage in some activities that relate to farms and farming in King County than do urban residents.

- Rural residents engage in some activities relating to farms and farming more often and rate these activities as more important than do urban residents, including visiting food-producing and horse farms; the importance of being able to purchase plants, poultry, and meats from King County; and the importance of visiting farms and riding horses in King County.

- The freshness and safety of foods grown in King County, wanting to support local farmers, and being able to visit farms in King County were more important considerations in decisions to purchase foods produced in King County for rural than for urban residents.

11. Next, I'm going to read several statements about agriculture in King County. Please tell me whether you agree or disagree with each statement. First, _____. Do you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with this statement? READ AND ROTATE.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	DK/ REF
It is more important to develop land for housing, business, and industry than to preserve land for farms in King County.	1	2	3	4	5	6
It is more important to use agriculturally zoned land for horse farming than for producing food in King County.	1	2	3	4	5	6
Farming in King County is economically challenging.	1	2	3	4	5	6
King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture.	1	2	3	4	5	6
It is more important to use agriculturally zoned land for producing food in King County than for horse farming.	1	2	3	4	5	6
King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices.	1	2	3	4	5	6

12. In your opinion, should the amount of land used for all types of agriculture in King County be increased, decreased, or kept about the same as it is now?

Increase 1
Decrease 2
Keep about the same 3
DK/REF 4

13. This last question is for classification purposes only. What is your home zip code?

___ ___ ___ ___ ___
DK/REF 99999

14. Thank you very much for your time and opinions. Your input will be very helpful to King County as it works to develop the best possible policies and programs for agriculture.

15. Record gender (DO NOT ASK):

Male 1
Female 2

Appendix D.

Community Partners Survey and Summarized Results

Community Partners Survey and Summarized Results

As part of the research for the *FARMS Report*, the King County Agriculture Program surveyed about 70 organizations that partner with the King County Agriculture Program. These groups vary significantly and include governmental organizations that the county works with on land use, code and policy; non-profits that the county works with in areas such as marketing, economic development, and educational programming; groups that receive financial assistance; and representatives of farmer groups that are impacted by county regulations and policy.

Thirty responses were returned. Following is a short summary of the results.

Question 1: Please identify the challenges, concerns and services that are the most important for organizations and local governments to be prioritizing in work plans over the next 5 – 10 years in order to help ensure the future of farming in King County and western Washington.
30 responses

- Access to land: cost, protecting land inside and outside the Agricultural Production Districts, farmland preservation programs (77 percent)
- Access to appropriate infrastructure: process, distribution and transportation needs (67 percent)
- Development pressures: incompatible land uses, McMansions, cumulative impacts of growth (43 percent)
- Market Development: new markets and products that provide a fair price—farmers markets, institutional sales to schools, health care, hotels (40 percent)
- Farmer transitions: succession planning for retiring farmers, support for new farmers such as finding land, training, technical and financial support (37 percent)
- Flooding impacts, regulatory issues, and access to capital (all at 33 percent)

There was less consensus about identifying the five least important challenges, concerns and services important to farming viability. Many respondents did not answer this section, stating that all issues were important. Some respondents stated the issues they identified as least important were still important, but less so than those identified as priorities.

- Farm labor issues: finding workers, cost of labor, housing, immigration (37 percent)
- Access to capital (37 percent)
- Food safety issues: understanding and complying with new standards, additional training (37 percent)
- Research to gather essential data to support agricultural activities: land use research, economic impacts of farming, farmers market research (37 percent)
- Cost of doing business: cost of permits, high taxes on agricultural buildings, equipment, insurance (33 percent)
- Marketing and consumer education: marketing about locally grown food, helping to increase demand (33 percent)

Question 2a: Please identify the top five challenges, concerns and services your organization is prioritizing to work on for the next 5-10 years in the first column. (30 responses)

- Marketing and Consumer Education (17 responses)
- Education and Training (16 responses)
- Market Development (15 responses)
- Access to appropriate infrastructure (14 responses)
- Research to gather essential data (11 responses)
- Advocacy (10 responses)

Of the top six priorities surveyed organizations are working on, only two (market development and access to appropriate infrastructure) were identified in the top five priorities to help ensure the future of farming over the next 5-10 years (Question 1).

Question 2b: Please identify which of the challenges, concerns and services you think the King County Ag Program should prioritize in its programming over the next 5-10 years.

- Access to land (22 responses)
- Access to appropriate infrastructure (17 responses)
- Development Pressures (16 responses)
- Regulatory issues (15 responses)
- Flooding Impacts and Cost of doing business (12 responses for each)

Question 3a: We know there are many organizations working on a wide variety of issues facing agriculture. Do you see any gaps in services to farmers in western Washington, specifically King County, that organizations and governments are not responding to, or are responding inadequately? If so, what are they? (20 responses)
Comments about gaps in services fell into several themes:

- Helping farmers sell more products: develop infrastructure, help make farm-institution sales easier, coordinate processing and distribution, develop new products and take to market, King County advocate for strong direct sales sites in cities, policy work to improve farm to institution sales (12 responses)
- Land use issues: wetland mitigation banking is removing farmland, use land for food and fiber not other purposes in APD, policy work on development pressures, farmland preservation (5 responses)
- Flooding: more policy work about impacts, create stable task force for flooding issues, training/research about food safety, more after flood relief support (5 responses)
- Farm labor (2 responses)
- Access to land (2 responses)

Question 4: Are there areas where there is excessive overlap of services to farmers in western Washington, specifically King County? If so, what are they? (17 responses)
Comments about overlap in services fell into several themes:

- No overlaps, farmers need all the help they can get (6 responses)
- Marketing: could back off on consumer marketing in King County because demand for local food exceeds supply; refine message to target institutional purchasing; bundle marketing dollars to cover local, regional, and state efforts to buy local; do not duplicate research (6 responses)
- Government overlap: King County duplicates others' services, too much red tape on some programs, contract out more services (4 responses)
- Partner communications: too many meetings, need more coordination, not clear about who is doing what (3 responses)

Question 5: You and your organization were chosen to participate in this survey because the King County Ag Program partners with you in some way. We would like feedback on how this partnership is working for you and what we could do better. (17 responses)

5a: In what work areas do you partner with the King County Ag Program?
There was a wide range of answers reflecting each organization's unique relationship to the Agriculture Program.

5b: What is the role of King County Ag Program in the partnership?
Most organizations partnerships with the Agriculture Program vary depending on the activity.

- Support role (14 responses)
- Lead role
- Financial
- Partner, colleague
- Advocate

5c: How can King County make the partnership more effective? (21 responses)

- More communications, better coordination, be more proactive asking for partner help, give partners more information (7 responses)
- Fine as is (5 responses)
- More financial resources would be great (5 responses)

6a: We would like you to comment on the current scope of work of the King County Ag Program. What types of programs or work activities do you think the King County Ag Program is most effective at performing? (26 responses)
This was a free form question with several themes that became apparent.

- Farmland Preservation
- Dealing with government regulations, land use and permitting issues
- Interfacing between government and farmers, helping decipher code
- Working on Puget Sound Fresh, farmers market support and marketing

6b: When thinking about the work of the King County Ag Program, can you identify any areas that could be better done by another organization? (17 responses)

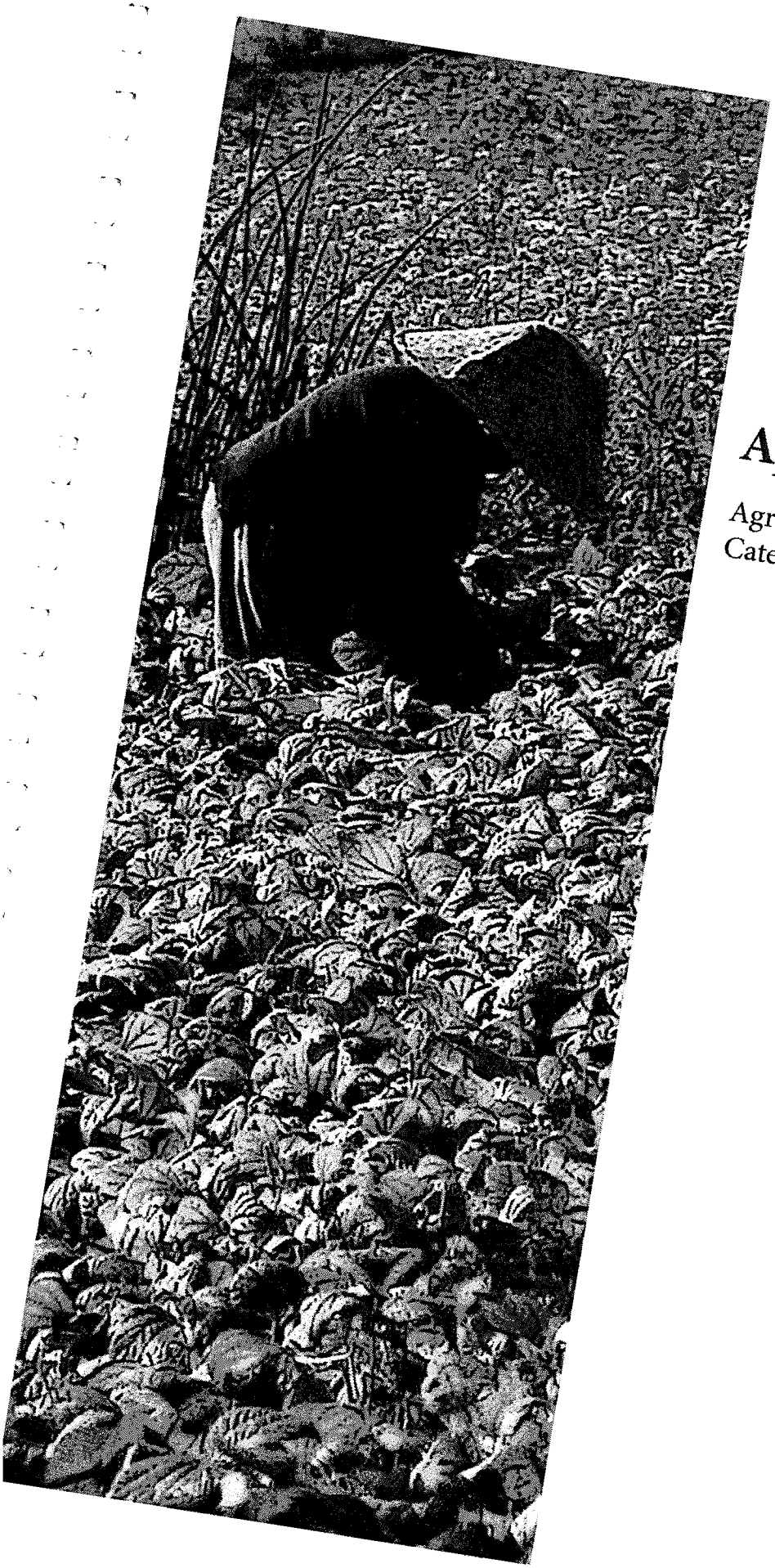
- Six respondents stated responded there were not other work areas to improve
- Three respondents mentioned education and research could be better done by other groups
- The rest of the answers covered a wide area. Several mentioned marketing related activities that could be done better by others.

Key Stakeholder Organizations
Attending Community Partners Meeting or providing other input

Acting Food Policy Council of King County
Carnation Farmers Market
Cascade Harvest Coalition
Cascade Land Conservancy
Green River Community College, Small Business Assistance Center
Horses for Clean Water
King Conservation District
King County Farmers Markets
King-Pierce Farm Bureau
Natural Resources Conservation Services
Neighborhood Farmers Market Alliance
Northwest Ag Business Center
Partnership for Rural King County
PCC Farmland Trust
Public Health – Seattle & King County
Puget Sound Meat Producers Coop
Seattle Farmers Market Association
Snohomish Conservation District
Sno-Valley Tilth
Washington State Department of Agriculture
Washington State University – King County Extension
Washington State University – Pierce County Extension
Washington State University – Small Farms Program

Department of Natural Resources and Parks
Water and Land Resources Division
201 S. Jackson Street, Suite 600
Seattle, WA 98104

Karen Kinney
Karen.Kinney@kingcounty.gov



Appendix E.

Agriculture Production District Land Use Category Descriptions

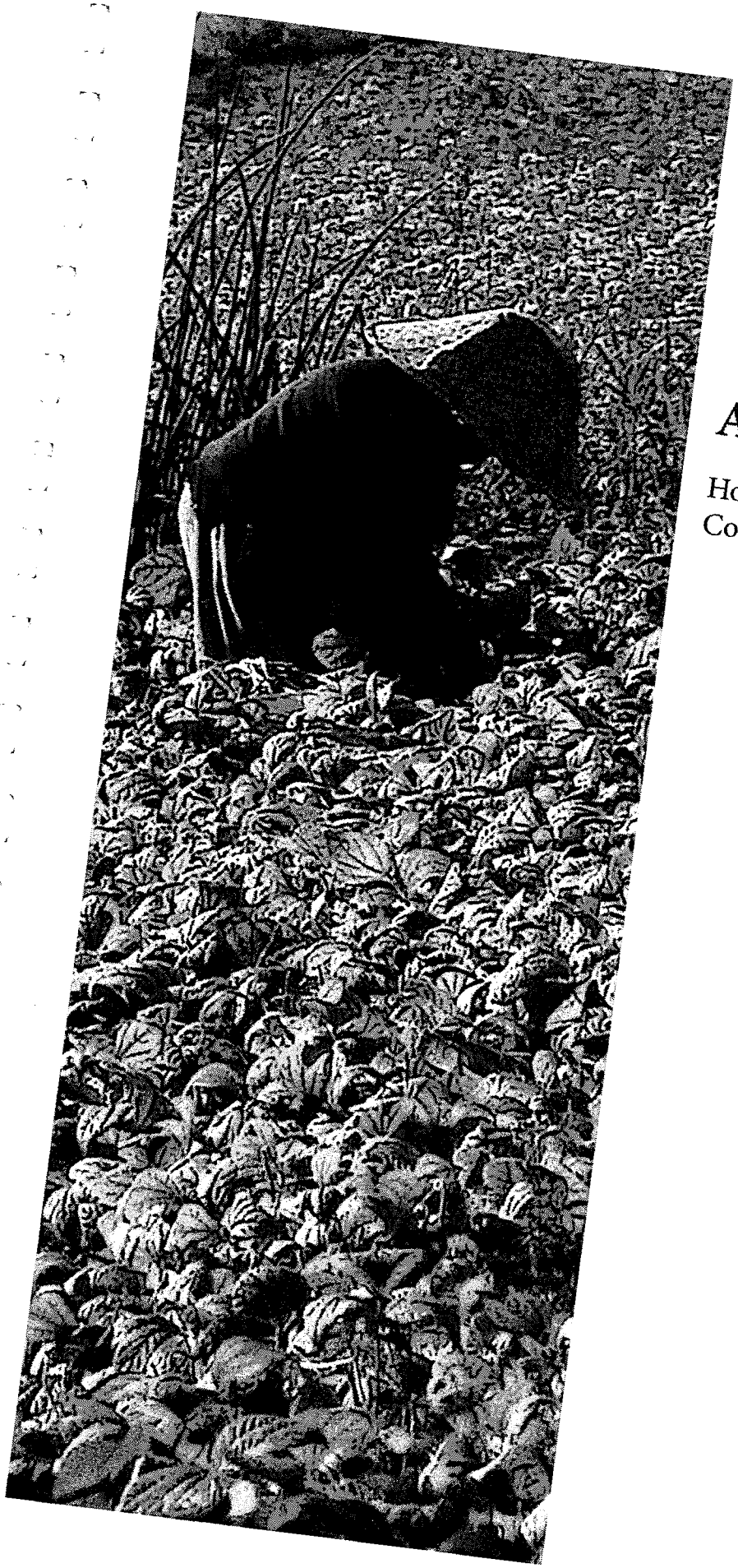
Agriculture Land Use Survey
Category Descriptions

Livestock/Forage:	Livestock present on the field, visible animal waste, presence of hay bales, visible tire tracks from cutting, baling or chopping, manure spreading
Managed Grassland:	Grassland or field where there are no signs of livestock/forage but is being cut at agronomic stubble heights (<3 inches)
Corn (2006 only):	Stand alone corn field use for grain or silage (vegetable corn included in Market Crops/Produce). Recorded as Livestock/Forage in 2009 survey.
Market crops/Produce:	Flower and vegetable gardens (must be larger than only self-sustaining)
Unmanaged Grassland:	Grassland or field where there are no signs of livestock/forage that is not being cut for length
Nursery:	Presence of a nursery
Tree Farm:	Presence of a tree farm (i.e. poplar plantation)
Orchard:	Presence of at least 6 orchard trees
Unmanaged Orchard:	Presence of orchard trees that show no signs of being harvested, pruned, fruit falling to the ground; collection must be visible on aerial photos
Grapes:	Presence of grapes
Sod farm:	Presence of sod farm
Forested/Upland:	Presence of forest, typically continuous multi-parcel tracts of trees; small, isolated groves not included
Sports/Recreation:	Presence of ball fields (baseball, soccer, etc.), parks, golf courses, grassland preserves that can be used for recreational hiking, sports complexes, campgrounds
Too Wet to Farm:	Presence of standing water visible from road or in aerial photos

Marsh or Wetland:	Presence of marsh, wetland, reeds, etc.
Other	Roads, rivers and lakes, buildings, any lawn or grass cut too short to be used for grazing, houses, mining or construction, non-tillable surfaces, non-agriculture parcels that are not covered by other categories
Horse (2009 only):	Horses present. Recorded as Livestock/Forage in the 2006 survey.

Notes on categories

- Depending upon the use of rotation and presence of activity, some parcels categorized as Managed or Unmanaged Grassland could be categorized as Livestock/Forage. Attempts were made to determine if any grassland fields were previously used or looked as if they were being kept up for future use (i.e. well-managed fencing, electrical tape).
- When a parcel had multiple land types it was divided into multiple records to indicate these uses. This was not done for buildings on an agriculturally-used parcel (such as a house on a livestock property) or when the other land type was insignificant (such as some trees on a property). In these instances the entire parcel was categorized as the majority use in order to keep record count at a manageable level.



Appendix F.

How much land is needed to feed King County's population?

How much land is needed to feed King County's population?

The chart below shows how much land it might take to grow about 27 of the most common fruits and vegetables consumed by an average American as reported by U.S. Department of Agriculture (USDA) Economic Research Service consumption data. Production estimates are based on published yield data from Washington State and Oregon State Universities or local growers when available. The amount of calories a person needs is based on a 2,000 calorie a day diet.

2,000 calories / person x 2 million people =4 billion(4,000,000,000)calories/day x 365 days = 1.46 trillion (1,460,000,000,000) calories/year								
	Per capita consumption lbs /year	x 2 million people= tons	yield/ acre/ton	acres needed to supply	Total lbs (1,000)	Calories/lb	Total calories (1,000)	% of Per Capita consumption
Snap beans	1.8	1,800	6.5	277	3,601	80	288,080	100%
Broccoli	5.4	5,400	5.5	982	10,802	139	1,501,478	100%
Brussels sprouts	0.21	210	7.8	27	421	166	69,919	100%
Cabbage	7.8	7,800	13	600	15,600	108	1,684,800	100%
Carrots	8.6	8,600	28	307	17,192	110	1,891,120	100%
Cauliflower	1.6	1,600	8	200	3,200	20	640,000	100%
Sweet corn	8.9	8,900	9	988	17,784	264	4,394,976	100%
Cucumbers	5.8	5,800	6.4	906	11,596	45	521,856	100%
Garlic	2.1	2,100	5	420	4,200	405	1,701,000	100%
Collard greens	0.49	490	8.4	83	1,394.4	22	30,677.8	100%
Kale	0.28	280	22.4	13	582.4	96	55,910.4	100%
Head lettuce	20.9	20,900	16	1,306	41,792	57	2,382,144	100%
Romaine and leaf	11.2	11,200	10	1,120	22,400	50	1,120,000	100%
Mustard greens	0.42	420	8.4	50	840	29	24,360	100%
Onions	20.4	20,400	20	1,020	40,800	121	4,936,800	100%
Potatoes	44.7	44,700	25	1,788	89,400	360	32,184,000	100%
Pumpkin	4.2	4,200	15	280	8,400	160	1,260,000	100%
Radishes	0.49	490	6	82	984	59	56,056,	100%
Spinach	1.8	1,800	9	200	3,600	104	374,400	100%
Summer Squash	4	4,000	20	200	8,000	35	280,000	100%
Tomatoes	16.4	16,400	14	1,171	32,788	81	2,655,828	100%
Turnip greens	0.41	470	8.4	6	100.8	95	9,576	100%
				12026			58,062,980.4	
Blackberries	0.11	111	5	22	220	150	33	100%
Blueberries	0.35	350	7	50	700	162	113,400	100%
Raspberries	0.27	270	3.5	77	539	121	65,219	100%
Strawberries	8	8,000	5	1,600	16,000	92	1,472,000	100%
Apples fresh & Juice)	40	40,000	60	670	20,100	106	2,130,600	
				2,419			3,781,252	
TOTAL				**14,445**			61,844,232	

The chart below indicates how much land might be needed to raise livestock for consumption. There are two lines for each animal. The first line shows how much land it would take to produce 100% of what might be consumed. The second line shows how much could be produced on 6,000 acres. For example, for beef the top line shows that 372,000 acres would be needed to raise all the beef that county residents consume. The second line shows that King County farmers can only produce less than 1% of the beef animals we consume on 6,000 acres

	Per capita lbs /year	x 2 million people= tons	# of animals needed	Acerage needed	Total Lbs (1,000)	Calories/lb	Total Calories (1,000)	% of Per Capita consumption
Beef	62	62,000	124,000	372,000	124,000	600	74,400,000	
	62	500	2,000	6,000	1,000	600	600,000	0.08%
Pork	46	46,000	707,692	707,692	92,000	700	64,400,000	
	46	138	6,000	6,000	276	700	193,200	0.03%
Sheep	0.75	750	37,500	27,750	1,500	800	120,000,000	
	0.75	150	7,500	6,000	300	800	240,000	0.02%
Chicken	60	60,000	50,000,000	*	120,000	600	720,000,000	100%
							721,033,200	

* chicken can be raised on ground that is used for other crops

King County

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Appendix G.

Climate Change Impacts

Climate Change Impacts on Agriculture

Agriculture in King County is sensitive to climate variability. Too little precipitation may result in not enough water for irrigation; while too much causes drainage problems and fields that are too wet to plant in the spring or harvest in the fall. Plants and livestock can be stressed by variable or extreme temperatures. The lack of extended cold periods allows certain pathogens and pests to persist and damage crops and harm livestock. Most of the county's agricultural land is located in low-lying river valleys so crops, equipment, structures and animals are very susceptible to flood damage. Climate change predictions are that most of these problematic conditions will become worse in the future and may affect:

- precipitation necessary for plant growth and irrigation
- pest and disease problems to crops and livestock
- types or varieties of plants grown
- time of harvest
- crop yields and livestock production
- energy and fuel costs and availability
- availability of livestock feed as crops elsewhere are affected (for example, hay from eastern Washington).

The water supply issue is very significant to agriculture, but it affects many other areas as well. As summer supplies decrease, there will be increased competition for water to serve farmers, fish, municipal water providers, and hydroelectric facilities. It is important that agriculture is considered in regional water supply planning and distribution. Creative solutions might include reclaimed water, water provided via pipe or groundwater recharge, and winter storage.

The potential impacts of climate change and the need to adapt are unlikely to be foremost on the minds of many farmers. Other issues, such as remaining economically viable for another season, are more immediate to the agricultural community. Instead, the relevance of climate change may be the ability to participate in clean energy campaigns. Farmers may see an opportunity to develop biofuels or other climate-friendly energy sources such as anaerobic digesters or wind power. Farmers may also benefit from new crops that can be grown in the slightly modified climates of the future.

The agricultural sector could benefit from more information on projected precipitation and temperature changes and research on new crop types and varieties better suited for the region as the climate changes. Adaptation strategies for the near-term include:

- acceleration of agricultural water supply planning, including an assessment of current needs and shortages
- improvement of economic conditions for agricultural enterprises (increased markets, reduced regulations)

- facilitation of reclaimed water provision to farmers.

Longer-term solutions might include facilitating land grant university research from institutions, such as Washington State University (WSU), for long-term agricultural adaptation to climate change.

In addition to the King County Agriculture Program, support to agriculture in adapting to climate change will have to come from other agencies and groups: King County Department of Development and Environmental Services, Washington State Department of Agriculture, Washington Department of Fish and Wildlife, Washington State Department of Ecology, and WSU Extension & Research Programs, the King Conservation District, and U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS).

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Appendix H.

Products Commercially Grown in King County

2009 FARMS REPORT
Appendix H

Products Commercially Grown in King County

Below is a list of products grown or raised in King County.
This list may not include all the items produced by our commercial farmers

Fruits, Nuts, Berries

Apples
Cherries, Pie
Currants
Blackberries
Blueberries
Filberts
Gooseberries
Grapes
Kiwi
Marion berries
Quince
Raspberries, Fall
Raspberries
Pears
Pears, Asian
Plums
Prunes
Strawberries
Walnuts

Vegetables and Herbs

Artichokes
Asparagus
Bamboo Shoots
Basil
Beans, Fava
Beans, Green
Beans, Shell
Beans, Yellow Wax
Beets
Bok Choy
Broccoli
Brussels Sprouts
Cabbage
Carrots
Cauliflower
Celery
Chervil
Chinese Vegetables
Chives
Cilantro
Corn, Sweet
Cucumbers, Japanese
Cucumbers, Pickling
Cucumbers, Slicing
Daikon
Dill
Edible Flowers
Eggplant
Fennel
Epizote
Garlic
Garlic, Elephant
Greens
Jerusalem Artichoke
Kohlrabi
Leeks
Lemon Thyme
Lavender
Lettuce
Lettuce, Butter
Lettuce, Green leaf
Lettuce, Head
Lettuce, Red leaf
Lettuce, Romaine
Marjoram
Melons
Mint
Mushrooms
Onions, Green
Onions, red
Onions, white
Oregano
Parsley
Parsnips
Pea vines
Peas, Chinese
Peas, Shell
Peas, Sugar Snap
Peppers, Hot
Peppers, Sweet
Potatoes, Blue
Potatoes, Fingerling
Potatoes, Red
Potatoes, White
Potatoes, Yellow
Pumpkins
Radishes
Rhubarb
Rosemary
Sage
Salad greens
Savory
Shallots
Sorrel
Spinach
Sprouts
Squash, Summer
Squash, Winter
Sunchoke
Sweet Bay
Tarragon
Thyme
Zucchini
Turnips
Tomatillos
Tomatoes

Dairy

Dairy Products, Cow
Dairy Products, Goat
Dairy Products, Sheep
Eggs, Chicken
Eggs, Duck
Eggs, Emu

Animals

Alpaca
Beef
Chicken
Donkeys
Ducks
Emu
Goats
Horses
Pork
Llamas
Turkey
Pigs
Lamb

Ornamental

Bamboo
Bulbs/Tubers
Christmas Trees
Corn Stalks
Dahlias
Dried Flowers
Fresh Cut Flowers
Holly
Nursery Stock
Ornamental Corn
Ornamental Gourds
Plant Baskets
Sunflowers
Vegetable/Herb starts
Wreaths
Yarn/Fibers
U-Cut Flowers
Sweet Peas

King County
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2009
Produced in conjunction with the FARMS report

Appendix I.

Farm and Flood Task Force Report

Snoqualmie Flood-Farm Task Force Report

January 2008

King County

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- Model results did show some sensitivity to the modeled alterations, including minor rises in both calculated water surface elevations and energy grade near most of the pad sites. At two of the sites these rises were almost measurable, as defined by the code, but none exceeded that threshold.
- The provision of compensatory storage was a challenge in this demonstration project: only three of the projects were able to provide compensatory storage at the same elevation. Six others provided compensatory storage, in some cases not quite all required; and one provided none at all.

The environmental review of the projects was conducted by the ecologists of DNRP's Water and Land Division (WLRD). Current wetland and stream regulations did not affect the placement of the pads.

Many landowners in the Snoqualmie Valley APD have commented that this project sends a new and crucial message that they will once again be able to expand their operations with the confidence they can protect themselves. More landowners would have participated if the opportunity had occurred with a different timeline and earlier in the year.

The project demonstrated that a staff team could respond in a very compressed time frame with a high degree of coordination among the Department of Development and Environmental Services (DDES), DNRP, the King County Agricultural Commission, and the King Conservation District (KCD), driven by a mutual understanding of the urgent need to beat the rain and flood season. The team from the River and Floodplain Management Unit, Science Unit, Critical Areas Review, Clearing and Grading, GIS mapping unit, Agriculture Program, KCD farm planners and Natural Resource Conservation Service (NRCS) engineers/planners had to each reorganize work priorities and work schedules to meet deadlines and respond to the unique needs of the applicants. This was an immense effort and other work priorities shifted. While this course would not be recommended as a standard mode of business, the results of providing both immediate and long-term protection to these landowners is satisfying for all involved.

C. Evaluation of Alternative Development Standards

Ordinance 15883 allowed modification to several areas of King County Code and to the standards in the Farm Management Plan Public Rule in order for the pilot project to occur. These changes are listed below and evaluated for effectiveness.

1. Modified K.C.C. 16.82.095 to allow clearing and grading between October 1 and April 30.

Evaluation: The timeframes set forth in Ordinance 15883 could not be met without this modification. However, wet weather complicated these earthwork projects, and it limited the ability of some participants to finish their work. Both for resource protection and practical construction considerations, it is preferable to limit grading projects to the regulated construction season.

Recommendation: Do not amend the code.

2. Modified K.C.C. 21A.24.240A to not require compensatory storage at the same elevation and not require that it be hydraulically connected.

Evaluation:

- Three projects were able to locate compensatory storage at elevation from the same site on one nearby farm.
- Three projects will receive partial compensatory storage from this same site, with one or two vertical feet of the project occurring at the same elevation.
- Three projects were initially able to locate some or all compensatory on site but not at the same elevation. In one instance, the identified soil turned out to be unusable for a pad and would have to instead be hauled out of the floodplain. In another, the top soil has to be excavated and set aside, the lower soil horizons taken for the pad, and then the topsoil re-spread on that area. In a third site, topsoil must be removed and a seasonal pond will be left.
- The largest project could not locate any compensatory storage.
- For those sites that located compensatory storage, it was located at a site that met the criteria for hydraulic connectivity.

Recommendation: Retain the requirement that compensatory storage be provided in equivalent volume and at equivalent elevation. Provide flexibility within that context by establishing a compensatory storage bank to provide opportunities for those sites that cannot meet this standard. See Recommendation #12 in Section V, Recommendations of the Flood-Farm Task Force, for an explanation of the bank.

3. Modified K.C.C. 21A.24.240C to allow development where the base flood depths exceed three feet or the base flood velocity exceeds three feet per second.

Evaluation: This modification was important to the success of the demonstration project, as most of the pads are in areas exceeding a depth of three feet. The standard is intended to help guide new land uses away from areas of highest risk. However, the demonstration project involved existing agricultural land uses, and serves to reduce the known hazard to that existing use. Modification of this standard is reasonable as it allows reduction of hazard where the risk is greatest.

Recommendation: Amend K.C.C. 21A.24.240C to allow limited agricultural exceptions to the required depth and velocity standards, and to waive the associated requirements for analysis. See Recommendation #7 in Section IV: Recommendations of the Flood-Farm Task Force, page 23.

4. Modified K.C.C. 21.24.240K to allow up to 40,000 square feet of cumulative encroachment if compensatory storage at elevation was not available;

Evaluation: Because many of the farm pads were constructed without providing compensatory storage at the same elevation, approximately 24,000 square feet of cumulative encroachment was used. Only three of the pads could have been constructed without this code flexibility.

Recommendation: Allow the remaining 16,000 square feet of cumulative encroachment to be used while the compensatory storage bank is being developed. See Recommendation #12 in Section IV: Recommendations of the Flood-Farm Task Force, page 24. This will be addressed in the Compensatory storage bank.

5. Modified K.C.C. 21A.24.260 to allow repair and configuration to existing livestock flood sanctuaries in the FEMA floodway.

Evaluation: The construction of the farm pads in the demonstration project would have been prohibited without this code flexibility.

Recommendation: Amend the code to allow farm pads in the FEMA floodway. See Recommendation #6 Section IV: Recommendations of the Flood-Farm Task Force, page 22.

6. Modify K.C.C. 21A.24.270 to not require an elevation certificate prior to issuance of a letter of completion for the project.

Evaluation: Elevation Certificates provide critical elevation data to ensure the farm pads are constructed to proper elevations above based flood elevation levels. Elevation Certificates will be provided for the farm pads constructed under the demonstration project. .

Recommendation: Do not amend the code.

7. Allowed modification of the standards in the Farm Plan Public Rule that pertain to livestock sanctuaries.

Evaluation: The Farm Plan Public Rule standards augment the code. Relaxation of some of the standards was necessary to accomplish the project. Any permanent changes in code will have to be reflected in the Public Rule.

Recommendation: Amend Farm Plan Public Rule to reflect any changes in code.

8. Required recorded non-conversion agreement

Evaluation: All the participating landowners agreed to execute a non-conversion agreement recorded on the title to the parcel on which the pad was located. The agreement states that the farm pad will only be used for agricultural purposes and that it may not be converted to any other use. However, the Task Force agreed that agricultural buildings should be allowed

on farm pads and that an investment in a building required that it have other agricultural uses, and not only storage during floods. The primary concern is that the allowance of a building does not lead to any non-agricultural use, especially residential use, which is prohibited in the FEMA floodway by state law.

Recommendation: Require a non-conversion agreement to be recorded for any new farm flood pad that indicates it will remain in agricultural use and conversion to non-agricultural purposes is prohibited. See Recommendation #10 in Section V; Recommendations of the Flood-Farm Task Force.

D. Additional Information Directed by Section 4, Subsection I of Ordinance 15883:

1. A complete inventory of all existing livestock flood sanctuaries in the Snoqualmie and the parcel number on which they are located.

The map in Appendix A includes 22 farms that are thought to have had a livestock sanctuary exempted in the early 1990s. (Two of these were in the Demonstration Project and therefore have star. Records from the original livestock sanctuary exemptions are incomplete. There is difficulty in identifying the exact location of several of these; either they were never built or have been modified over time. The original owners need to be located to better understand the situation. Two of the properties have piles composed significantly of hog fuel that may not be the original sanctuary.) The chart in Appendix B includes the number of the parcel on which the livestock flood sanctuary is or was located. The map also includes any farm pads that were elevated in this project. Appendix B also includes their parcel number; as well as any other known farm pads.

2. The size and base flood elevation of each livestock flood sanctuary.

Appendix B includes an estimate of the top square footage of each livestock flood sanctuary; and an estimate of how its top elevation relates to the base flood elevation.

3. An assessment of the need for new livestock flood sanctuaries and an assessment of the need for farm pads, ... including an evaluation of the alternatives to fill.

a. The Need:
The following data represents what is known on the limited option of "farm pads." The need was assessed by a mapping exercise in which the WLRD Agriculture Program staff and the KCD farm planners put their collective knowledge of farms on a map (Appendix C) and also initiated personal contact with landowners. While this work is not entirely complete, the assessment and the map represent a significant amount of knowledge about "farm pads" in the valley.

The findings include:
i. Farms that have high ground or adequate farm pads:

If the costs of the hydraulic analysis, environmental review and permitting are not made affordable, it is likely that projects will not be done effectively or will not be done at all and agricultural enterprises will not be viable.

Recommendation: The County should make it a priority to identify mechanisms that will make costs more affordable or to find sources of funding to cost share the expenses. One possibility is to use a portion of the funding from the King County Flood Control Zone District that is being recommended for cost sharing barn elevation mitigations to pay WLRD staff to conduct the hydraulic modeling at a much lower cost than a consultant. This form of cost-shared technical assistance would be comparable to other forms of County technical assistance provided through the Agricultural Drainage Assistance Program or the Livestock Management Program.

3. Identification of compensatory storage and outreach to landowners:

Evaluation: WLRD's Agriculture Program and GIS unit identified compensatory storage opportunities (based on topography), and the River and Floodplain Management Unit provided field review and confirmation. WLRD's Agriculture Program conducted outreach to landowners, provided assistance with the shoreline exemption applications, and recorded the required covenants for the farm pads.

Recommendation: Continue to fund the WLRD Agriculture Program staff to provide outreach, technical assistance, education, and permit coordination on county regulatory and incentive programs. Work with the King Conservation District to utilize their expertise. Continue to fund GIS staff to help identify potential compensatory storage opportunities.

4. Elevation benchmarks and elevation certificates:

Evaluation: KCD and NRCS provided surveyed elevation benchmarks, technical assistance on farm pad construction and finishing. The KCD was able to pay for it this time but will not necessarily pay for it in the future. However, KCD relies on the expertise of the NRCS for these tasks; in this case the work was performed by staff from the Snohomish Conservation District. Their participation in this demonstration project was helped by DDES' batched permitting. Their capacity to help on an individual basis will vary according to their work load. The KCD provides financial cost share to landowners as they can. However, competition for KCD's limited financial assistance resources will need to be balanced against other requests beyond flood mitigation projects.

Recommendation: Support continued funding for the KCD.

III. AGRICULTURE TASK FORCE (MOTION 12559)

The King County Executive was directed to convene a task force to review and make recommendations on farm protection measures related to flooding in the Snoqualmie Valley

APD. A Task Force of twelve individuals and one facilitator met for seven half days and one all day meeting between October 15th, 2007 and January 9th, 2008. Twelve other people attended some of the sessions to observe, contribute, or to make formal presentations. As outlined by Motion 12559, the following groups or agencies participated in the Task Force:

- Agriculture Commission (one farmer, plus an alternate);
- King Conservation District (KCD) (Supervisor and farm planner); and
- Hmong Community (one farmer, plus an alternate).

In addition, representatives from the following groups were invited:

- Sno-Valley Tilth;
- Federal Emergency Management Agency (declined);
- Washington State Department of Ecology;

Others were invited according to agenda topic:

- University of Washington Climate Impacts Group;
- U.S. Department of Agriculture;
- A farm contractor; and
- Snohomish County Surface Water Utility.

A. Findings of the Flood Farm Task Force.

The following specific topics that Motion 12559 requested that the Task Force address the following specific topics:

1. Expansion of the opportunities to construct farm pads to protect livestock, equipment, and products such as seeds, bulbs, hay or other feed during floods.

Findings:

- Federal and state regulations do not prohibit farm pads in the designated FEMA flood-way, but do require that any fill placed within the FEMA floodway does not result in an increase in the base flood elevation.
- King County code prohibits livestock flood sanctuaries in the designated FEMA floodway.
- Floodplain management for No Adverse Impact requires compensating for fill placed in the flood plain by removing material from the same elevation.
- The location of one farm pad or a cluster of farm pads could trigger a variety of unintended hydraulic impacts that can not be accurately predicted until the farm pads are assessed through hydraulic modeling.
- Elevated buildings, farm pads, or any alternatives to farm pads are critical components of agricultural operations in the Snoqualmie APD because the entire valley farmland is inundated three to five times a year. This is a unique situation for Snoqualmie farmers compared to competitors in the Skagit, Snohomish or Green River flood plains.

Recommendations:

- Amend King County code to allow farm pads in the FEMA floodway if compensatory storage and zero-rise standards are met.

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Recommendations:

- Amend King County code to allow farm pads in the FEMA floodway if compensatory storage and zero-rise standards are met.

- Allow the construction of agricultural accessory buildings on farm pads provided a covenant assures the farm pad and the buildings will not be converted to non-agricultural uses, including residential, which is prohibited in the FEMA floodway under both State and King County regulations.
- Identify sources of funding to assist farmers to implement projects and/or meet the regulatory requirements.
- Establish a compensatory storage "bank" to support the viability of agriculture in the Snoqualmie Valley. See recommendation #12 in Section IV: Recommendations of the Flood-Farm Task Force., page 24.

2. Ability to repair flood-damaged building regardless of the assessed value.

Findings:

- Federal and state regulations require that when a structure is "substantially improved,"(improvements exceeding 50% of the market value of the structure) the structure must be brought up to current code.
- Federal and state laws do not prohibit substantial improvements in the FEMA floodway.
- King County DDES had interpreted the (Sensitive Areas Ordinance which went into effect in November 1990) to prohibit substantial improvements within the FEMA floodway. The Critical Area Ordinance regulations that went into effect January 1, 2005, obviated this earlier determination which was officially reversed by the department's Regulatory Review Committee in December 2007.
- The assessed value of many old agricultural buildings is low so that the substantial improvement threshold is also low. When an old structure needs to be brought up to current code, the cost of the upgrade can be prohibitive. Any change to the threshold for determining "substantial improvement" would require a change in federal and state regulations.

Recommendation:

- Implement the DDES Regulatory Review Committee's recent interpretation that a substantial improvement to a non-residential building is allowed within the FEMA floodway if it meets the federal and state requirements to bring the structure up to current code.

3. **Application of expanded storm drainage technology and requirements, including berms, for urban developments that contribute storm water into the Snoqualmie River Basin;**

Findings:

- Flood flows in the lower Snoqualmie River valley are primarily the result of snowmelt and rainfall in the North, Middle, and South Forks of the Snoqualmie River basin, the Raging River basin, and the Tolt River basin.
- Based on available data, the increase in impervious surfaces in the lower part of the basin will have a negligible impact on the river in severe flood events. However, storm water runoff from development may explain why some agricultural fields near tributary streams flood earlier than flows from river flooding and remain inundated longer than they used to be after river flows recede.
- Tightlines from the Urban Planned Developments appear not to be the issue they were perceived to be based on available data. Redmond Ridge does not flow to the Snoqualmie. Snoqualmie Ridge and Redmond Ridge East have detention facilities that meet strict standards in King County's Stormwater Design Manual and the discharge tightlines are for emergency overflow only.
- Berms may be effective to prevent minor flooding adjacent to small streams.
- There are no gages to measure storm water runoff from some of the small creeks and streams that flow into the Snoqualmie River.

Recommendation:

- Add flow gages on Tuck Creek and Ames Creek – the two main tributaries in the Snoqualmie that are not currently monitored for flow to further analyze and understand the hydrologic affects of tributary and stormwater impacts in the Snoqualmie Basin. Investigate the need for additional gaging. See Recommendation #9 in Section V: Recommendations of the Flood-Farm Task Force.

4. **Implementation of a flood control program within the Snoqualmie Valley APD that focuses upon the reduction of flooding to farmlands.**

Findings:

- Control of winter flooding by upstream control of Snoqualmie River flows would require reservoir volume in excess of those on the Cedar and Green River systems.
- Row crop farmers report that spring floods generally do more agricultural damage or inhibit viable agriculture more than the larger floods of winter months.
- Spring floods might be controlled with an upstream reservoir of more modest size.
- Prior studies by the U.S. Army Corps of Engineers and others have found problems with the most likely locations and design concepts for reservoir construction in the upper Snoqualmie Valley. With the exception of the North

Fork Dam site proposed in the early 1970s, few feasible opportunities have been identified. The North Fork proposal was vetoed by then Governor Daniel Evans primarily for environmental reasons.

- Salmon recovery planners have identified the natural, unregulated flows of the Snoqualmie River system as a unique and important benefit that is not present in most of King County's other major river systems, making the Snoqualmie River critical for salmon recovery in the Puget Sound region.

Recommendation:

- The County should conduct a hydrologic analysis of the Snoqualmie River basin. See Recommendation #16 in Section IV: Recommendations of the Flood-Farm Task Force, page 25.

B. OTHER FINDINGS OF THE FLOOD-FARM TASK FORCE

1. Hydrologic Trends.

- There is wide variability in how the Snoqualmie River responds in a flood event.
- Factors affecting variability include: amount and location of rainfall in the basin; existing snow pack; temperatures; degree of soil saturation before the storm; and pre-flood levels in the South Fork Tolt River reservoir.
- Existing data do not indicate any significant changes in flow response in the basin, despite periods of logging and of sediment removal (dredging).
- Data indicates that the time for flood progression from Snoqualmie Falls to Carnation continues to match established rules of thumb: Carnation crests approximately 12 hours, plus or minus 6 hours, after Snoqualmie. Records from both Snoqualmie River stations (at Snoqualmie and at Carnation) are considered "good" by the U.S. Geological Survey. "Good" is defined as meaning 95% of reported measurements are within 10% of actual values.

2. Future Flood Predictions

- The predictions for the future are that there will be higher variability in storms and floods due to global climate change.
- In a mixed rain and snow basin like the Snoqualmie River that variability is more pronounced than in lowland or high mountain basins. The Snoqualmie Basin is one of the most sensitive basins to climate change on the West Coast.
- Regional warming from predicted global climate change will result in high snow levels. Precipitation that once fell as snow would fall as rain and therefore runoff will be greater.
- Historic records may require adjustment to yield useful predictions in light of climate change.
- Models indicate there will be increased winter flows but lower winter peaks flows and reduced spring flows with drier conditions in the summer.

3. Snoqualmie 205 Project Effects

- The Snoqualmie 205 Project involved channel widening done in 2004 to reduce flood problems in the City of Snoqualmie, which previously had the highest number of flood insurance claims of any city in the state. Pre-project study by the U.S. Army Corps of Engineers suggests that the project can cause about 1,500 cubic feet per second (cfs) more water to go over the falls at the peak of a major flood; later in the flood, the same study predicts a 500 cfs decrease.
- The Snoqualmie 205 Project contributed mitigation funding to raise 12 structures (7 houses, 3 barns, 1 office, 1 shop) as mitigation for downstream impacts. Total project contribution is $328,500.
- The project contributed mitigation funding to raise 12 structures (7 houses, 3 barns, 1 office, 1 shop) as mitigation for downstream impacts. Total project contribution is $328,500.
- Flood storage was restored as mitigation and included the removal of 90,000 cubic yards of a berm at the former Weyerhaeuser mill site. Berm removal also enhanced the river's access to a much larger area of active floodplain behind the berm.

4. Backwaters from the Snohomish/Skykomish

- Dikes in the Snohomish are now built to a uniform profile and all overtop at a 5-year event. They do not contribute to or cause a back up the Snoqualmie.
- Tidal effects can be seen as far as SR 522, where gage measurements show this tidal influence when river flows are low. In flood conditions, the gage does not show this tidal influence.
- A diary from the 1880s observed the Skykomish River back up into the Snoqualmie River, which indicates that the Skykomish has historically had a backwater effect on the Snoqualmie River.
- The Skykomish River has a very steep grade and when its flows reach the flatter Snohomish Valley floor, a hydrologic mound forms in the Snohomish Valley that can cause the Snoqualmie to back up into King County.
- The degree to which the Skykomish River backs up into the Snoqualmie depends upon the timing of the flood crests in the two basins.

5. Federal and State Regulations

The majority of the Snoqualmie Valley APD is mapped in the FEMA floodway where the most protective regulations apply.

- In the Snoqualmie River floodplain, the FEMA floodway includes some areas of deep, fast flowing, and especially dangerous waters, and it includes some areas of lesser hazard.
- Federal and state regulations recognize that agriculture requires some degree of flexibility or relief if agriculture is to occupy the floodplain. Agriculture is a compatible land use in floodplain and is recognized as a preferred land use over more intense residential or commercial development.
- Based on federal regulations, under no circumstance can the activities cause an increase in the base flood elevation within the FEMA floodway.

- Federal and state regulations allow wet flood-proofing through a variance process for agricultural buildings, or they can be allowed outright for low damage potential buildings.
- State and federal laws allow construction of new non-residential structures in the FEMA floodway as long as performance standards are met.
- Construction of new residential structures is prohibited in the FEMA floodway under state law.

6. Compensatory Storage

- Compensatory storage at elevation is essential for effective No Adverse Impact floodplain management.
- Most jurisdictions now require compensatory storage even though it is not required by federal or state regulations.
- Available compensatory storage opportunities are unusually limited by topography in the flat floodplain of the Snoqualmie River.

7. Elevating Buildings

- The cost of elevating some types of new buildings adds a relatively marginal expense to the initial construction cost.
- Elevating existing and new agricultural buildings can greatly reduce flood damages and can also result in savings in flood insurance premiums. Flood insurance premium discounts may be sufficient to recover the incremental costs borne by property owners in just few years time for some buildings.
- Federal flood mitigation grant funding can be applied to elevating buildings. However, the criteria for grants generally seek to reduce flood insurance claims, so they tend to favor homes instead of agricultural buildings.
- Federal flood mitigation grant funding can be applied to elevating buildings. However, the criteria for meeting minimum benefit-cost analysis may reduce the potential grant eligibility of agricultural buildings.
- Elevation is not feasible for some agricultural buildings that are either too old or need to be located at grade to be accessible by animals or equipment.
- Elevating an existing building that consists primarily of walls and a roof to shelter livestock or heavy equipment on the ground can involve significant cost for heavy structural flooring that is not otherwise necessary.
- The agricultural representatives state that it is cheaper to elevate buildings by importing fill. Flood management staff question this statement and have found data to the contrary.

8. Floating Technologies.

- Floating technologies tend to be used in marine tidal environments or lake environments more than in river environments.
- Designs that would address flood debris may not be ideal for a farm environment.
- The technologies explored are cost prohibitive for a single farm.

9. Miscellaneous Findings.

- Produce crops such as vegetables and flowers are not considered commodity crops. As a result, Snoqualmie farmers are not compensated by federal assistance for their losses. The Farm Services Agency staff advised the Task Force that attention should be drawn to this issue so that federal insurance funds can be available to local agriculture.
- Floods leave agricultural landowners with miscellaneous debris from upstream properties that need to be cleared from their land. The landowners have to clear the debris, haul it to a disposal site, and pay the disposal fees – all at a time when they need time and funding to recover from the flood event.
- Hazardous wastes can contaminate the food supply when transported in floodwaters. A pilot program in the basin is underway to promote safe storage, collection and disposal.

IV. RECOMMENDATIONS OF THE FLOOD-FARM TASK FORCE

The Task Force is forwarding the following recommendations for consideration by the King County Council, in no order of priority:

Recommendation 1. Allow new non-residential agricultural accessory buildings in the FEMA floodway in King County's APDs (K.C.C. 21A.24.260C), as long as applicable standards are met.

New elevated buildings – on post and piling, not on fill – may be the best solution for both floodplain management and agricultural viability in the long term. New elevated structures provide protection, reduce flood damage, chaos, and stress, and provide lower insurance rates. Grants and cost share may be able to help defray their costs.

Recommendation 2. Allow for wet flood-proofing of some agricultural buildings through an alteration exception to the critical areas ordinance or through a code amendment.

Wet flood-proofing allows buildings to be constructed or remain at grade while requiring that permanent or contingent measures are applied to the building or its contents which prevent or provide resistance to damage from flooding while allowing floodwaters to enter the structure or area. Generally, these measures include properly anchoring the structure, using flood resistant materials below the base flood elevation, protecting mechanical and utility equipment, and the use of openings or breakaway walls. Federal law allows this provision through a variance process, which in King County would be through an alteration exception, or it can be allowed outright if certain standards are specified in King County Code. Approval would be needed from FEMA and the Department of Ecology to allow this change to code. This outright provision is generally approved only for buildings that are of relatively low value. FEMA has approved a $65,000 limitation for such buildings in Snohomish County.

Recommendation 3. Help reduce flood impacts to agriculture by providing $100,000 per year for 10 years from the King County Flood Control Zone District to be used as cost share for mitigation projects, such as the elevation of barns or other mitigation measures in King County APDs.

Because flood mitigation measures can be expensive, the King County Flood Control Zone District funds can provide a cost share to leverage other sources of funding, including property owner contributions. The funds may also be used to cost share the expenses of conducting the hydraulic modeling and permit expenses required for construction of new or repair of existing farm pads.

Recommendation 4. Work with the federal Farm Services Agency to propose modifications to the federal insurance programs to recognize and provide coverage for the type of agriculture that occurs in King and Snohomish counties.

Most federal crop insurance programs cover only commodity crops such as wheat, corn, and cotton. Most crops grown in King County, such as vegetables, herbs and flowers, are considered specialty crops and are not covered by federal crop insurance. The Farm Services Agency recognizes that alterations to the flood insurance program, such as reimbursing for loss of income, are needed to assist Snoqualmie Valley farmers. A representative of the agency spoke to the Task Force and encouraged our collaboration on this issue.

Recommendation 5. Add a definition of farm pads to K.C.C. 21A.06. The definition should include the storage of equipment, seeds, hay, bulbs, livestock and small animals.

This recommendation reflects the change in agriculture in the Snoqualmie Valley from the predominance of dairies in the early 1990s to the "new" agriculture centered on hay, vegetable, flower and herb production, and range-fed beef, sheep and poultry. Farm pads are needed to be more than just livestock sanctuaries; they need to provide protection for equipment and supplies as well as animals.

Recommendation 6. Allow farm pads in the FEMA floodway (K.C.C. 21A.24.260D) as long as applicable standards are met.

Since the 1990 exemption, no new livestock sanctuaries have been constructed in the FEMA floodway. The original livestock sanctuaries were sized for large dairy herds and resulted in approximately 275,000 cubic yards of fill being imported into the floodplain. If constructed today, many of them would not meet federally-required conveyance or King County's compensatory storage standards. Farm pads needed for the "new" agriculture will generally be much smaller. The recommendation is to encourage alternative means of flood protection to minimize this import of fill, but to allow farm pad construction if the project can meet the applicable compensatory storage and conveyance standards. Changes to the floodplain regulations to allow farm pads within the FEMA floodway also require an amendment to the county's shoreline regulations. These changes will require review from the Department of Ecology and FEMA.

Recommendation 7. Provide limited agricultural exceptions to the maximum depth and velocity thresholds. (K.C.C. 21A.24.240C).

The code amendment would give the DDES director the authority to waive the requirement for a depth and velocity analysis for agricultural uses and to approve certain projects that exceed depth and velocity thresholds.

Recommendation 8. Extend the demonstration project deadlines for the ten project participants to complete farm pad construction to September 1, 2008, and to submit the required elevation information by September 30, 2008.

The late start of these of the demonstration project process, combined with early wet weather, resulted in projects that could not be completed in the Fall of 2007. Specific factors included:

- the river was high in September and fields were wet before the exemptions were issued. Those farmers with wet fields could not run equipment in and out of them to construct the farm pads;
- there was very little fill available from contractors late in September at the end of the construction season;
- haulers were afraid of liability if they damaged county roads when turning onto or off the saturated shoulder of an unpaved farm road;
- it was too late to stabilize and hydro-seed the farm pads or to surface them with gravel or plants; and
- idealy a final certification of elevation should be done after the farm pads have a had time to settle.

Recommendation 9. Install flow gages on Tuck Creek and Ames Creek.

The addition of gages on these two streams will complete the monitoring of flows in streams that come into the Snoqualmie Valley APD and may affect the inundation of farm fields – independent of river levels. The other major streams in the Snoqualmie Basin are already being monitored. These data will be used for the hydrologic analysis proposed in ecommendation #16.

Recommendation 10. Allow non-residential agricultural accessory buildings on farm pads.

Buildings are needed on farm pads because equipment and supplies require protection from the rain as well as from floodwaters. These structures must be used only for farm operations with conditions such as the prohibition on septic systems, public use and residential use. Other conditions will be worked out by the DDES Agriculture Permit Team, which includes the Seattle-King County Public Health Department, the King Conservation District and WLRD. Outreach should specifically be targeted to the Hmong farmers, working with Hmong representatives and interpreters.

Recommendation 11. Increase public education workshops and materials for landowners on flood preparedness and flood response in order to gather more information and to convey the

progress made on improving flood protection for agriculture. Conduct outreach targeted specifically to farm members of the Hmong community.

An annual workshop could be hosted by WLRD's Agriculture Program and supported by DDES, WLRD's River and Floodplain Management Program, and WRIA 7 to help landowners prepare for and respond to floods. This workshop could serve as a forum to track progress on the implementation of the recommendations in this report. Other ideas include a "Guide to the Valley" document that discusses floods and the responsibility they entail, workshops for realtors to educate them on flood hazards when they market property in floodplains, and a video displayed at DDES in the permit center.

Recommendation 12. For the purposes of promoting agricultural viability, the Agriculture Program and the River and Floodplain Management Unit of WLRD shall establish a "compensatory storage bank" to the floodplain to enable easy transfer of compensatory storage between property owners and to expedite permitting.

The preservation of flood storage capacity is an essential underpinning of the nationally recognized King County strategy for safe long term management of the floodplain. The standards do not outright prohibit all floodplain fill, but rather require compensatory storage for any displacement. This allows some flexibility for floodplain development without allowing adverse impacts to neighboring properties. However, the lower Snoqualmie Valley APD is one area where the standard offers little opportunity for compensatory storage opportunities: there is limited high ground that could be excavated to compensate for adding fill into the floodplain. The Task Force recommends that the County:

- Continue to protect floodplain storage capacity by requiring that compensatory storage be provided in equivalent volumes at equivalent elevations to those being displaced.
- Establish a "compensatory storage bank" to facilitate agricultural and important public projects while continuing to protect the flood storage capacity of the floodplain.
- Open the bank with an initial balance equal to the unused remainder of the 40,000 square foot allowance for unmitigated flood storage displacements established by the 2007 Demonstration Project, equal to approximately 16,000 square feet.
- Supplement the bank balance with an additional deposit to represent an allowable additional storage loss that would appear to satisfy the county's zero-rise threshold, according to proposed computer model simulations of hydraulic impacts. The estimated time frame for completing this analysis is June 30, 2008.
- Locate and quantify potential contributors to the bank such as, Chinook Bend levee removal, King County Department of Transportation roads maintenance activities, etc.
- Explore options with DNRP for design of the north Snoqualmie Trail Extension to determine whether there are any options that might contribute compensatory storage to the bank, such as lowering, narrowing or elevating some portions of the trail. Any outcome would have to recognize the importance of the trail as not only essential to the Regional Trail System, but as an essential public facility, and the additional costs of constructing and maintaining the trail under any reconfiguration as a public

investment. A major constraint may be the Trans-Continental Fiber Optic Cable that is located with the trail fill.

- Explore whether there is any opportunity to obtain compensatory storage from locations in Snohomish County.

Recommendation 13. Develop a plan to coordinate cleanup and disposal of miscellaneous post-flood debris among the various entities – contract haulers, the Solid Waste Division, Duvall, and Carnation. The County should support basin-wide programs, including collection and safe storage, to reduce the possibilities of hazardous waste coming in contact with floodwaters.

In the last flood, haulers voluntary offered clean up services in the Duvall area and King County Solid Waste cancelled disposal fees. However, there is no official plan coordinated among the various entities. Landowners end up cleaning up the debris deposited on their land from upstream landowners, and they cover the hauling and disposal fees. This happens at the same time that they need to be spending time and funds on flood recovery in their own operations.

The King County Local Hazardous Waste Program is conducting a pilot program to reduce hazardous waste in the basin. Farmers are very supportive of this effort because it will help abate concerns about potential adulteration of food by floodwaters. The Task Force members would like to see this program continued and strengthened.

Recommendation 14. Examine the feasibility of establishing secure locations for seasonal storage of equipment or livestock outside the floodplain or during flood events.

Historically some agricultural landowners take equipment and livestock out of the floodplain, either for the season or during flood events. Many relocate livestock and equipment to land of a neighbor, but this option has its limitations. People want a secure location where their equipment and livestock are safe. Livestock need oversight, some degree of quarantine and care. County staff, farmers, the KCD, Task Force members and survey respondents all provided evidence that many people currently use this option for part of their flood protection need. However, because some fields are frequently flooded during the winter and spring, and if floods become more frequent, this option diminishes. Moving livestock once every two years in an emergency is tolerable; moving them chronically three or four times a year – whenever the river rises – presents an entirely different logistical challenge.

Recommendation 15. Investigate the feasibility of constructing farm pads with flow-through devices such as culverts.

This idea may require only half the compensatory storage and may address conveyance issues at some sites. Further work is needed on costs and hydraulic modeling to determine if the benefits outweigh the costs.

Recommendation 16. Conduct a hydrologic study of the Snoqualmie River Basin.

Hydrologic simulation of the basin would allow a more thorough understanding of many concerns developed elsewhere in this report. The model could help to better quantify the cumulative impacts of changing land use in the basin, which is often blamed for flood problems in the Snoqualmie Valley APD. The model may also help to improve flood warning capabilities, and serve as a planning tool for future flood reduction projects.

V. Other Ideas to be Noted but Not Recommended

The ideas listed below were suggested by members of the Task Force as potential solutions but were generally considered infeasible because of constraints such as cost, impacts on environmental resources, or were beyond the scope of the Task Force's roles. However, some Task Force members wanted these ideas to be included in this report.

A. Comparisons to Regulations in Snohomish County.

Snohomish County has mapped a "density fringe" for agricultural lands within the Snohomish River floodplain. Under this approach, each farm is allowed to fill 2% of their land for agricultural purposes. The agricultural representatives on the Task Force expressed the desire to adopt a similar mapping and regulation approach.

The Task Force representative from the Department of Ecology stated that the "density fringe" was approved for Snohomish County because of the tidal influence on the lower Snohomish River that is not present in King County. Because of this tidal influence, Snohomish County has constructed an extensive dike system, which disrupts the natural storage and flow of floodwater. In addition, these dikes only provide protection to the five-year storm and are designed to be over-topped at those flood levels.

King County proposes to provide flexibility for farmers through the establishment of a compensatory storage bank and is optimistic that this will help the agricultural community meet the compensatory storage regulations, which Task Force member agree are valuable floodplain management standards. Additionally, the County is finding ways to support the elevation of buildings – the preferred long-term option for agricultural viability and floodplain protection.

B. Pump Carnation Marsh to Provide Flood Storage During Flood Events.

This concept could provide additional flood storage volume that would be available before the onset of a flood. However, the marsh is on relatively low-lying ground that is not isolated from the river by levees, railroad grades, or similar impervious features. For these reasons, it is unlikely the marsh could be pumped down without significant investment in infrastructure to facilitate pumping. Furthermore, the marsh would probably fill in the early hours of a flood, providing little benefit in the later hours when the damaging crest arrives. Also, this proposal would adversely impact rearing habitat for multiple salmonid species, including Endangered Species Act (ESA) listed Chinook salmon and steelhead trout.

C. Prioritize and Schedule Five Sediment Removal Sites in the Snoqualmie Basin in Accordance with Flood Plan Policy.

Consider the two sites on the mainstem Snoqualmie River channel (below the Raging River and below the Tolt River) as the highest priorities for agriculture.

Proposals such as these are being examined under the umbrella of the new Flood Management Plan. However, there would not be significant flood relief from these proposals. Since these two areas account for over 50% of ESA listed Chinook salmon spawning grounds, and for a fairly large portion of ESA listed steelhead trout spawning grounds, there are significant environmental challenges associated with removing this gravel, Thus, these two sites will likely score very low in terms of priorities for the controversial issue of sediment removal on the river.

D. Raise the West Snoqualmie River Road in Locations That Make it Impassable at Lower Flood Stages.

This would entail significant costs for the benefit of few landowners. Road project funds are extremely limited and this project would likely be a low priority compared to other public safety needs when determining how these limited resources will be used.

E. Hire a Consulting Firm to Analyze Feasibility of Multipurpose Flood Control Dams and Reservoirs.

First analyze the capacity necessary to reduce flooding in a way that would make a difference to agriculture, by determining what flood levels are acceptable for agriculture.

Recommendation 16 begins part of the process needed to undertake this proposal by recommending collecting and modeling necessary background information. However, it does not address that natural flooding levels benefit ESA listed salmonid habitat. Attempts to install any dam within the Snoqualmie Basin would face significant environmental challenges.

F. Provide compensatory storage by elevating some of the Snoqualmie Valley roads on pilings.

As in Idea D, this would entail significant costs and would likely be a low priority use of limited road project funds.

VI. Framed Issue: New Farm Houses in the FEMA Floodway

One item the Task Force addressed, which some members of the Task Force suggested as a recommendation, is not being carried forth as a recommendation of this report. The Task Force did not reach consensus on allowing new residential farm houses in the FEMA floodway, however it is important to recognize that this issue was not fully discussed or

explored. New residential homes, including farm houses, are not allowed in the FEMA floodway by state law and King County code.

The agricultural representatives of the Task Force wanted to recommend that the King County Council should endorse a farmer-initiated proposal that State Legislators amend State Law to allow new residential farm houses to be built in the FEMA flood-way of APDs (such as Snoqualmie Valley) that are not protected by levees or dikes, provided that they meet appropriate requirements.

They argue that the County has expressed a desire to support "family farms" and thereby provide the community with the social, cultural, and economic benefits that local family farms provide. Agricultural representatives to the Task Force believe that giving farmers the opportunity to live on their farms is essential to the existence of these small family farms.

Farmers further argue that because the flows during floods are not of high velocity in all parts of the Snoqualmie floodway, it is not too dangerous to locate a house in the floodway if it is elevated above the flood level.

The recommendation of King County staff is to preserve the prohibition of new residential homes in the FEMA floodway. Staff believe that the floodway is generally thought of as the corridor of deepest, fastest flow. From a state-wide perspective, this general understanding is reasonably accurate, although the methods used to define the floodway do not always correspond with the deepest and fastest conditions. In general, the floodway would be a very dangerous place to live.

The existing state law has saved lives and prevented property damage by keeping people out of areas that are truly unsafe. Unless the state can more precisely map areas of extreme flood risk, the floodway should continue to be considered as the most hazardous subset of the floodplain where residential construction remains prohibited.

A State legislative process would be expensive and lengthy, and require many years of work. It would open a "Pandora's Box" for those with less sensitivity to the flood issue and this could put far more people in harm's way. With floods perhaps increasing in both frequency and magnitude, King County staff believes this is not a wise direction.

VII. CONCLUSION

For effective long-term management of floodplain functions – which will benefit the viability of agriculture in the long term – alternatives to placing fill in the floodplain are the solution of choice. Agricultural landowners need protected storage opportunities that are elevated above the base flood elevation. The protected storage can be provided by options that do not require fill, such as elevating existing buildings, constructing new elevated buildings, or taking equipment and supplies out of the floodplain for the flood season. Importing fill is the least desirable option.

A suite of options must remain open for agricultural landowners to both contribute to long term floodplain protection and to protect themselves individually during floods. The agricultural community will need support to help them meet the regulations that will provide the flood protection they need. The key to success is ongoing dialogue.

Staff will meet with the agricultural members that were on the Task Force to report on such items as the status of the modeling for the compensatory storage bank, the outcome of the fully completed demonstration project proposals, the legislative package related to these proposals, and any further information on agricultural needs. In addition, staff will provide an annual update to the King County Agriculture Commission on the issues addressed in this report.

The Executive will evaluate the code changes recommended by this report and forward appropriate legislation by April 30. Changes to the floodplain regulations to allow farm pads within the FEMA floodway also require an amendment to the county's shoreline regulations. This latter code amendment is part of the larger shoreline code rewrite which will not be completed until later this year. This also will require approval from Washington Department of Ecology. We understand farmer's expectations regarding work that might be done in the summer of 2008, however any work planned for this summer should not assume flexibility from current regulations could be provided by these code changes.

This report has taken an immense effort from agricultural representatives, including the King Conservation District and King County managers and staff. However, there was a very short time frame and the Task Force members recognize that some report items may be lacking in adequate details.

Farm Flood Task Force – Appendices.

Appendix A: Map of Livestock Sanctuaries and Demonstration Projects.

Appendix B: Farm Pad Data: Farm name, parcel number, BFE, pad height, exemption or permit number, dimensions.

Appendix C. Maps: Assessment of Need for Farm Flood Pads.
South Snoqualmie APD
North Snoqualmie APD

Appendix D. Flood Farm Survey

Appendix E. Estimated Permit Costs of Farm Flood Pads.

Appendix F. Floating Technologies

Other Presentations To Task Force:

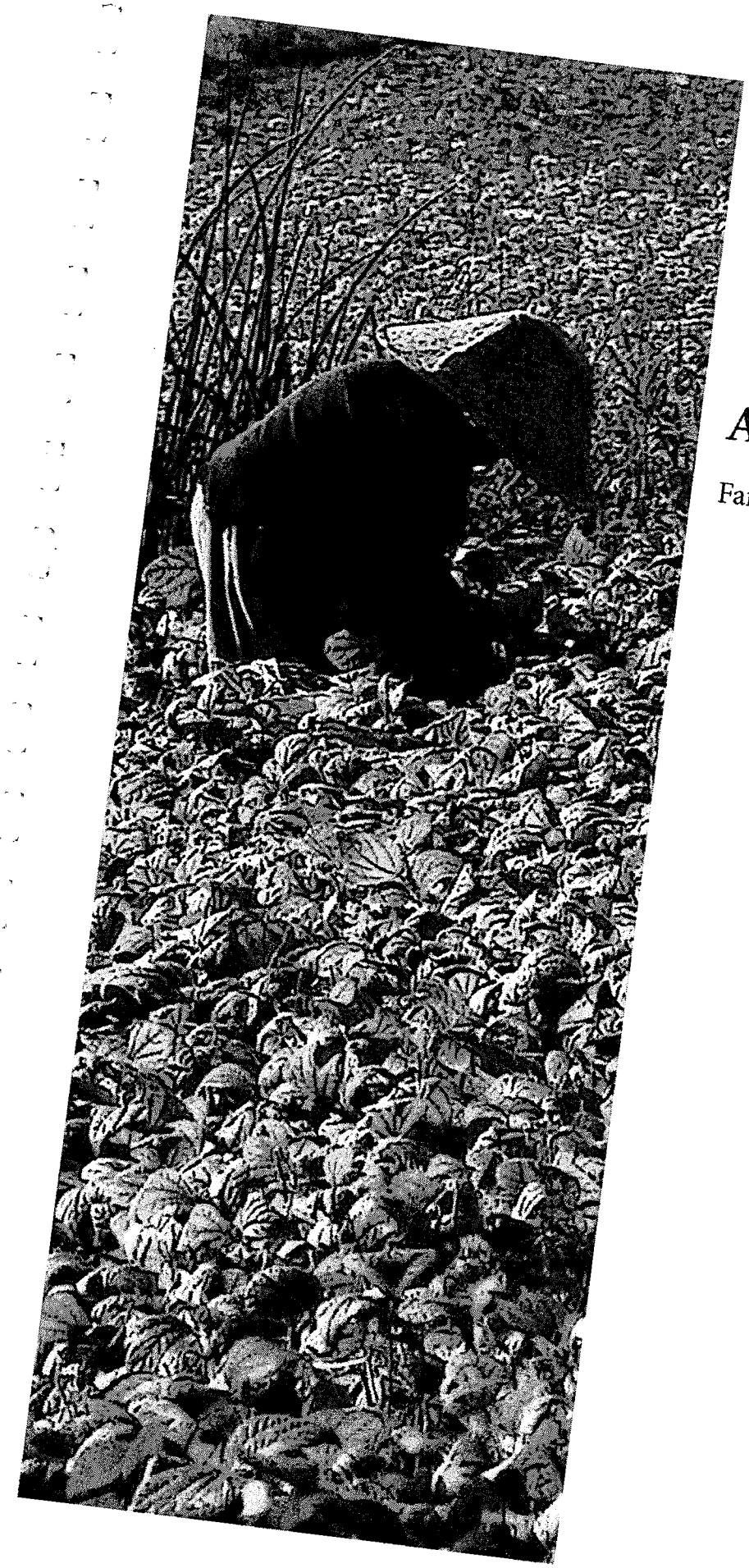
Appendix G. Modeling Effects Results: Impacts of the Demonstration Ordinance

Appendix H. Power Point: Hydrologic Trends in the Snoqualmie

Appendix I. Excess Flood Volumes

Appendix J. 205 Project

Appendix K Costs: (a) Estimated Costs for Building Elevations
(b) Costs: One Estimate for Elevating a Sample Agricultural Building



Appendix J.

Farmland Preservation Program

Farmland Preservation Program

Program Description and History

November 6, 2009 was the 30th anniversary of the Farmland Preservation Program (FPP). The FPP, which purchases and holds farmland development rights in perpetuity, is one of the oldest preservation programs in the United States. Since 1984, when the first development rights were purchased, the FPP has been a corner stone for agriculture in King County. The FPP ensures that at least some of the county's remaining prime agricultural land will always stay undeveloped and open and available for agriculture.

Program Description

The Farmland Preservation Program (FPP) is a voluntary program that purchases the development rights from farmland in order to permanently preserve it for agriculture or open space uses. In selling their development rights, property owners grant the county the right to place covenants on their property that restrict its use and development. The covenants are contained in an agricultural conservation easement known as the Deed Of and Agreement Relating to Development Rights (Deed and Agreement). The Deed and Agreement is both an easement and a contract as it places restrictive covenants on the property and imposes contractual obligations on both the property owner and the county.

King County holds the development rights in trust on behalf of the citizens. The covenants that are placed on the property are in perpetuity; they "run with the land" and remain in effect even if the property is sold, rented, bequeathed or annexed by another jurisdiction. The covenants restrict the land to agricultural or open space uses, permanently limit the number of dwelling units and require that 95 percent of the property remain open and available for cultivation. Although the covenants do not require that the property be actively farmed, they prohibit any activities that would permanently impair the use of the property for agriculture.

How the FPP Began

The FPP officially began in November, 1979 when county voters passed a $50 million Farmlands and Open Space Bond Initiative that authorized the sale of bonds to finance the purchase development rights on high quality farmlands. Ordinance 4341 (codified as Chapter 26.04 of the King County Code) outlined the objectives and parameters of the FPP and instructed the Executive to put the bond initiative before the voters. The Ordinance recognized the economic, aesthetic and unique benefits that agriculture provides to the citizens of King County and stated that land suitable for farming is an irreplaceable resource. The Ordinance acknowledged that current policies and regulations (i.e., in 1979) did not provide adequate protection and that the permanent acquisition of voluntarily offered interests in farm and open space lands would provide long-term protection of the public interests which these lands serve.

Ordinance 4341 and the Bond Initiative obligated the county to hold the development rights in trust, on behalf of the citizens of King County, in perpetuity. They also required that, if the Council were to find that any of the lands or interests acquired with bond proceeds could no longer fulfill the public purposes described in the ordinance, the Council would submit to the voters a proposition to approve of the disposition of such lands or interests. Only upon a majority

vote approving such proposition, could the county dispose of any land or interest. To-date, no lands or interests have been found unable to fulfill the public purposes that were described, and the only loss of development rights has been through condemnation.

Purchase of Farmland Development Rights:
During the mid-1980s, the county accepted offers to purchase the development rights on 12,600 acres. Although most of the funds generated by the 1979 Farmlands and Open Space Bonds Initiative have now been spent, the county has continued to acquire farmland development rights using funds generated by the Conservation Futures levy as well as with federal and State funding. Since 1987, development rights have been purchased on 489 acres and the development rights on 52 acres have been donated to the county. An additional 121 acres have been acquired in fee. Adding these acres to those acquired during the mid-1980s brings the total acreage of permanently protected farmland in King County to 13,337 acres.

Managing the Farmland Preservation Program
In 2009 King County had 1.4 Full Time Employees dedicated to managing the county's farmland development rights interests. Management of these interests (i.e., the Farmland Preservation Program-FPP) includes the following activities:

- Policy development and implementation. FPP staff develop and implement policies for managing the FPP. Written policies have been developed for determining the permissibility of various uses of FPP property, including the use of FPP property for utility easements and for rights-of-way. Policies have also been developed regarding habitat restoration and enhancement activities on FPP property. Implementation of various policies may require that they be approved by the King County Council. The restrictive covenants that are placed on properties to preserve them for agriculture have also been recently updated and revised to be more compatible with the needs of contemporary agriculture.

- Interpretation of the restrictive covenants. Although the covenants that are contained in the Deed and Agreement were written to be as specific as possible, questions occasionally arise concerning their interpretation. FPP Staff periodically consult with the King County Prosecuting Attorney to ensure that the covenants are interpreted in a consistent and legally defensible manner.

- Property monitoring. FPP staff monitor properties by conducting site visits and meeting with the property owner(s) to ensure compliance with the restrictive covenants. Farmland Preservation Program (FPP) staff regularly monitor FPP properties to ensure that the owners are aware of the restrictive covenants and are complying with them. Monitoring activities include site visits and meeting with the property owner as well as routinely driving by properties.

- Application review. FPP staff review applications for building, grading, boundary line adjustments and other alterations of FPP properties to ensure that the proposed alteration is consistent with the covenants. Staff also review requests for easements across FPP property. Council approval may be required depending on the extent of the requested activity.

- Record maintenance. FPP staff update and maintain other records pertinent to the county's development rights interests.

Trends and Challenges Affecting the FPP
FPP properties are generally reflective of other agricultural properties in the county. The changes and trends that are noted in this report also affect the county's preserved farmlands.

Increase in Number of Farms and Separate Ownerships

As the number of farms in the county has increased so has the number of farms that are in the FPP. The county originally purchased development rights on 187 separate ownerships during the 1980's. Since then, the county has acquired development rights on 17 additional farms. Besides purchasing more development rights, many of the farms that originally consisted of several parcels have been broken up and the parcels have been sold separately. As a result, by the end of 2008, FPP properties were under 260 separate ownerships. Staff estimate that approximately two thirds of FPP properties have changed in ownership since the development rights were acquired. Besides selling parcels separately, the entire property may have been sold or, since some of the owners who originally sold the development rights are now deceased, the property has been passed on to their heirs.

Changes in property ownership presents challenges for the FPP. In many instances FPP staff are working with owners who acquired the property after the development rights were sold. Not having received any compensation themselves, these owners are often somewhat unfamiliar with the FPP and the restrictions that have been placed on their property. Staff are frequently surprised by the lack of information that new owners have about the covenants and sometimes it appears that they have not even read them. Ensuring that property owners are familiar with the covenants and the restrictions that they impose is the most effective way of keeping FPP properties in compliance with the covenants. Monitoring staff make sure that new owners of FPP property have a copy of the covenants and they point out those that are most likely to affect their use of the property.

Adjusting boundary lines between parcels or selling parcels separately may also create unintended consequences. FPP properties are subject to a 5 percent non-tillable surface allowance that is calculated as 5 percent of the total area of all of the parcels that comprise the property. If a property consists of several parcels, and if the amount of non-tillable surface on any one parcel is at or near the 5 percent limit for the entire property, then there will be little or no allowance remaining for use on the other parcels. FPP property owners may be unaware of the implications of this restriction if they are unfamiliar with the covenants.

Statistics compiled by FPP monitoring staff show that within the 3-year period of 2006 – 2008, 15 percent of the FPP properties that were visited had a least one covenant violation. The most frequent violations noted involved dwelling units; either the number of dwelling units exceeded the allowable limit or the occupants were not family members or associated with farming activities on the property. In addition to the covenant violations regarding dwelling units, monitoring staff also reported informally resolving other violations. Often, more than one site visit is required to ensure that a violation has been adequately resolved and monitoring staff reported that during the above 3-year period, more than one site visit was required for 30 percent of the properties.

Property monitoring is one of the FPP's most important activities. The enabling legislation for the FPP stated that King County would hold the development rights in trust on behalf of the citizens and monitoring is necessary in order to uphold this obligation. It is very strongly recommended that the county maintain staffing levels sufficient to allow periodic monitoring of the preserved properties.

Changes in Agricultural Use

Agriculture in King County has undergone significant changes since the FPP began in 1979. Socioeconomic factors, such as increased land prices and costs of living, challenges in finding and providing for required labor, potentially conflicting land use practices and increased demand for water and water rights all have potential adverse impacts on the long-term viability of farming in King County and the ability to keep FPP properties actively farmed.

While these forces present challenges to preserving and promoting King County's farming tradition, other opportunities have emerged to promote local farming. The demand for market crops and value-added products has increased dramatically and new means have emerged to allow farmers direct access to consumers throughout the Puget Sound area. Additionally, recent changes to the King County Code have supported value-added processing and direct marketing of farm products.

The use of FPP properties reflects the changes in types of agriculture in the county. King County originally purchased development rights on 62 dairies which, collectively, encompassed approximately half of 12,600 acres that were preserved during the 1980s. Although only 16 of the original dairies are still in operation, much of the acreage they utilized is still used for livestock or forage production. As was noted in a previous section of this report, the diversity of livestock operations is increasing and a recent survey of lands within the APDs showed that 48 percent of FPP land is used for livestock or forage production.

The upsurge of interest in locally produced food and the response of farmers to this expanding market is also reflected on FPP properties. In the 1980's when most of the development rights were purchased, only a few farmers sold directly to consumers. Now, with 32 farmers markets in the county, there are many agricultural operations on FPP properties that sell their products directly to the consumer. In the early 1990's there was one FPP property that was a subscription farm in which the "subscribers" (i.e., the consumers who buy the farm products) pay a fee at the start of each season which then buys them a season's worth of product. Now there are three CSA's operating on FPP property and each of these has several hundred subscribers.

Habitat Projects on FPP Property

In addition their suitability for agricultural use, FPP properties often have high habitat value, both for aquatic and terrestrial species. In recent years, the FPP has had to respond to inquiries as to whether FPP properties can be used for habitat purposes. In responding to these inquiries, policies have been developed that are intended to maintain the county's obligation to preserve these lands for agriculture while at the same time utilizing, to the extent possible, their value as habitat sites. Although the Bond Initiative that enabled the FPP and the FPP covenants both recognize the open space values of the preserved lands, the intent of the FPP is to preserve land for agricultural use. Consequently, suitability for agricultural use must be maintained and any use of preserved farmlands for habitat or open space purposes must not permanently impair the land's ability to support agriculture.

Responding to Change

The Agriculture Commission has been working with county staff to assess and respond to the challenges, changes and opportunities facing farmers. However, farmers whose properties are subject to the FPP's original Deed and Agreement have not been able to take full advantage of some of the changes and opportunities and the commission felt that the Deed and Agreement needed to be updated and revised in order to better promote and protect economically viable agriculture.

Updating King County's Original Agricultural Conservation Easement

In 2005, the original Deed of and Agreement Relating to Development Rights was modified to include requirements imposed by the use of federal funding to purchase farmland development rights. This funding, available thought the Farm and Ranch Lands Protection Program administered by the Natural Resources Conservation Service, has become an important source of funding for the FPP. In 2006, the State of Washington initiated a Farmland Preservation Program that made State funding available for purchasing farmland development rights.

The State Farmland Preservation Program also requires that certain restrictions and contractual obligations be included in the easement that is placed on properties on which the development rights have been acquired. In light of this, and because King County's Deed of and Agreement

Relating to Development Rights had not been significantly altered or updated since it was drafted in the early 1980s, FPP staff felt that it was a good time to update the Deed and Agreement and make it more compatible with current agricultural practices and concerns. Staff enlisted the assistance of the King County Agriculture Commission in reworking and updating the covenants.

The Agriculture Commission's Regulatory and Land Use Committee met for approximately two years to discuss and update the FPP covenants. The majority of the Committee's work focused on the following questions and topics:

1. How should agriculture be defined?
1. Should the covenants require that the protected property be actively farmed?
2. How to keep preserved properties affordable by farmers.
3. Should the covenants address water rights?
4. Should there be a limit on the size of dwelling units?
5. Should the covenants allow the processing and marketing of products that are not grown on-site?
6. Criteria for allowing home industries and home occupations
7. Should the covenants allow the consumption of food items?
8. Non-tillable surface restrictions
9. Conversion of farmable areas to habitat uses

Two of these topics were of particular concern to both the committee and the full commission: requiring that the protected property be actively farmed and keeping the protected property affordable for farming. The following paragraphs summarize the discussions of these topics and the Agriculture Commission's recommendations concerning them.

Should the FPP Covenants Require that the Protected Property be Actively Farmed?
Both the Regulatory and Land Use Committee and the Agriculture Commission felt strongly that preserved properties should remain in active agricultural uses. However, there were also strong differences of opinion as to how this goal could be achieved. Ordinance 4341 that enabled the FPP used the definitions in RCW 84.34 to define farmland and open space land. The Committee discussed whether the easement should describe the protected property as specifically meeting the criteria for classification as "Farm and Agricultural Land" as set forth in Section 84.34.020(2) or if the description should also include the criteria stated in Section 84.34.020(8). Using only the criteria specified in Section 84.34.020(2) would require that preserved farmlands be actively farmed. Section 84.34.020(8) expands the criteria to include lands that used to be actively farmed, but which are now classified as "Open Space Land." It also includes other traditional farmlands that are not currently farmed, but which have a high potential for returning to commercial agriculture.

It was argued that since the intent of the FPP is to preserve properties as farmland, the easement should only reference Section 84.34.020(2) and the covenants should only allow agricultural uses. The point was made that since the original easement allows both agricultural and open space uses, FPP lands are being used for "palatial" home sites without using (nor intention to use) the land for commercial agriculture. These home sites are located in the Agricultural Production Districts (APDs) and some Committee members felt that this use violates the intent of the Growth Management Act (GMA) designation of agricultural lands with long term commercial significance and is contrary to the GMA goal to maintain and enhance the agricultural industry. The concern was also expressed that using preserved properties primarily as home sites damages the "critical mass" of commercial agriculture within the Agricultural Production Districts (APDs) and leads to a loss of infrastructure that is critical to the agricultural economy. One member also felt that allowing FPP lands to be used primarily as home sites could be interpreted as a misuse of funds dedicated to the protection and enhancement of agriculture. Requiring that preserved properties remain actively farmed would also help to ensure that the features which make them suitable for agriculture, such as drainage, water availability, etc., are maintained.

The argument to allow other open space uses in addition to agriculture focused on the ability of the county to enforce the covenants. It was argued that, due to circumstances beyond their control, a property owner may not be able to farm themselves or even to lease the property for farming. In instances such as this, requiring that the protected property be actively farmed may be very difficult or even impossible to enforce. This concern was also expressed by the Prosecuting Attorney. The additional point was made that the primary objective of the FPP is to preserve high quality agricultural soils and, although it is desirable to have preserved properties actively farmed, protecting the soil resource should be the requirement rather than active farming.

Instead of stating that the property must be actively farmed, the committee recommended that the new covenants state that "The Grantee strongly encourages the Grantor to farm the protected property or the lease the protected property for farming" so that the Grantor would be aware of what the county wanted. In order to address the very real concern that unfarmed properties may lose their ability to support agriculture, the Committee also recommended that the covenants require that the property be managed under a Farm Management Plan by which the property is maintained in a condition capable of supporting current or future commercially viable agriculture. The Agriculture Commission supported the Committee recommendations to include language stating that farming is strongly encouraged and to require that the property be managed under a Farm Management Plan that would maintain its suitability for agriculture.

Keeping FPP Property Affordable for Farming

One of the main factors affecting property value is the value of the improvements and the Committee discussed limiting improvement value as a means of keeping cost of property down. As was previously noted, several Committee members expressed concern that very large houses were beginning to appear in the APDs. They felt that these large residences were inconsistent with the rural character of APDs and they were concerned that the value of these improvements is so high that the property on which they are located is no longer affordable for farming. The suggestion was made that, as a means of keeping preserved properties affordable, perhaps the covenants should restrict dwelling units to a size that is consistent with other dwelling units in the APD. It was suggested that a reasonable restriction would be a size limit of 150 percent of the median size of dwelling units in all of the APDs. Based on the Assessor's data, the median size (total living space square footage) of dwelling units in all of the APDs is currently 1,970 sq. ft.; 150 percent of this area is 2,955 sq. ft.

In addition to keeping preserved farmlands affordable, Committee members who supported this suggestion argued that this including restriction would allow the property owner to receive additional compensation for their development rights. They also argued that limiting the size of dwelling units may help to ensure that sufficient non-tillable surface allowance (the covenants restrict non-tillable surfaces to 5 percent of the property area) would be available for agricultural buildings and surfaces.

The Committee also discussed the drawbacks of limiting dwelling size to keep properties affordable. Putting an additional restriction on the property would increase the cost to the county of purchasing development rights. Limiting the size of residences in order to keep properties affordable for farming assumes that only farmers purchase affordable properties; it also makes the assumption that farmers don't want or need large houses. The opinion was also expressed that it can be beneficial to allow a variety of house sizes and lifestyles as this can result in greater diversity of farmers and farming operations. Additionally, limiting the size of residences on preserved farmlands could be the first step towards limiting the size of residences on all properties within the APDs.

In light of these arguments, the Agriculture Commission recommended that limiting house size should not be required, but instead, that it be included as an option. The Commission also recommended that, on properties which are currently undeveloped, the Grantor be given the option of reserving the right to have no dwelling units. This would allow a Grantor who did not

need a residence to receive additional compensation for his development rights and, because the property could not be used for residential purposes, would help to keep the property value down.

The Regulatory and Land Use Committee kept the Agriculture Commission informed of their proceedings and as the Committee developed its recommendations, they were passed on to the full commission for their review. At the September 11, 2008 meeting the Agriculture Commission approved a motion recommending the adoption of the new agricultural conservation easement.

The new FPP easement, now called the King County Agricultural Conservation Easement: Deed and Agreement Relating to Development Rights was approved for use by the King County Council on October 5, 2009 (Ordinance 16676). It includes the recommendations of the Agriculture Commission and meets the requirement that are imposed by the use funds generated by the 1979 Farmlands and Open Space Bond Initiative, as well as funding from the federal Farm and Ranch Lands Preservation Program and the State Farmland Preservation Program. The new easement will be used for new development rights acquisitions and as an amendment to the existing easement (Deed and Agreement) on properties currently enrolled in the FPP, if all parties agree to the amendment.

History of the Farmland Preservation Program

I. The Bond Initiative

The FPP originated in 1974 when a study on regional agriculture by the Puget Sound Council of Governments documented that urbanization of prime farmland was approaching 3,000 acres per year in King County. Although the county encompasses over 1.4 million acres, only about 100,000 acres have the soil characteristics necessary to be considered prime farmland. Between1945 and 1974 the acreage of land in farms decreased to less than 58,000 acres and the number of farms in the county declined from almost 6,500 to less that 1,400. The study also found that agriculture was often considered to be an "interim" land use that could be displaced as soon as other uses became available.

King County has long recognized the importance of agriculture as part of the county's economic and social community. The King County Comprehensive Plan, adopted in 1964, identified certain land areas for continuation in agriculture and stated as a goal the "protection of certain agricultural, flood-plain, forest and mineral resource areas from urban type development." In 1972 this goal was reinforced with adoption of Ordinance No. 1096 which established a policy that "Class II and III soils having agricultural potential and other classified or unclassified land presently being farmed shall be reserved for current and anticipated needs."

The Puget Sound Council of Governments report that defined and evaluated agriculture in the Central Puget Sound Region was released in the summer of 1974. The report concluded that maintaining agriculture in an urbanizing area would require both the preservation of prime agricultural land and the promotion of the agricultural use of that land. The adoption of Ordinance No. 1839 implemented the concept of withholding agricultural lands from development to protect their agricultural capability. Unfortunately, this ordinance did not provide sufficient protection and the erosion of the county's agricultural land base continued. Finally, in December 1975, the County Council adopted a one-year moratorium on further development of farm land until the problem could be studied and a more comprehensive action program initiated.

Ordinance 3064, which was passed by the King County Council in January, 1977, designated eight Agricultural Production Districts and established policies to ensure that as development occurred, the agricultural potential of the Districts would not be adversely affected. The ordinance also designated Agricultural Lands of County Significance and included zoning

policies to ensure that parcels within this designation remained large enough to support commercial agriculture.

In addition to designating agricultural areas, Ordinance 3064 directed the Executive to conduct an analysis of agricultural lands programs and to develop implementation proposals for such programs. A report issued in October, 1977 by the County's Office of Agriculture analyzed factors affecting agricultural economic activity. The report concluded that a combination of land and support programs was necessary to provide a comprehensive approach that would adequately protect and encourage agriculture in the county.

In September, 1978 the County Council passed two ordinances addressing the acquisition of farmland development rights. Ordinance 3871 authorized submitting a $35 million bond initiative to the voters for the purpose of providing funds for the acquisition of interests in farm and open space land. Ordinance 3872 authorized the use of the bond proceeds to purchase development rights on 10,000 acres as a means of preserving farm and open space lands.

This bond initiative was placed on the November, 1978 ballot and the election recorded 177,984 "yes" votes to 119,912 "no" votes. However, this was 754 votes short of the 60 percent majority necessary for approval of the initiative.

After the election, the County Executive and the Chair of the King County Council convened a citizens' study committee to review the 1978 ballot measure and develop a recommendation on the best way to preserve farm and open space lands. In May, 1979 the citizens' study committee recommended that a $50 million bond initiative be presented to the voters in the next primary election. Passage of this initiative would enable the purchase of development rights on 13,500 acres of agricultural land in the Snoqualmie, Sammamish and Green River valleys, on the Enumclaw Plateau and on Vashon Island.

In June, 1979, the County Council approved Ordinance 4341 which called for an election to authorize issuing bonds, the proceeds of which would be used to acquire development rights on suitable farmlands. Ordinance 4341 also outlined the criteria for evaluating lands for development rights acquisition and established a citizen selection committee to advise the Council on suitable properties.

The County Council decided to put the new bond initiative before the voters in the September, 1979 primary election. The ballot received the required 60 percent "yes" vote, but the number of votes cast fell short of the number necessary (40 percent of the number voting in the last general election) to validate the bond initiative.

The Farmlands and Open Space Bond Initiative was put back on the ballot for the November 6, 1979 general election. The third time was a charm, as 63.6 percent of the voters approved the initiative and the voter turnout was sufficient to validate the election.

II. Implementation of the Farmland Preservation Program

Implementation of the FPP and the purchase of farmland development rights was delayed by a 1980 State Supreme Court ruling that said the bonds King County issued were limited by the 8 percent interest rate on 30-year municipal bonds that was in effect at the time of the 1979 election. Since the interest rate for AA municipal bonds was close to 12 percent in the early 1980s, the county could not sell any 30-year bonds at the original rate of 8 percent. The bonds that the voters approved in 1979 were to be available for only six years and there was concern that the bond rate may not drop back to 8 percent within this timeframe. In 1982, with just 3 ½ years remaining before the authority to sell bonds expired, the County Executive appointed a citizens' task force to examine financial alternatives and present recommendations on the best means of implementing the FPP.

The citizens' task force made several recommendations, one of which was to authorize the immediate issuance of at least $10 million in Councilmanic bonds. This recommendation was adopted and although it resulted in a second lawsuit, the county was able to sell $15 million in Councilmanic bonds. In 1984, funds generated by these bonds were used to purchase development rights on 2,100 acres of farmland in the Sammamish and Green River Valleys and on Vashon Island.

The State Supreme Court made another ruling in 1985, allowing the county to use short-term bonds and to average interest rates, to meet the 8 percent limitation. This ruling allowed the county to issue bonds for the remaining $35 million so that the FPP was fully funded. Funds from these bonds were used to purchase development rights on farmlands in the Snoqualmie Valley and on the Enumclaw Plateau. The county continued to purchase development rights for the next two years and by 1987, 187 properties totaling 12,658 acres were enrolled in the FPP.

The FPP was audited in 1988 by the County's Office of Internal Audit. The audit recommended that a monitoring program was necessary to ensure the effective preservation of program properties and to ensure the viability of local agriculture. The audit also recommended that preserved properties be identified to staff who review permit and subdivision applications, that information on the condition of the preserved properties be completed, that identified covenant violations be resolved, and the implementation of formalized investment policies and procedures to maximize financial resources for future programs.

Due to a lack of funding for staff for staff time, only the recommendation regarding investment policies and procedures was implemented promptly. The FPP was audited a second time in 1991 and the Auditor again recommended that a formal monitoring program be initiated. The audit also recommended that organization responsibility be fixed for commenting on land use proposals and the Comprehensive Plan, as to their impact on agricultural activities in the county. The audit also recommended that the county consider the feasibility of including certain elements of agricultural marketing/economic support with the agriculture program of the county. The implementation of the last two recommendations is discussed in other sections of this report.

The 1991 audit resulted in the creation of a "Property Rights Specialist" position having the duties of property monitoring, updating and maintaining records, resolving covenant violations and ensuring that permitting staff had access to information regarding the preserved properties. Funding for this position was included in the county's 1992 budget and a Property Rights Specialist began working in July, 1992. Since then the scope of the position has changed to include the other activities described in the "Program Description" section of this report. In recent years, a part-time position has been added to assist with monitoring and record-keeping. It is strongly recommended that this additional staffing be continued as these activities are crucial to the continued success of the FPP.

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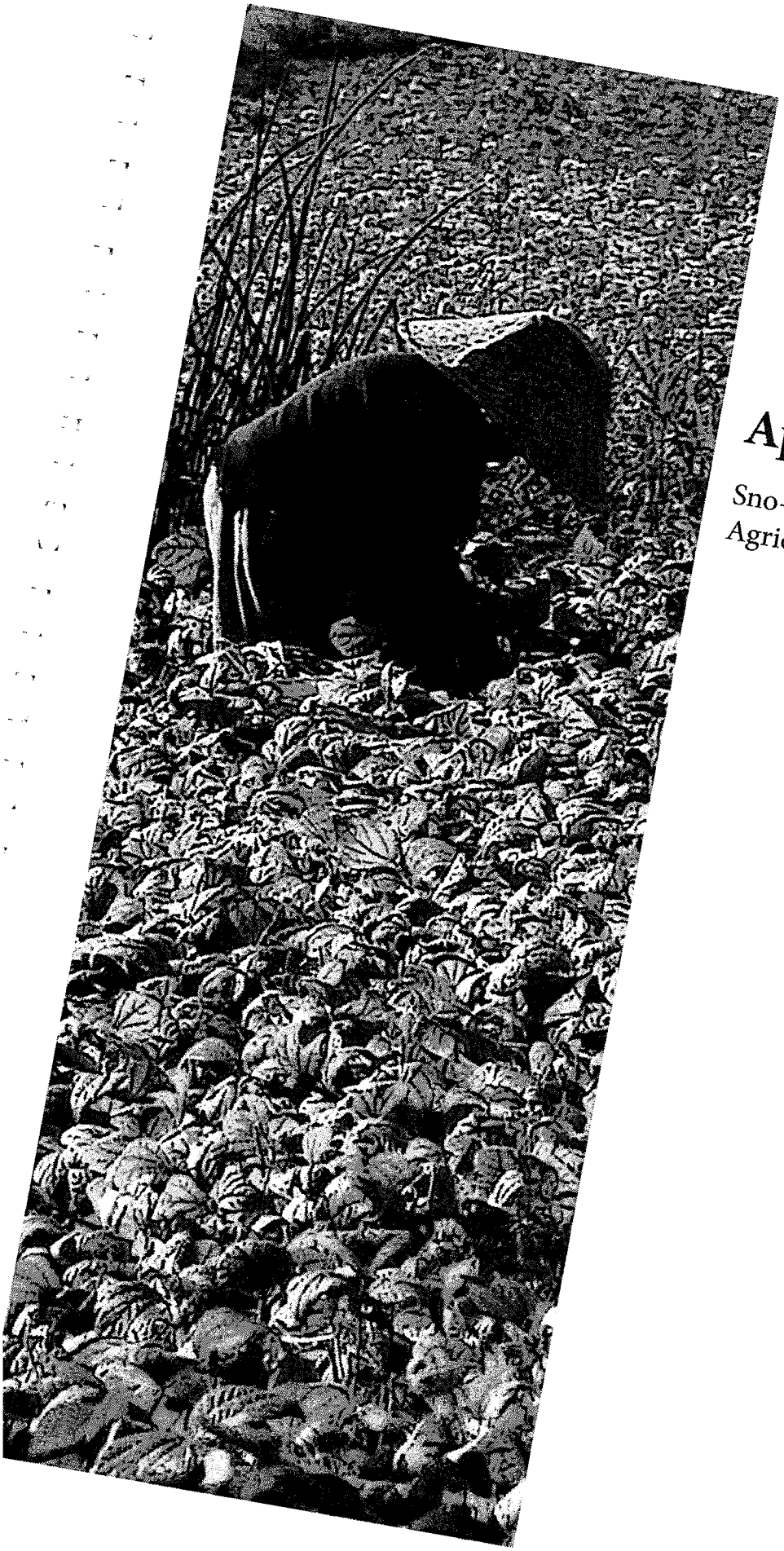

Appendix K.

Sno-Valley Tilth statement on the Future of Agriculture

Sno-Valley Tilth Public Testimony on "The Future of Farming in King County." March 12, 2009

[Two notes about Sno-Valley's Tilth's testimony:

a. For the sake of readability, we have written this testimony using first-person plural; when we say "we," we refer to the Board of Directors of Sno-Valley Tilth that has approved this statement.
b. Our testimony applies only to agriculture as it occurs in designated "Agricultural Production Districts," or APDs. This is because in creating the APDs, legislative bodies have provided some very specific guidelines about what APDs should be; in areas outside the APDs, we do not see that degree of clear, legislative direction.]

We would like to focus our comments concerning the "future of agriculture" on two questions that emerged from public testimony before the King County Council last summer. The first of these questions stems from contradictory public testimony about what agriculture in King County is. The second question relates to conditions that should apply to the granting of permits for new agricultural structures in our Agricultural Production District floodways.

1. In the future, what should be considered as "agricultural practices" on King County lands designated as Agricultural Production Districts (or APDs)?

To clarify the future of agriculture in King County's APDs, we believe that Council should establish a working definition of what activities should be considered agricultural. We hear a great deal about "preserving agriculture," "enhancing agriculture," and "supporting agriculture." But how can we speak responsibly about the future of agriculture unless we know what we mean by the word "agriculture"? We believe that such a definition is clearly operative in existing State laws and County codes. But confusion still exists, and we urge the Agricultural Commission to recommend to Council that it adopt a clear and explicit definition of agriculture in our designated APDs.

Our recommendation for the specific language of this definition is this: "agriculture is either (1) the commercial production of food and forage products which are grown for the end-use of human consumption, or (2) the commercial production of fiber products."
Based on this definition, the litmus test as to whether a proposed land-use, in designated King County APDs, is "agricultural or not" would be this: "does this activity generate a product that is being grown commercially (directly or indirectly) for human consumption, or that is grown as a commercial fiber product?" If such a product can be identified, the proposed land-use should be considered agricultural; if such a product cannot be identified, this use should not be considered agriculture.

In support of our vision of the future of farming in King County APDs, we would like to reference the recently published *Future of Farming in Washington* report. This document, with one exception, does not specify any activity deemed "agricultural" that does not meet the criteria of our proposed definition. The one exception is the inclusion of "fuel" as an end-use. Beyond biofuels, every reference to agricultural production in this nearly 100 page document is a reference to land-use activities that fall within our proposed definition of agriculture.
This research project was a year-long, well-funded, study, which, of course, was aided by our own Agricultural Commission. Clearly we don't have to determine that the "Future of Farming in King County" is exactly the same as the "Future of Farming in Washington State." But in recognizing that our proposed recommendation for a definition of agriculture so closely coincides

with the operative definition of the state-wide study, we see strong validation of the relevance and appropriateness of our proposed definition.

Of more significance are the reasons for the similarity between our proposed definition and the report of the "Future of Farming in Washington State." Certainly this definition is reflective of the common understanding of what agriculture is. More importantly, however, is that this understanding is supported by clear, abundant, and compelling documentation within Federal, State, and King County Codes, as well as many public ancillary statements and pronouncements. We won't take time to cite the relevant codes, but we have had an attorney collate some of these documents which we are submitting today to the commission as a written addendum to our public testimony.

At the present time, land uses such as gun ranges, sports fields, equestrian facilities, golf courses, dog kennels (etc.) exist on land designated for agricultural production. Although we do not believe these kinds of land-uses are agricultural, we see these existing facilities to continue on both now and in the future. But we also believe that as we look to the future of agriculture in King County, new endeavors on lands that have been designated specifically for agricultural production should be land-uses that result in the commercial production of agricultural products.

2. What conditions should be applied to new agricultural structures in the APD floodways?

Last summer when the recommendations of the Snoqualmie Valley Flooding and Farming Task Force were presented to Council for approval, we objected to one of the sixteen recommendations—the one that allowed new agricultural accessory structures in the APD floodways.

It will be remembered that the Snoqualmie Valley Flooding and Farming Task Force was initiated by Councilmember Kathy Lambert at the request of members of SVT. It was SVT representatives to this Task Force that introduced and argued persuasively that new accessory, agricultural structures should be allowed in the floodways. So it was extremely difficult and, frankly, awkward, for us to end up having to repeatedly speak in opposition to the ordinance we initiated, we had argued strongly in favor of, and that we wanted so badly.

The reason for our opposition to this ordinance was that we feared (and still fear) that without a clear and operative definition of "agriculture," new buildings in the future could be constructed to support non-agricultural activities in the floodways of the APDs.

We are thankful that Council responded to our concerns last summer by amending the legislation regarding those structures to a limit of 5000 square feet in size. We are even more thankful that Council has asked the Agricultural Commission to try to sort out these issues, and that the commission has established the process we're involved in today to find ways to address our concerns.

Our recommendation to the Agricultural Commission regarding new agricultural accessory buildings in the APD floodways is this: First, we ask the Agricultural Commission to recommend that Council adopt our proposed definition of agriculture in the APDs of King County. Second, we ask that, predicated on that definition, the Agricultural Commission recommend further that Council amend the ordinance allowing these structures by adding these words: "the use of all new agricultural accessory structures in the floodways of the APDs be shall be for agricultural purposes."

If for some reason Council does not adopt a definition of agriculture along the lines of our proposal, that is, if we fall short of a definition of agriculture that states something consistent with "agriculture is either (1) the commercial production of food and forage products which are grown for the end-use of human consumption, or (2) the commercial production of fiber products," then

we would strongly urge the Agricultural Commission to recommend to Council that it extend the 5000 square foot limit on the size of future agricultural accessory structures in the floodways of the APDs that now expires on January 1, 2010 to January 1, 2012.

This is not a recommendation we make lightly. Farmers desperately need accessory agricultural buildings. But we are neither desperate enough nor short-sighted enough to recommend that agricultural accessory buildings be constructed in our APDs that could serve what we, and most others, believe to be non-agricultural purposes.

It is these non-agricultural land-uses that drive the cost of land up; they have historically displaced existing farming operations, and have inflated land values to the level that land becomes unaffordable for farming. We do not want to have any part in making this happen, and we are willing to scale back our farming operations by imposing this size limit on our own accessory structures, if that is what it takes to prevent new non-agricultural structures from being constructed on APD floodway land.

Conclusion

In conclusion, we want to point out that our understanding of what agriculture should be in the future is not only supported by common understanding, laws and codes at all levels of government, findings of the *Future of Farming in Washington* research project, the only local agricultural organization in King County, and the vast majority of the residents of this County, but we believe it is also the one and only understanding of "Agricultural Production Districts" that is coherent.

What we mean is this: The land in our APDs has been designated to be preserved for agriculture. In naming these lands "Agricultural Production Districts" legislators have, by the very choice of this specific name, said these districts are established for the purpose of "agricultural production"—the name says what it is, and what it's for. But if we grant agricultural production, then there must be agricultural products.

Each of the non-agricultural uses of land we mentioned earlier—sports fields, dog kennels, horse facilities, golf courses, shooting ranges, etc.—have this in common: none of them produce an "agricultural product." What agricultural product could possibly be named in any of these worthy, but non-agricultural, endeavors? On the other hand, each of the agricultural uses that fall within our proposed definition of agriculture does have a nameable, agricultural product. Our question is, "how does one make sense of having an 'Agricultural Production District' if it doesn't mean that this area is a 'district' in which there is 'agricultural production'?"

It seems to us that we should either dissolve the APDs, or let them be what they were designed and named to be—places that commercially produce agricultural products. What we should not do is alter the unquestionable intent of the legislators who established our APDs.

We want to conclude our testimony by reiterating that our proposal regarding an operative definition of agriculture has no bearing on endeavors that now occur in designated APDs—whether they are agricultural or not. Our proposal is most certainly not a suggestion about closing down any *existing* activities in our APDs, now or ever. Our recommendations look to the "future of agriculture," which is what the Agricultural Commission has enjoined us to do.

We also want to emphasize that our recommendations regarding agricultural accessory buildings are only relevant to lands within those areas of designated APDs that are also designated as FEMA "floodways." Our recommendation regarding agricultural accessory buildings has no bearing, for example, in the majority of the Enumclaw APD, which lies outside the FEMA floodway, nor has it any bearing in other APD lands that are not in the FEMA floodway.

Summery of actions requested by SVT

We are asking that the Agriculture Commission recommend:

King County Agriculture Program

•**Livestock Program** – This program supports the raising and keeping of livestock in the county in an environmentally sound manner. Provides technical assistance on compliance with the county's Livestock Management Ordinance: manure management, stream and wetland setbacks; livestock densities, and clean water diversion. The Livestock Program includes cost-share assistance for implementing best management practices with a farm management plan.

•**Agricultural Drainage Assistance Program (ADAP)** – ADAP provides technical and financial assistance to farmers to help them maintain agricultural watercourses to improve drainage of fields while preserving water quality and avoiding harmful effects to fish.

•**Farmland Preservation Program (FPP)** –The FPP began in 1979 when voters approved a $50 million bond initiative which has permanently protected over 13,000 acres of prime county farmlands. Property owners voluntarily sell development rights and agree to covenants that restrict their land use to agriculture or open space and that limit housing density. The county holds the development rights in trust on behalf of the citizens. The program monitors compliance with the covenants, reviews permits and other proposed activities, and continues to secure grant funding to add to the acreage protected.

•**Agriculture Commission** – The Agriculture Program provides assistance to the Agriculture Commission, which advises county staff, the Council and Executive on topics related to agriculture. The Agriculture Program staff members plan and organize meetings, identify and research issues, and assist the commission in communicating their decisions and implementing their annual work program.

•**Agriculture Permit Team** – The Department of Development and Environmental Services (DDES) sponsors an inter-departmental, interagency team that reviews county code and policy as it affects farmers. In addition to DDES, the team includes Public Health, the Agriculture Program, and the King Conservation District. The team addresses individual permit and code enforcement cases and makes recommendation for improvements in the permitting process and regulations so that they are more agriculture-friendly.

•**Puget Sound Fresh** – King County initiated Puget Sound Fresh in 1997 to encourage consumers and businesses to purchase products grown in the 12 counties that touch Puget Sound. The county has since transferred the program to Cascade Harvest Coalition. Agriculture Program staff continue to manage the website and participate in the program's marketing activities. King County is the primary financial supporter of the program.

•**Farmers Market Support** – Staff consult with groups starting new farmers markets, work with market managers on best practices, management issues, business operations, and Health Department coordination, and identify opportunities to work together (such as cooperative marketing efforts).

•**Economic Development** – The Agriculture Program staff participate in a number of groups that support the economic viability of farming through the development of farming infrastructure, improving access to markets, providing education to farmers, and helping new farmers get started.

•**Farmbudsman Activities** – Staff provide direct assistance to farmers on land use, building, fire, road, and health code issues, on technical permit questions; on flood recovery, poor drainage, debris slides, impacts from neighboring businesses and residents, requests for conservation easements, etc. Staff work with other agencies to implement balanced solutions for farmers to meet codes and resolve enforcement cases.

• **Land Use Policy** – Staff participate in the County's Comprehensive planning to ensure that Agricultural land use is protected. Activities include reviewing development proposals, easements, and condemnations related to the designated Agricultural Production Districts and the FPP and encouraging appropriate action. Staff negotiate resolution of the many controversies between agriculture and other mandates; such as fish, floods, transportation, wetland mitigation, value added infrastructure, direct marketing, and health regulations.

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Appendix M.

Postcard of meeting notice

The King County Agriculture Commission invites your ideas for the FARMS Study

Future of Agriculture: Realize Meaningful Solutions

You are invited to attend any of these meetings

Jan. 8, 2009 7 p.m. – 9 p.m.
Carol Edwards Center, Madrona Room
17401 - 133rd Ave NE, Woodinville

Jan. 22, 2009 7 p.m. – 9 p.m.
Carnation Elementary Multi Purpose Room
4950 Tolt Ave, Carnation

Feb. 12, 2009 7 p.m. – 9 p.m.
Auburn City Hall Council Chambers (1st floor)
25 West Main St, Auburn

Mar. 12, 2009 7 p.m. – 9 p.m.
Enumclaw High School - Commons
226 Semanski St S, Enumclaw

For more information and other ways to share your ideas

For questions contact
Steve Evans
206-296-7824
steve.evans@kingcounty.gov

If you would like to offer your ideas online, please visit
www.kingcounty.gov/wlr

King County

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Alternative formats available.
Please call 206-296-6519
or TTY: 711

0810farmsPCARD.indd wgab

Appendix N.

Agriculture Friendly Regulations

Regulations

Accomplishments

Since its inception, the Agriculture Commission has advised King County on regulatory issues that affect commercial agriculture. The county has made significant progress on addressing many of the issues raised by the commission and other members of the agricultural community. As a result of this work, commercial agriculture has benefited from many regulatory changes, including:

- The Livestock Management Ordinance
- Allowing agricultural ditches to be maintained without a county grading permit
- Allowing wineries on Agricultural-zoned properties
- Flexibility in reducing critical areas buffers for agricultural developments
- Additional opportunities for on-site sales, processing, and storage of agricultural products
- Demonstration Ordinance to allow farm pads
- Allowing agricultural accessory structures in the floodway.

In addition to regulatory changes, the county has offered cost-share incentives and technical assistance for implementation of farm plan Best Management Practices and meeting the regulatory requirements for drainage maintenance and farm pad construction. Recognizing that permit fees were a challenge to many farmers, the county capped the cost of clearing and grading and land use permits for farmers and reduced the lower hourly permit fee for agricultural buildings.

In 2005, the Department of Development and Environmental Services (DDES) took additional measures to address the frustrations many rural residents, including farmers, faced in obtaining permits or responding to code enforcement complaints. DDES began to offer two free hours of technical assistance at the beginning of each day to respond to inquiries from rural residents about zoning, critical area, clearing and grading, and stormwater regulations. They hired a Rural Permit Coordinator to serve as a single point of contact for rural applicants and assigned two ecologists from the critical areas staff to provide free technical assistance. These outreach staff have worked closely with King Conservation District (KCD) staff in implementing the flexibility provided in the Critical Areas Ordinance for buffer reductions. This effort has proven successful in helping farmers. One of the ecologist positions has been eliminated in the 2010 budget, but DDES continues its efforts to provide assistance to farmers and other rural applicants.

At the end of 2006, with the support of the KCD and the Agricultural Commission, DDES convened an Interagency Agricultural Permit Team. The team was composed of staff from DDES, KCD, the Health Department, and the Agriculture Program. Staff from Rural Economic Development and other programs in the Department of Natural Resources and Parks also participate. The Agricultural Permit Team has enabled DDES to work collaboratively with other agencies to resolve permitting and enforcement issues.

An important component of the permit team's work has been getting information out to the public. The Agriculture Commission and the KCD co-sponsored and facilitated permit and flood preparation workshops in the Agricultural Production Districts (APDs). DDES staff held workshops for Vashon-Maury Island and equestrian owners. DDES also published a Technical Assistance Bulletin on agricultural permits.

The team continues to discuss regulations and policies that are difficult to implement. These include those regualting development on alluvial fans, fire code requirements for barns, siting of farm pads, and enforcement related to horse washing facilities. Another measure under consideration by DDES is the development of an Agricultural Commercial Building permit process. The permit team is also working on the difficult task of integrating state, federal, and local permits.

Accomplishments of the DDES Agriculture Permit Team

	Permit Process Improvement	Written Product	Education and Outreach	Issue Identification and Analysis	Code Development	Policy Development	Effective Compliance
FALL 2006							
1. Drainage Review for Agricultural Permits	■						
2. CAO/Grading/ FEMA Issues for Farm Pads	■			■	■	■	
3. "New Agricultural Regulations, Permit Process Changes" - presentation to Enumclaw Forest and Foothills Recreation Association	■		■				
4. Types of Farm Buildings Permitted in APDs				■			
2007							
5. Individual Permit resolved	■			■			
6. Meeting with Agriculture Commission			■			■	
7. Individual Permit resolved	■					■	
8. "Interagency Ag-Training"							
9. Individual permit resolved	■					■	
10. "Ag Permit Process" workshop – Carnation	■		■				
11. "Ag Permit Process" workshop – Enumclaw	■		■				
12. Individual Compliance Action Agreed Upon				■			■

	Permit Process Improvement	Written Product	Education and Outreach	Issue Identification and Analysis	Code Development	Policy Development	Effective Compliance
13. Meeting with KCD, Agriculture Commission, DDES, WLRD, landowners			■				
14. New horse operations and Farm Plans – DDES, KCD, Agriculture Program	■			■	■		
15. Septic Repair versus New Septic and CAO – Health and DDES	■			■	■		
16. Permit Exemptions for Structures				■			
17. Adopt Snohomish Co. 6 interpretation of hog fuel in floodplain				■			■
18. Individual TUP Issued	■						
19. Individual Compliance Action Resolved				■			■
20. 10 Shoreline Exemptions issued rapidly for Farm Pads	■	■					
21. Individual Permit Resolved				■			■
22. Agreement on code change for Wineries				■	■		
23. Individual Compliance Action Resolved.				■			■
24. Collation of Permit Types and Use in APDs		■			■		
25. Individual Compliance Solution							■

	Permit Process Improvement	Written Product	Education and Outreach	Issue Identification and Analysis	Code Development	Policy Development	Effective Compliance
26. Identify issue: Ordinance allows concept but other codes will not allow - Health, DDES					■		
27. Identify Issues/Solutions for Task Force	■				■	■	
28. KCD capacity on farm plans	■			■			
2008							
29. Ag Permits Technical Assistance Bulletin		■					
30. Interagency approval of Flood-Farm Task Force Report		■		■	■	■	
31. "Horse Property Workshop"			■				
32. "Permit Workshop" for Vashon – Agriculture Program			■				
33. Individual Violation: Accurate information to each party							■
34. Decision on Scope of Farm Plan Rule – Agriculture Program, KCD, DDES				■		■	
35. Coordinated Agreement and SEPA for Shoreline Master Plan Update for Farm Pads					■	■	
36. "Flood Preparedness Workshop" – Carnation	■		■				
37. Identified use issues				■			

	Permit Process Improvement	Written Product	Education and Outreach	Issue Identification and Analysis	Code Development	Policy Development	Effective Compliance
38. Two Emergency Farm Pad Permits	■						
39. Identify issues regarding segregations, non-tillable surfaces				■			
2009							
40. Identify issues/comments on FARMS Report				■			
41. Factors Related to Size of Agricultural Buildings in Floodway				■	■	■	
42. Review FARMS Public Meeting Comments related to DDES	■			■		■	
43. Contribute to ADAP Streamlining (in process)	■			■		■	
44. Confirm Comp Storage Methodology for Farm Pads in 2009	■					■	■
45. Refine Rural Economic Strategies				■		■	
46. Flood Recovery Issues in Snoqualmie; rehabilitation of two farms	■		■	■			■
47. "Farm Pad Workshop" - Preston	■		■				■
48. Interagency Discussion of Shoreline Master Plan & Agriculture				■		■	

	Permit Process Improvement	Written Product	Education and Outreach	Issue Identification and Analysis	Code Development	Policy Development	Effective Compliance
49. Howard Hanson Flood Preparedness Planning				■			
50. Issues related to Wastewater from Horse Washing Facilities				■		■	
51. "Three Flood Preparedness Workshops" – Green River Valley	■		■	■			■
52. Identify Commercial Agricultural Building Permit Process Issues				■			
53. Two Code Compliance Cases Slaughter Facilities				■		■	■
54. Development Issues on FPP Parcels in Enumclaw APD				■		■	
55. Changes to CAO for Farm Pads		■			■		
57."Farm Pad Permit Pre-APP Workshop" in field	■		■				■
58. Expedited Farm Pad Permit Process	■						■

Regulatory Issues Identified by the Agriculture Commission

The Agriculture Commission has created a list of regulatory issues based on input from farmers, rural land owners, stakeholders, and commissioners over the years. The priority was established by the Agriculture Commission, based on what they heard at the FARMS public meetings.

Although many of the issues are addressed in the *FARMS Report*, the list has not been evaluated by King County to determine if particular issues are valid or require regulatory changes. The issues included in the list were chosen by the Agriculture Commission alone, without endorsement by King County.

Protecting the APDs and Farming in the APDs

High Priority:

- Drainage from upslope development onto the APDs
- The effects of flooding in the APDs
- Streamlined ADAP (Agricultural Drainage Assistance Program)
- Alluvial fan deposition below areas that are cleared and developed
- Low-cost remediation of debris slides on alluvial fans
- Planting of farmland as mitigation for buildings or other infrastructure in "grazed wet meadows"
- Production for food and fiber through regulations and incentives, including finding and using mechanisms that discourage or prevent residential estate development on farm land
- Barriers for managing water
- Dredging of the Tolt River Fan and gravel bars in the river to increase its capacity and reduce the likelihood of flooding
- Voluntary enhancement of habitat areas in the APDs

Lower Priority

- Reservoirs upslope of farms to reduce the amount of water flowing down streams into the APD in order "to take top off floods"
- Prevention of direct discharges to the river from large developments in the Snoqualmie

Ag Friendly Regulations for Farmers

High Priority

- Farmworker housing
- Farm pads large enough to accommodate future expansion of the agricultural operation
- Redefine wastewater/sewage from on-farm processing so that it can be used for irrigation and not be considered "industrial wastewater"
- Milking parlors and other farm infrastructure on farm pads
- Beavers and removal of beaver dams that are causing drainage problems

Medium Priority

- Compensatory storage restrictions on farm access roads, manure bins, and other farm infrastructure in the floodplain
- Protection from damage caused by coyotes, deer, elk and other animals

Lower Priority

- The 200 square foot limit of agricultural structures that can be constructed without obtaining a permit
- Permitting requirements for animal waste containment
- Size of manure storage facilities allowed without a permit

- Replacement of old houses in a floodway without the rule that it must be done within a year of the house being destroyed
- Restrictions to wells
- Allow existing septic systems to remain within the floodplain by revising the approach to "repair" versus "new" systems
- Fire code and temporary labor thresholds that require expensive sprinkler systems
- Health code regulations regarding public use of farms for activities such as education and ecotourism
- Limitations on sewer hookups in APDs

How the Regulations are Applied

- Continue the work programs of the Rural Coordinator, CAO assistance, and Agriculture Permit Team to improve agriculture-appropriate permit process and code compliance resolution
- Time, process, and cost required to obtain necessary agricultural permits
- Cost of residential permits for operating farms
- A less compartmentalized agricultural permit track that does not treat infrastructure on an existing farm as "new development," including a permit for agricultural buildings.
- Work with the Army Corps of Engineers to reduce the time it takes to obtain permits
- Alternative building materials for some small agricultural structures

King County

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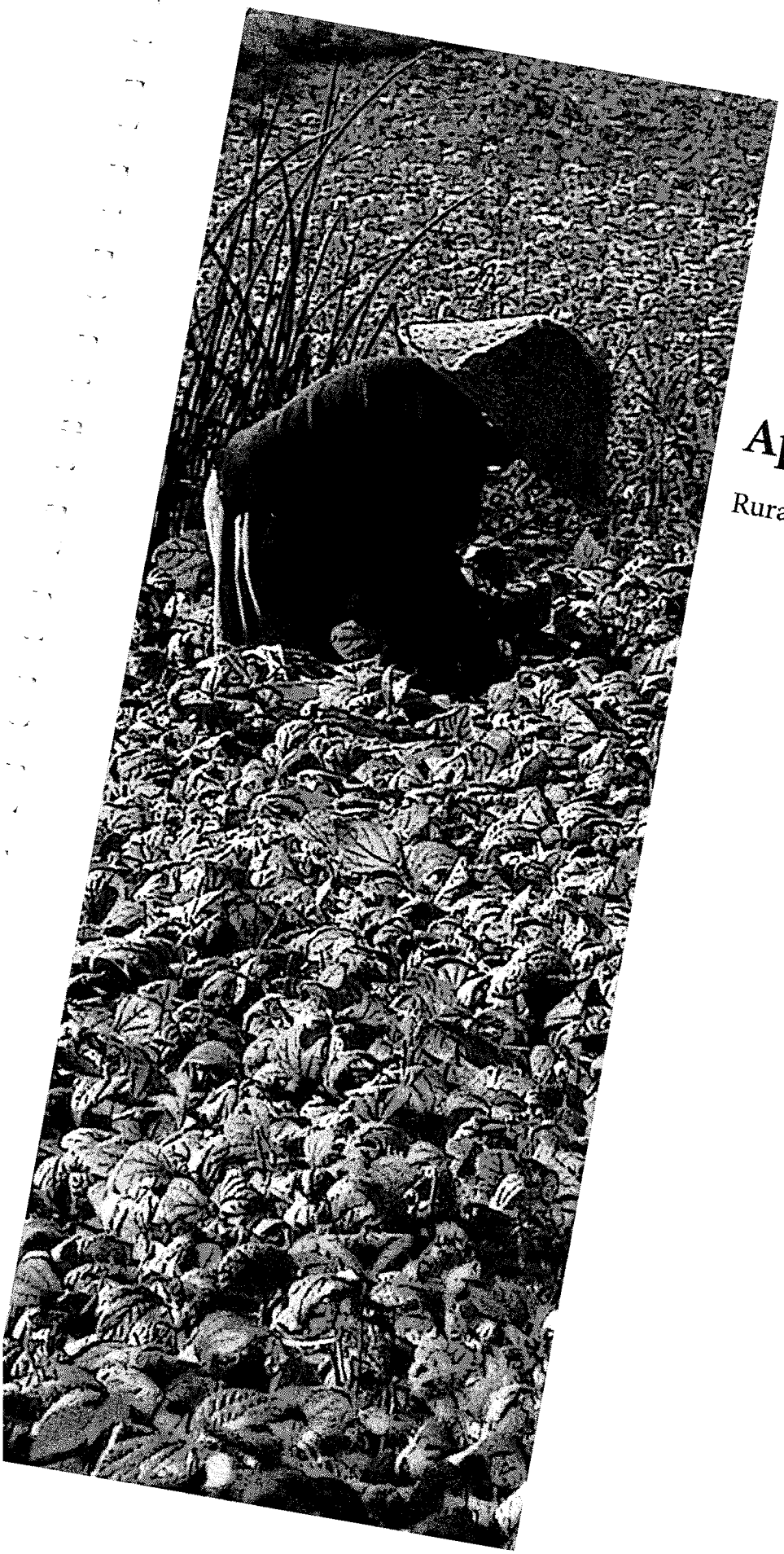

Appendix O.

Rural Economic Strategies

Summary / Rural Economic Strategies / Foundation and Agriculture Cluster Strategies and Actions / Oct. 2009

RES NUMBER	COMP PLAN POLICY	STRATEGY	ACTIONS [to be implemented by OSPPM, BRED, and/or the RES Coordinator]
RES MISSION: Sustain and enhance the long-term economic viability of the Rural Area and Natural Resource Lands.			
	RES Goal 1: Support the diversity and richness of the rural economy by effectively engaging farmers, foresters, rural business owners, rural communities, and rural related organizations in an on-going dialogue.		
	RES Goal 2: Implement the intent and policies of the King County Comprehensive Plan to support a sustainable and vibrant rural economy.		
	RES Goal 3: Promote opportunities for rural residents to both live and work in the rural area.		
Foundation Strategies			
RES-FS1	ED-501, R-102	**County Department Application:** County departments recognize the importance of sustaining the rural economy and consider the applicable Rural Economic Strategies during development and implementation of their respective strategic plans, policies, and programs.	Continue to coordinate with county departments to ensure that existing and new policies, programs, and projects address and are responsive to rural needs, by participating on interdepartmental policy and project teams and departmental and/or county-wide strategic planning efforts.
RES-FS2	ED-501	**Advocacy:** Function as an advocate for, liaison with, and technical specialist to ensure that the interests of the rural economy are considered during policy, program, and regulatory development at all levels of government and by rural related organizations throughout the county and Puget Sound Region.	Continue to ensure that the interests and needs of the rural economy are represented in meetings and when reviewing documents regarding policy, program development, and regulatory review and or changes, by continuing to respond to rural issues and coordinating with both internal and external groups and organizations.

RES-FS3	ED-503(b), R-206, R-209, R-211	**Policy and Regulatory Support:** Ensure existing and proposed changes to county policy and regulations are written and implemented to provide the flexibility needed to sustain the economic vibrancy of rural businesses.	Continue to coordinate with county departments, particularly DDES, DNRP, the Agriculture and Rural Forest Commissions, and rural Unincor-porated Area Councils, to ensure that existing and new policies and regulations are responsive to rural business needs, by 1) monitoring and evaluating rural economic impacts of proposed policy and regulatory changes, 2) ensuring rural involvement in the review of applicable proposed changes, and 3) initiating internal discussions of possible changes based on rural concerns and/or input.
RES-FS4	ED-503, R-102	**Communication:** Promote effective communication and maintain an on-going dialogue with rural residents, businesses and related organizations to exchange ideas, inform, and facilitate solutions to identified needs, issues, or concerns in the rural area.	Continue outreach to and dialogue with rural residents by 1) attending rural related organization meetings, 2) providing input for informational newsletters and the rural services website, and 3) responding to requests for information.
RES-FS5	ED-503(b), R-101	**Partnerships:** Continue, strengthen existing, and initiate new collaborations when necessary to encourage resource-based and compatible economic development in rural areas of the county and the Puget Sound Region.	Continue to participate in partnerships with individuals and organizations that support or enhance the viability of the rural economy.
	ED-503(c), R-101, R-603	1) Agriculture and Rural Forest Commissions and the rural Unincorporated Area Councils.	Continue to work with and support the programs and projects related to the enhancement of the rural economy by coordinating with county recognized commissions and councils.

	ED-107, ED-401, R-102	2) Rural communities, cities, and organizations that represent or impact on rural area interests (especially in areas not represented by an unincorporated area council).	Continue to work with and support the programs and projects related to the enhancement of the rural economy by organizations and entities within the county by 1) continuing to initiate contact, 2) raising rural issues with appropriate groups, and 3) partnering on economic enhancement projects.
	ED-106, ED-402, R-201, R-204, R-214	3) Puget Sound counties and regional organizations.	Continue to work with and support the programs and projects related to the enhancement of the rural economy in adjacent counties and throughout Puget Sound by 1) continuing to initiate contact, 2) raising rural issues with appropriate groups, and 3) partnering on economic enhancement projects.
RES-FS6	ED-201	**Business and Technical Assistance:** Strengthen existing and initiate new collaborations with professional organizations to provide rural businesses with business and technical assistance, resources, training, and networking opportunities.	Continue to explore and participate in opportunities to coordinate with local and regional efforts to provide business assistance, training, and networking venues for rural businesses by 1) continuing to initiate contact, 2) raising rural business needs with appropriate organizations, and 3) partnering on business assistance projects.
RES-FS7	ED-503(b), R-206, R-207, R-209	**Incentives:** Ensure rural residents and businesses are knowledgeable about and have access to grants, low-interest loans, tax, and other incentives that encourage agriculture, forest-based, compatible rural business development, and historic property redevelopment, consistent with rural character and the relevant policies.	Continue to explore and participate in evaluating existing and proposed incentives that will support rural businesses, by 1) leading an interdepartmental effort to identify countywide and regional incentives, 2) providing this information to rural businesses, and 3) continuing to solicit rural input on needs and ensuring incentive opportunities are explored by the proper entities.

RES-FS8		**Performance Management:** Identify and track rural indicators and trends to help direct policies, the rural economic strategies, and implementation actions that support and/or enhance the rural economy.	Continue to identify, develop, and monitor rural indicators and trends that will support development of county policies and the rural economic strategies as well as implementation actions to support the rural economy, by 1) leading an effort to identify measurable rural indicators, 2) soliciting input on the indicators from the rural area, 3) developing an indicator and trends report by the end of 2010, and 4) continuing to monitor the indicators to ensure that county policies and the rural economic strategies are responsive to changes in rural economic trends.
RES-FS9	ED-503	**RES Flexibility & Responsiveness:** Address changing rural business needs and guide future economic development by modifying and/or adding strategies and implementation actions as needed to reflect the evolving nature of the rural economy.	Continue to respond to evolving rural business needs by 1) exploring options for solutions to the identified needs and 2) adding or modifying strategies and action items as appropriate.
Rural Economic Cluster Strategies			
RES-AG		**AGRICULTURE**	
		Purpose: Strengthen and enhance the agriculture cluster - raising of crops and livestock and production of value-added goods - in both the Rural Area and the Agricultural Production Districts.	

RES-AG1	Chapter 3, Section VI(C), ED-501, R-204, R-205	Retain the agricultural land base of King County and strengthen the policy, regulatory, and business environment to sustain and enhance the businesses that comprise the agricultural cluster.	Continue to support and partner with the DNRP Agricultural Program, Agriculture Commission, and non-profit organizations, such as the Cascade Harvest Coalition, whose goals are related to the support and enhancement of agriculture in the county, by 1) attending meetings as an advocate for and specialist on the rural economy, 2) reviewing draft documents, and 3) providing support for agriculture related economic enhancement projects.
RES-AG2	Chapter 3, Section VI(C), ED-503, R-204, R-205,	Assist implementation of the Agriculture Commission's annual work plans and its recommendations for priority actions to retain and conserve agricultural lands for agriculture and enhance agricultural production.	Continue to support the activities of the Commission and partner with DNRP Agriculture Program staff on projects that influence or have a direct impact on the economic health of the agricultural economic cluster, by 1) attending key Commission meetings, 2) reviewing planning documents, 3) assisting in developing revised agriculture regulations to provide more flexibility for the cluster, based, in part, on the recommendations of the FARMS Report that the Commission will send to Council in late 2009.
RES-AG3	Ed-503, R-656	Support and partner with programs that provide business and technical assistance to businesses within the agriculture cluster.	Continue to support and partner with the DNRP Agriculture Program and other organizations whose goals support agricultural business and technical assistance, by 1) attending meetings as an advocate for and specialist on the rural economy, 2) reviewing draft documents, and 3) providing economic technical assistance.

RES-AG4	ED-503, R-657, R-658, R-659, R-660, R-661	Support and partner with programs that promote marketing and market development for agricultural products and value-added goods.	Continue to support and partner with the DNRP Agriculture Program and other organizations whose goals are related to the marketing of value-added agricultural products, by 1) attending meetings as an advocate for and specialist on the rural economy, 2) reviewing draft documents, and 3) providing economic technical assistance.
RES-AG5	ED-503, R-204, R-659, R-668, R-669, R-670	Solicit and respond to identified needs of the agriculture cluster and its required infrastructure to formulate policy and regulatory changes to ensure sustainable and economically viable agricultural practices.	Continue to review county policies and regulations relating to agriculture, by 1) exploring solutions to agricultural issues raised, 2) reviewing new and existing policies and regulations, and 3) promoting and ensuring rural input on proposed regulatory changes.
RES-AG6	R-656, R-657	Support and partner with programs that provide assistance to new farmers with a focus on minorities, low-income, and immigrants.	Continue to support and partner with the DNRP Agriculture Program and other organizations whose goals support providing agricultural business and technical assistance to minorities, low-income, and immigrants, by 1) attending meetings as an advocate for and specialist on the rural economy, 2) reviewing draft documents, and 3) providing economic technical assistance.

RES-AG7	ED-501, R-661	Solicit partners and support businesses or programs conducting efforts to develop secondary markets for added farm revenue, including but not limited to biofuels, manure digester systems, and agri-tourism.	Continue to support and partner with the DNRP Agriculture, green programs, and other organizations whose goals support businesses such as biofuels, manure digesters and agri-tourism, by 1) continuing to initiate contact with potential partners, 2) attending meetings as an advocate for and specialist on the rural economy, 3) reviewing draft documents, and 4) providing economic technical assistance.
RES-AG8	R-672, R-673, R-674, R-675	Educate and promote the importance of buying local produce and value-added products to all county residents and businesses.	Continue to partner with programs and projects, such as Puget Sound Fresh, that support the rural/urban interface, by 1) educating county residents about the county's agricultural base and products, 2) exploring opportunities to promote this message, 3) attending meetings as an advocate for and specialist on the rural economy, 4) reviewing draft documents, and 5) making presentations on and providing information on the rural economy.

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Needed Resources and Services

Though King County farmers have shown resilience by accommodating their operations to meet the market demands and comply with the multiple layers of regulations from the local to federal level, the farmers' comments repeatedly expressed a continued need for farmland preservation programs at the local level to protect farmland from development pressures. They additionally called for measures that promote farming as a business. The call for resources and services are a paralleled response to the challenges outlined earlier in this chapter. The major resources and services identified in the surveys were discussed in each of the public meetings (see Table 6).

Table 7: Needs Identified by Farmers

Needed Resources & Services	# of Survey References	Discussed in Public Meeting					
		Auburn	Enumclaw	Sammamish	Snoqualmie	Vashon	
Regulatory Flexibility & Efficiency	54	X	X	X	X	X	X
Prioritization of Rural Interests	52	X	X	X	X	X	X
Financial Assistance	26	X	X	X	X	X	X