

FARMS Report

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



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.



George Irwin

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



Michael Blakely

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



Ewing Stringfellow

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



Ben Kodama

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



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.



Bob Tidball

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



Larry Pickering

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



Roger Calhoon

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



Ward Roney

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



Grant Davidson

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



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-



PROLOGUE

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-

PROLOGUE

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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Appendix (separate downloadable documents at www.kingcounty.gov/ag)

- A. Ten Year Vision
- 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
- E. Agriculture Production District Land Use Category Descriptions
- F. How much land is needed to feed King County's population?
- G. Climate Change Impacts
- H. Products Commercially Grown in King County
- I. Farm and Flood Task Force Report
- J. Farmland Preservation Program
- 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

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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 agen-

cies 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 policies 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).

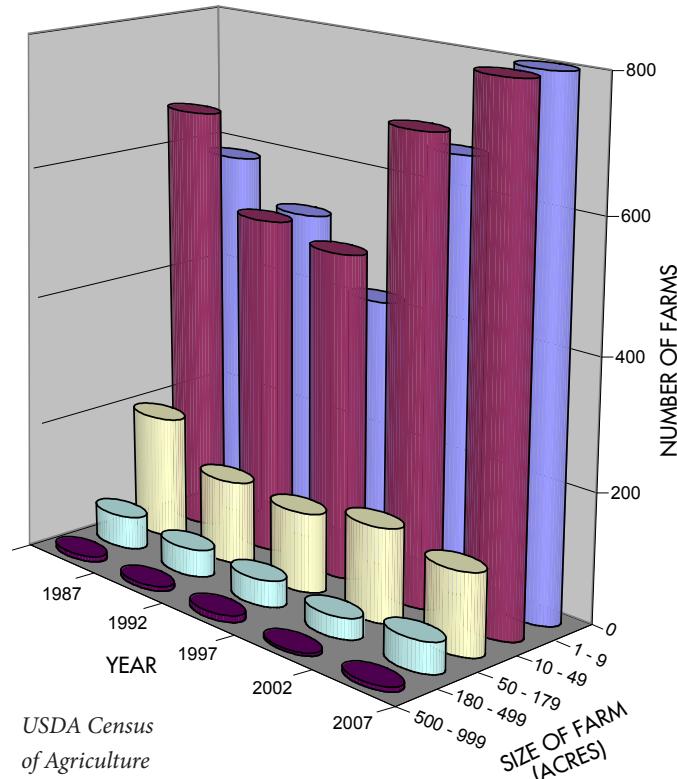
- *Having farms and farming in King County and being able to purchase food produced on farms in King County are important to most county residents.* Seventy-five percent of King County residents rated having farms and farming in King County as extremely important (a four or five on a five-point scale). 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



Agriculture in King County

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.

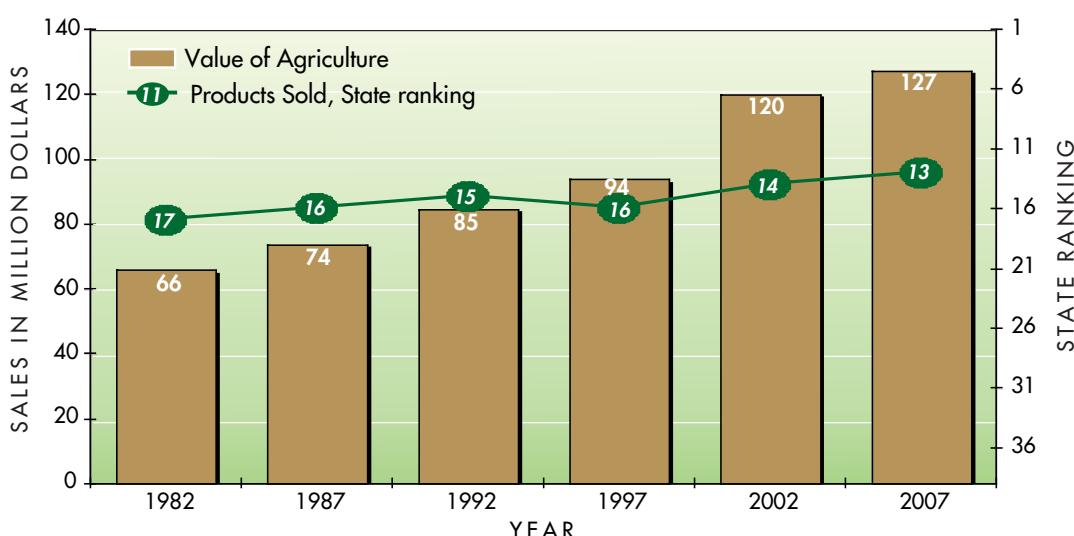


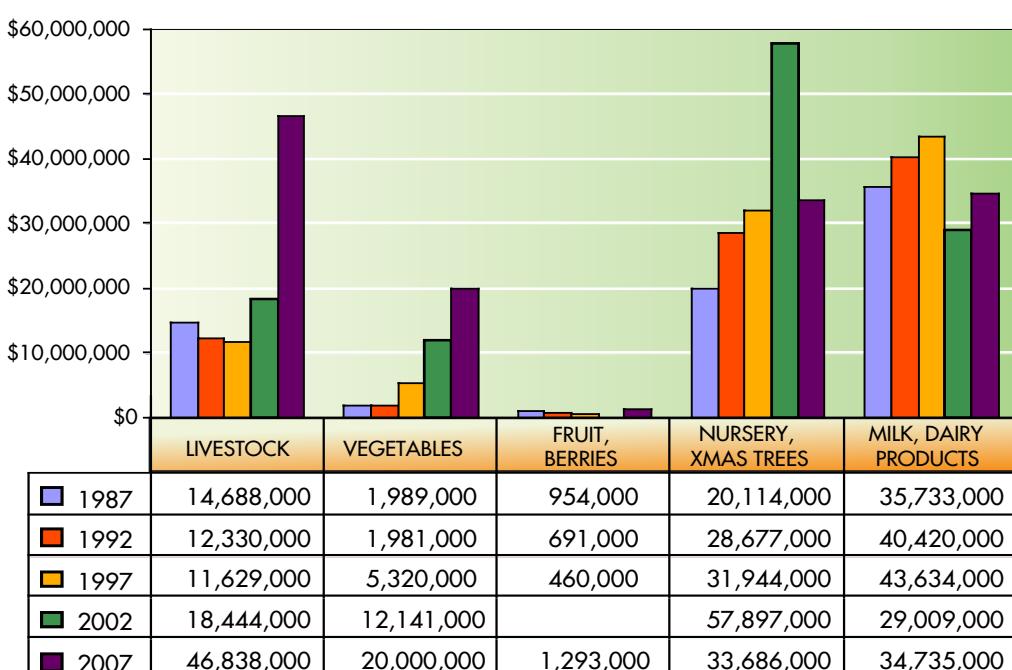
Chart 2
Value of
Agriculture
Products and
State Ranking

USDA Census of
Agriculture

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



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

manure is considered by some dairies as essential to their continued operations as more properties are converted to residences.

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.



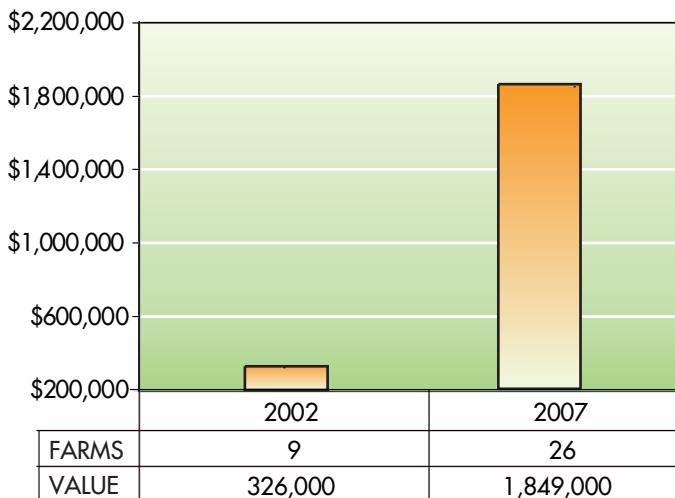
Agri-tourism

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



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)

CATEGORY	ENUMCLAW PLATEAU		UPPER GREEN		LOWER GREEN		SNOQUALMIE		SAMMAMISH		TOTALS	
	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

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%

two surveys as more land is being used for livestock, horses, and related grazing and haying.

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

Agricultural Production Districts

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.

Agricultural Production Districts

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%	

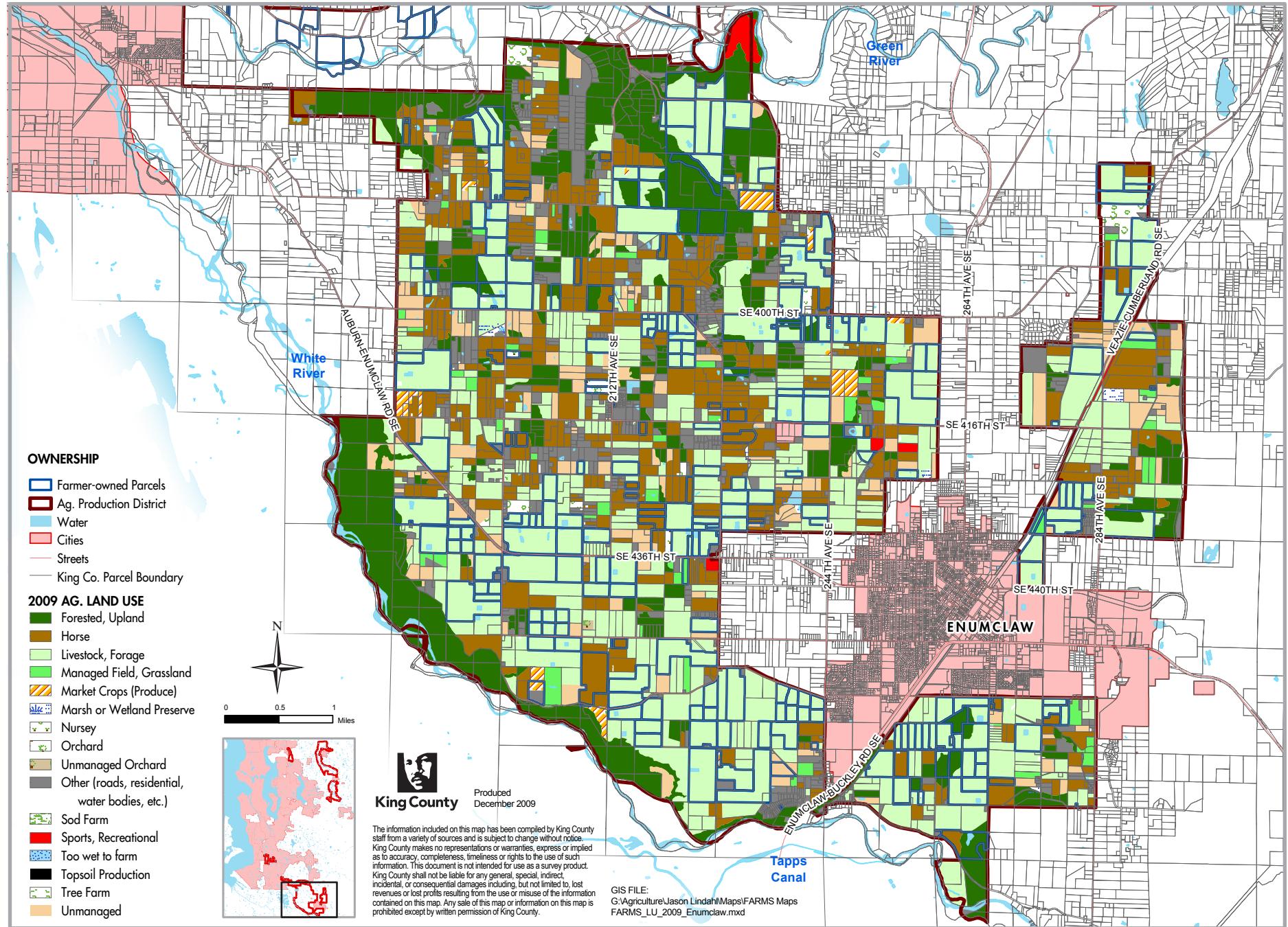
Although only 32 percent of the APD is owned by farmers, the majority of the APD is farmed. Sod Farm and Market Crops are the two main uses of the APD, comprising over 60 percent of the total acreage. Sports/ Recreation uses 16 percent of the APD because of existing facilities that predated the agricultural 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

Agricultural Production Districts

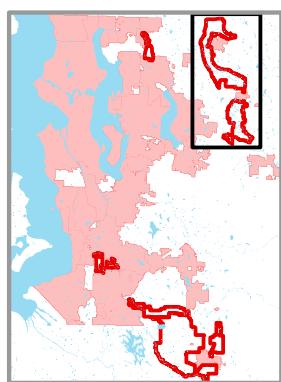
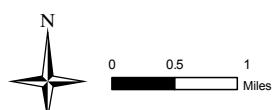
2009 Agriculture Land Use - Snoqualmie APD

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



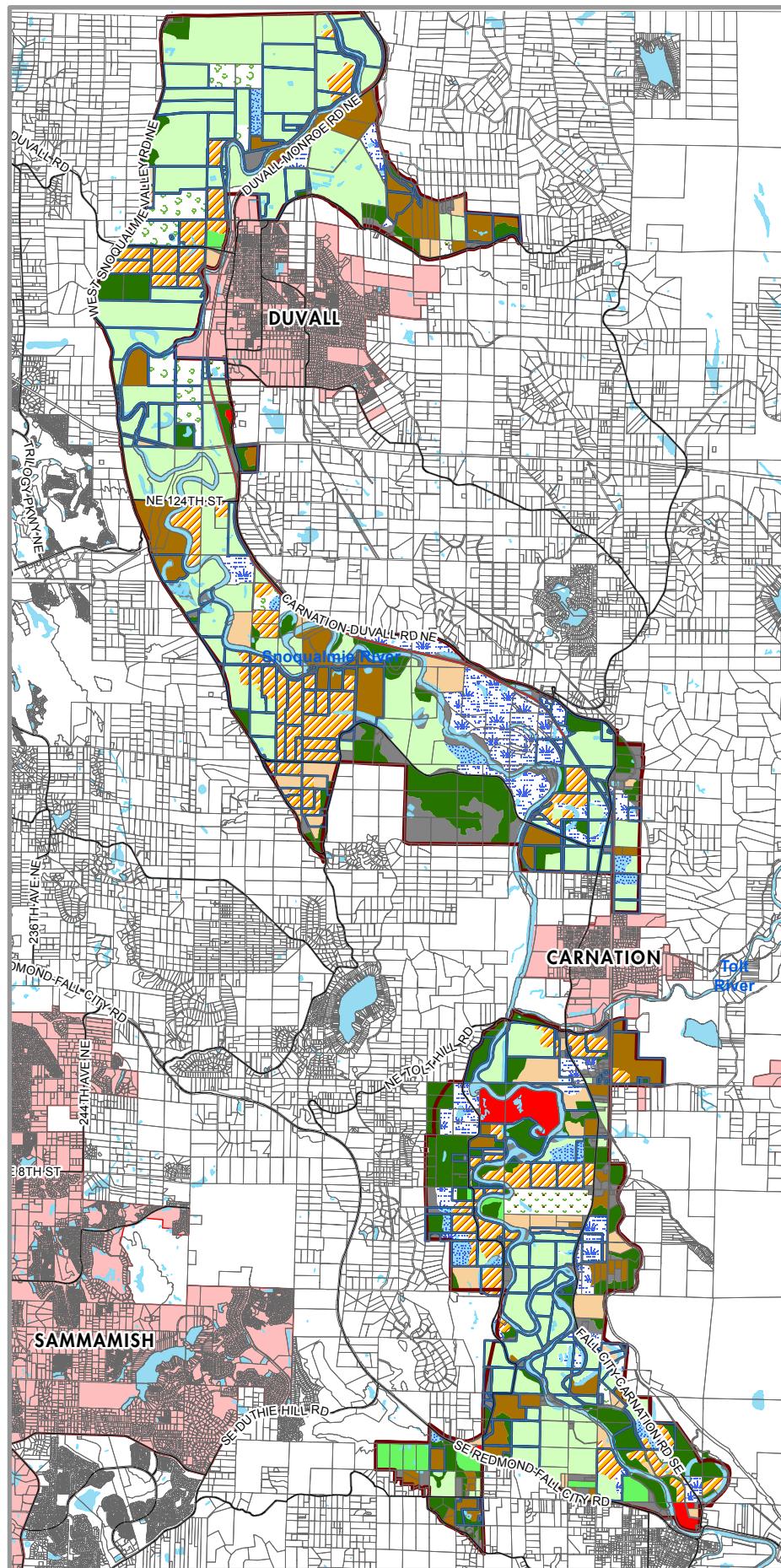
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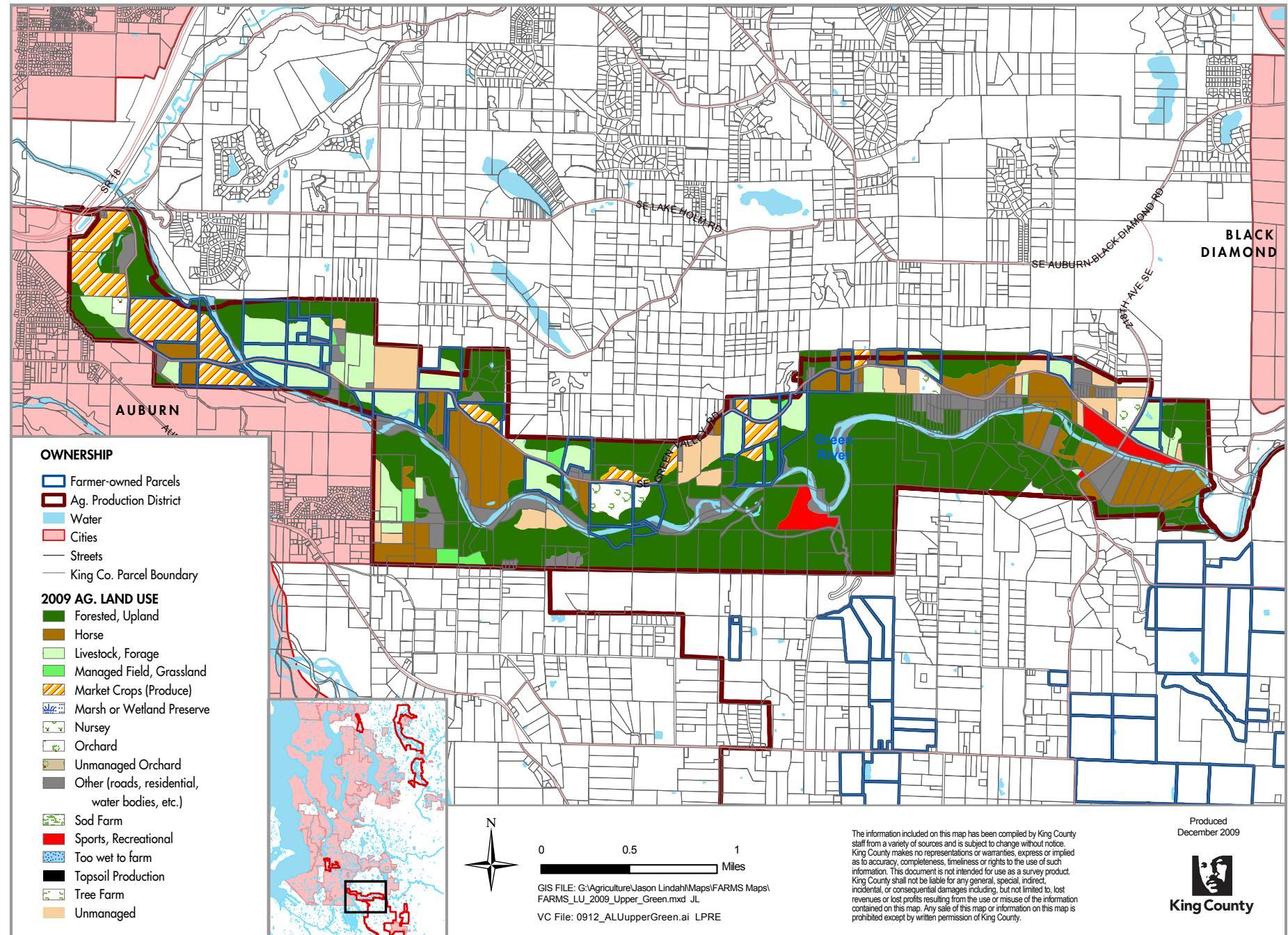
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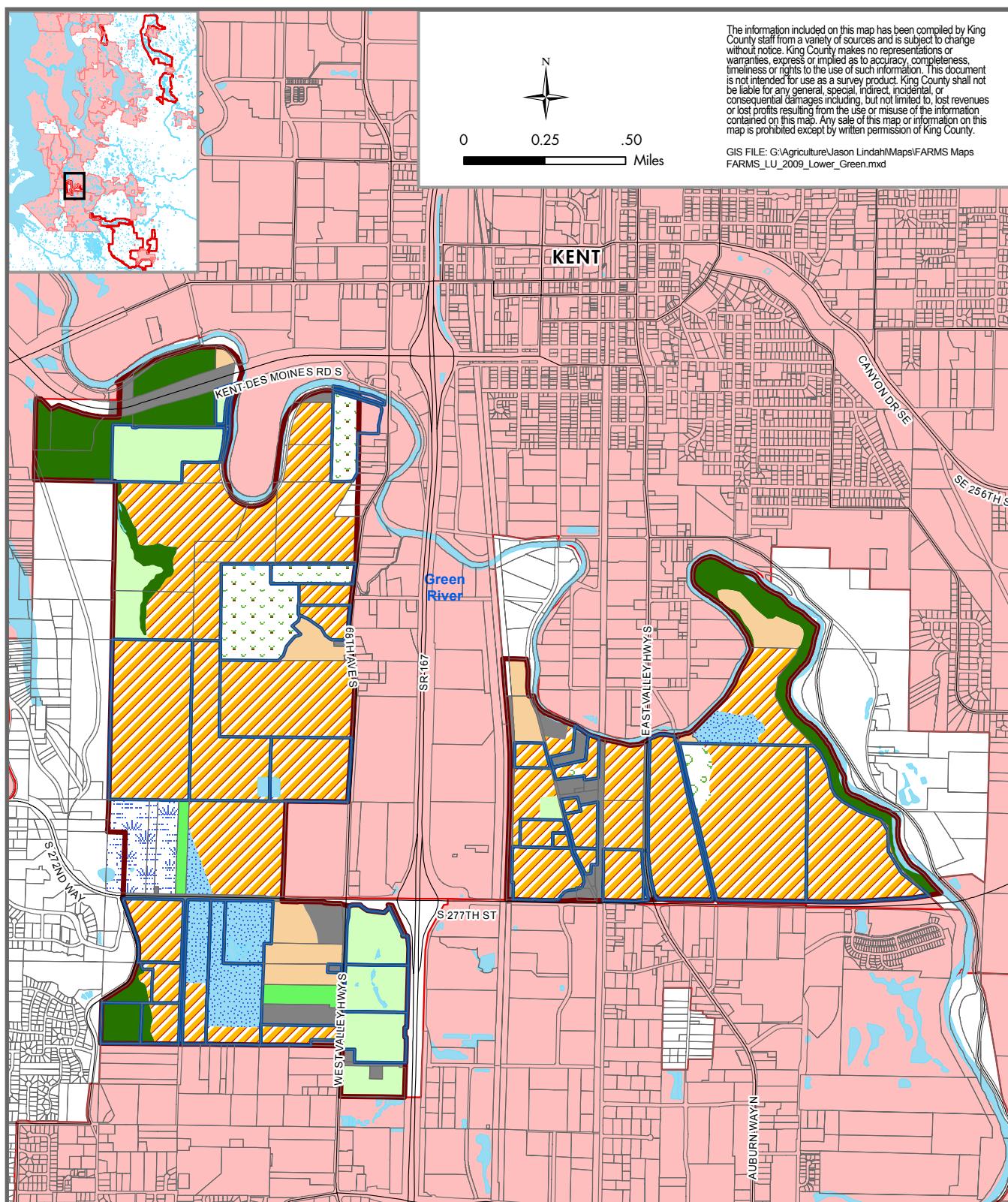
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December 2009





2009 Agriculture Land Use - Upper Green APD

Agricultural Production Districts



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

- ▢ Nursery
- ▢ Orchard
- ▢ Unmanaged Orchard
- ▢ Other (roads, residential, water bodies, etc.)
- ▢ Sod Farm

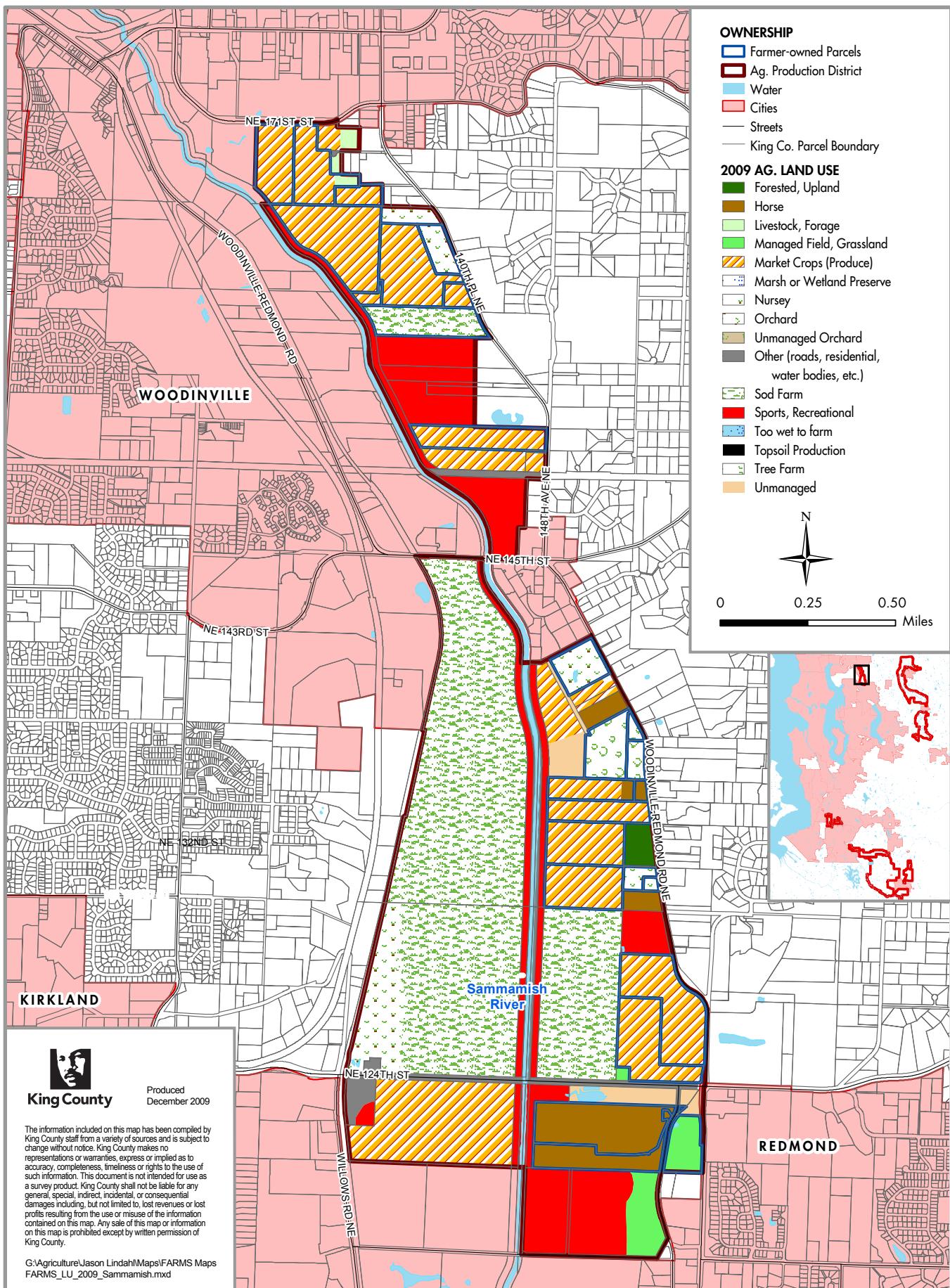
- █ Sports, Recreational
- █ Too wet to farm
- █ Topsoil Production
- ▢ Tree Farm
- █ Unmanaged



King County



Agricultural Production Districts



2009 Agriculture Land Use - Sammamish APD

VC File: 0912_ALUsammamish.AI LPRE



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 channeled 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.

Recommendations

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.

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.

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.

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



Recommendations

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

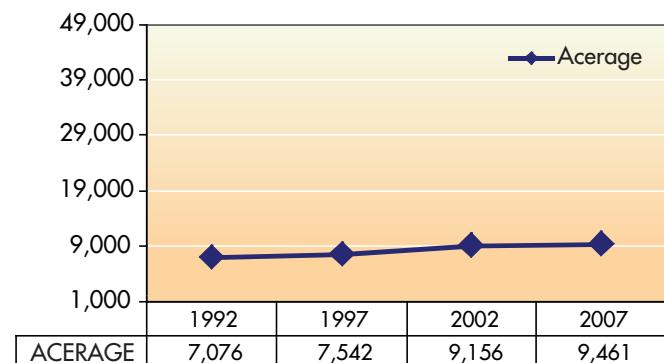
Number of farms irrigated in King County



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



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.

Recommendations

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 op-



tion 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.

Help keep our farmers farming



www.pugetsoundfresh.org

Ask for Puget Sound Fresh where you shop



A Program of Cascade Harvest Coalition Supported by King and Snohomish Counties

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).

Recommendations



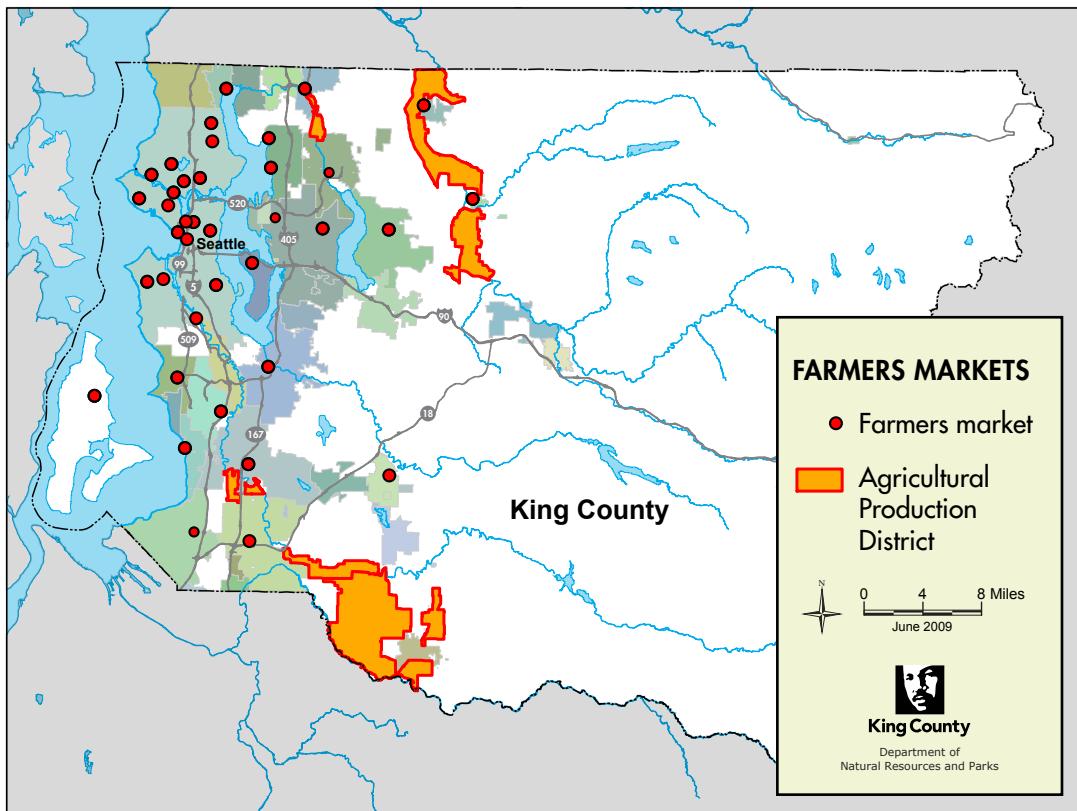
Comprehensive Plan policy R-517

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 was 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.

Recommendations

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 policies 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

Recommendations

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.

Recommendations

The definition of agriculture was a topic the Agriculture Commission discussed while developing this report. Sno-Valley Tilth (SVT), an organization representing about 25 farms in the Snoqualmie Valley, recommended the following: “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,” (For SVT’s full recommendation see Appendix K). Most of the farmers that make up SVT are food producers. They are concerned about the potential for the Snoqualmie Valley to be overtaken by horse farms and other uses that will develop expensive infrastructure and make the land inaccessible for food and fiber farmers. The issue surfaced in 2008 when the County Council considered revisions to the county’s flood regulations, allowing the construction of agricultural buildings in the floodway. Although SVT welcomed the change for food and fiber farmers, they argued against it for fear of what kind of development it might bring. The Council passed the ordinance, but to address the concerns, they called for this report on the future of agriculture and temporarily restricted the size of agricultural buildings allowed in the floodway.

The Agriculture Commission has always included representatives from many different agricultural sectors, including food crops, flowers, nursery, horses, dairy, livestock for meat, livestock for wool, and poultry. The commission and staff have always recognized the benefit of a more inclusive definition of agriculture that is supported by more segments of the population. Businesses that provide services to farmers, such as equipment repair, feed suppliers, and veterinarians, serve many different types of agriculture and depend on larger numbers of customers to stay in business. The commission is unwilling to exclude flowers, nurseries, and horses from the definition of agriculture and recommends the county use the definition recently revised by the state of Washington in RCW 84.34.

On the other hand, the commission does recognize that land suitable for growing food is limited. We also recognize that horse farms, in particular, often construct expensive barns and arenas that make the land less likely to be affordable for future food farmers. We will continue to address this issue and look for incentives to encourage food production. We would like to continue discussions with Sno-Valley Tilth, horse farmers, and representatives from many agricultural sectors to develop proposals. This will be an important topic for the Farm-City Connection Conference (see Issue Topic V).

Action: King County should work with farmers and interested groups, such as Sno-Valley Tilth, to better understand the constraints to increased food production in the county and develop programs that reduce barriers and create incentives to growing food crops and raising food-producing livestock.

Conflicts with Other Natural Resource Goals

Four of the five APDs are located in river valleys. Much of the farmland is in the floodplain. Many farms are adjacent to fish-bearing rivers or streams, which may have been channelized or armored with revetments or levees. Though highly modified, these farm acres are not paved. Many farmlands retain ecological functions and some are seen as having potential for enhancement of fish habitat, wetland mitigation, and space for free meandering of streams and rivers. Some farms are located in areas of high priority for fish recovery and flood management goals. For floodplain management needs and healthy fish populations, it can be argued that the APDs present the best opportunity to restore natural floodplain and habitat functions.

In King County, the APDs are also the only remaining clustered areas of prime agricultural soils. As agricultural lands of long-term commercial significance, they are required by law to be protected as much as are wetlands or rivers and streams. The fact that King County has protected these agricultural lands from development is the only reason they still offer such opportunity for fish, wetland, or rivers management projects.

From 1980 to the late 1990s, the majority of threats to the APDs came from proposed developments or rezones. The county took a stand and adopted strong policies to protect the agricultural designation and to ensure that no net loss of APD land occurred. More recently, additional threats come from proposals for wetland mitigation projects, salmon recovery projects, and levee setbacks.

The future of agriculture in King County depends significantly on how the protection of remaining farmland is integrated with the protection and recovery of other natural resources, water quality, and floodplain management. The county, the cities, and private landowners must decide to what degree the APDs can accommodate these multiple and often conflicting mandates.



The conflicts posed by flood, fish, and wetland projects in the APDs are addressed in the Comprehensive Plan. Several policies require that agriculture not be diminished by such projects. However, other policies in the Comprehensive Plan direct the county to pursue salmon recovery and flood management, activities that may be targeted at lands in the APDs.

Comprehensive Plan policy R-648

Aquatic habitat restoration projects or floodplain restoration projects are allowed on agricultural lands that are unsuitable for direct agricultural production purposes, such as portions of property that have not historically been farmed due to soil conditions or frequent flooding, and which cannot be returned to productivity by drainage maintenance, or where the proposed project would result in a net benefit to agricultural productivity. Agriculture must remain the predominant use in the APDs and these projects shall not reduce the ability to farm in the area. Such projects may only be allowed on agricultural lands when there are no other suitable lands available and the project is supported by landowners who would be impacted by the project and when:

- a. The project is included in an approved Water Resources Inventory Area Plan, Farm Management Plan, Flood Hazard Management Plan or other functional plan; or
- b. The project would improve agricultural productivity within the APD.

Salmon Recovery

The Ten Year Vision included a goal of making farms more fish-friendly. Many farmers have worked with county staff, the King Conservation District (KCD), and non-profits, such as Stewardship Partners, to plant buffers along streams and rivers. Many farms have farm management plans with the goal of improving practices to protect water quality, fish, and other natural resources. We recognize that farms can impact fish and water quality and are working to minimize these effects. Over 12 miles of stream banks have been planted in the Snoqualmie and the KCD has completed over 1,000 farm plans that help to accomplish this objective.

The WRIA recovery plans recognize the continuation of agriculture as consistent with salmon recovery. They recommend that for the first ten years of the plan that recovery projects in the APDs be limited to voluntary actions by farmers. However, for the long term, they propose projects in the APDs that, if implemented, could result in a loss of productive agricultural land. As the end of the first ten years of the plans is approached, the needs of agriculture and salmon recovery remain to be reconciled.

Action: Identify and measure the improvements in riparian conditions and agricultural practices related to water quality and salmon in the last ten years and work to incorporate these practices into farm plan implementation, the Agricultural Drainage Assistance Program, and additional voluntary habitat improvement projects.

Action: Increase representation of agricultural interests on salmon recovery forums.

Action: Integrate agricultural interests into salmon recovery plan updates, as was done in the development of the WRIA 7 plan.

Floodplain Management

The safest and most cost-effective way to manage a floodplain is to avoid levees and revetments and allow as much space as possible for the river to run. The wider the river corridor, the greater the storage and conveyance capacity, the greater the protection afforded to adjacent lands, and the lower the maintenance costs of the levees. In addition to the flood management benefits, there are significant fish habitat improvements that result from removal or setbacks of levees.

A long term goal of the Flood Control District is to protect the cities in the Green River valley by levee setbacks. The 2006 Flood Plan proposes a number of levee setbacks on agricultural land in the Upper and Lower Green APDs. These projects may reduce productive acreage. In the Snoqualmie Valley, the plans include a variety of projects, including home elevations, support for construction of farm pads, abandonment or relocation of frequently flooded roads, and removal or setback of levees and revetments. When revetments are not maintained it can lead to the gradual erosion of agricultural land. More dramatically, roads can be eroded away, cutting off farm properties.

Recommendations

Solutions to these issues will be complex and controversial. Ideally, decisions about floodplain management will minimize the loss of agricultural acreage and infrastructure and maximize the benefits to the remaining acreage.

Action: Address conflicts and develop solutions that enhance fish, farm and flood goals by working with existing groups.

Barriers to Buildings and Infrastructure on Farms

King County has made significant progress in recent years in improving permitting and regulations for agriculture. Regulatory issues were a major concern of farmers when the 1996 *Farm and Forest Report* was written. Since then, the county has addressed many of the concerns, adding flexibility in allowed uses, increasing the size and type of processing and sales allowed on farms, and increasing the number of farm worker housing units allowed. The county also reduced the hourly permit fee for agricultural permits in the APDs and capped the total fee for some land use agricultural permits that are needed for farm infrastructure.

In 2005, the Critical Areas Ordinance added flexibility to regulations for farmers who have a farm plan developed by the King Conservation District (KCD). The involvement of KCD farm planners in discussions on permits has done a lot to bring the farmer's perspective into the process. Since 2006, DDES has made a considerable effort at improving and providing low cost permitting services to the rural and agricultural communities in unincorporated King County. The position of the Rural Permit Coordinator, along with two full-time ecologists, have been established to provide free consulting services in the areas of zoning, permitting, and critical areas. In this effort, DDES has streamlined its pre-application process for agricultural permits.

Working with the KCD and Agriculture Program, DDES convened an interagency Agricultural Permit Team. The permit team evaluates the impacts of regulations on agriculture, addresses individual permit complaints, provides outreach and education on rules and regulations, coordinates across regulatory agencies, and works to simplify the permit process. The accomplishments of the Agricultural Permit Team are listed in Appendix N.

Despite the improvements, many farmers still raise concerns about the building permit process. They report that the regulatory system constrains their ability to add needed infrastructure. The cost and complexity discourages them from investing in their farm's infrastructure or expanding operations to take advantage of new markets, such as value-added processing and agri-tourism. In response to these concerns, DDES is considering modifying their process for agricultural permits to ensure consistency in application of regulations and processes. This will also result in increased knowledge and understanding of goals and objectives of the county's Agriculture Program by DDES staff. It should be noted that unlike other jurisdictions, DDES is a fee-supported agency that does not receive any general funds for permit reviews.

Like most agricultural areas in western Washington, extensive wetland systems existed in the floodplains of the Sammamish, Snoqualmie, and Green River APDs and in the Osceola mudflow that formed the Enumclaw APD. Many farm acres that are in agricultural production have the soil, hydrologic, and plant characteristics that classify them as wetlands and retain valuable ecological functions that wetlands provide. King County's Critical Area regulations provide considerable flexibility for farmers who are maintaining existing agricultural operations. Farmers are also allowed expansion of new agriculture into non-forested wetland buffers.

However, farmers who want to build a loafing shed, barn, farm road, or farm pad, even on a field that has been actively farmed for decades, may find they still need to comply with wetland regulations, permits, and provide mitigation for lost wetland functions because they propose to fill a wetland. Wetland functions require mitigation (compensation) for the impacts to wet-



land from these new structures and these regulations are based on a range of replacement ratios depending on the category and type of wetland. Typical mitigation includes repairing historic functions of a degraded wetland (rehabilitation) or changing the composition of the vegetation (enhancement) by replanting native plants somewhere else on the property. In some cases mitigation requirements are severe and a significant amount of farmland can be lost because of them.

King County has been able to provide some flexibility to the wetland regulations by developing farming friendly goals in the Critical Areas Ordinance. Priority goals include maintaining the productivity of the agricultural land base and economic viability of agriculture on the site and maintaining, restoring or enhancing wetlands to the maximum extent practical in accordance with the site-specific goals of the landowner. However, state and federal goals favor protection of the wetland over maintaining agricultural productivity, so the state and federal agencies do not have the same flexibility to reduce ratios. This results in an unpredictable permit outcome for farmers.

The problem is not limited to the loss of productive acres on the property where the mitigation is sited. If not designed or located appropriately, wetland projects can impede drainage of adjacent acreage. This has happened with several wetland mitigation projects in the APDs.

Comprehensive Plan policy R-617

Habitat protection requirements should not fall disproportionately on land maintained in agriculture or forestry, and the costs of such protection shall not be disproportionately placed on the owners of such land.

Farmers are asking for an agricultural building permit, with standards appropriate for their level of use. If a farm building is to have any employee or public use, it needs to be safe. However, the fire, health, and safety standards applied to farm buildings are the same as for commercial buildings in the urban area and may be beyond what is needed for a farm building. The process is also not easy or comprehensible for an infrequent user. In response to the farmers' requests, DDES is working to develop a commercial building permit for agriculture.

Affordable farm worker housing was often mentioned at the public meetings. The current code does not allow for the use of trailers or other inexpensive ways to house part-time, temporary workers. Permits for mobile homes are expensive. For many farmers, the need for farm worker housing is seasonal, between three and six months out of the year. These farmers may not want or cannot afford to construct accessory dwelling units on their property. Instead they may want to allow campers or recreational vehicles to park on their property on a seasonal basis. The zoning code allows campers and recreational vehicles on a temporary basis, but the required septic systems may be too costly for most farmers.

Regulations and the permit process are not set up to respond to innovative ideas or unconventional activities such as retrofits of barns for value-added activities, remodels needed to convert dairies to horticulture, or the use of alternative building materials to keep costs low on small sheds. One farm in the Sammamish APD, which is demonstrating innovative buildings and farm practices, has faced extremely high permit fees because their buildings are not typical. More ability to respond to new ideas without high cost is necessary to promote innovation on farms and keep them competitive with farmers in other counties.

Action: King County should join other counties to meet with the Department of Ecology and the Army Corps of Engineers to explore ways to preserve farmland, prevent conversion of APD acreage to wetlands, and reestablish some wetlands where there are opportunities that would not result in a loss of productive soils.

Action: The Department of Development and Environmental Services Agriculture Permit Team should continue to address regulatory concerns raised by farmers.

Action: Continue to develop and implement a commercial agriculture building permit and regulatory process.

Recommendations

Size of Agricultural Buildings

Ordinance 16172, which called for this report, also called for recommendations for legislation regarding the allowed size of agricultural accessory buildings. Sno-Valley Tilth recommended that structures should be allowed only for food and fiber uses and their size should be limited to 5,000 square feet until at least 2012. The Agriculture Commission considered that existing regulations, such as impervious surface limits and buffer requirements, already restricted building size. They also considered typical sizes of existing agricultural buildings and found that many are larger than 5,000 square feet. Dairies, for example, typically have barns as large as 20,000 square feet. Building size restrictions may serve as a detriment to the growth of successful farm businesses. The commission recommended that the county not adopt additional building size restrictions.

WAC 458-30-345 describes the type of advice that can be given by the advisory committee. This advice cannot include the valuation or assessment of specific parcels of land. Instead, the committee can supply the Assessor with advice on typical crops, land quality, and net cash rental assessment to assist the Assessor in determining appropriate values.

Action: Form an agriculture committee to serve in an advisory capacity to the Assessor's Office on farm and agricultural issues to the extent allowed by WAC 458-30-345. This committee could be a subcommittee of the Agriculture Commission.

Taxation

Most commercial farmers in King County are enrolled in the farm and agriculture category of the state's open space taxation program (RCW 84.34). Participating farmland is assessed at the agriculture value of the land, or current use, instead of the market value. To be eligible, the farmer must document that the farm meets the program requirements for agricultural revenue. This program, referred to as current use taxation (CUT), results in substantial property tax savings for farmers. It is an essential tool for preserving agricultural land and keeping it in production.

Despite the significant benefits of CUT, some farmers expressed concern about how the program has been monitored for compliance in the past. They also expressed concern over how their agricultural buildings are assessed. They stated that even though taxes on the land are low, the high taxes on their agricultural buildings have a significant impact on their ability to make a profit, and thereby discourage continued farming.

Ongoing discussion with staff in the Assessor's Office would be useful to ensure that the administration of the farm and agriculture CUT program is fair and equitable and that program participants are complying with the statutory requirements. State law (RCW 84.34.145) calls for the county legislative authority to appoint a committee representing the active farming community within the county to serve in an advisory capacity to the Assessor on issues related to farming.

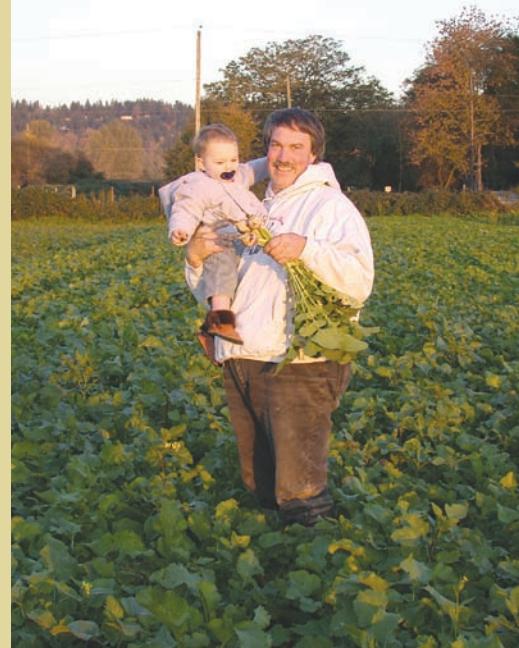


Issue Topic IV: Farmer Succession

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.



Intergenerational Transfer

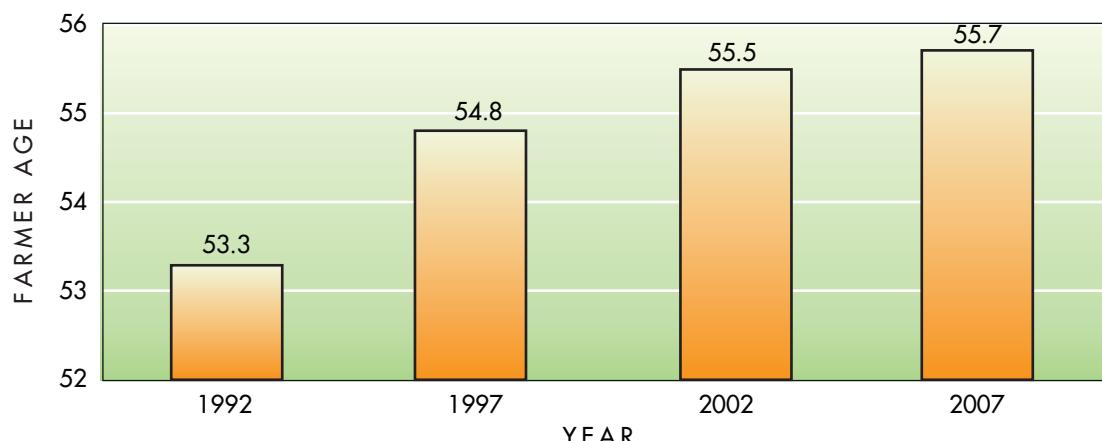
Across the nation, the average age of farmers is rising. Fewer young people are entering agriculture as a career and, according to the USDA, approximately 50 to 75 percent of all farmland is expected to change hands in the next 10 to 15 years. As indicated in **Chart 7**, King County follows this national trend.

One of the results of the 1996 *Farm and Forest Report* was the development of the Washington FarmLink program. The program operates as a matching service between an agricultural landowner and a person interested in farming. The county provided startup funding for the program but does not provide ongoing funding. FarmLink is now maintained by the Cascade Harvest Coalition, but with very little funding.

The complexity of land ownership, financing, and transitioning farmland does not allow for simple solutions. A program is required to adequately address the needs of retiring farmers who expect their land to provide retirement income and beginning farmers who may lack knowledge and experience with an agricultural career. FarmLink should be expanded to provide mentoring by experienced farmers, in which they share their knowledge and resources with new farmers. FarmLink participation should be integrated with the Farmland Preservation Program (FPP) enrollment so property owners are encouraged to transition their land to new farmers when they are ready to retire.

Chart 7
**Average Age of
King County Farmer**

USDA Census of
Agriculture



Recommendations

Action: Identify a consortium of partners to fund Washington FarmLink so it can update its database of farmers and landowners, identify needs, establish a mentoring component, and develop materials and workshops to educate aspiring farmers and farmland owners about different land tenure models and options.

Action: Link the Farmland Preservation Program and Washington FarmLink more closely.

Action: Work with partners to develop a succession planning program for farmers to help them plan for the future, create retirement accounts, and transition agricultural land and resources.

Action: King County should work with WSU to maintain a presence in the county, developing a reasonable sharing of agricultural agents across counties.

Action: Partner with existing mentoring or apprenticeship programs to provide an opportunity for experienced farmers to share their knowledge and resources with new farmers.

Action: Work with the existing high school, higher education, and other vocational programs to create training programs for new farmers.

Action: King County and Washington State University Extension should partner and work with immigrant groups to identify available land, provide technical training, and help develop marketing and selling methods.

Providing Technical Support for Farmers

Many farmers commented about the lack of technical support in the field. Traditionally, Washington State University (WSU) Extension has disseminated the research provided by the university and has provided education and assistance to farmers. Currently King County does not have a dedicated WSU Extension agent. Agents from Snohomish and Pierce Counties provide field services to farmers in King County. Farmers strongly encourage WSU to retain a commitment to assisting commercial agriculture in King County. This will take partnership funding from King County, which is questionable with the county's funding challenges.

Comprehensive Plan policy R-656

King County shall work with and provide support to the work of Washington State University Extension for technical and marketing assistance for small-scale commercial farmers.

South King County is home to growing numbers of immigrants, many of whom came from rural farming backgrounds. Many of them would like to return to farming as a way to earn a living and are starting work with King County, WSU Extension, and others. Initially the county and WSU Extension are working with two groups, one from Burundi and one from Somalia. As efforts have progressed, other groups have stepped forward and asked for assistance. The county does not have a funding source for these efforts.

Credit Access

Many of those participating in the public meetings indicated that access to credit was essential to encouraging more farmers in the future. People interested in starting or expanding a farm operation cited access to credit as a big impediment.

Higher land values create more collateral and make it easier for property owners to get loans that require equity. However, high land values make it more challenging for those who need to finance a purchase of farmland to begin or expand a farming enterprise.

Action: Work with banks, the Farm Service Agency, and emerging capital networks to develop a loan assistance program to help new and expanding farmers obtain credit for purchasing land and equipment and building infrastructure, such as barns.



Issue Topic 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 of 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.

The interest in local agriculture is primarily focused on food. Consumers want to know where and how their food is grown. They perceive local food as safer, fresher and better-tasting. Restaurants feature local products on their menus. Health planners see local food as a means to improve health through better nutrition and to combat chronic health problems, especially obesity. Advocates for low income communities want to see fresh produce and other local food available in low income communities, where food options are often limited to fast food and convenience stores. People want to support the local economy. Local, fresh food is often less energy-intensive and has lower carbon emissions than food that is packaged, prepared, and transported long distances. Local production reduces the dependence on food imported from distant countries, which can be subject to disruptions in the food distribution system caused by natural disasters or political upheavals.

The population of the Puget Sound region is expected to increase by 50 percent in the next 20 years. This will put tremendous pressure on farmland as the growing population puts competing demands on the use of land. Moreover, population growth will increase the need to preserve farmland to help feed that population. Supplying food from far-off places may be considerably more expensive as fuel costs continue to increase. It is incumbent on us today to both preserve the land we have for food production and to look for ways to encourage growing food in rural and urban areas. Furthermore, the links necessary to connect the farm to the consumer must be understood and strengthened. Comprehensive policies that strengthen urban, suburban, and rural production of food and the entire food system must be coordinated across jurisdictions.

Many agencies and organizations are involved in promoting local agriculture and food. The King County

Recommendations

Agriculture Commission and the staff of the King County Agriculture Program have focused primarily on commercial farming: preserving farmland, overcoming regulatory barriers, promoting land use policies that protect the viability of agriculture, and providing technical assistance to encourage the business of farming and farm practices that protect the environment. Our efforts are almost entirely within the unincorporated areas of the county, where the commercial farmland is located and where the county has jurisdiction. The exception is the marketing programs that connect the farmer with the consumer, but even these are primarily focused on increasing opportunities for farmers. We depend on the efforts and missions of other organizations to augment our efforts and to provide multiple connections to consumers.

WSU Extension specializes in education and brings the research and resources of WSU to the farmers. Their research in sustainable farming helps the business of farming and improves the environment. They are active in promoting small farms and immigrant farmers. Their harvest celebration farm tours bring thousands of people out to King County farms each fall. The King Conservation District provides assistance to farmers, primarily in farm planning and implementation of practices that promote the conservation of soils, water quality and other natural resources. Their grant program has also been a source of funding for the county Agriculture Program and WSU Extension farm support programs. Other public agencies we work with include the Washington State Department of Agriculture, Natural Resources Conservation Service, and Farm Service Agency.

Dozens of non-profits and other organizations partner with the Agriculture Commission and staff to support agriculture. Appendix D lists the organizations that

participated in the partner survey for this report. They include a variety of interests: organic and sustainable farming, farmers markets, technology, health, marketing and promotion, farmland preservation, education, training, restaurants, hunger prevention, and more.

Representatives from many of these groups joined forces several years ago to promote the formation of a food policy council, with the vision that all residents should have access to nutritious, fresh food that is produced and distributed as part of the local economy in an environmentally beneficial way. They recognize the complexity of the food system and believe it must be addressed comprehensively, including all the processes involved in keeping us fed: growing, harvesting, processing, packaging, transporting, marketing, consumption and disposal. In 2006, they formed an acting food policy council and are now working to be established as a regional food policy council to serve multiple counties.

To improve cooperation and communication across jurisdictions and organizations and to re-energize the farm-city connection, we recommend a conference, sponsored by all of the interested organizations, to address these and related food system concerns. The conference should expand beyond the farmers and advocates already involved and engage city governments and a broad spectrum of citizens. We would expect the conference to further the work of this report, and help to formulate the direction we should take to solve some of the more intractable problems we face. Part of the follow-up from the conference should be the development of a system to enhance continued communication among all the participants. This may be an electronic bulletin board, perhaps building on existing websites, which would allow posting of ideas, events, information, and opinions.



Action: Convene a summit of multiple organizations involved in agricultural support to prepare and plan for the conference or public event that will promote the farm-city connection.

Action: Work with existing groups to identify other ways farmers can engage with urban residents to help them understand the issues and pressures facing commercial agriculture in an urban county.

Issue Topic VI: Financial and Interlocal 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.

Interlocal Support

The public opinion survey made it very clear that King County residents, both urban and rural, support local agriculture. Commercial agriculture is located in the unincorporated area of the county, but is affected adversely by the activities in cities. There are two areas in which King County needs to engage cities in helping to ensure the future of agriculture:

- Address the impacts to agriculture that cross jurisdictional boundaries
- Develop a broader funding base to provide agricultural support services.

King County agriculture continues to be affected by the urbanization of the county. The GMA, the Countywide Planning Policies, and the county's Comprehensive Plan ensure that the remaining agricultural land itself will not be urbanized. However, the effects of development in a city are not contained within jurisdictional boundaries. The challenges to agriculture from the activities in adjacent cities include alterations to hydrology that result in flooded fields, increased traffic that interferes with farm vehicles on roads, increased lighting at night,

and complaints from urban neighbors about farm operations. The land use regulations of unincorporated King County govern uses on agricultural land, but the county has no land use jurisdiction in the adjacent cities where many of the land use impacts to farmers occur.

Since the adoption of the 1996 *Farm and Forest Report*, King County has financially supported the agriculture program and associated efforts such as Puget Sound Fresh. King County's ability to continue to fund these efforts as a local service has diminished as the unincorporated area has become smaller and the general fund has been allocated to legally mandated services, such as regional justice, sheriff, and public health. Successful agriculture is a regional service that benefits the residents of the cities as well as those of unincorporated King County. A funding mechanism that includes contributions from the cities would be an appropriate way to fund the marketing, economic development, and other efforts that help ensure local food is available to all residents of the county. Funding could also include contributions from private businesses.

Recommendations

The King Conservation District's (KCD) system of assessment is an existing regional revenue to which nearly all of the cities contribute. One of the goals of the district is to significantly improve the sustainability of working lands. Agricultural support has traditionally been a primary part of the work of conservation districts. Given the regional benefits that agriculture provides and the mission of the KCD, it could be appropriate to increase the portion of the assessment used for agricultural services. It will take discussion with cities about the benefits and needs of agriculture to garner their support for this change in how KCD grants are apportioned. Whether or not the KCD funding is the mechanism, it is crucial to increase the regional financial support for agriculture.

Action: King County should work with cities to minimize the operational and environmental impacts of urban development on farming and to promote activities and infrastructure, such as farmers markets and agricultural processing businesses, that benefit both the cities and the farms by improving access to locally grown agricultural products (Comprehensive Plan policy R-650).

Action: Broaden the base of financial support for agricultural services to encompass more funds from the cities of King County. Evaluate public-private partnerships, including options for increased King Conservation District support.

County Funding

Parts of the Agriculture Program are appropriately funded by King County utility and general fund revenue. Surface Water Management funds can be used to improve and manage the effects of surface water runoff and to improve drainage and water quality on agricultural lands. The Flood Control District funds can be used to reduce flood risk on farms and for response to flood emergencies. The Agriculture Commission would like to see more flood funds going to agricultural needs related to flood protection.

Comprehensive Plan policy R-610

King County shall employ a variety of innovative programs and incentives to help maintain and enhance resource-based industries.

King County must continue to protect its investment in the Farmland Preservation Program as the development rights that are purchased are held in trust on behalf of the citizens in perpetuity. The FPP covenants are intended to ensure that the preserved properties remain farmable and, at a minimum, this requires monitoring for compliance with the covenants and reviewing proposed activities on FPP properties. These are responsibilities that the county needs to address and which require adequate funding. A description of the FPP's management and monitoring activities is included in Section J of the Appendix.

Action: Continue to use Surface Water Management funds to improve and support agricultural drainage maintenance and water quality improvements on farms.

Action: Use general funds to manage the Farmland Preservation Program long term. If general funds are not available for this work, the county should work with cities and other organizations, including the King Conservation District, to ensure that FPP lands are protected.

Action: Continue to use Flood Control District funds to help reduce flood risks and mitigate flood damage on farms.



Multi-County Efforts

The types of agriculture in King County and the challenges it faces are similar to those of other counties in western Washington. The Puget Sound counties share similar soils, climate, growth patterns, crop diversity and markets. It is important that King County work with its neighbors to partner on programs that benefit the whole region. Working together helps reduce program costs and increases agriculture's ability to compete in the market place.

Comprehensive Plan policy R-603

King County should work with other counties to help maintain and enhance commercial agriculture and forestry by addressing challenges common across the region.

King County recognized the need to work regionally with the development of the Puget Sound Fresh and Washington FarmLink programs. Farmers from a dozen counties now participate in the Puget Sound Fresh program; the FarmLink program serves aspiring farmers and farm land owners statewide. King County recently participated in the development of a USDA certified mobile slaughter unit that now serves livestock owners in a five county region. The unit is primarily funded by the Pierce Conservation District, but resulted from the efforts of farmers and organizations from all five counties. This kind of cross-county cooperation results in efficiencies and better service for farmers.

Some of the regulatory challenges are also similar across the Puget Sound counties. For example, some neighboring counties have been more successful than King County in addressing agricultural ditch maintenance. All counties are recognizing the potential loss of farmland from wetland mitigation banks. New food safety rules will affect all farmers in the region. It makes sense to address these challenges regionally, working with other counties and state agencies.

Action: Partner with other counties and regional organizations to promote and expand local agriculture.

Action: Work with other counties and the state to tackle common regulatory challenges.



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 jurisdictions.

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

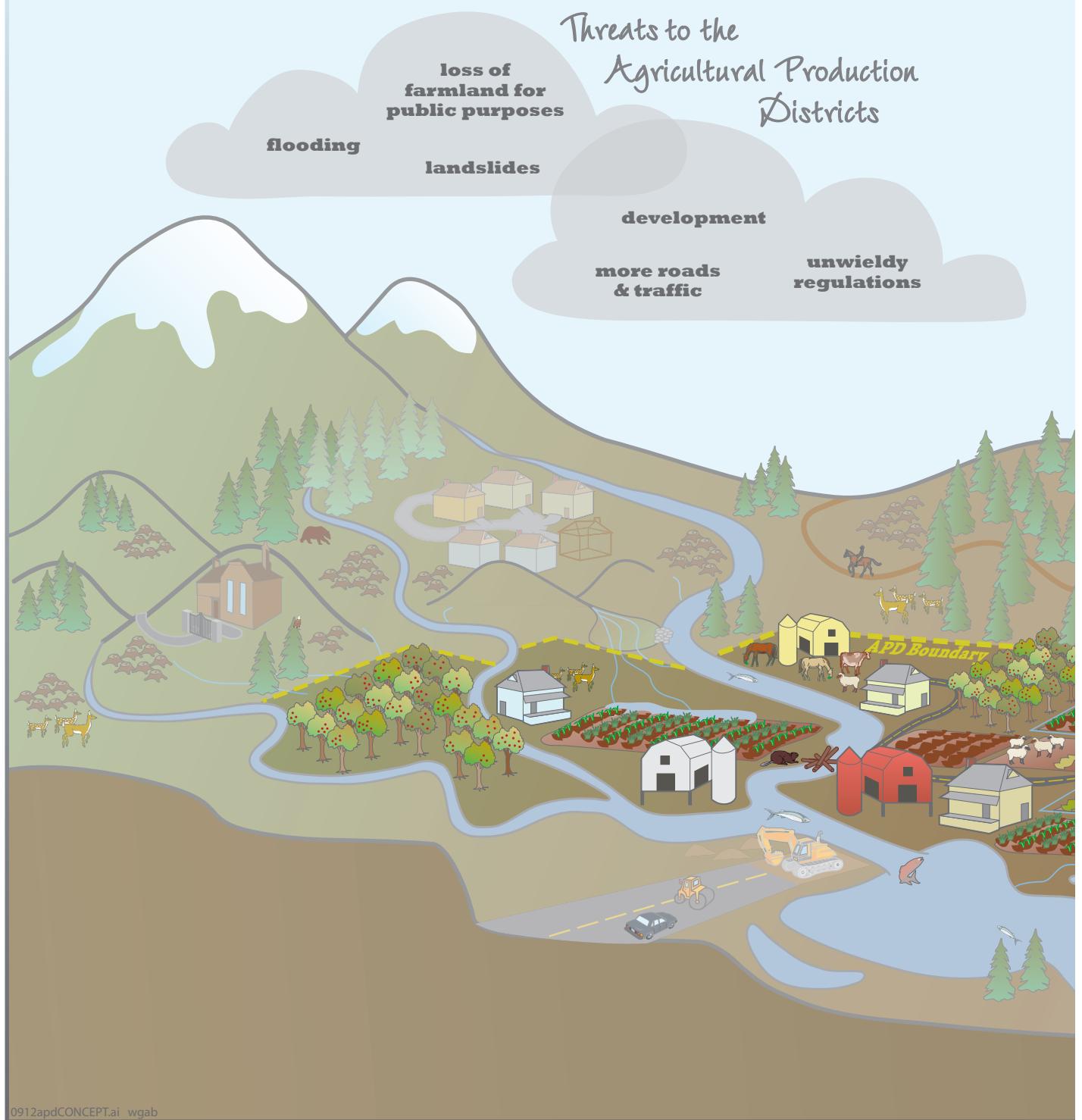
As urban pressures increase can the county's agricultural industry continue to thrive? Farmers need continual and increased public support in the future. Continuing partnerships with organizations interested in food access and security will be critical to the future of agriculture in King County.

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



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Agricultural Production Districts (APD) and Harvesting their Bounty

