LOSING GROUND

THE FUTURE OF FARMS AND FOOD
IN MISSOULA COUNTY

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LOSING GROUND: THE FUTURE OF FARMS AND FOOD IN MISSOULA COUNTY

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April 2010

Mission: The Community Food & Agriculture Coalition (CFAC) is a multi-stakeholder coalition that addresses community needs related to food and agriculture in a comprehensive and creative way. We aim to develop and strengthen Missoula County’s food system, promoting sustainable agriculture, building regional self-reliance, and assuring all citizens equal access to healthy, affordable and culturally appropriate food. Our members bring a range of interests and ideas to the table, and include: agricultural producers, landowners, food retailers, conservationists, architects, developers, nutritionists, anti-hunger advocates, public officials, and local food eaters. Largely a volunteer organization, CFAC’s members drive our grassroots work.

ACKNOWLEDGEMENTS

Contributors: The Community Food & Agriculture Coalition’s Land Use and Agricultural Viability Committee managed this research project, and generated specific recommendations based on the findings. Many valuable contributions were made by committee members: Jim Berkey, Jim Cusker, John DiBari, Brianna Ewert, Jessie Fischer, Tim Hall, Don MacArthur, Josh Slotnick, and Jason Wiener. Jackie Corday (Missoula Open Space Program Manager) and Nancy Heil (Planner, Missoula County Rural Initiatives) provided technical expertise.

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- Our dedicated members and major donors
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EXECUTIVE SUMMARY

Diverse farms and ranches provide the backbone for working landscapes and local food in Missoula County. A vibrant local food movement has taken hold here over the last decade or so, and there is much to celebrate about its success. Yet, the challenges have become clearer too. In the face of population growth and residential development, one of the biggest hurdles may be saving fertile soil – the irreplaceable medium in which our local food system must be rooted. These changes have made the issues of farmland and local food a major topic of public discourse.

To inform public dialogue and decision making, this report, Losing Ground: The Future of Farms and Food in Missoula County, aims to address these central questions:

- What is the state of agriculture in Missoula County, and how has that changed over time?
- Where are our best agricultural soils? How much farm and ranchland has been converted to other uses in recent times? What can we learn from recent subdivision decisions about the patterns of development on the landscape?
- How much grazing land and cropland remain for food production? How can we conserve the necessary resources for food production (especially, land, water and people)?
- How can the community effectively keep working farms and ranches productive? How can the community build an even more vibrant local food system here?

Key findings related to the state of agriculture and the local food economy:

The structure of agriculture in Missoula County has changed considerably in recent decades. The number of farms has more than doubled since 1974 (to 699), but the average farm size has decreased markedly, as shown in Figure 1. The number of farms that are less than 10 acres has ballooned from 29 in 1974 to 149 in 2007. Also, nearly half of the farms in the County now sell less than $1,000 worth of agricultural products in a year; about 72 farms generate over $20,000 in gross sales annually. Taken together, these facts strongly suggest that many of the County’s “farms” are primarily rural residences. (The threshold for being considered a “farm” in the U.S. Census of Agriculture is quite low.)

To complicate matters, farmers have reached an average age of 60 years old in Missoula County. Many will soon retire, and their land will change hands. Land prices, inflated due to development pressure, often make it difficult for beginning farmers and ranchers to access land and get started.

Figure 1: The number of farms has been rising in Missoula County while their average size is down.
Economically, farming and ranching are small but important parts of Missoula County’s total commercial output. The market value of all agricultural products sold in Missoula County was nearly $7.6 million in 2007, with almost $4.9 million from livestock sales and $2.7 million from harvested crops. On the consumer end, Missoula County residents spend over $300 million each year on food. Re-directing more of that to local food and farm businesses will not only support working farms and ranches on the land, but also magnify its financial impact throughout the local economy by keeping our dollars circulating through area businesses. Few other industries have the opportunity to be truly rooted in the land and place.

With the emergence of a strong local food movement, selling into local markets has become a bright spot in the agricultural economy. In the past ten years, the number of farms selling directly to customers has almost doubled. The value of direct sales has tripled. Area businesses and organizations have created and expanded new markets for local food – from Farm-to-School and Farm-to-College, to Electronic Benefits Transfer (food stamps) at farmers’ markets, to restaurants and grocers that feature locally-grown and processed foods. The Western Montana Growers Cooperative has thrived in collectively marketing and distributing wholesale the produce of its nearly 30 grower-members. Missoula’s three farmers’ markets have over 150 vendors.

Key findings related to agricultural use and soils:

Fertile soils take thousands of years to develop. Good soil is not just dirt; it is our most underappreciated, least valued, and yet essential resource. Regardless of the changes we see in our fast-paced, modern lives, we still depend on fertile soil to keep us alive. Knowing how much agricultural land has already been converted to other uses – and what remains available for food production – is a difficult task. Here is what we learned to better understand current and historic uses of working farm and ranchlands:

- Since 1986, almost 29,000 acres of farm and ranchlands have been converted from agricultural use (cropland, grazing, and wild hay) to non-agricultural use. That’s 1,443 acres per year on average (shown in Table 5).
- Since 1974, the number of cropland acres harvested has declined by over 13,000 acres, an average of 394 acres a year and a drop of 44%.
- Roughly 80% of the lands containing the best agricultural soils have been subdivided into parcels smaller than 40 acres.
- About 87,000 acres of grazing land remain. There

<table>
<thead>
<tr>
<th>MDOR Productive Ag Land Classification</th>
<th>3-Year Average 1986-88</th>
<th>3-Year Average 2006-08</th>
<th>Change over 20 Years</th>
<th>No. Acres Converted Per Year on Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated Crop Land</td>
<td>17,588</td>
<td>15,123</td>
<td>-2,465</td>
<td>123</td>
</tr>
<tr>
<td>Non-Irrigated Crop Land</td>
<td>5,796</td>
<td>2,655</td>
<td>-3,141</td>
<td>157</td>
</tr>
<tr>
<td>Grazing</td>
<td>108,502</td>
<td>87,196</td>
<td>-21,306</td>
<td>1,085</td>
</tr>
<tr>
<td>Wild Hay</td>
<td>9,210</td>
<td>7,253</td>
<td>-1,957</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>141,096</td>
<td>112,227</td>
<td>-28,869</td>
<td>1,443</td>
</tr>
</tbody>
</table>

Table 5: Productive agricultural lands by use in Missoula County, change over time, according to the MT Department of Revenue (MDOR). The acres for each category of agricultural land were averaged over three years at each end of the 20-year spectrum (1986-88 and 2006-08). This reduces subtle year-to-year fluctuations and more accurately reflects the net change.
were over 108,000 acres in the mid-1980s.

- About 16,000 acres of cropland are still used to grow and harvest crops (about 12,000 acres of those are irrigated). These lands are likely available for continued production.

Although we have lost a lot of ground in the last few decades, Missoula County still has enough agricultural land for working farms and ranches to remain an important part of our economy, culture, landscape, and place. Yet, as seen below, there are compelling reasons to act now to protect this finite resource.

**Key findings regarding development patterns on the agricultural landscape:**

State law, as well as local regulations and policies, mandate that local government consider the impacts a subdivision might have on agriculture and agricultural water users when they review a proposal to subdivide land. For decades, the adverse impacts of subdividing farmland have largely been regarded as incremental. In response, CFAC participated in the subdivision review process in 2008 and 2009, and commented on 25 proposals regarding their potential impacts to agriculture. As the following list of findings indicates, the incremental losses have added up.

- From 1990 to 2009, almost 22,000 acres were subdivided in the County, over 90% of which were outside the City of Missoula.

- Even during the recession of the last two years, local government approved subdivisions on 2,250 acres; roughly 1,400 of these were on farm and ranchlands.

- Neither the City nor County have clear guidelines about how to ensure new developments mitigate their impacts to agriculture, making the subdivision review process unpredictable and ineffectual when it comes to protecting the agricultural lands with the best potential.

- Of the 25 subdivisions CFAC commented on in 2008 and 2009, we found that 13 would have substantial impacts to agriculture, dividing 570 acres of highly productive farmland. All 13 were approved. For every 6 acres of exceptional farmland converted to residential uses, just 1 acre was left for agricultural production (see Figure 10).

- The sub-regions within Missoula County that have the best agricultural lands often face the greatest development pressure.

- Conservation easements have proven to be an important tool that has been used with

![Subdivision Outcomes on Best Farmlands](image)

**Figure 10: Decision outcomes of 13 subdivision proposals (2008-2009) on the most viable, but buildable, agricultural lands in the City and County of Missoula.** Another 160 acres were in the floodplain, and therefore, unbuildable.
some success to protect valuable lands. Yet, only 4% of the County as a whole is in conservation easement. Roughly 25% of those protected lands contain soils classified as agriculturally important.

The take home message is that farm and ranchland – often of the best quality and within agrarian communities – is permanently lost at the point of subdivision. The City and County of Missoula’s existing planning tools do not have the capacity to address this challenge alone.

**Gaining ground: Recommendations for our food future**

In light of changing national and global circumstances – population growth, loss of farmland, the finite character of agricultural soils, and the increasing cost of transporting food long distances – Missoula County’s agricultural lands are going to be increasingly vital, and economic opportunities for nearby working farms and ranches will continue to grow. For decades, the community has talked about the importance of agriculture, working lands, and local food. Despite having growth policies that articulate a strong vision to “support local sustainable agriculture” and protect farm and ranchlands from the “adverse impacts of urban development,” the City and County of Missoula lack adequate tools to implement the community’s vision. Local government routinely plans for housing needs, neighborhood character, water supplies, sewage and waste treatment, transportation, wildlife, air quality, and recreation. Specific measures ensure these community needs are met. Without doing the same for food and agriculture, our preparation for Missoula’s future is incomplete.

CFAC envisions a comprehensive strategy that protects the local resources necessary to produce food, and re-directs more of the $300 million Missoula County eaters spend on food each year back to local businesses, such as farms, ranches, processors, distributors, grocers, and restaurants. Taken together, this multi-pronged and community-wide strategy will strengthen Missoula County’s food security and agricultural legacy, even as the population continues to grow.

**Recommendation 1.** Identify Agricultural Cornerstone Areas that are priorities for farm and ranchland protection in the City and County. Amend the Missoula City/County Growth Policy to enact an Agricultural Cornerstone Plan that encourages the conservation of agricultural resources and discourages non-agricultural development within these Areas. Conserving contiguous areas, where important agricultural soils, access to agricultural water user facilities, and sufficient parcel sizes support viable farming and ranching, will minimize conflicts between farmers/ranchers and their non-agricultural neighbors.

**Recommendation 2.** Mitigate the loss of important farm and ranchlands by enacting Agricultural Resource Standards in the City and County of Missoula’s zoning ordinances and subdivision regulations. The Agricultural Resource Standards would require permanent conservation of agricultural land that is of equal or greater value in terms of suitability for agriculture and community farms. Agricultural Resources Standards should provide clarity and predictability for developers, area residents, elected officials, and agencies.
Recommendation 3. Identify, evaluate, and activate a broad suite of incentives available to agricultural producers and owners of important farmland. Use incentives to encourage and reward conservation, especially within areas identified as Agricultural Cornerstones. A diverse set of tools, as well as a balanced approach between voluntary incentives and regulatory compliance, is the most effective way to conserve agricultural land.

Recommendation 4. Assist beginning farmers and ranchers in securing land and establishing viable operations. CFAC plans to further develop our Land Link Montana program to help the next generation of farmers and ranchers access land and resources in order to establish successful agricultural businesses in western Montana.

Recommendation 5. Expand the capacity of Missoula’s markets to source locally produced foods and work with farmers and ranchers to assist them in strategically accessing those markets. CFAC will continue to work directly with interested farmers and ranchers in accessing local markets – from schools to restaurants, homes, and beyond. We will also work with our partners to 1) identify opportunities for creating new markets or expanding existing ones, 2) help beginning farmers and ranchers develop clear strategies to capitalize on local market opportunities, and 3) promote markets that make local food available to Missoula County eaters.
INTRODUCTION

Our Agricultural Legacy, Our Food Future

The people and cultures that have inhabited what is now known as western Montana have always been shaped and guided by their connection to the land for their spiritual and material sustenance. From time immemorial, the area has been an important part of the aboriginal territories of the Salish and Pend d'Oreille people. Ancient place names still reflect the traditional way of life of the tribes, who hunted large game such as bison, elk and deer; fished; and harvested a variety of berries, roots, and other plant materials. Both tribes moved through their territories with the seasons, following the cyclical bounties of plants and animals. The Salish people, along with Jesuit missionaries, were among the first to practice agriculture in what is now Missoula County and the surrounding area.

A new chapter in Missoula County's agricultural heritage began with the aid of the Homestead Act of 1862, construction of the railroad in 1883, and irrigation projects. Diverse farms and an associated processing industry expanded to meet the needs of the local population and, increasingly, an export market. The agricultural industry included orchard fruit and sugar beet processing, meatpacking, flour mills, dairies, wool production, and more.

After the Second World War, technology increased production in the area, farms consolidated, and the average farm size in Missoula County grew from 480 acres in 1950 to over 1,000 acres by 1969.\(^1\) In the late 1960s, however, agriculture here began to decline rapidly. The number of farms dropped and local producers were affected by wider economic changes in agriculture. Slowly, most of the processing facilities closed. Indeed, much has changed since the days when Missoula earned its moniker as “The Garden City” because of the market gardens and truck farms that used to provide much of the food people in the valley ate.

These changes did not go unnoticed. In the early 1980s, the Missoula Planning Office conducted a study on agriculture here.\(^2\) Fairly comprehensive, the *Agricultural Protection Study* looked at consumption patterns, imports and exports, changes in the farm service and supply industries, opinions of local producers, and various strategies for protecting and promoting agriculture. Almost 30 years later, however, local government still lacks the tools necessary to implement a vision for working farms and ranches.

Yet, the community and local government have repeatedly expressed the desire to promote sustainable agriculture and protect working lands. For instance, the City of Missoula committed to conservation of its natural open spaces, including agricultural land, in the *Missoula Urban Area Open Space Plan 2006 Update*. In November of that same year, voters across the County voted overwhelmingly to pass a $10 million bond to preserve open space, including working land. In addition, *The Missoula County Growth Policy 2005 Update*, one of the most important documents articulating a vision for planning, includes as a specific objective:

Encourage continuation of agricultural and forestry operations and protect them from adverse impacts of urban development. Distinguish between urban and rural land use patterns in land

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\(^{1}\) Neva Hassanein and Maxine Jacobson, editors, *Our Foodshed in Focus: Missoula County Food and Agriculture by the Numbers*, Missoula County Food Assessment, 2004.

use decisions related to agriculture. Support local sustainable agriculture.\(^3\)

Despite these expressed commitments, Missoula County’s agrarian landscape is still at risk. In recent decades, the Rocky Mountain West has been one of the fastest growing regions in the U.S., with the most intense growth concentrated within urbanizing counties.\(^4\) From 1960 to 2000, for example, Missoula County’s population surged 114%, while the acres in agricultural production decreased by 34%.\(^5\) In the 1990s, rural areas of Missoula County saw the population balloon by 46%, compared to 22% for the County as a whole.\(^6\) To accommodate this growth, over 10,000 acres were subdivided, often farm and ranchlands.

The Community Food Assessment of Missoula County analyzed production and consumption trends and identified strategies to strengthen the community’s food security. One key recommendation was to create a food policy council. Accordingly, the Community Food & Agriculture Coalition (CFAC) was established to bring a collaborative and innovative approach to solving systemic weaknesses in the ways we produce and consume food. Further, the City of Missoula and Missoula County sanctioned the new group in 2005 and pledged in a Joint Resolution to “actively support efforts to increase the security of our local food system so that it is based on sustainable agriculture which enhances the local economy and builds regional self-reliance and so that all citizens have access to nutritious and affordable food.”\(^7\) Thus, part of CFAC’s charge is to find deep-rooted solutions to ensure that farmers and ranchers can make a decent living on the land and that eaters of all income levels can put good food on the table.

CFAC’s work has been part of a vibrant local food movement that has gained tremendous momentum here in the last 10-15 years. For instance, area businesses and organizations have created and expanded new markets for local food – from Farm-to-School and Farm-to-College, to Electronic Benefits Transfer (food stamps) at farmers’ markets, to restaurants and grocers that feature locally-grown and processed foods. A remarkable asset, the Western Montana Growers Cooperative has thrived as it collectively markets and distributes wholesale the produce of its nearly 30 grower-members. All of these initiatives and more increase economic opportunities for the working farms and ranches in the region.

While there is much to celebrate about the interest in local foods, the challenges have become clearer too. In the face of population growth and residential development in the areas near and outside of the City of Missoula, one of the biggest hurdles may be saving fertile soil – the irreplaceable medium in which our local food system must be rooted. These changes have made the issues of farmland and local food a major topic of public discourse. Now, a variety of stakeholders and government officials are exploring how best to protect our remaining farm and ranchlands, the bedrock of our food system. How can we ensure a healthy food future and a vibrant agricultural sector?

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\(^3\) The Missoula County Growth Policy 2005 Update, Development Patterns and Land Use Goals and Objectives, p. 3.3-3.5.

\(^4\) Larry Swanson, Growth and Change in the Bitterroot Valley and Implication for Agriculture and Ag Lands, 2006.

\(^5\) Hassanein and Jacobson, Our Foodshed in Focus, 4.

\(^6\) Neva Hassanein and Maxine Jacobson, editors, Food Matters: Farm Viability and Food Consumption in Missoula County, Missoula County Food Assessment, 2004.

\(^7\) Missoula City Council and Board of Missoula County Commissioners, Joint Resolution 6889, March 7, 2005.
The Purpose and Scope of Losing Ground

To inform public dialogue and decision making, Losing Ground: The Future of Farms and Food in Missoula County aims to address these central questions:

- What is the state of agriculture in Missoula County, and how has that changed over time?
- Where are our best agricultural soils? How much farm and ranchland has been converted to other uses in recent times? What can we learn from recent subdivision decisions about the patterns of development on the landscape?
- How much grazing land and cropland remain for food production? How can we conserve the necessary resources for food production (especially, land, water, and people)?
- How can the community effectively keep working farms and ranches working? How can we build an even more vibrant local food system here?

To answer these questions and offer solutions grounded in the best available data, this report covers the following in four sections:

**Section 1: The State of Agriculture and Local Food in Missoula County** takes a close look at on-going trends in farm size and number, owner characteristics, and economics. It explores opportunities for supporting viable farming and ranching businesses as an integral part of the local economy and culture. This analysis draws upon the U.S. Census of Agriculture, and uses the most recent data to update the Community Food Assessment.

**Section 2: Working Farm and Ranchland in Missoula County** reviews (a) the loss of working farms and ranches and agricultural resources, (b) the development patterns shaping the agricultural landscape, (c) the methods for reviewing subdivisions on agricultural land in both the City and County of Missoula, and (d) the deficiencies in those processes. This analysis is largely based upon data from the Montana Department of Revenue regarding agricultural land classification, and an investigation of 25 recent subdivision proposals in the City and County of Missoula.

**Section 3: Ensuring Community Food Security in a Changing World** discusses the converging global and national trends that increase both the importance of agricultural resources in Missoula County, as well as existing and potential economic opportunities created by a vibrant local food system.

**Section 4: Gaining Ground: Recommendations for Our Food Future** offers a multi-pronged strategy to develop a resilient agricultural sector and strengthen community food security for the long term. That strategy includes conserving farm and ranchland, facilitating land access for new producers, and expanding local food markets for community economic development and agricultural viability. CFAC believes that we can conserve working agricultural lands and farming communities, while providing landowners and developers with a more predictable land use process.
Agriculture in Missoula County is at a crossroads. Clearly, many people in the community cherish our agricultural heritage and the local food that connects us to this place. Both residents and visitors appreciate our working landscapes and value all that they provide (see box, below). For decades, the community has talked about the importance of agriculture, working lands, and local food. Still, the City and County’s policies only articulate a strong vision for sustaining working farms and ranches on the land; the community still lacks the tools to make the vision a reality. Local government routinely plans for housing needs, neighborhood character, water supplies, sewage and waste treatment, transportation, wildlife, air quality, and recreation. Specific measures ensure these community needs are met. Without doing the same for food and agriculture – which are also vital human needs – our preparation for Missoula’s future is incomplete.

<table>
<thead>
<tr>
<th>WHY PROTECT WORKING FARM &amp; RANCH LANDS?</th>
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<tbody>
<tr>
<td>★ Well-managed agricultural lands preserve <strong>water quality</strong>. Conserving farmland helps to protect drinking water, as well as our treasured rivers, streams, and lakes.</td>
</tr>
<tr>
<td>★ <strong>Farmland is a finite resource.</strong> Less than 8% of Missoula County’s soils are ideal for crops or livestock, and much of that has already been developed. The Natural Resources Conservation Services estimates that 80% of the County’s best agricultural lands have been subdivided into parcel sizes under 40 acres (see Section 2).</td>
</tr>
<tr>
<td>★ <strong>Our community food security</strong> is rooted in the land. We need to plan ahead for limited oil supplies, global and local population increases, and climate change. Fifty years from now, we will still need farms to grow our food.</td>
</tr>
<tr>
<td>★ A deep <strong>connection to the land</strong> is part of our collective identity. We depend on working farms and ranches for sustenance and for our shared a sense of place.</td>
</tr>
<tr>
<td>★ <strong>Cultural, social and historical values</strong> are embedded in working farms and ranches. They are the roots of our heritage and vital to our legacy.</td>
</tr>
<tr>
<td>★ <strong>Local markets</strong> provide economic development opportunities for locally produced foods. A growing number of consumers want to know where their food comes from and recognize that local food is usually fresher and tastier.</td>
</tr>
<tr>
<td>★ Working farms and ranches provide essential <strong>ecosystem services</strong>—such as flood control, ground water recharge, open space, and wildlife habitat.</td>
</tr>
<tr>
<td>★ The open and working countryside contributes to <strong>cherished cultural amenities</strong> like farmers’ markets, vibrant downtowns, colorful restaurants, and beautiful views, which in turn fuel a growing economy and robust real estate sector.</td>
</tr>
<tr>
<td>★ Farms and ranches generate more in <strong>tax revenue</strong> than they require for government services. According to the American Farmland Trust, on average, for every incoming dollar, residential land costs local governments $1.19 in services, while farm and ranchlands require just $0.39.</td>
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SECTION 1: THE STATE OF AGRICULTURE AND LOCAL FOOD IN MISSOULA COUNTY

Introduction

Agriculture is much more than farm and ranchland. People are also a critical component. The way people grow and market food – particularly in their social, economic, and legal relationships – comprises the structure of agriculture. Structure is measured by factors like the size and type of farm, the degree of reliance on off-farm income, characteristics of the farming/ranching population, and economics. The United States Department of Agriculture (USDA) collects this kind of information every five years in the Census of Agriculture. Over the last sixty years, the structure of agriculture in the U.S. has changed considerably as part of a process of industrialization and globalization. These changes have important implications for who controls the food supply and how the land is treated, including the likelihood of converting farmland to other uses.

While the industrial food system has produced an abundance of foods, it also raises a number of concerns that affect communities. For instance, in 1950, American farmers and ranchers took home 41 cents for every dollar spent on food.9 By 2006, that had dropped to 19 cents. Not only do Montana’s producers receive less of each dollar, but more of those dollars are also sent out of state. In 1950, 70% of Montana’s diet was raised, grown, and often processed in the state – keeping our dollars right here. Today, about 10% of the food that Montanans eat is grown in state,11 the food most North Americans eat travels over 1,500 miles between the farm gate and the dinner plate,12 and food changes hands an average of 33 times between the producer and the consumer.13

“Localizing” food and agriculture not only addresses threats to the community’s food security, but will also increase opportunities for producers to earn a good living and for consumers to eat well. This involves closer relationships between producers and consumers, production that responds to local demand, opportunities for new businesses in food processing

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11 Grow Montana, “Montana’s Food System Fact Sheet,” 2007
and value-added products, and community economic development in general. Accordingly, over the last decade, individuals and organizations throughout western Montana have created inspiring new markets for local foods and reinvigorated an interest in community agriculture.

When we talk of localizing our food system, the issue is not whether we can or should divorce ourselves from the global food system – that is neither likely, nor would it necessarily be desirable. Yet, we may not want to be entirely dependent on global food production and distribution, either. Beyond long-term food security, there are many benefits of eating closer to home, including:

- When consumers buy locally-grown food, they keep money circulating in our community.
- Supporting the economic viability of working farms and ranches in turn conserves open spaces for the benefit of all.
- Local food is typically fresher, tastier, and more nutritious than food shipped half way around the world.
- Eating local food reduces transportation and energy costs, helping to protect our environment and saving finite fossil fuel resources.
- A growing number of Montana farmers and ranchers are using more sustainable farming practices, which means that by purchasing local foods we can support farming that reduces pesticide use and soil erosion, and reward ranching that uses sound grass management and produces grass-fed beef.
- Connections between producers and consumers strengthen community and continue an important tradition in this place.

Reinvigorating local and regional food systems creates exciting opportunities and in the long run will enhance our community food security. Identifying the best strategies so that local agriculture can thrive now and in the future, however, depends in part on a clear understanding of the structure of agriculture here and how it has changed over time. Towards that end, this chapter draws on the Census of Agriculture and presents relevant information on farm numbers and size, farmer/rancher characteristics, and agricultural economics in Missoula County. The data present challenges for localization efforts, which are briefly described at the end of the chapter.
Farms by Size and Number

The number of farms (see definition p.14) in Missoula County has more than doubled since 1974, from 310 to 699 in 2007.¹⁴ This dramatic increase is coupled with a steep decline in the average farm size, as shown in Figure 1. Since 1974, the average size has decreased by over 50%, going from 845 acres on average in 1974 to 403 acres today.

The decrease in average farm size stems from two corresponding trends: an increase in smaller farms and a decrease in larger ones (see Figure 2, below). Most notably, the number of farms over 260 acres dropped by 22% from 1974 to 2007 (from 212 farms to 87), while farms under 50 acres have increased by 291% (from 106 to 414), accounting for the vast majority of growth in the County’s farm numbers. The number of farms less than 10 acres in size has ballooned by 414% (from 29 in 1974 to 149 in 2007).

¹⁴ All Census of Agriculture figures are available at [http://www.agcensus.usda.gov/](http://www.agcensus.usda.gov/). The 2002 and 2007 publications took a different approach from previous censuses. The difference is an adjustment for incompleteness at the County level. Earlier censuses were also incomplete, but the adjustment was published only for the state as a whole rather than for particular counties. In contrast, the 2002 Census re-published the 1997 County data to make it comparable with the 2002 data. The re-adjusted numbers are considered the most accurate data available, and we have used them throughout this report.
Farmer Characteristics

Consistent with national trends, the majority of farmers in Missoula County depend on off-farm income. In 1974, the number of producers who farmed or ranched as their primary job was roughly equal to those who held an off-farm occupation as their main source of income. Today, 70% of farmers hold another job as their primary occupation (see Figure 3, below). However, the number of people farming as their primary occupation has also risen from 145 in 1974 to over 200 today.

This suggests that Missoula County’s core agricultural base of producers has remained fairly stable. Yet, as a group, the County’s farmers and ranchers are also getting older. The average age of the principal operator has reached an all-time high of 60 years old – up from 49 in 1982. Although data showing the relationship between age and primary occupation are unavailable for Missoula County, for Montana on the whole, more than 5,000 people over the age of 65 are farming as their primary occupation, compared to roughly 650 people under the age of 35 also farming as their main job (a ratio of almost 8:1). This suggests few aspiring farmers and ranchers are able to get started, while those in their later years continue to work the land.

Now more than ever, Missoula County is at a point where many producers will retire in the near future. Many will seek to liquidate the equity in their land to fund their retirement. Indeed, over half of the Rocky Mountain West’s working farms and ranches are expected to change hands in the next decade.15 As one Missoula County rancher approaching retirement reflected: “It pains me to see older producers selling land to developers. But I’m understanding, because it’s harder as I age to maintain the land and do the work.”16

On the one hand, growth makes farmland worth more, and selling for development seems tempting. It may even seem like the only way out. On the other hand, a way of life and a legacy handed down from generation to generation is hard to walk away from. And inflated prices of land raise the question of whether or not a new farmer or rancher will be able to access the land.

Agricultural Economics

Small farms near population centers can be quite productive and profitable. Nationally, 86% of U.S. fruits and vegetables, 63% of dairy products, 39% of meat products, and 35% of grains are produced in urban-influenced areas, often on small farms.\(^{17}\) However, the increasing number of farms in Missoula County that sell less than $1,000 annually suggests that many of these smaller farms may be primarily rural residences with agriculture playing a minimal role.

The total market value of agricultural products sold in Missoula County was nearly $7.6 million in 2007, with almost $4.9 million from livestock sales and $2.7 million from harvested crops.\(^{18}\) Beef cattle are the largest portion of the County’s agricultural sales (see Table 1, below), despite ranking low for the state overall. Missoula County ranks much higher for vegetable and fruit crops, nursery products, and horses. While the County benefits from having these businesses as part of the community’s economic fabric, farms and ranches are not raking in huge profits. High input costs, vacillating commodity prices, and unpredictable weather strain the narrowing profit margins of working farms and ranches.

<table>
<thead>
<tr>
<th>Product</th>
<th>Number of Farms</th>
<th>Annual Sales</th>
<th>State Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle &amp; calves</td>
<td>156</td>
<td>$3,371,000</td>
<td>54</td>
</tr>
<tr>
<td>Horses, ponies, mules, burros, donkeys</td>
<td>88</td>
<td>$1,108,000</td>
<td>2</td>
</tr>
<tr>
<td>Nursery, greenhouse, floriculture, sod</td>
<td>31</td>
<td>$1,042,000</td>
<td>9</td>
</tr>
<tr>
<td>Other crops &amp; hay</td>
<td>180</td>
<td>$981,000</td>
<td>45</td>
</tr>
<tr>
<td>Grains, oilseeds, dry beans, and dry peas</td>
<td>14</td>
<td>$306,000</td>
<td>50</td>
</tr>
<tr>
<td>Vegetables, melons, potatoes, sweet potatoes</td>
<td>16</td>
<td>$250,000</td>
<td>12</td>
</tr>
<tr>
<td>Other animals and other animal products</td>
<td>18</td>
<td>$202,000</td>
<td>30</td>
</tr>
<tr>
<td>Sheep, goats, and their products</td>
<td>45</td>
<td>$113,000</td>
<td>38</td>
</tr>
<tr>
<td>Poultry &amp; eggs</td>
<td>69</td>
<td>$37,000</td>
<td>24</td>
</tr>
<tr>
<td>Hogs &amp; pigs</td>
<td>26</td>
<td>$19,000</td>
<td>32</td>
</tr>
<tr>
<td>Milk &amp; dairy products from cows</td>
<td>4</td>
<td>$13,000</td>
<td>45</td>
</tr>
<tr>
<td>Fruits, tree nuts, berries</td>
<td>19</td>
<td>[D]</td>
<td>4</td>
</tr>
<tr>
<td>Cut Christmas trees and short-rotation woody crops</td>
<td>1</td>
<td>[D]</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 1: Value of agricultural sales in Missoula County by product group, according to the 2007 Census of Agriculture. State ranks are out of 56 counties in Montana. The Census of Agriculture cannot disclose the 2007 sales of fruits, berries, nuts, Christmas trees, and short-rotation woody crops.

Figure 4 illustrates the number of farms in relationship to their gross annual sales. In 2007, relatively few farms grossed in the $20,000-$49,000 range (35 farms, 5% of the total), and 37 farms (another 5%) grossed over $50,000. Those selling at least $20,000 decreased from 85 in


\(^{18}\) Census of Agriculture, Missoula County, Montana, 2007.
1992 to 72 in 2007 – a more than 15% drop. In the past 15 years, the number of farms selling at least $5,000 of agricultural products annually has fallen 13%, from 204 in 1992 to 178 in 2007. In Missoula County, farms that do not meet the $1,000 gross sales threshold now account for 46% of all farms, up from 22% in 1992. Many of these “farms” do not report any sales at all. (The Census of Agriculture includes them because of their “potential” to gross more.) At the other end of the spectrum, are those farms that generate much of the total market value of agricultural products. Of the farms that report sales, the average gross income was about $11,000 in 2007, down from $13,000 in 2002. Production expenses per farm now average almost $20,000. Clearly, there is much room to improve agriculture’s economic viability here.

According to Ron de Yong, Director of Montana’s Department of Agriculture, the future of agriculture in Montana “looks bright” for farms and ranches that scale down and diversify. Most agricultural products in Montana are raw commodities that are shipped out of state to be processed elsewhere. Such commodities are subject to fluctuations in price and low profit margins that force producers to maximize volume for the global marketplace. Instead, de Yong suggests farmers shift to producing higher quality foods and selling into local markets, which continue to expand to meet consumer demand.

One indicator that Missoula County’s farmers and ranchers are taking de Yong’s advice is the increasing amount of direct sales to consumers in the last ten years. According to the 1997 Census of Agriculture, 37 farms reported making direct sales to individuals for human consumption for a total of $91,000. By 2007, the number had grown to 68 farms, making direct sales of $272,000 – an 84% increase in the number of farmers growing for direct markets, and a 199% increase in direct sales.

These direct sales do more than keep fresh food in our community. They also re-circulate dollars among local businesses, a phenomenon that economists call the “multiplier effect.” When family businesses – such as local farms, locally-owned grocery stores, restaurants, food processors, distributors, and equipment dealers – are the predominant economic system in a community, the economic impact of their profits has a multiplier effect of three or four. That is, a dollar spent on local food not only supports the food and farm businesses directly, but then those local businesses are likely to spend the profit on other local services, keeping the dollar within the community and changing hands from one entrepreneur to another, three to four times. In contrast, when individuals buy food from a non-local corporation, the money quickly leaves the community and the profit heads to the company’s headquarters, wherever that may be.

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19 Kim Briggeman, “Better markets on the horizon: long-term looks encouraging for agriculture, even as prices fluctuate and lending is tight,” Western Montana In Business Monthly, Vol. 8 No. 1, January 2010.
20 William Heffernan, Consolidation in the Food and Agriculture System, a report prepared for the National Farmers Union, 1999.
Opportunities for Local Farms, Ranches and Eaters

In Missoula and communities across the nation, there is a burgeoning local foods movement. More and more, people want to know how and where their food is produced, and how to grow or purchase food locally. Consumers are finding that even when local food costs a little more, it delivers significantly higher value in terms of increased nutrition, taste, social relationships (e.g., farmers’ markets), sustainability, and their community’s economy. Over the last decade, innovative marketing arrangements have emerged, and agriculture within and near cities has seen resurgence as both a community and economic development tool:

- **Farmers’ markets** are booming. The number of farmers’ markets in Montana has grown from five in 1990 to 49 today. Missoula now has three farmers’ markets. To ensure that Missoulians of all income-levels can afford fresh food, CFAC partnered with the Clark Fork River Market to set up an Electronic Benefits Transfers program (food stamps). In its pilot year, the program accounted for $5,000 worth of sales. That rose to $11,000 in 2008 and $18,000 in 2009. The Missoula Farmers’ Market has also added an EBT program.

- **Farm to Institution programs** provide larger market capacity, given the high volume of their cafeterias. Public institutions, in particular, can play an important role in creating markets for the state’s food and agricultural businesses. Since 2003, the University of Montana’s Farm to College program has spent over $3.7 million on Montana-produced foods, which now accounts for over 20% of UM’s $3 million annual food budget. Farm to School is projected to serve over 50,000 pounds of locally grown or processed food in Missoula County Public Schools in the 2009-2010 school year – increasing significantly each year, as shown in Figure 5.

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21 What constitutes “local food” has been a subject of debate among both scholars and practitioners (e.g., some emphasize a 100-mile radius diet; others, especially public institutions, focus on procuring food within a given state’s boundaries; still others resist attempts at a fixed definition). Many local food advocates not only promote a shorter physical distance between the point of production and consumption, but also prize reducing the social distance – increasing understanding between producers and consumers.


24 Kyra Williams, UM’s Farm to College Coordinator, email message, Feb. 3, 2010.
Grocery stores and restaurants are increasingly buying and featuring local foods. The Western Montana Growers Cooperative helps meet the needs of restaurants and schools by collectively marketing and distributing the produce of the co-op’s nearly 30 farmer-members.

There is tremendous opportunity to increase the capacity of local markets. Missoula County’s eaters spend over $300 million on food each year\(^2\) -- over $290 million more than what the County’s farmers and ranchers produce. To capitalize on this, 71% of the County’s producers said in a survey that they would like to sell their products more locally, and the majority of consumers said they want to purchase more food raised nearby.\(^2\)

Conclusion

The Census of Agriculture shows a powerful change in the structure of agriculture in Missoula County. Farms are growing in number but shrinking in size, and the growth in farm numbers appears to be in rural residences that have agricultural revenues under $1,000 per year. While the number of people farming as their primary occupation has been gradually increasing, the average age of farmers and ranchers is just shy of qualifying for Social Security. This aging population of farmers suggests that now is a critical time for the future of agriculture in Missoula County. As producers ready to retire, we need strategies to help beginning farmers to access land. Often, the value of farmland hinges more on its development potential than its agricultural potential, which puts agricultural land out of the financial reach of the next generation of farmers and ranchers.

Agriculture will probably never be Missoula County’s largest economic engine, but if the current recession has taught us one thing, it is that diverse businesses that have a stake in the community provide the most durable economic backbone. Farms, ranches, agricultural services, and food-related businesses contribute more than an essential service. They offer Missoula County an opportunity to develop a part of the local economy that is by definition rooted in the land. Even if the total sales of agricultural products remain a small fraction of the County’s overall measure of money changing hands, the dollars spent on local food have a high potential to stay within the community and support many local businesses.

Agriculture is a particularly important part of Missoula County’s economy, culture, and sense of place. If the community implements land-use planning and economic development strategies that support the long-term viability of the agricultural sector, the prospects for the sustainable growth of a local food economy are strong. The dramatic increase in direct sales recorded in the Agricultural Census is an encouraging trend in the right direction. Also, processors, restaurants, retailers, and institutions that sell and serve food can capture more value as food travels through fewer hands. In turn, consumers accessing fresh, nutrient-rich foods from local producers both build community and support the local economy. Expanding local markets and the increasing population can provide economic development opportunities to keep a significantly larger percentage of the $300 million Missoula County eaters spend each year on food circulating within the local economy.

\(^2\) Hassanein and Jacobson, *Food Matters*, 27.
SECTION 2: WORKING FARM AND RANCHLAND IN MISSOULA COUNTY

Introduction

A stronger local food economy can enhance the profitability of the agricultural sector, the viability of which translates into the preservation of open space and heritage when farmers and ranchers stay on the land and the next generation is able to take over. Yet, the farmers and ranchers surveyed in the Community Food Assessment identified development pressures as one of the biggest threats to agriculture here, and the majority felt the County should do more to plan for the future of agriculture.27 Clearly, the sustainable management of the resources on which agriculture depends, especially land and water, is essential to achieving the objectives that the community and local government have already expressed.

Accordingly, when the Community Food and Agriculture Coalition (CFAC) formed in 2005, the group began to study how land-use decisions at the local level impact our agricultural resource base and to participate in various planning processes. This has included participation in broad community planning efforts, such as the Urban Fringe Development Area Project, Missoula’s zoning update, and neighborhood plans. CFAC has also commented on specific subdivision proposals. Montana state law requires that subdivision proposals be evaluated for their potential impacts to agriculture and agricultural water user facilities, and the state law also allows local governments to require mitigation for these impacts. For decades, however, local government has not thoroughly assessed these potential impacts, and incremental losses have added up. Upon invitation from local government in 2008, CFAC began reviewing and commenting on subdivision proposals with regards to the implications for agriculture and Missoula County’s local food security.

Through our engagement in these public processes, several key questions have emerged that this chapter seeks to address:

- Where are our agricultural soils?
- How much farm and ranchland has been converted to non-agricultural uses in recent decades?
- What can we learn from recent subdivision decisions about the patterns of development on the landscape, and perhaps more importantly about the strategies that will prevent us from losing more ground?

To answer these questions, we draw on data from the Natural Resources Conservation Service (NRCS), Montana Department of Revenue (MDOR), the US Census of Agriculture, the Missoula Office of Planning and Grants (OPG), and Missoula County Rural Initiatives. We also analyze the 25 subdivisions that we have commented on in 2008 and 2009 for their potential impacts to agriculture.

27 Hassanein and Jacobson, Food Matters, 22-25.
Soils of Agricultural Importance

Technically, agricultural soils occupy only a small portion – about 8% – of the total land area in Missoula County (see map, p. 24). Our best soils are located on the valley floors and near population centers. For agriculture, the best soils are “loams,” which are a balanced mix of sand, silt, and clay particles; organic matter; roots; and living organisms. Soils are a finite and irreplaceable resource. Yet, some of the qualities that make these lands good for agriculture also make them attractive for development (e.g., level and well-drained). Portions of the agricultural soils shown on the map have likely already been developed or put to a use other than agriculture.

The Natural Resources Conservation Service (NRCS) evaluates soils to assess their ability to support agriculture. The soils are classified into the three major categories shown on the map, and are defined below in descending order of their value for agriculture:

Prime Farmland. From a national perspective, these lands are of the highest quality and the most suitable for producing food, forage, fiber, and/or oilseed crops. In other words, these lands are critical for meeting the nation’s agricultural needs in the short and long term. They tend to be flat (with slopes of 0-6%), have few rocks, are permeable to air and water, have an adequate growing season, and do not erode easily. Prime farmlands receive a good supply of moisture, which in our area must nearly always be provided through irrigation. When managed well, prime farmland produces sustained crop yields with minimal use of energy and other resources, which in turn improves economic viability. Also, farming on these soils is likely to do the least damage to the environment. The loss of prime farmland puts pressure on lands that are less productive and more vulnerable.

Farmland of Statewide Importance. Appropriate state agencies define and identify these areas as being particularly important from a statewide perspective. Generally, these soils nearly meet the criteria for prime farmland, producing high crop yields when managed properly. Often, soils of Statewide Importance are just as productive as prime farmland.

Farmland of Local Importance. Local agencies identify these lands as being significant for agricultural production at the local level. In Missoula County, soils meet local importance criteria if they have at least half of the components used in assessing prime and statewide soils, and if they meet other minimal requirements for slope (<15%), drainage, and crop production (for spring wheat, hay, and pasture).

<table>
<thead>
<tr>
<th>Top Crops</th>
<th>Acres</th>
<th>State Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forage (hay, haylage, silage, greenchop)</td>
<td>15,044</td>
<td>49</td>
</tr>
<tr>
<td>Wheat for grain</td>
<td>1,249</td>
<td>48</td>
</tr>
<tr>
<td>Barley for grain</td>
<td>NA</td>
<td>52</td>
</tr>
<tr>
<td>Vegetables</td>
<td>50</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top Livestock Inventory</th>
<th>No. of Animals</th>
<th>State Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle and calves</td>
<td>7,609</td>
<td>53</td>
</tr>
<tr>
<td>Horses and ponies</td>
<td>3,039</td>
<td>12</td>
</tr>
<tr>
<td>Colonies of bees</td>
<td>(D)</td>
<td>21</td>
</tr>
<tr>
<td>Layers</td>
<td>1,493</td>
<td>19</td>
</tr>
<tr>
<td>Sheep and lambs</td>
<td>1,208</td>
<td>40</td>
</tr>
</tbody>
</table>

Tables 2 and 3: Missoula County’s Top Crops and Livestock Inventory. The table gives a sense of the types of agricultural activities currently taking place on these lands. The Census of Agriculture cannot disclose the number of bee colonies in Missoula County.
Map 1: Important agricultural soils in Missoula County account for just 7.8% of the entire land mass. There are almost 30,000 acres (1.8%) of Prime and Prime if Irrigated soils, another 20,000 acres (1.1%) are Farmlands of Statewide Importance, and 80,000 acres (4.9%) are Farmlands of Local Importance. Many of these lands have already been developed, however. See Map 2 on p. 25, and Maps 3-5 on p. 30.
Map 2: For the most part, Missoula County’s farmlands have already been subdivided into parcels smaller than 40 acres. Desmet, Alberton, Grantsdale, Tally Variant, and Bigarm are the soil types that make up Prime and Prime if Irrigated Farmlands in Missoula County. Only 6,000 acres (22% of all prime soils) remain in parcels of 40 acres or larger. Hanaker, Perma and Tally are the main soil types in Missoula County classified as Farmland of Statewide Importance, for which 4,300 acres (23% of all soils of statewide importance) are still in tracts of 40 acres or more. Farmlands of Local Importance (not mapped here) have also seen very high development pressures, and only a fraction remain in parcels of 40 acres or larger.
Farm and Ranchland Conversion

Understanding how much agricultural land has already been converted to other uses – and what remains available for food production – is a difficult task. One source of data that can help answer this question comes from the Montana Department of Revenue (MDOR), which annually classifies all farms, ranches, and other lands to calculate property taxes. Despite strong incentives to reduce taxes by keeping agricultural land in production, the MDOR data shows a significant decrease in every category of productive agricultural land in the County (see box at right and Figure 6 below).

MONTANA DEPARTMENT OF REVENUE’S DEFINITIONS OF AGRICULTURAL LAND

What counts as “agricultural land”?
- All properties of 160 acres or greater.
- Parcels under 160 acres that have at least $1,500 in annual revenue from agricultural products.

How is agricultural land classified?
- Grazing land – from irrigated pastures to rangeland.
- Tillable irrigated land – all irrigated cropland.
- Tillable non-irrigated land – dryland farming where crops are harvested.
- Wild hay land – non-irrigated hay is harvested.

What is Non-Qualified Agricultural Land?
- Properties between 20 and 160 acres that do not gross $1,500 in agricultural sales annually.
- This category was created in 1994.

Figure 6: Montana Department of Revenue's agricultural land classifications by number of acres and tax year for Missoula County. The MDOR did not have data available for 1995 or 1996.
Since 1986, productive uses of agricultural land have decreased by almost 29,000 acres, and over 27,000 acres of working farm and ranchlands have become non-qualified agricultural land (see Figure 7). According to economist Larry Swanson, non-qualified agricultural land “could be construed as ‘lost ag land’ in that it appears to have been taken out of commercial agricultural production and use in that it no longer has ag sales of any significance.” Most notably, 24% of the total cropland (both irrigated and non-irrigated) in Missoula County has slowly but steadily been converted to non-agricultural uses from 1986 to the present. Lands used for grazing and non-irrigated hay are down 20% and 21% respectively.

As mentioned above, non-qualified agricultural lands are properties that are not generating significant sales of agricultural products (i.e., less than $1,500 annually, on parcels 20-160 acres). Accordingly, we analyzed the changes in the other land classification categories in order to better understand what has happened with respect to the productive uses of land. As Table 5 (p. 28) shows, the number of acres converted to non-agricultural uses is on average 1,443 per year, totaling nearly 29,000 acres during the twenty-year period.

<table>
<thead>
<tr>
<th>MDOR Agricultural Land Classification</th>
<th>No. of Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing land</td>
<td>86,618</td>
</tr>
<tr>
<td>Irrigated crop land</td>
<td>14,879</td>
</tr>
<tr>
<td>Wild hay</td>
<td>7,172</td>
</tr>
<tr>
<td>Non-irrigated crop land</td>
<td>2,599</td>
</tr>
<tr>
<td>Non-qualified ag land</td>
<td>26,925</td>
</tr>
<tr>
<td>Total</td>
<td>138,193</td>
</tr>
</tbody>
</table>

Table 4: Agricultural lands in Missoula County in 2008, according to the MT Department of Revenue.

![Change in Agricultural Land by Use, 1986-2008](image)

**Figure 7: Change in the acreage of Missoula County's productive agricultural lands since 1986.** For these calculations, shown in the graph, the acres for each category of agricultural land were averaged over three years at each end of the 20-year spectrum (1986-88 and 2006-08). This reduces the more subtle year-to-year fluctuations and more accurately reflects the total change over 20 years.

As mentioned above, non-qualified agricultural lands are properties that are not generating significant sales of agricultural products (i.e., less than $1,500 annually, on parcels 20-160 acres). Accordingly, we analyzed the changes in the other land classification categories in order to better understand what has happened with respect to the productive uses of land. As Table 5 (p. 28) shows, the number of acres converted to non-agricultural uses is on average 1,443 per year, totaling nearly 29,000 acres during the twenty-year period.

28 Larry Swanson, *Growth and Change in the Bitterroot Valley and Implications for Area Agriculture and Ag Lands*, 41.
Other data confirms that agricultural land is falling out of production in Missoula County. For example, the USDA’s National Agricultural Statistics Service (NASS) generates county-level agricultural statistics annually. The number of acres of farmland where crops were harvested fell by over 40%, from 1993 to 2008. In addition, the US Census of Agriculture shows that Missoula County had 16,651 acres where crops were harvested in 2007 – down from 29,664 acres in 1974 (see Table 6). The average number of acres converted to other uses during that period was 394 per year, totaling over 13,000 acres in this 33 year time span and representing a decline of 44%.

What are we to make of the decline of some 29,000 acres used for agriculture since 1986 (including grazing and hay) and the drop in harvested acres since 1974? Are these farm and ranchlands permanently “lost”? Taking the data at face value, it is not clear whether these agricultural lands are lying fallow temporarily, or whether the resource itself has been permanently converted to non-agricultural uses.

What is clear, though, is that these lands are no longer in commercial agricultural production. We also know that from 1990 to 2009, almost 22,000 acres were subdivided in Missoula County (2,044 acres in the City and 19,912 acres in the County’s jurisdiction).  

<table>
<thead>
<tr>
<th>MDOR Productive Ag Land Classification</th>
<th>3-Year Average 1986-88</th>
<th>3-Year Average 2006-08</th>
<th>Change over 20 Years</th>
<th>No. Acres Converted Per Year on Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated Crop Land</td>
<td>17,588</td>
<td>15,123</td>
<td>-2,465</td>
<td>123</td>
</tr>
<tr>
<td>Non-Irrigated Crop Land</td>
<td>5,796</td>
<td>2,655</td>
<td>-3,141</td>
<td>157</td>
</tr>
<tr>
<td>Grazing</td>
<td>108,502</td>
<td>87,196</td>
<td>-21,306</td>
<td>1,065</td>
</tr>
<tr>
<td>Wild Hay</td>
<td>9,210</td>
<td>7,253</td>
<td>-1,957</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>141,096</td>
<td>112,227</td>
<td>-28,869</td>
<td>1,443</td>
</tr>
</tbody>
</table>

**Table 5: Productive agricultural lands by use in Missoula County, change over time, according to the MT Department of Revenue (MDOR). Non-qualified ag land not included. The acres for each category of agricultural land were averaged over three years at each end of the 20-year spectrum (1986-88 and 2006-08). This reduces subtle year-to-year fluctuations and more accurately reflects the total change over time.**

<table>
<thead>
<tr>
<th>Census of Ag Year</th>
<th>Harvested Cropland</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>29,664</td>
</tr>
<tr>
<td>1992</td>
<td>22,845</td>
</tr>
<tr>
<td>1997</td>
<td>28,045</td>
</tr>
<tr>
<td>2002</td>
<td>22,290</td>
</tr>
<tr>
<td>2007</td>
<td>16,651</td>
</tr>
</tbody>
</table>

| Change in Acres from 1974-2007 | -13,013 |
| Percent change from 1974-2007   | 44      |
| Average No. Acres Converted to Other Use Per Year | 394 |

**Table 6: Harvested cropland acres in Missoula County over time, according to the US Census of Agriculture. Includes both irrigated and non-irrigated cropland from which crops were harvested in the census year. 1974 was chosen as the base year because that is when the most recent definition of what constitutes a “farm” was adopted.**

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29 USDA, National Agricultural Statistics Service, Montana County-Level Data. 1993 is the earliest year the NASS has this data.

To what extent do the lands converted to other uses and subdivided contain the most important agricultural soils? Recent data from the Natural Resources Conservation Service provides some insight. Local NRCS soil scientist Neal Svendsen carried out an analysis of what he termed our “best agricultural soils” (see Map 2, p. 25). These consist of Prime, Prime if Irrigated, and Farmland of Statewide Importance. Svendsen found that roughly 80% of the lands containing the best agricultural soils have been subdivided into parcels smaller than 40 acres. Svendsen describes two particular soils – Alberton and Desmet – as “some of the best soils in Montana, especially when irrigated.” Only 20% of the Alberton soils remain in ownership parcels larger than 40 acres, and only 33% of the Desmet soils. Located between Missoula and Huson, the lands that contain these soils are in areas that have experienced considerable development pressure in recent decades.

As Svendsen explained, 40 acres is not a prescription for a profitable operation. Depending on crops, markets, and the productivity of the land, some farms and ranches will need much more land; others will need less. In other words, parcels smaller than 40 acres may be viable for certain kinds of agriculture here, if the soil quality is still good. Despite this limitation to the NRCS analysis, it indicates pretty clearly that most of the best agricultural soils in Missoula County have been permanently converted to non-agricultural uses – especially since working lands are rarely subdivided for agricultural purposes.

So, how much agricultural land is left? The most reliable source of data on pasture and rangeland comes from the MDOR, which indicates there are about 87,000 acres of land that is used for grazing in the County (see Table 4 above, p. 27). For productive cropland, we can compare several credible data sources, including MDOR, the National Agricultural Statistics annual county-level data, and the US Census of Agriculture. As shown in Table 7 below, about 16,000 acres of cropland are still used in Missoula County to grow and harvest crops, and therefore are most likely available for continued production (i.e., not yet “lost”).

<table>
<thead>
<tr>
<th>MDOR Harvested Cropland</th>
<th>No. of Acres 2008</th>
<th>Ag Statistics Harvested Cropland</th>
<th>No. of Acres 2008</th>
<th>Census of Ag Harvested Cropland</th>
<th>No. of Acres 2007</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated</td>
<td>14,879</td>
<td>Irrigated</td>
<td>9,900</td>
<td>Irrigated</td>
<td>12,161</td>
<td>12,313</td>
</tr>
<tr>
<td>Non-irrigated</td>
<td>2,599</td>
<td>Non-irrigated</td>
<td>4,600</td>
<td>Non-irrigated</td>
<td>4,490</td>
<td>3,896</td>
</tr>
<tr>
<td>Total</td>
<td>17,478</td>
<td>Total</td>
<td>14,500</td>
<td>Total</td>
<td>16,651</td>
<td>16,210</td>
</tr>
</tbody>
</table>

Table 7: Harvested cropland in Missoula County in 2007 or 2008, most recent data available, from Montana Department of Revenue, National Ag Statistics Service, and the US Census of Agriculture.
Map 3: In 1905, about 20,000 people lived in Missoula County, mostly concentrated near the commercial center and on working farms and ranches.

Map 4: By 1955, the County had 40,000 residents, but most lived near the city center.

Map 5: By 2005, 100,000 people called Missoula County home, and the growth pattern had shifted to spread residences out across the valley floors and best farm and ranchlands.

Source: Sonoran Institute.
Subdivisions on Agricultural Lands

In aerial photos of the Missoula Valley, the problem becomes conspicuous: agricultural land is rapidly being fractured by non-agricultural developments – mainly residential subdivisions (see Maps, pp. 24-25 and 30). Not only are new subdivisions being placed on the best lands for food production, but also the average new residential lot is consuming more and more land than its predecessors, thus accelerating the rate of farmland conversion. For example, since 1970 the amount of residential land each person occupies has more than doubled, and the average new residential lot in 2008 and 2009 in Missoula County was 2.7 acres, as shown in Figure 8. Clearly, the larger growth patterns of expanding outwards and consuming more land per residence threaten to eliminate Missoula County’s agricultural resources.

Honing in on subdivisions recently approved on agricultural land provides insight into the nature of the challenge as well as potential strategies to prevent the continuation of these growth patterns. Since January 2008, CFAC has monitored all new developments on agricultural soil in Missoula County. To date, CFAC has submitted comments on 25 proposals to subdivide agricultural land, after carefully assessing each one for its potential impacts to agriculture and agricultural water use facilities. Through this work we drew several conclusions about the way farmland is subdivided in both the City and County of Missoula:

1. Current subdivision regulations are ineffectual in protecting agricultural land, lack predictability, and are cumbersome to all. Montana state law explicitly enables local governments to require new developments to minimize and avoid negatively impacting agriculture and agricultural water use facilities. The County and City of Missoula’s subdivision regulations include farm and ranchland in their definitions of agriculture, but neither has clear

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33 When CFAC reviews a subdivision proposal for its impacts to agriculture, we are investigating the potential of the property to support a working farm or ranch, the degree to which the proposed subdivision impacts that, as well as the potential impacts of the subdivision on nearby working farms and ranches. To answer this, we gather the relevant information regarding the requisite resources for agriculture (e.g., quality of the soil, size of land, access to irrigation), and we visit the site in person to ground-truth the data. Our comments are then written and reviewed by a committee of volunteers with extensive expertise in agriculture and land use planning.
guidelines about how to ensure new developments minimize or mitigate their impacts to agriculture, particularly with regard to the loss of agricultural resources. In effect, developers, planners, neighborhoods, and elected officials do not have a clear, predictable framework to process subdivisions on farm and ranchland.

2. **Agricultural soil is rapidly being subdivided into non-agricultural uses.** Just as the MDOR, NRCS, and OPG data suggest, the most viable lands for farming and ranching are being subdivided into non-agricultural uses. Even during the recession of 2008 and 2009, 2,250 acres were approved for subdivision in the City and County of Missoula. Roughly 1,400 acres (62%) of these were farm and ranchlands.

3. **The regions with the best agricultural lands often face the highest pressures to develop.** During 2008 and 2009, Frenchtown experienced the highest volume of proposals to subdivide farm and ranchland with six proposals on roughly 420 acres. Orchard Homes and Target Range neighborhoods, just west of the city limits, combined to account for another six subdivision proposals on 43 acres. The Mullan Neighborhood area, northwest of Missoula, saw two proposals to subdivide 319 acres. (See Figure 9 below.)

![Figure 9: Agricultural neighborhoods and regions in Missoula County where farm and ranchlands were approved for subdivision in a two-year period.](image)

The Mullan, Orchard Homes and Target Range communities have some of Missoula County’s best agricultural soils within the City’s Urban Services Area. Target Range and Orchard Homes have already experienced years of residential development, often converting working farms into half-, one-, and two-acre residential lots. This has fragmented much of the agrarian landscape, though some important farming properties and sub-regions remain viable for agriculture. The Mullan neighborhood still has many parcels over 10 and 20 acres in size. In recent years, some
large developments have moved in, though many farming properties are still contiguous to one another.

Parts of Miller Creek and the Wye are also within the Urban Services Area and have some important agricultural lands, though often of a lesser quality. One of the Miller Creek ditches that brought irrigation to some of the remaining working farms with Prime if Irrigated soil was abandoned so that a residential subdivision could obtain the water rights.

Outside of the Urban Services Area, development pressure is high in the Grass Valley’s Frenchtown and Huson areas, where the fertile loams have some of the best potential for supporting working farms and ranches. In Evaro and the Blackfoot Valley, two other important agricultural regions, there were fewer proposals to subdivide viable agricultural land in 2008 and 2009.

4. Not all agricultural lands hold the same productive potential, capable of supporting a viable farm or ranch. Depending on the soil quality, availability of water, and size of the property, the productive capacity of farmland can range enormously. For 11 of the 25 subdivisions, covering 630 acres, CFAC concluded that the proposed development would have minimal impacts to agriculture, because the land – though often having decent soil – was limited by a lack of access to irrigation and/or not enough fertile land to support a viable farm or ranch.

Other subdivisions, however, permanently replaced some of Missoula’s most fertile and productive lands with residential lots. Of the 1,400 acres of farmland approved for subdivision, 570 acres had a very high productive potential and the ability to support a working farm or ranch.

5. Regardless of the land’s agricultural value, most subdivisions permanently displace every acre of farmland. Thirteen new developments subdivided 570 acres of highly productive farmland. Despite a Montana State Law that encourages local governments to require developers to mitigate a subdivision’s impacts to agriculture, 349 of the 570 acres within these 13 developments were permanently lost to residential uses (see Figure 10).34 All 13 subdivisions were approved, and less than 60 acres of developable agricultural lands remained for future food production – though clearly in much smaller pieces. In other words, for every 5.9 acres of exceptional farmland converted to non-agricultural uses, just one acre was left for agricultural production.

Figure 10: Decision outcomes of 13 subdivision proposals (2008-2009) on the most viable, but buildable, agricultural lands in the City and County of Missoula.

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34 Another 160 acres were in the floodplain, and therefore unbuildable.
The Strengths and Limits of Purchasing Development Rights

As discussed in the introduction to Losing Ground, the City and County of Missoula have stated a commitment to agriculture for decades. Perhaps the most important action came in July of 2005, when the Missoula Board of County Commissioners appointed two land owning members from each of the nine geographic planning regions in the County to compose the Open Lands Working Group (OWLG). The goal of this committee was to study land conservation tools, which could be used to preserve open space and to make recommendations to the County Commissioners regarding the most appropriate options for implementation.

The OLWG recommended that the County ask the public to support a $10 million Open Space Bond. The purpose of the bond funds is largely to purchase conservation easements from willing landowners. During the public process for launching the Open Space Bond campaign, citizens voiced strong support for using the funds for the protection of agricultural lands.

Since 2007, when Open Space Bond funds first became available, important agricultural land has been protected in the Potomac, Greenough, Miller Creek, Evaro, and Frenchtown regions of Missoula County. Although some success in protecting farmland has been achieved by purchasing conservation easements (both prior to the Bond and since its passage), the effectiveness of this tool is restricted by the willingness, or lack thereof, of the landowner to voluntarily sell his/her development rights. Furthermore, the Open Space funds cannot even make a dent in protecting the most productive valley bottom soils that typically carry higher development values per acre.

As of February 2009, 99 of the 158 easements in Missoula County contain some agricultural soils of importance, as classified by NRCS (see Map 6, p. 35).35 Roughly 25% of all lands under conservation easement in the County contain soils that are classified as important farmland soils. A small fraction of these acres are Prime or Prime if Irrigated Farmlands. Most of the agricultural areas that are experiencing the highest development pressures (Missoula and Grass Valleys) are not protected under easements. And, overall, only about 4% of the private lands in Missoula County are protected under easements.36

While protection of open space through conservation easements has many proven benefits, this effort needs to be complemented by other tools and policies. As evidenced by the trends analyzed in the preceding pages, the City of Missoula and Missoula County still face a difficult task when it comes to conserving more of the working farm and ranchlands that remain, especially for those areas experiencing high development pressure and that contain agricultural soils.

35 Data provided by Carly Walker, Missoula County Rural Initiatives, via email, Feb. 26, 2010. Note that most of these easements pre-date the Open Space Bond funding.
36 Missoula County Rural Initiatives, Factsheet: Conservation Easements in Missoula County, Prepared February 18, 2009.
Map 6: Farmland protected by conservation easements in Missoula County, as of February 2009. Just 25% of all lands in conservation easements have important agricultural soil. Notice the wide-open vulnerability of some of the best farmlands remaining in Missoula County, along the valley floor between Missoula and Huson.
Conclusion

Agricultural soils are a rare and irreplaceable resource, originally covering about 130,000 acres or 8% of Missoula County’s land area. Yet, how much of those original acres have already been developed or put to a non-agricultural use has largely been unknown. Similarly, the public has not had good knowledge of how much of the land is used for agriculture and how that use has changed over time. What remains available for potential food production? Given the importance of food as a basic human need and in light of the emerging local food economy, getting a better grasp on these questions is an important task, one which we have sought to undertake here.

Key findings related to agricultural use and soils are:

- Since 1986, almost 29,000 acres of productive, working land has been converted from agricultural use (cropland, grazing, and wild hay) to non-agricultural use. That’s 1,443 acres per year on average.

- Since 1974, the number of cropland acres harvested has declined by over 13,000 acres, an average of 394 acres a year. That represents a drop of 44% during a 33-year period.

- Roughly 80% of the lands containing the best agricultural soils have been subdivided into parcels smaller than 40 acres.

- Only 20% of the Alberton soils and 33% of the Desmet soils remain in ownership parcels larger than 40 acres. A NRCS soil scientist calls these some of the “best soils in Montana,” which are unfortunately located in an area that has experienced considerable development – Missoula to Huson.

- About 87,000 acres of grazing land remain. There were over 108,000 acres in the mid-1980s.

- About 16,000 acres of cropland are still used to grow and harvest crops (about 12,000 acres of those are irrigated). These lands are likely available for continued production.

State law, as well as local regulations and policies, mandate that the local government consider the impacts a subdivision might have on agriculture and agricultural water users when they review a proposal to divide land. For decades, the impacts that a particular subdivision might have on agriculture have largely been regarded as incremental. In response, in 2008 and 2009, CFAC participated in the subdivision review process and commented on 25 proposals regarding their potential impacts to agriculture. As the preceding list of findings indicates, the incremental losses have added up over the decades.

Key findings regarding development patterns on the agricultural landscape are:

- From 1990 to 2009, almost 22,000 acres were subdivided in the County, and most of that was outside the City of Missoula.
- Even during the recession of the last two years, local government approved subdivisions on 2,250 acres; roughly 1,400 of these were on farm and ranchlands.

- The average new residential lot in 2008 and 2009 was 2.7 acres, consuming much more land per residence than we have historically.

- Neither the City nor County have clear guidelines around how to ensure new developments mitigate their impacts to agriculture, making the subdivision review process unpredictable and ineffectual when it comes to protecting working agricultural lands.

- Of the 25 subdivisions CFAC commented on in 2008 and 2009, we found that 13 would have substantial impacts, dividing 570 acres of highly productive farmland. All 13 were approved. For every 6 acres of exceptional farmland converted to other uses, just 1 acre was left for agricultural production.

- The sub-regions within Missoula County that have the best agricultural lands often face the greatest development pressure.

- Conservation easements – both those voluntarily donated and those purchased – are an important tool that has been used with some success to protect valuable lands. Only 4% of the County as a whole is in conservation easement, and roughly 25% of those protected lands contain soils classified as agriculturally important.

Over the years, the community and local government have expressed a strong appreciation for our agricultural heritage. The Comprehensive Plan, the Growth Policy, and other planning documents state a clear vision for encouraging the continuation of agricultural operations, conserving working farm and ranchlands, and promoting sustainable agriculture. Still, residential sprawl has continued to fragment the agricultural landscape. Clearly, the time has come to stop losing ground. As discussed in the next section, there are several compelling reasons to act now.
SECTION 3: ENSURING COMMUNITY FOOD SECURITY IN A CHANGING WORLD

Since World War II, the U.S. has led the world in food production – particularly staple crops of commodities, like wheat, corn, and soybeans. Yields reached unprecedented levels, and the high volumes made food products extremely cheap for the consumer. In 1930, for example, Americans spent 24% of their disposable income on food.\(^{37}\) By 2000, our food expenses dipped below 10% of disposable incomes, even as we have become able to eat a variety of food from all over the globe. In some ways, cheap food is secure food and more accessible to individuals with lower incomes. However, the industrialization of agriculture has also brought high-caloric products with significantly lower nutritional values, which are linked to diet-related diseases that have become epidemic, such as obesity, heart disease and diabetes.\(^{38}\) Furthermore, we cannot depend on cheap food from distant lands forever. Several powerful trends are converging, which will make Missoula County’s remaining agricultural lands vital to future residents, as well as eaters in the region and beyond. These trends, however, are not just a threat to our current food supply; they will also open economic opportunities for farming and ranching in Missoula County.

1. Populations continue to rise in Missoula County, the United States, and the world, which increases demand for food in all corners of the globe – including here at home.

Over the past hundred or so years, Missoula County’s population has grown steadily, from 14,000 in 1900 to 96,000 in 2000.\(^{39}\) In 2004, it surpassed 100,000, and if current growth rates continue, 40,000 new residents will call Missoula County their home by 2030 (see Figure 11). The nation’s population is also rising, as is the world’s. Not only will the County have 40% more mouths to feed in 20 years, but the demand for food in most corners of the world will also be that much greater. By 2050, the U.S. population will be 30% larger with over 400 million people. The world will have 9.1 billion mouths to feed.\(^{40}\) All agricultural lands will be important, as populations rise.


\(^{39}\) U.S. Census Bureau.

2. Across the U.S., farmland is being permanently lost, reducing the land’s ability to feed the nation as well as export markets.

The U.S. has some of the world’s richest agricultural resources. For decades, we out-produced every other nation. Yet, in 2005 the U.S. became a net importer of food, and the country’s most productive lands continue to be developed into non-agricultural uses. Every minute, two acres of farmland in the U.S. are permanently lost to development, adding up to over 1 million acres every year. The communities that retain the ability to produce food will be best able to buffer themselves from volatility in agricultural markets and food supplies.

As Missoula County uses its agricultural lands to house an increasing population, the ratio of farmland acres per capita accelerates downward. According to some estimates, the average American diet requires 1.2 acres of productive cropland and 1.8 acres of pasture per year. Today, the U.S. has 1.8 acres of cropland per capita. If current growth patterns continue, only 0.6 acres of cropland and 1.1 acres of pasture will be available to grow food for each American by 2050. Despite the capacity of modern farms to feed great numbers of people, a certain amount of fertile soil will still be needed to support each person.

3. Agricultural soils are a finite and irreplaceable resource that is vital to human life.

Fertile soils take thousands of years to develop, based on a combination of geology, climate, and biology. Each soil is unique with its own character, history, and abilities to support plants and animals. Good soil is not just dirt; it is our most underappreciated, least valued, and yet essential resource. As noted geologist David Montgomery explains: “In our accelerated modern lives, it is easy to forget that fertile soil still provides the foundation for supporting large concentrations of people on our planet.” Considered at a global scale, Montgomery shows how we are slowly running out of soil — lost to erosion (faster than it can be formed) or to pavement and suburbs. In many ways, soil is an intergenerational resource, one that can be managed with care or squandered.

4. As the Earth’s oil reserves wane, transporting food long distances will become less affordable or practical.

In the U.S., the average food product travels over 1,500 miles — 22% farther than in the early 1980s. Often, the calories burned in growing and shipping a product dwarf the energy received by the consumer. When a head of lettuce, for example, is shipped from California to

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46 Rich Pirog, Checking the food odometer: Comparing food miles for local versus conventional produce sales to Iowa institutions, Leopold Center for Sustainable Agriculture, Iowa State University, 2003.
Washington D.C., the transportation alone requires about 36 times as much fossil fuel energy as the lettuce provides in food energy.\textsuperscript{47} This inefficiency cannot persist as energy costs rise, and will pose an economic advantage for the farms and ranches that remain in Missoula County, as the final point of food consumption will generally have to be much closer to the field or pasture.

5. Markets for local food are becoming more desirable and cost competitive.

As the demand for locally produced food continues to grow, several studies have documented the consumers’ willingness to purchase local food, even if it costs a little more. One recent study, for example, found that nearly 50\% of consumers were willing to pay 10 to 30\% more for locally produced foods.\textsuperscript{48} Another study, however, suggests that consumers may not always have to. Despite the perception that local food is almost always more expensive, when researchers compared a variety of local vegetables from multiple farmers markets to their non-local equivalents at supermarkets, the average pound of local vegetables cost 14 cents less than at the supermarket. The average pound of local meat cost 50 cents less per pound than its non-local counterpart.\textsuperscript{49}

Conclusion

At least four factors at the local, national, and global levels threaten Missoula County’s future food security: increase in human population across the globe, loss of productive farmland across the country, the finite character of agricultural soils, and the increasing cost of transporting food long distances from its place of origin to its place of consumption. However, these converging trends are also an economic opportunity for local farms and ranches and food-related businesses. An encouraging movement across the nation – and elsewhere in the world – is the increasing public awareness of the superiority in taste and nutrition of locally-produced foods at prices comparable to those paid for imported foods.

Missoula County’s food security is rooted in a durable local economy and the capacity to produce much of our food nearby. While the community’s food security is in jeopardy, and opportunities to strengthen our local economy stare us in the face, we cannot do it without farmland or farmers. It is time for the City and County of Missoula to prepare for the community’s future needs and well-being by employing a multi-pronged strategy to support and protect the remaining working farms and ranches.

\textsuperscript{47} Halweil, \textit{Eat Here}.
\textsuperscript{48} Rich Pirog and Andy Larson, \textit{Consumer perceptions of the safety, health, and environmental impact of various scales and geographic origins of food supply chains}, Leopold Center for Sustainable Agriculture, Iowa State University, 2007.
SECTION 4: GAINING GROUND: RECOMMENDATIONS FOR OUR FOOD FUTURE

Missoula County is at a crossroads. As discussed in Section 1, the number of farms has grown steadily since 1974, but they have simultaneously decreased in size. Since farms that sell less than $1,000 annually have driven much of the increase in farm numbers, many of the new farms appear to be rural residences with minimal agricultural activity at all. The present moment is particularly urgent, because the average age of farmers in Missoula County has reached a record 60 years old. As farmers and ranchers retire, their land will inevitably change hands. The data presented in Section 2 suggests that farmland is often not being passed on to the next generation of farmers and ranchers. Instead, it is being permanently converted to non-agricultural uses. Working farm and ranchlands have decreased by roughly 29,000 acres since the mid-1980s, and residential subdivisions are consuming the best agricultural lands and fragmenting the agrarian landscape. In 2008 and 2009 alone, 1,400 acres of farmland were subdivided into non-agricultural uses – mostly residential lots averaging 2.7 acres in size. The changing global and national circumstances, as outlined in Section 3, suggest we need to respond at the local level to actively strengthen our food system, protect the local resources necessary to produce food, and re-direct the $300 million Missoula County eaters spend on food each year back to local farms, ranches, and food-related businesses, which in turn create jobs and spend much of their profits at other local businesses.

Based on the findings of this report, the Community Food & Agriculture Coalition offers five recommendations to seize opportunities to build a resilient food system, strengthen our local economy, and support working farms and ranches in Missoula County. Our multi-pronged strategy is also about minimizing the limitations our decisions place on future generations.

Since the bedrock of Missoula’s food system – farmland and agricultural resources – is the most vulnerable, the first three recommendations are for Missoula’s County Commissioners and City Council to adopt land-use planning tools, policies and incentives that will strategically conserve farm and ranchlands that have the most potential to support viable operations. The fourth recommendation is aimed at ourselves and other organizations that assist beginning farmers and ranchers in starting their agricultural operations. Beyond farmland, a viable food system requires producers having secure access to land, the skills to grow food, and the business savvy to turn a profit. The fifth recommendation is for CFAC and other organizations and businesses to continue building markets for local food products. Taken together, this multi-pronged and community-wide strategy will strengthen Missoula County’s food security and agricultural legacy, even as the population continues to grow.
Recommendation 1: Identify Agricultural Cornerstone Areas that are priorities for farm and ranchland protection in the City and County. Amend the Missoula City/County Growth Policy to enact an Agricultural Cornerstone Plan that encourages the conservation of agricultural resources and discourages non-agricultural development within these Areas.

How? CFAC recommends identifying Agricultural Cornerstone Areas in Missoula County where important agricultural soils, access to agricultural water user facilities, and sufficient parcel sizes support viable farming and ranching. CFAC proposes that a collaborative, public process be established for the purpose of recommending to decision makers which Agricultural Cornerstone Areas could be designated through an amendment to the Missoula City/County Growth Policy.

Why? The aim would be to conserve a “critical mass” of agricultural land to ensure that there will be enough farms and ranches to support local service businesses and to provide local food for Missoulians. Conserving areas of contiguous agricultural lands will minimize conflicts between farmers/ranchers and their non-agricultural neighbors. Conserving agricultural landscapes as whole, contiguous working farms and ranches will ensure Missoula County’s future generations also enjoy open space, agricultural heritage, water quality, and community food security.

Once delineated, Agricultural Cornerstone Areas would guide local government officials and key stakeholders in protecting our most valuable agricultural resources within agricultural regions or neighborhoods. If amended to the Growth Policy, the Agricultural Cornerstones would inform Missoula’s City Council and County Commissioners in all relevant land-use planning decisions (e.g., open space bond projects, subdivision review, requests for re-zoning). Agricultural Cornerstone Areas would also ensure off-site mitigation (see Recommendation #2 below) strategically conserves agricultural land within farming and ranching communities.

Recommendation 2: Mitigate the loss of important farm and ranchlands by enacting Agricultural Resource Standards in the City and County of Missoula’s zoning ordinances and subdivision regulations.

How? CFAC recommends enacting Agricultural Resource Standards that mitigate for the conversion of agricultural land to a predominantly non-agricultural land or use. The Agricultural Resource Standards would require permanent conservation of agricultural land that is of equal or greater value in terms of suitability for agriculture and community farms. Mitigation could be achieved by protecting agricultural land off-site (ideally in Cornerstone Areas described above in Recommendation #1), on-site or through cash-in-lieu of land, if appropriate. Agricultural Resource Standards would ensure that Missoula’s agricultural resources are protected and that the agricultural community is not jeopardized by non-agricultural development.
Resources Standards should provide clarity and predictability for developers, area residents, elected officials and agencies.

**Why?** Farm and ranch lands provide unique aesthetic, economic, ecological, and social benefits to the citizens of the City of Missoula and Missoula County and to all who visit here. Land suitable for farming and grazing is an irreplaceable natural resource with soil and topographic characteristics enhanced by generations of agricultural use. Fertile soil provides the essential foundation for supporting human life. The agricultural industry and community farms and gardens contribute to the area economy and provide locally produced food. Well-managed agricultural lands preserve the quality of our water. When such land is converted to urban and suburban uses, an important community resource and part of our heritage are permanently lost for current and future generations.

While the City and County have policies to protect agricultural land and promote sustainable agriculture, there are no clear guidelines for mitigating the adverse impacts to agricultural resources at the point of conversion to other uses—such as residential, commercial or industrial development. Enactment of a comprehensive mitigation policy should fill this gap.

**Recommendation 3:** Identify, evaluate, and activate a broad suite of incentives available to agricultural producers and owners of important farmland. Use incentives to encourage and reward conservation, especially within areas identified as Agricultural Cornerstones.

**How?** CFAC recommends that a more powerful and comprehensive set of agricultural land conservation incentives be developed and made available to landowners in Missoula County. CFAC suggests that a collaborative public process be established to 1) identify a comprehensive list of potential incentives; 2) evaluate their efficacy in light of local land use, State law, and other factors; and 3) select the most promising incentives and work to enable these incentive tools in Missoula County. Re-visiting the conservation tool-box that the Open Land Working Group put together in 2005 could serve as a useful starting point to this discussion. The Working Group reviewed over 33 incentives, regulations, policies, and economic development strategies to conserve and support working lands.

**Why?** Existing incentives, such as the use of Open Space Bond funds to acquire conservation easements, are too few and limited in scope to affect local farmland conservation at the necessary meaningful scale. CFAC believes that we need to pursue as many avenues as possible to retain the farmland in Missoula County that will be critical for future food production and consumption. A more diverse set of tools is more likely to provide a greater number of landowners with enough of an incentive to choose to keep their land open and productive. A balanced approach between voluntary incentives and regulatory compliance is the most effective way to conserve agricultural land.

**Recommendation 4:** Assist beginning farmers and ranchers in securing land and establishing viable operations.

**How?** CFAC’s Land Link Montana is a program designed to help the next generation of farmers and ranchers access land and resources in order to build successful businesses in western
Montana. CFAC plans to further develop its Land Link Montana program and increase its outreach to landowners who might consider leasing or selling their land to a new producer. CFAC is also forging partnerships with other agencies and organizations that can provide aspiring farmers with the resources they need to run successful agricultural businesses—such as on-farm experience, business planning, debt management, production expertise, and market relationships.

Why? There are many obstacles facing Missoula County’s next generation of farmers and ranchers in starting an agricultural business. Development pressure increases the cost of land for young producers. Nevertheless, many beginning producers are determined to start a farm or ranch in Missoula County, and CFAC’s Land Link Montana program is working with them to secure land and the necessary resources to establish a viable operation. Interestingly, these aspiring farmers and ranchers are looking to produce a diversity of products at a variety of scales—which is exactly what Missoula’s eaters need. Many are also eager to capitalize on opportunities in Missoula’s local markets, if they can secure land.

Recommendation 5: Expand the capacity of Missoula’s markets to source locally produced foods and work with farmers and ranchers to assist them in strategically accessing those markets.

How? CFAC will continue to work directly with interested farmers and ranchers in accessing the local markets – from schools to restaurants, homes, and beyond. We will also work with our partners to 1) identify opportunities for creating new markets or expanding existing ones, 2) help beginning farmers and ranchers develop clear strategies to capitalize on local market opportunities, and 3) promote markets that make local food available to Missoula County eaters – such as the restaurants that have taken our Buy Fresh Buy Local pledge and Electronic Benefits Transfer program (food stamps) at Missoula’s farmers markets.

Why? As discussed in Section 1, Missoula County residents spend approximately $300 million on food each year, and the majority would prefer to spend their money on food from nearby farms and ranches, who on the whole have sold roughly $8 million in agricultural products the past two Census of Agriculture years (2002 and 2007). Expanding Missoula County’s market capacity for locally produced foods could dramatically increase farm/ranch profit margins, and more money will cycle through Missoula County’s agricultural economy.

In the last several years, many new markets for local food have emerged, and all seem poised for growth. CFAC’s Farm to School program has increased its procurement of local products by 330% since the program began in 2005. Electronic Benefits Transfer at Missoula farmers markets brought $18,000 in sales to area producers, not to mention fresh food to low-income families. Our Buy Fresh Buy Local restaurant initiative has provided assistance in successfully connecting twelve Missoula restaurants and catering businesses with western Montana producers. One of the lessons we have learned through our involvement in the marketplace is that demand already outstrips supply, which means there are economic opportunities for more of Missoula County’s farmers and ranchers to begin selling to local markets.
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