

Urban Sprawl and Its Impact on Farming: A Message in Embroidery

Lana Miller Caywood

Texas Tech University

Abstract

Since the 1980s there has been growing concern over urban sprawl among policymakers, farmers and, land protection organizations, and individual citizens. In this paper sprawl is defined as residential and commercial development growing along the urban fringe or large lot developments in the rural countryside. The consumption of farmland is discussed with a focus on Wisconsin. Legislative policies to protect farmland often referred to as “smart growth” are suggested. The issue of sprawl is the subject for a series of hand and machine embroidered towels. There are 7 hand embroidered towels with images drawn by the artist and 7 towels with machine embroidered text featuring a quote. Another towel serves as a title page for a total of 15 towels. The goal of the research, the art, and the website www.lcaywoodgradproject.weebly.com are designed to draw attention to the issue of sprawl, its impact of farming, and our future food supply.

Urban Sprawl and Its Impact on Farming: A Message in Embroidery

Introduction

Due to the complex nature of urban sprawl and its resulting social and environmental issues, I've chosen to limit the discussion to the consumption of farmland. The first part of the paper will explain my choice of embroidery as the medium for my artwork and detail the process. The second part of my paper will describe the impact urban sprawl has on farming with a focus on Wisconsin.

Why Communicate the Message in Embroidery?

In her 1906 book on embroidery Grace Christi states

The art of embroidery, however, is not merely an affair of stitches; they are the means by which ideas can be expressed in intelligible form . . . The best kind of work is that which appeals to the intelligence as well as to the eye, which is to say there should be evidence of mind upon the material. (pp. 8-9)

Like Christi, I believe embroidery can be more than mere decoration. It can communicate an issue of concern. There are two reasons I chose embroidery as the medium for my artwork and embroidery for the process. First, I think it appropriate to communicate the threat to our future food supply with a kitchen item as common as a tea towel. Redwork is the type of embroidery I chose since the color red is the international color signaling us to stop. I think it appropriate to use it to signal us to stop and consider the wisdom of developing prime farmland for residential and commercial use. Secondly, I chose embroidery to honor the women in my family who taught me the needlework skills that have given me much pleasure and fulfillment during my life. Redwork is the type of embroidery I remember my mother putting on tea towels she often gave as gifts at bridal showers and weddings.

Unfortunately, I never had the opportunity to explore fabric, thread, and processes of needlework as a means for making art in pursuit of my Bachelor of Science or Masters of Art Education degrees. Nor were textiles or surface design discussed in any art history class I took. It would seem neither Gardner nor Jensen thought needlework worthy of occupying many pages in their books on art history. Both mention the Bayeux Tapestry, an example of embroidery depicting the battle of Hastings in 1066, only in passing. Jensen (1991) gives it only one brief paragraph. In Gardner's ninth edition (1991) the tapestry is referred to as

unique in Romanesque art in that it depicts a contemporary event in full detail a time shortly after it took place – a kind of distant anticipation of modern pictorial reportage. The work is not only important as art but as a valuable historical document. (p. 372)

At least Gardner referred to the Bayeux Tapestry as art; unfortunately, many in the art community today still do not accept needle and thread as a medium worthy of the word.

Rozsika Parker (1989) detailed the domestication of embroidery during the Renaissance in her book, *The Subversive Stitch: Embroidery and the Making of the Feminine*. She explains the

Tighter regulations and increasingly hierarchical organizations worked to exclude women from positions of responsibility and prestige . . . The emerging artistic values of the Renaissance finally favored painting above embroidery. . . It is usually assumed that technical limitations prevented embroidery from attaining *trompe l'oeil* effect achieved in oil painting so that as illusionism became the aim of art, embroidery fell behind painting. . . Far more important for the future of embroidery was the changing role of the artist and accompanying developments

with art production, coinciding with the rise of the female amateur embroiderer.

(pp. 60-79)

Any discussion of embroidery as an art form must include the groundbreaking work of Judy Chicago's, *The Dinner Party*. Chicago (1996, describes it as "a work of art, triangular in configuration, that employs numerous media, including ceramics, china-painting, and needlework, to honor women's achievements" (p. 3). A visit to an exhibition of ecclesiastical embroidery unsettled Chicago due to "the fact that the women received absolutely no tangible credit for their needlework; they were not even allowed to stitch their names onto the pieces they had spent months, sometimes years, creating." The experience prompted her "to undertake a systematic study of the history of needlework" (1996, p. 7). Those of us who use needle and thread as an art form or other processes traditionally associated with women owe much to this controversial, feminist artist and *The Dinner Party* for drawing attention to women, their art forms, and their contributions to history.

What is Redwork?

When I decided to do my project using red thread I did so because this is the type of work I remember my mother doing on white tea towels. I didn't even know it was referred to as redwork nor did I know the history of this particular style of embroidery. In 2010, I attended a workshop at the University of Wisconsin-Platteville Sewing and Quilting Expo. It was here I met Rebecca Kemp Brent who had just published a book, *Redwork from the Workbasket*, and began my journey to discover the history of redwork. Prior to the eighteenth century, Europeans used madder root to make a red dye. However, the results were inconsistent and fading was a problem. "Only dyers in the Ottoman Empire and India seemed to possess the key to consistent

red dyes” (Brent, 2010, p. 8). The color referred to as Turkey Red was named for the country not the bird. The French introduced the process of making this vibrant red dye to the Europeans.

Brent goes on to say

Their discovery, coupled with imports of cotton from British outposts in India, made inexpensive red cotton thread and flosses available to those who couldn't afford silk or woolen threads. Best of all, the new red dye produced thread that held its color even through harsh laundering. (2010, p. 8)

Redwork is traditionally done in the outline stitch which is also referred to as the Kensington stitch. Kensington, England was the home of the Royal School of Art Needlework. In 1876, an impressive display of redwork from the school was exhibited at the Philadelphia Centennial Exhibition (Harding, 2000).

Because Turkey Red was a colorfast dye, it became the popular color to use on household items subjected to repeated laundering such as quilts, pillow shams, dresser scarves, and tea towels (2000).

My Process

I learned of the connection between the *Workbasket: Home and Needlecraft, For Pleasure and Profit* and *Aunt Martha's Hot Iron Transfers* from Brent and her book. Both were started in 1935 by John and Clara Tillotson (2010). It was probably the Aunt Martha's transfer #3825, the Animated Dish series, my mother used to embroider a set of towels for me. One of which is featured in Figure 1. While learning more about the *Workbasket* and *Aunt*

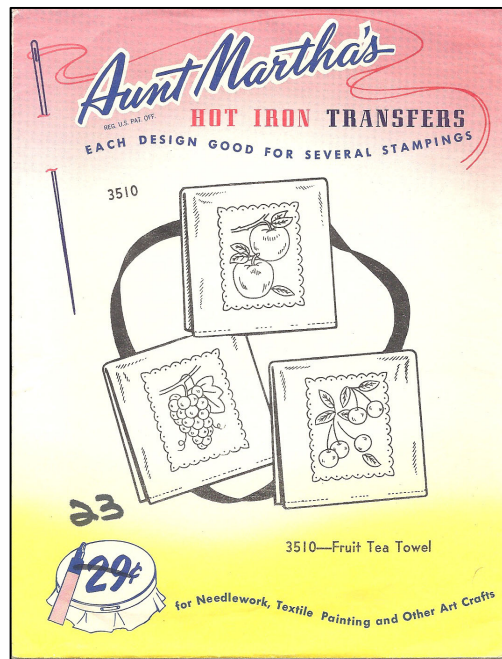
Figure 1. A Towel Embroidered by My Mother, circa 1969



Martha's transfers. I began scouring area antique malls for back issues of the magazine. It was during one of my searches I found several examples of *Aunt Martha's Hot Iron Transfers* neatly opened and the transfer sheets in pristine condition. It was the #3510, Fruit Tea Towel transfers that inspired the images I would later create for my towels, Figure 2. To pay tribute to ... I decided to use the border from this transfer and alter the images of the fruit to houses.

Since I had noted a passage in the Natural Resource Defense Council publication, *Once There Were Greenfields*, "No wonder the ironic declaration of many in the farm community is that the last crop that will be grown on America's farmland is not fruit, vegetables or grain but houses" (Benfield et al., 1999, p. 68). I also decided to include altered images of vegetables and grain. I incorporated the quote by machine embroidering it on a series of seven towels to display along with the hand embroidered images. The text and the images together would better communicate the issue of urban sprawl.

Figure 2. *Aunt Martha's Hot Iron Transfer # 3510—Fruit Tea Towel*



With my idea solidified, I began to draw the images for the towels. Having read housing and subdivisions are also called clusters or pods (Duany et al., 2000 p. 5), my first drawing was an altered pea plant with houses in the pods (See Figure 3). Using photo imaging software, I combined it with the resized border.

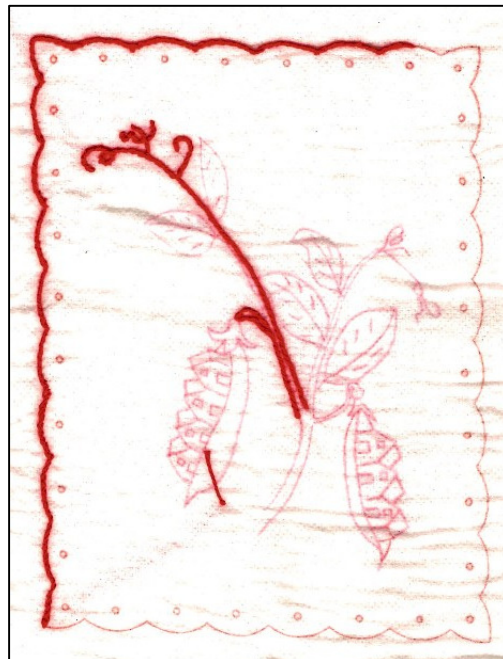
From my time with Brent, I learned about a product called Transfer-Eze. It is easily found on the internet and this transfer product can be used in an ink jet printer. In keeping with the tradition of transfers printed in the color thread to be used, I printed the images on Transfer-Eze in red. After removing a protective backing the product sticks to the material for hand embroidery and dissolves in cold water once the hand work is done. An example of the hand embroidery in process on the Transfer-Eze is featured in Figure 5.

Figure 3. *Pea Pod Houses with Aunt Martha's Border*, 4.75" X 6," 2011



After experimenting with the product and practicing making French knots for the border, I began prepping the towels. I found white feed sack towels at a variety store located in Fennimore, Wisconsin, the town where I teach elementary art. To prep them for the embroidery, I ripped off the selvage edges and tore the other edge to measure twenty-four inches. I then pressed a small rolled hem on all four edges and machine stitched them with white thread. Each towel was folded and pressed into thirds and the center third served as the area for the hand embroidery. As each drawing was completed they were printed on Transfer-Eze and adhered to the towel after careful measuring to ensure each image was centered and the same distance from the bottom hem.

Figure 5. Hand Embroidery in Process using Transfer-Eze, 4.75" X 6," 2011



As the hand embroidery continued on the image towels, I took time to work on towels that would feature machine embroidered text. This required dividing the quote I had decided to use into segments that would meet the space requirements while remaining less than fifty characters, the limit of the memory on the machine I used. Figure 5 features the quote broken into workable lines with the appropriate number of characters. Test embroidery strips were done to determine if the size was appropriate for the towels and the machine had been programmed correctly for accurate spelling, spacing, and punctuation. As each test was completed the line of text was embroidered on a towel.

Figure 5. Machine Embroidery Tests



The hand work and the machine embroidery were complete within days of each other. Figure 6 is an example of the hand work and Figure 7 features machine embroidered text. All towels and more photographs of artwork and Wisconsin farmland can be found by visiting my website at, <http://lcaywoodgradproject.weebly.com/> .

In April, 2011 I submitted an application to a fibers exhibit scheduled to correspond with the 2011 Sewing and Quilting Expo to be held at the University of Wisconsin-Platteville. The towels were accepted and were on display in the Harry Nohr Gallery on the campus May 13-June 13, 2011. The towels were displayed on simple chromed metal towel bars that were more commonly used in kitchens in the 1950-60s. A photo of the exhibit is featured in Figure 8.

Figure 6. Hand Embroidery, *Housing Cluster*, Pearl cotton on white cotton towel, embroidered image, 4.75" X 6," 2011

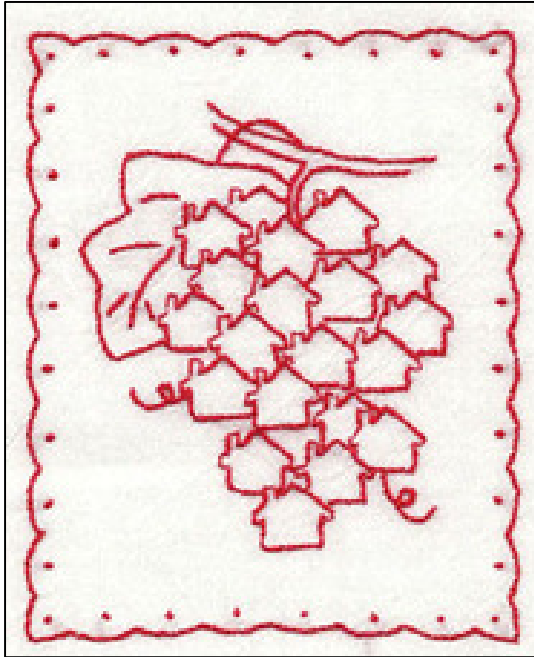


Figure 7. Machine Embroidery Text Pearl cotton on white cotton towel, 2011

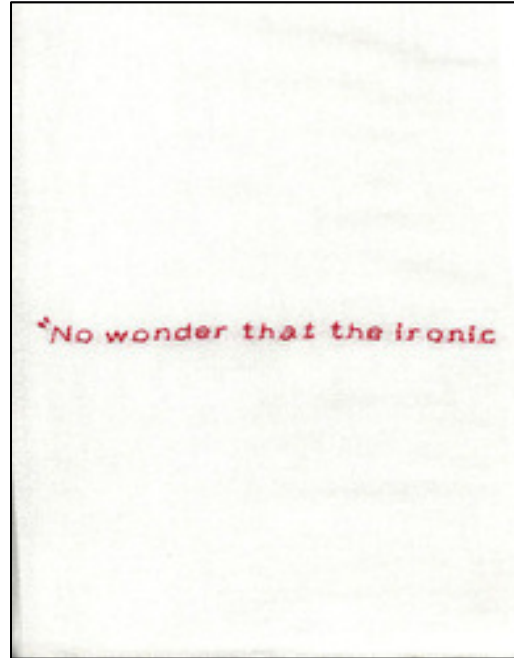


Figure 8. Completed Urban Sprawl Towels on Display at the Harry Nohr Gallery, UW-Platteville



The graphic simplicity of the images along with the quote that moved the viewers down the row of towels communicated my concern over this issue of sprawl. This was confirmed when a

visitor to the exhibit who is also a farmer and the mother of students in the rural district where I teach told me she appreciated my efforts to draw attention to one of the many issues facing farmers today.

Urban Sprawl and Its Impact on Farming

I moved to Wisconsin in 1991 with my husband and two sons. The southwestern corner of the state is referred to as the driftless or non-glaciated region since the ice age spared the terrain. Today the rolling hills are covered with wavy lines of corn alternating with alfalfa and the valleys feature scenic dairy farms dotted with herds of Holsteins. There is no denying the family farms I see on my daily commute are vital to our state's economy and our nation's food supply. Unfortunately, in the nineteen years I've resided here, I've seen the family farm threatened by urban sprawl and the inability to compete with large corporate farms.

I have the utmost respect for the hard working men and women who either by destiny or design farm America's heartland. Many of them are struggling in our current economy and with the decision to keep farming when their land is more valuable for residential or commercial development. I dedicate my research paper to them for all they do to provide food for our state, our nation, and the world.

I first heard the term urban sprawl in 1997. It was used by a friend, Rich Waugh, Ph.D., a cultural geography professor at the University of Wisconsin-Platteville. I needed course credit to maintain my teaching license, so I decided to travel to the American Southwest on his annual geography field trip. When possible, Rich would take photos of what he referred to as the "strip," a term he used to describe areas of commercial development that occur on the fringes of cities and towns, usually driven by highway expansion or the location of big box stores. This brief introduction to urban sprawl heightened my awareness of the issue. I found myself

watching the sprawl from our state capital in Madison, Wisconsin, stretch westward and wondering if we, as a nation of people, would realize in time that building on productive farm land would eventually jeopardize our food supply.

As with any research topic the first thing I learned is how little I knew about the subject. As I read Heimlich and Anderson's Agricultural Economic Report No. 803 for the U.S. Department of Agriculture and the book, *Once There were Green Fields*, published by the Natural Resource Defense Council, it is easy to see the issues of sprawl are complicated and federal, state, and local policies to control it won't be easy either.

What is sprawl?

I first learned policy makers and scholars can't agree on what defines urban sprawl. Heimlich and Anderson (2001), in their Agricultural Economic Report for the U.S. Department of Agriculture would not even use the term sprawl. "Because the term "sprawl" is not easily defined, this report is couched in the more neutral terms "development" or "growth" (p. vi).

Duany, Plater-Zyberk, and Speck (2000) define sprawl as being made up of five components: Housing subdivisions, places consisting only of residences. Shopping centers, strip centers, shopping malls and big-box retail, places are exclusively for shopping. Office parks or business parks, places are only for work. Civic institutions include town halls, churches, schools, and other places where people gather for communication and culture. They go on to say the suburban version of such places is usually large and infrequent, surrounded by parking and located nowhere in particular. The fifth component of sprawl consists of miles of pavement that is necessary to connect the other four disassociated components (pp. 5-7).

According to Cynthia Berlin (2002, p.3) a more complete definition includes:

- Leapfrog scattered development

- Commercial strip development
- Poor accessibility and automobile dependency (e.g. lack of public transport)
- Fragmented open space between scattered developments
- Lack of functional open space (public space that provides high-quality habitat)
- High edge contrast (e.g. a strip mall next to wetland)
- Lack of nearby conveniences (e.g. businesses, shopping, and services)
- Increasing expenditures on infrastructure (e.g. roads, utilities, services)

However, to complete the definition of sprawl or growth another type of building development must be considered. Heimlich and Anderson (2001) describe it as often occurring farther out in the rural countryside, beyond the edge of a city or town. Large lots (an acre or more) dominate such developments and remove land from agricultural production. It changes the nature of open space, but is not “urban”(p. 2). The housing development pictured in Figure 9 is surrounded by soy bean fields.

Figure 9. Large Lot Development in Rural Countryside



Note. The name, location, and phone number for the realty company have been obscured.

Whether sprawl is on the fringe of a large, deteriorating city, rural communities, or large-lot housing developments that spring up in the countryside, all types of growth described above can affect the amount and productivity of agricultural lands.

What does this mean for agriculture?

When driving through America's heartland, I see vast acres of farmland producing corn, soy beans, alfalfa, oats and occasionally wheat. I see beef and dairy cattle feeding on acres of pasture. I know sprawl is an issue for concern but there still seems to be an abundance of farmland. However, at the conclusion of exhaustive research the American Farmland Trust found we are losing the best of our farmland at an alarming rate.

In its 2002 report, *Farming on the Edge: Sprawling Development Threatens America's Best Farmland*, the American Farmland Trust reported from 1992 to 1997 we lost to urban and suburban development an average of 1.2 million acres per year of "prime" farmland, the land with the best soils and climate for growing crops. This translates to a loss of 2,880 acres per day. This rate of loss was 51 percent higher than the 1982-1992 timeframe. The report further states, "From 1982-1997, U.S. population grew by 17 percent, while urbanized land grew by 47 percent... the acreage per person for new housing almost doubled..., 10+ acre housing lots have accounted for 55 percent of the land developed" (2002, p.2).

Another concern for farmers is the increased value for farmland and the resulting property taxes.

When development spreads to rural areas, the price of farmland is often driven above its economic value for farm use. In states where farmland is in great demand for conversion to developed and rural residential uses a relatively large portion of the market value of farmland is attributed to nonfarm demand. (USDA, 2002, p. 17)

What will happen when sprawl begins to have a negative impact on our food supply?

Can't we just reclaim the land and begin producing food again?

According to the USDA report, *Agricultural Outlook* (2002, p. 17) several studies have shown that once land is converted it tends to remain in those uses. Conversion of land to developed uses in urban areas tends to be irreversible. The extent to which rural residential land is irreversible is also likely high but has not been studied.

What Does This Mean for Wisconsin?

In the introduction to a working paper developed as part of the Wisconsin working Lands Initiative steering process (n.d.) indicates agriculture is a cornerstone of the state's economy. According to this document agriculture generates 420,000 jobs and over \$51 billion in economic activity. The sale of agricultural products generates over \$28 billion annually. More than half those dollars come from the dairy industry. About 12 percent of Wisconsinites work in a job related to farming.

The paper goes on to state Wisconsin is losing valuable farmland. Since 1950 Wisconsin has lost 8 million acres, of farmland. Dropping from 24 million acres to 16 million acres farmland is down by a third. During the 1980s over 150,000 acres of farmland were converted to urban use. It only took 5 years in the 1990s to lose the same amount, an annual rate increase of 60 percent. Another sign to indicate the problem could get worse is the loss of two dairy farmers for every new farmer who starts a dairy.

Can We Establish Boundaries to Protect our Farmland?

If left unchecked, urban sprawl along with a growing population will at some point in the future outstrip our agricultural production. Can something be done to curb the commercial and residential development of prime farmland? Is it possible to meet the needs for economic growth

that relies on the construction of residential and commercial development while protecting our farmland and future food supply? Land management policies often referred to as “Smart Growth” are being adopted by all levels of government across the nation to protect farmland. Cynthia Berlin (2002, p. 8) lists seven principles of smart growth:

1. Revitalizing existing city and town centers, neighborhoods, and commercial areas
2. Encouraging development in areas where utilities and public services already exist
3. Encouraging mixed-use development
4. Facilitating accessibility by strengthening public transit
5. Applying the concepts of conservation development to new subdivisions
6. Increasing cooperation between neighboring towns and cities
7. Removing land from development through land purchase

According to the American Farmland Trust (2002) “to save our best farmland we must build upon successful work of state and local farmland protection programs” (p. 6). For example, in 2009 Wisconsin passed The Working Land Initiative. “The new law provides more tools and incentives for county and local governments to preserve agricultural land and promote agricultural enterprise.” It also provides “enhanced tax credits for farmers, new opportunities for public-private partnerships, encourages a renewed community focus on farmland preservation, and land-use planning” (Matson, 2009, pp. 1-2).

The only way farmland can be protected is through awareness and community involvement. I chose urban sprawl as the subject for my capstone art project to draw attention to the issue. It is my hope the redwork tea towels will serve as a simple graphic medium to draw attention to the need to protect our agrarian culture and our future food supply.

Conclusion

During the writing of this paper I contacted the American Farmland Trust concerning one of its publications. I included a link to my website in the email. In the reply from its headquarters in Washington D.C. I learned the link was sent out in an email to the national office and to the AFT field offices. The email went on to say, “ I’m hoping that someone will be getting in touch with you concerning your project and research”(J.D. Prater, personal communication, June 24, 2011). I also received a phone call from Ben Kurtzman, Farmland Information Specialist (personal communication, June 27, 2011) with the American Farmland Trust Office in Northampton, Maine. He called to see if I needed more assistance with information or obtaining reports. In the course of our conversation he expressed his appreciation that an artist was drawing attention to the issue of urban sprawl and the loss of prime farmland.

References

- American Farmland Trust. (2002). *Farming on the edge: Sprawling development threatens America's best farmland*. Retrieved from http://www.farmlandinfo.org/documents/29393/Farming_on_the_Edge_2002.pdf
- Benfield, F. K., Rami, M. D., & Chen, D. D. (1999). *Once there were green fields: How urban sprawl is undermining America's environment, economy, and social fabric*. New York, NY: Natural Resource Defense Council.
- Berlin, C. (2002). Sprawl comes to the American heartland. *Focus*, 46, 2-9.
- Brent, R. K. (2010). *Redwork from the workbasket*. Cincinnati, OH: Krause Publications.
- Chicago, J. (1996). *The dinner party*. New York, NY: Penguin Books.
- Christi, G. (2007). *Embroidery and tapestry weaving*. Retrieved from http://www.gutenberg.org/catalog/world/readfile?fk_files=1520071 (Original work published 1906)
- Duany, A., Plater-Zyberk, E. & Speck, J. (2000). *Suburban nation: The rise of sprawl and the decline of the American dream*. New York, NY: North Point Press.
- De La Croix, H., Tansey, R.G., & Kirkpatrick, D. (Eds.). (1991). *Gardner's art through the ages* (9th ed.). Fort Worth, TX: Hartcourt Brace Jovanovich.
- Harding, D. (2000). *Red and white: American redwork quilts*. New York, NY: Rizzoli International Publications.
- Heimlich, R. E. & Anderson, W. D. (2001). *Development at the fringe and beyond: Impacts on agriculture and rural land*. Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 803.
- Janson, A. F. (Ed.). (1991). *History of art* (4th ed.). New York, NY: Harry N. Abrams.

Matson, J. K. (2009). Wisconsin's Working Lands: Securing our future. *Wisconsin Lawyer*, 82, 1-11.

Parker, R. (1989). *The Subversive Stitch: Embroidery and the making of the feminine*. New York, NY: Routledge.

Wisconsin Working Lands Initiative Steering Process (nd). *Introduction or Case Statement to the Problem*. Retrieved from http://www.datcp.state.wi.us/workinglands/pdf/sept7/Introduction_or_Case_Statement_to_the_Problem.pdf

U.S. Department of Agriculture, Economic Research Service. (2002). Rural Residential Land Use: Tracking its growth. *Agricultural Outlook*, 14-17. Retrieved from <http://www.ers.usda.gov/publications/agoutlook/aug2002/ao293.pdf>