

A HISTORICAL GEOGRAPHY OF THE PAPER INDUSTRY IN THE WISCONSIN  
RIVER VALLEY

By

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Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the  
degree of Doctor of Philosophy.

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## Abstract

The paper industry, which has played a vital social, economic, and cultural role throughout the Wisconsin River valley, has been under pressure in recent decades. Technology has lowered demand for paper and Asian producers are now competing with North American mills. As a result, many mills throughout the valley have been closed or purchased by nonlocal corporations. Such economic disruption is not new to this region. Indeed, paper manufacture itself emerged when local businessmen diversified their investments following the decline of the timber industry. New technology in the late nineteenth century enabled paper to be made from wood pulp, rather than rags. The area's scrub trees, bypassed by earlier loggers, produced quality pulp, and the river provided a reliable power source for new factories. By the early decades of the twentieth century, a chain of paper mills dotted the banks of the Wisconsin River.

The paper industry helped to revive struggling sawmill communities in the region and, in some cases, created completely new settlements. Paper company executives, in fact, served as both employers and civic leaders. Operating under the principles of "welfare capitalism," these leaders provided employees good wages and made generous gifts to local communities. This culture persisted for decades, but ended abruptly when local mills were sold.

Using a variety of sources including, newspapers, maps, business records, and interviews, this dissertation examines the paper industry's impact on three communities in the Wisconsin River valley: Nekoosa, Port Edwards, and Wisconsin Rapids. It examines

factors that made the region attractive to paper manufacturers and discusses the entrepreneurial decisions that led to the creation of successful mills in each city. Later chapters investigate the industry's impact on the material landscape of the three communities and how these places are coping with paper's recent decline.

## Acknowledgements

Anyone who has ever read an acknowledgements page knows, dissertations are not created by just one person. This one is no different and, because I have spent nearly five years researching and writing, I have even more individuals to thank. First and foremost, I wish to thank my advisor, James R. Shortridge for sticking with me through this long process. He put a great deal of effort into each draft I submitted. No doubt this project would not be nearly as good without his guidance. It is not easy to be a doctoral student living several states away from your institution, but his immediate feedback made me feel as if I was just as important as the graduate students in-residence. I must also thank Bev Koerner who helped navigate me through several administrative processes during my long journey.

A special thanks goes to my committee members: Jay Johnson, Steve Egbert, Kim Warren, and Phil Englehart. Through Dr. Englehart's courses I discovered a strong interest in urban history. His comments on this dissertation have also improved the content and gave me much to consider in taking the research forward. Dr. Warren and Egbert provided thoughtful commentary that helped guide the project and I also learned a great deal from both as a student. Finally, Jay Johnson has been a supportive figure throughout my entire graduate career and I am grateful that he has been willing to serve on my thesis committee, but my dissertation committee as well.

I wish to also thank the many people I have met in central Wisconsin who have aided me in this research process, including J. Marshall Beuhler and the Alexander House in Port Edwards, Wisconsin and Susan Fife and the staff at the Wisconsin River Papermaking

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## Chapter One: Introduction

Paper is pervasive in our modern lives. Once a somewhat rare product, its consumption grew rapidly in the nineteenth century as literacy rates and business transactions both increased. In the wake of this change and expansion, new paper manufacturing centers emerged in different regions of the United States, including the Wisconsin River valley. This dissertation explores the industry in that particular location: its inception, impact, and eventual decline.

The first paper mill along the Wisconsin River was founded in 1888 by Frank Garrison, a local businessman, in partnership with George Whiting, an industry veteran who had a successful mill on the Fox River. They built this mill just south of present-day Wisconsin Rapids. Soon, by the early decades of the twentieth century, paper mills lined the northern half of the valley from Rhinelander to Nekoosa and the region became an important part of the national papermaking landscape. Paper manufacture was also the foundational economic enterprise for many communities along the river. In a local history of Port Edwards, for example, J. Marshall Buehler wrote that: “It is impossible to separate the village history from the background of the paper mill. Without the mill there would most likely not be a village . . . .”<sup>1</sup> Moreover, it also became an important part of regional identity, with at least one high school (Nekoosa) adopting the mascot of “Papermakers.”<sup>2</sup>

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<sup>1</sup> J. Marshall Buehler, *Looking Back: A History of Port Edwards* (Port Edwards, WI: The Village of Port Edwards, 2002), 1.

<sup>2</sup> “Nekoosa Papermakers,” *Nekoosa High School*, accessed October 21, 2011, <http://www.nekoosapapermakers.com/football>.

Many of the paper mill towns in the Wisconsin River valley are located near the southern edge of the region's white pine forest and were established with important ties to the lumber industry. Often, as is the case for Wisconsin Rapids, Nekoosa, and Port Edwards, they began as sawmill towns (Fig. 1.1).<sup>3</sup> As timber reserves declined, sawmilling did not provide a stable profit and investors eagerly built paper factories as a way to diversify their investments. It was a shrewd decision. For the most part, these mills did indeed provide decades of profitability and residents came to regard them as permanent parts of local life.



Figure 1.1. Nekoosa-Edwards Paper Company, Nekoosa, Wisconsin. 1900. Source: Wisconsin State Historical Society.

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<sup>3</sup> John C. Hudson, "The Creation of Towns in Wisconsin," in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale (Madison: University of Wisconsin Press 1997), 197-220.

The glory years of the Wisconsin paper mills endured about a hundred years. Then, at the beginning of the twenty-first century, many communities began to see local mills with their good-paying jobs close down, possibly never to return. One newspaper cited a drop of 20,000 persons employed in the Wisconsin paper industry from 2000 to 2009.<sup>4</sup> Port Edwards, Kimberly, and Whiting all have experienced recent mill closures, and even the factories that have managed to stay open have cut back on workforces. Local people are left wondering about the future.

In a series of articles, journalist John Schmid has examined papermaking's uncertain future in the state. A shift to more digital forms of social and business interactions definitely has lessened demand and, at the same time, the industry is facing competition from China, where the government has invested billions of dollars in the business. An ongoing Chinese push for such a traditional product might seem surprising in a digital age, but paper was invented in China and so has special meaning there. Chinese leaders have been developing sprawling tree farms and pouring money into research and development. They even have been accused of illegally importing timber from Russia and Indonesia to bolster production.<sup>5</sup> Faced with these circumstances, it is hard to imagine Wisconsin mills would be able to compete.

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<sup>4</sup> Richard Thomas, "Wisconsin Paper Industry Survives, Hardly Unscathed," *Business North.com.*, February 4, 2009, accessed December 13, 2011, <http://www.businessnorth.com/viewarticle.asp?articleid=2845>.

<sup>5</sup>John Schmid, "Wisconsin's Place in Paper Industry under Siege," *Milwaukee Journal Sentinel*, December 8, 2012, accessed September 20, 2014. <http://www.jsonline.com/business/paper-industry-digital-china-wisconsin-182612951.html>.; John Schmid, interview with Jacki Lyden, *All Things Considered*, National Public Radio, January 08, 2013, <http://www.npr.org>.

The loss of a paper mill can be devastating for community members. In 2012, for example, when Wausau Paper closed its mill at Brokaw (a village of 250 residents on the Wisconsin River) some 450 people faced unemployment.<sup>6</sup> The closure also meant the loss of the village's largest source of tax revenue. Currently, Brokaw is facing a debt of four and a half million dollars and local property owners are unable to cover the shortfall. Bankruptcy is not an option, as this is prohibited Wisconsin state law, and so the future is unknown.<sup>7</sup>

Some people have argued that current state of the Wisconsin paper industry actually is more positive than I have suggested in the paragraphs above. They note that the mill at Nekoosa had employees working extra shifts to make the paper for Walter Isaacson's biography of Steve Jobs, the founder of Apple and an important mover in the digital revolution.<sup>8</sup> More generally, Jeff Landin of the Wisconsin Council of Paper argued in June 2013 that, far from being threatened, the Wisconsin paper industry has actually increased its exports in recent years. Landin also noted that paper is more broadly utilized than most people imagine. Beyond the world of newspapers and office supplies, it also is used extensively for food packaging, insulation, and other products that are not likely to

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<sup>6</sup> Glen Moberg, "Paper Industry Shutdowns Create Unemployment Crisis," *Wisconsin Public Radio*, January 08, 2013, accessed February 20, 2014. <http://www.wpr.org/paper-industry-shutdowns-create-unemployment-crisis>.

<sup>7</sup> Glen Moberg, "Central Wisconsin Village Faces Financial Crisis After Closure of Paper Mill," *Wisconsin Public Radio*, June 9, 2014, accessed July 1, 2014. <http://www.wpr.org/central-wisconsin-village-faces-financial-crisis-after-closure-paper-mill>.

<sup>8</sup> "iPads, China: Twin Threats to Wisconsin's Paper Industry," *National Public Radio*, January 06, 2013., accessed September 23, 2014. <http://www.npr.org/2013/01/06/168741373/ipads-china-twin-threats-to-wisconsins-paper-industry>.

disappear.<sup>9</sup> Still, despite such notes of hope, the communities where mills have closed face dramatic and painful change.

## LITERATURE REVIEW

In the midst of present-day uncertainty, a study that examines the development of this industry and the economic and social roles it assumed in regional life would seem to provide useful context. Although the papermaking industry has been present in Wisconsin for over a century and definitely shaped its landscape, few studies have examined its history and the communities that developed around it. Even fewer studies have considered current circumstances in the region when mills close or reduce production. Even the book, *Wisconsin Land and Life*, an anthology dedicated to the historical geography of the state with a variety of essays by geographers, fails to mention paper production in any capacity.<sup>10</sup>

The literature on the historical development of the paper industry in the United States can be divided into three categories: comprehensive and technologically themed analyses, corporate/business histories, and place-based studies. The first group includes Lyman Horace Weeks's *History of Paper Manufacturing in the United States, 1690-1916* and David C. Smith's *History of Papermaking in the United States*.<sup>11</sup> These books explore changes in

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<sup>9</sup> Jeff Landin, "Paper Industry Still Strong in Wisconsin," *Milwaukee Journal Sentinel*, June 19, 2013, accessed September 23, 2014. <http://www.jsonline.com/news/opinion/paper-industry-still-strong-in-wisconsin-b9937711z1-212242941.html>.

<sup>10</sup> Robert C. Ostergren and Thomas R. Vale, eds. *Wisconsin Land and Life* (Madison: University of Wisconsin Press, 1997).

<sup>11</sup> Horace Lyman Weeks, *History of Paper Manufacturing in the United States, 1690-1916* (New York: Burt Franklin, 1916); David C. Smith, *History of Papermaking in the United States, 1691-1969* (New York: Lockwood Publishing Co., 1970).

the industry from regional mills during the colonial period through the twentieth century with Smith's work including relatively recent developments. Similar works include Gary B. Magee's *Productivity and Performance in the Paper Industry*, Avi Cohen's "Technological Change as Historical Process," Nancy Kane Ohanian's *The American Pulp and Paper Industry, 1900-1940*, and Hannes Toivanen's doctoral dissertation, "Learning as Corporate Strategy: The Dynamic Evolution of the Pulp and Paper."<sup>12</sup>

The second category of literature, studies about specific corporations, includes Thomas Heinrich's article on International Paper as well as his company history of Kimberly-Clark written with Bob Batchelor.<sup>13</sup> This latter study, *Kotex, Kleenex, Huggies*, explores how the corporation continually sought new uses for paper manufacture and ultimately ushered in the consumer nondurables market.

The last category of pulp and paper scholarship, the industry at the regional level, is the most abundant and its works offer a more geographical approach. Examples include Judith McGaw's book on the development of the paper industry in the Berkshire district

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<sup>12</sup> Gary B. Magee, *Productivity and Performance in the Paper Industry: Labour, Capital, and Technology in Britain and America, 1860-1914* (Cambridge: Cambridge University Press, 1997); Avi Cohen, "Technological Change as Historical Process: The Case of the U.S. Pulp and Paper Industry, 1915-1940," *Journal of Economic History* 44, no.1 (1984): 775-799; Nancy Kane Ohanian, *The American Pulp and Paper Industry, 1900-1940: Mill Survival, Firm Structure, and Industry Relocation* (Westport, CT: Greenwood Press, 1993); Hannes Toivanen, "Learning and Corporate Strategy: The Dynamic Evolution of the Pulp and Paper" (Ph.D. diss., Georgia Institute of Technology, 2004).

<sup>13</sup> Thomas Heinrich, "Product Diversification in the U.S. Pulp and Paper Industry: The Case of International Paper," *Business History Review* 75, no.1 (2001): 467-505; Thomas Heinrich and Bob Batchelor. *Kotex, Kleenex, Huggies: Kimberly-Clark and the Consumer Revolution in American Business* (Columbus: The Ohio State University Press, 2004).

eastern Massachusetts; Susan E. Dick and Mandi D. Johnson's study of Savannah, Georgia; and Jack P. Oden's work on the development of the industry in the South.<sup>14</sup>

Place-based scholarship on the paper industry in Wisconsin focuses mostly on the Fox River basin. Maurice Branch completed one of the earliest and broadest works on the topic, a doctoral dissertation on papermaking's expansion in Minnesota, Wisconsin, and Michigan.<sup>15</sup> Most of his examples are drawn from Wisconsin with a concentration on the Fox River valley. Continuing in the same vein, Charles N. Glaab and Lawrence H. Larsen produced two works on this Fox River industry.<sup>16</sup> A more recent study by Carol D. Miller focuses on Niagara, Wisconsin, a community situated near the Michigan border.<sup>17</sup> My dissertation complements this group of studies by emphasizing the state's second, but less examined papermaking region, the Wisconsin River valley. Much like the work of Glaab and Miller, I explore the region's historical geography with particular emphasis on the

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<sup>14</sup> Judith McGaw, *Most Wonderful Machine: Mechanization and Social Change in Berkshire Paper Making, 1801-1885* (Princeton, NJ: Princeton University Press, 1987); Susan E. Dick and Mandi D. Johnson, "The Smell of Money: The Pulp and Paper-Making Industry in Savannah, 1931-1947," *Georgia Historical Quarterly* 84, no. 2 (2000); Jack P. Oden, "Development of the Southern Pulp and Paper Industry," 1900-1970 (Ph.D. diss., Mississippi State University, 1973).

<sup>15</sup> Maurice Branch, "The Paper Industry in the Lake States Region, 1834-1947" (Ph.D. diss., University of Wisconsin-Madison, 1954).

<sup>16</sup> Charles N. Glaab and Lawrence H. Larsen, "Neenah-Menasha in the 1870s: The Development of Flour Milling and Papermaking," *Wisconsin Magazine of History* 52, no.1 (1968): 19-34; Charles N. Glaab and Lawrence H. Larsen, *Factories in the Valley: Neenah-Menasha, 1870-1915* (Madison: The State Historical Society of Wisconsin, 1969).

<sup>17</sup> Carol D. Miller, *Niagara Falling: Globalization in a Small Town* (Lanham, Boulder, New York, Toronto, and Plymouth: Lexington Books, 2007).

communities of Wisconsin Rapids, Nekoosa, and Port Edwards. I also profile the industry's current impact on the region.

## STATEMENT OF PURPOSE

According to geographer Richard Walker, “the heart of every economy is industrial production and the heart of economic geography lies in the spatial patterns and physical landscapes industry creates.”<sup>18</sup> If this is true, then the landscape of paper production merits study not only for its own sake, but also as an important facet of Wisconsin's economy and history. By exploring the rise and fall of this industry along the Wisconsin River, I trace a central element in the lives of these communities. More generally, this work contributes a geographical perspective to the study of the paper industry and adds to the literature of the changing manufacturing landscape in the United States and Wisconsin.

Although I discuss developments in the region as a whole, special attention is devoted to three communities as case studies: Wisconsin Rapids, Nekoosa, and Port Edwards. These towns are geographically proximate to one another and served as the cradle of the paper industry in the Wisconsin River valley. Their stories typify the role that the industry has played in the urban development of the entire region and provide three different examples of community impact in an age of manufacturing decline.

Beyond papermaking itself, this dissertation contributes to the literature of urban history by focusing on the development of smaller communities that often get overlooked in

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<sup>18</sup> Richard A. Walker, “The Geography of Production,” in *A Companion to Economic Geography*, eds. Eric Sheppard and Trevor J. Barnes (Oxford, UK: Blackwell Publishing, 2000), 113.

scholarship in favor of their more successful and larger counterparts. In his book, *Hinterland Dreams*, historian Eric J. Morser has argued that small cities throughout the Midwest played an important dual role in regional development. Not only were they crucial components of the hinterland of large urban centers, but they also had their own hinterlands and served as central urban centers for surrounding rural areas.<sup>19</sup> The importance of places such as Chicago, Milwaukee, and Minneapolis is undeniable, but an active commercial and industrial scene occurred in smaller communities as well that deserves more attention.

Finally, with its focus on Wisconsin, this dissertation adds to the body of scholarship about the Midwest, a region that has been overlooked by scholars in recent decades. In a new book, *The Lost Region*, John Lauck argues that this place deserves study for its own unique merits rather than just assuming it is typical of the nation as a whole.<sup>20</sup> My work on an important regional manufacturing landscape should help to this end.

Questions to be explored by this dissertation will include, but not be limited to the following:

- How and why did papermaking diffuse to the Wisconsin River valley?
- How did papermaking influence or transform the economy of this region?
- How did the development of papermaking along the Wisconsin River compare to the earlier development along the Fox River?

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<sup>19</sup> Eric J. Morser, *Hinterland Dreams: The Political Economy of a Midwestern City* (Philadelphia: University of Pennsylvania Press, 2010).

<sup>20</sup> Jon K. Lauck, *The Lost Region: Toward a Revival of Midwestern History* (Iowa City: University of Iowa Press, 2013).

- How important, economically and socially, was and is papermaking in the towns of Wisconsin Rapids, Nekoosa, and Port Edwards?
  - How did it impact the growth and development of these towns?
  - What are the impacts of mill closure or mill layoffs on the towns and region?

## GEOGRAPHICAL FOCUS

The communities along the Wisconsin River valley that have or once had a paper mill range from Rhinelander in the north to Nekoosa in the south (Fig. 1.2). My focus towns-- Wisconsin Rapids, Port Edwards, and Nekoosa--are clustered at the southern end of this skein in Wood County, along the central portion on the Wisconsin River and near the middle of the state.

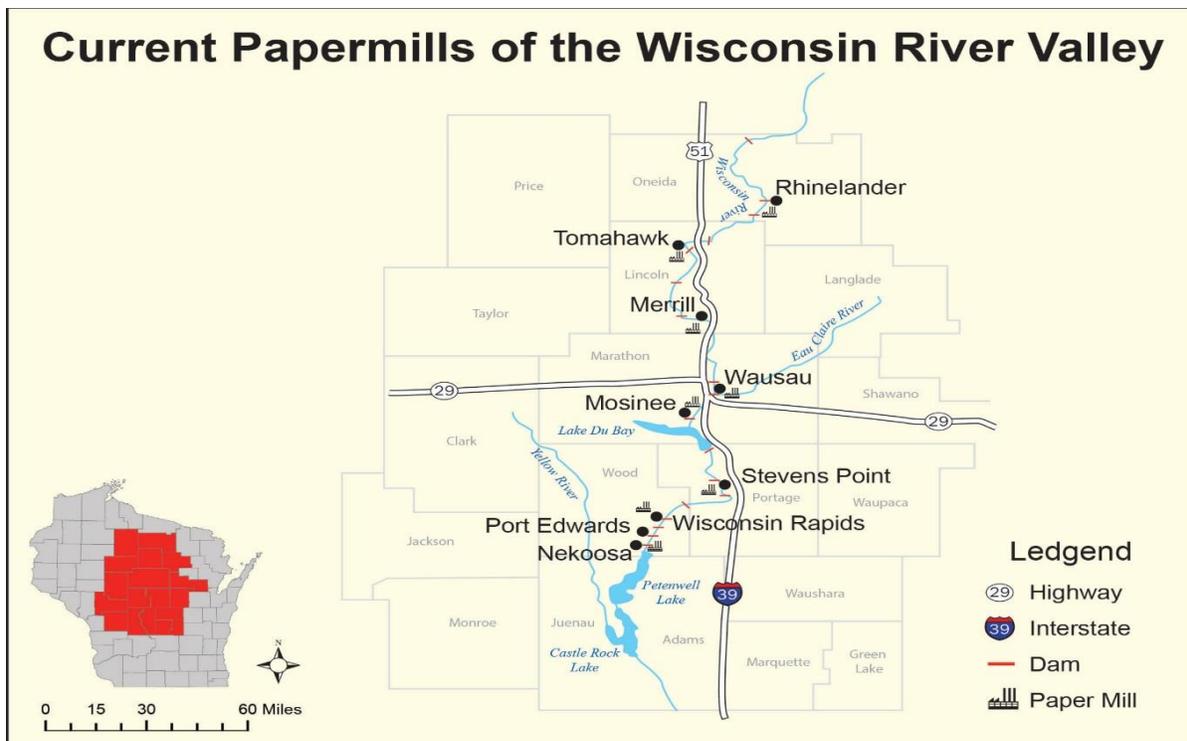


Figure 1.2. Study Area. Map by Ryan Weichelt and Katie Weichelt.

The physical landscape of central Wisconsin was shaped largely by continental glaciers that advanced south from Canada beginning some 900,000 years ago and then went through a series of oscillations. The last glacial advance began about 70,000 years before the present time and its retreat came only 9,000 years ago. In the ice's wake, much of the state today is marked by outwash plains and moraines. The state's numerous lakes are largely products of ice scouring, and many stream patterns are the result of glacial meltwater. A large stretch of land in the southwestern part of the state that was never covered by the most recent glacial ice shows the contrast. Its terrain is hillier than the rest of the state and its streams were more deeply incised.<sup>21</sup>

Wisconsin's location in the upper Midwest, flanked by Lake Michigan in the east and Lake Superior to the north, results in a climate of cold winters and mild summers. Polar air masses dominate the weather into April each spring, and the summer growing season is short. The proximity of the Great Lakes moderates the climate somewhat, but overall the area is marked by intense seasonality. The state's natural vegetation consists of prairie in the south and forest in the north. The major forest species are pine, oak, and maple, a mix that would fuel the local lumber industry and later, the paper business. The prairies in the south became farmland.<sup>22</sup>

The first humans came to Wisconsin shortly after the glaciers receded. At the time of European contact, the area's indigenous tribes included the Menominee, Ho-Chunk

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<sup>21</sup> Ingolf Volgeler, *Wisconsin: A Geography* (Boulder and London: Westview Press, 1986).

<sup>22</sup> *Ibid.*

(Winnebago), and Ojibwa (Chippewa). The Ho-Chunk were Siouan speakers, and located primarily in the southern prairies. They were farmers and generally a prosperous people. The Menominee made their homes near Green Bay in a mixed hardwood forest, while the Ojibwa (an Algonquin people) were more nomadic. The Ojibwa ranged throughout the northern forested lands where they hunted, fished, and otherwise practiced a subsistence existence. These groups traded extensively with one another and with other tribes. They also worked together on occasion. The Menominee, for instance, would often go on bison hunts with the Ho-Chunk (Winnebago) west of the Mississippi River.<sup>23</sup>

French explorers first probed the future Wisconsin region in the sixteenth century, starting with arrival of Jean Nicolet at Green Bay (Fig. 1.3). Nicolet had been sent by Samuel de Champlain to search for the fabled Northwest Passage across the continent. The French subsequently annexed much of the Great Lakes region when they saw its potential for producing furs. Local Indians then were incorporated into this trade, trapping and bartering the pelts to the French. Because this was a system that worked well, the French wanted to retain it rather than to attempt permanent colonial settlement. Still, a few missions were established along with the forts and trading posts. French control over the area endured for over a century, but ceased with the Treaty of Paris in 1763. Its influence remained, however, via a series of place names as well as the fur trade itself, which persisted for decades.<sup>24</sup>

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<sup>23</sup> Robert E. Bieder, *Native American Communities in Wisconsin, 1600-1960: A Study of Change and Tradition* (Madison: University of Wisconsin Press, 1995).

<sup>24</sup> Robert C. Nesbit, *Wisconsin: A History* (Madison: University of Wisconsin Press, 1973); Vogeler, *Wisconsin: A Geography*, 53-54.

British control over Wisconsin, which lasted for about fifty years, was not dramatically different from that of the French, and some independent French traders continued to ply the area. Similarly, the American Revolution during the 1770s did not affect this area much. The British, in fact, maintained commercial interests in the region until the War of 1812. Then the area was ceded legally and economically to the United States.<sup>25</sup>



Figure 1.3. The Landfall of Jean Nicolet. Painting by Edwin Willard Deming, 1907. Source: Wisconsin State Historical Society.

Americans began to set up military garrisons in Wisconsin in 1816, about the same time that the fur trade faltered. Settlement by European Americans continued with lead mining activities in the southwest, farming in the south, and later, logging in the north. With

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<sup>25</sup> Ibid.

these activities came the dispossession of indigenous peoples. They ceded their last lands in 1848, the same year that Wisconsin became a state.<sup>26</sup>

The Wisconsin River ran through the center of this changing landscape. The French had utilized it as a passageway to the Mississippi River. Later, American settlers filled it with logs for sawmills and then used it to convey sawn lumber to the growing cities in the Mississippi Valley. As manufacturing grew, the river powered a variety of factories. And, throughout these changes, the communities along its banks were tied to it economically. They gradually became absorbed into a larger region that would serve as the backbone of American manufacturing.

#### WISCONSIN AND THE INDUSTRIALIZATION OF THE AMERICAN MIDWEST

By 1900, the state of Wisconsin had become part of the nation's manufacturing belt. The boundaries of this region are vague, but one article has described it as a "parallelogram" with corners located in Portland, Maine; Baltimore; Green Bay; and St. Louis.<sup>27</sup> This belt persisted for nearly a century. Interestingly, as Paul Krugman has noted, it remained stable despite a westward march of the nation's resource extraction and agricultural production.<sup>28</sup>

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<sup>26</sup> *Ibid.*, 58.

<sup>27</sup> Alexander Klein and Nicholas Crafts, "Making Sense of the Manufacturing Belt: Determinants of U.S. Industrial Location, 1880-1920," *Journal of Economic Geography* 12, no. 4 (2012): 775.

<sup>28</sup> Paul Krugman, "History and Industry Location: The Case of the Manufacturing Belt," *The American Economic Review* 81, no. 2, Papers and Proceedings of the Hundred and Third Annual Meeting of the American Economic Association (1991): 80-83.

It has been argued that American manufacturing began in New England because capitalists there were able to take advantage of surplus labor in the region. Similarly, the mid-Atlantic area was able to industrialize in response to a growing agricultural and resource-based economy. The Midwest was not far behind. Urban populations rapidly caught up to those in the Northeast by the mid-nineteenth century and this change was followed by substantial industrialization in the late nineteenth and early twentieth centuries.<sup>29</sup> An increasing population required more household goods, urban centers required construction materials, and primary economic activities such as lumbering and agriculture required various implements.<sup>30</sup>

Midwestern industrialization has been poorly theorized according to Brian Page and Richard Walker. They have argued that, while previous economic models such as central-place theory, cumulative causation, and industrial take-off provide important insights into the region's development, each fails to explain fully the complexity and nuances of the process. They note, for example, that Midwest industrialization did not intrude upon a vibrant agricultural economy already in progress. Rather agricultural and industrial developments there were simultaneous and equal forces in building the region.<sup>31</sup> One process supported the other. The authors describe this combination as the "agro-industrialization" of the Midwest.

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<sup>29</sup> David Meyer, "Midwestern Industrialization and the American Manufacturing Belt in the Nineteenth Century," *The Journal of Economic History* 49, no. 4 (1989): 921-937.

<sup>30</sup> *Ibid.*

<sup>31</sup> Brian Page and Richard Walker, "From Settlement to Fordism: The Agro-Industrial Revolution in the American Midwest," *Economic Geography* 67, no. 4 (1991): 281-315.

In the case of Wisconsin, industry was present even prior to statehood. The region possessed abundant natural resources and the expansion of the railroad system and navigable waterways made such resources accessible. At the same time, the newly formed territory boasted a thriving agricultural sector and sufficient fast-flowing streams to power manufacturing operations.<sup>32</sup> As early as 1840, sawmills and gristmills were common. Then, over the next decade, manufacturers of clothing, furniture, wagons, and agricultural implements came into being. Breweries and pork-packing plants, foundries and machine shops were also on the rise as farmers and other manufacturers embraced technological changes in order to remain competitive and efficient.<sup>33</sup> It was in this period of industrial expansion that paper manufacture first emerged as an important force in Wisconsin industry.

Mills and other manufacturing enterprises varied in size and scale in these early decades. Many were smaller shops intended to service only local areas. Factories nearer more mature transportation routes might be able to sell to a somewhat larger market. According to Margaret Walsh, the goal of local manufacturing was to create an autonomous economic region, one less dependent upon products imported from eastern states. Journalists and entrepreneurs were concerned about the perceived outflow of money and wanted to create a much more self-sufficient environment.<sup>34</sup>

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<sup>32</sup> Margaret Walsh, *The Manufacturing Frontier: Pioneer Industry in Antebellum Wisconsin, 1830-1860* (Madison: State Historical Society of Wisconsin, 1972).

<sup>33</sup> Robert C. Nesbit, *The History of Wisconsin, Volume III: Urbanization and Industrialization, 1873-1893* (Madison: State Historical Society of Wisconsin, 1985).

<sup>34</sup> *Ibid*, 1.

## ENTREPRENEURIALISM, CLUSTERS, AND WELFARE CAPITALISM

In order to create a more self-sufficient region, industrialists first had to perceive value in the region. Therefore, this dissertation recognizes the role of entrepreneurs in the creation of place. The diffusion of paper manufacturing into northeastern and into central Wisconsin coincides with a period of substantial economic growth in the United States. In the half century following the Civil War, the country experienced high rates of immigration, investment in transportation, and a widening of the hinterland.<sup>35</sup> Entrepreneurs simultaneously encouraged and responded to these new developments, expanding technological development and then incorporating the new ideas into their businesses.<sup>36</sup> Even though regions can possess natural advantages favorable for a given industry at a certain period in time, individuals also must opt to capitalize on those resources. As I will detail in the chapters that follow, entrepreneurs in central Wisconsin definitely were eager to capitalize on new business opportunities they perceived in paper production. They also were willing to adapt to changing circumstances to ensure continued success.

The expansion of the industry throughout the region and its subsequent success is explained using Michael Porter's cluster thesis. Porter describes clusters as "geographic concentrations of interconnected companies and institutions in a particular field . . . for example, suppliers of specialized inputs such as components machinery, and services, and

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<sup>35</sup> Naomi R. Lamoreaux, "Entrepreneurship in the United States, 1865-1920," in *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, eds. David S. Landes, Joel Mokyr, and William J. Baumol (Princeton and Oxford: Princeton University Press, 2010), 367-400.

<sup>36</sup> *Ibid.*

providers of specialized infrastructure.”<sup>37</sup> Clusters can also include institutions such as university programs and research centers and other institutions that support the industry. Porter argues firms that compete and simultaneously cooperate, by relying on supportive firms, increases industry performance and makes those firms within the cluster more competitive. In other words, it is networks and linkages between firms that help propel growth and achievement.<sup>38</sup> The historical geography of the paper industry along the Fox and the Wisconsin River, demonstrates the importance of relationships between investors and firms. While this thesis intended to describe contemporary economic geographies since, as Porter argued, location geographies in the past were determined by a specific geographic advantage such as a natural resource or cheap labor pool.<sup>39</sup> However, the linkages that developed between paper mills, their investors and management, supportive industries, and educational institutions were critical even in the late nineteenth and early twentieth century.

Once the initial paper mills had been established, many firms began to foster strategies for bolstering loyalty among their workforces. This movement, known as “welfare capitalism,” consisted of new policies designed to add comfort and security to the lives of their employees. Such benevolence was largely a response to labor and management clashes in the early twentieth century over better wages, working conditions, and control. The

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<sup>37</sup> Michael Porter, “Clusters and the New Economics of Competition,” *Harvard Business Review* 76, no. 6 (1998): 77-90.

<sup>38</sup> Ibid; Michael E. Porter, “Location, Competition, and Economic Development: Local Clusters in a Global Economy,” *Economic Development Quarterly* 14 (2000): 15-34.

<sup>39</sup> Ibid, 78.

programs also sought to stem labor turnover, which was highly costly for some firms.<sup>40</sup> The plans varied, but often included health insurance for employees, pensions, recreational opportunities, and financial help toward home ownership. At times officials even encouraged workers to form committees that would give them a voice (or at least the appearance of a voice) in company matters.<sup>41</sup> It also took on a physical dimension. Companies would provide parks and schools for the community and enlist the help of architects to create beautifully planned communities. Some industrial firms chose to provide housing or incentives to encourage home ownership.<sup>42</sup> Welfare capitalism in its various guises played an important role in shaping the landscape and culture of Port Edwards, Nekoosa, and Wisconsin Rapids as later chapters will explore.

## APPROACHES, SOURCES, AND METHODS

In the construction of any historical narrative, subjectivity is present, and I want to acknowledge that at the outset of my study. As William Norton has written, “facts of history are necessarily selective for, of the total number of past facts, only some are known to the contemporary writer.”<sup>43</sup> Historical resources present incomplete pictures of the past, and it is the job of the researcher to interpret them in a way that is logical, but also with attention to

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<sup>40</sup> Gerald Zahavi, “Negotiated Loyalty: Welfare Capitalism and the Shoeworkers of Endicott Johnson, 1920-1940,” *The Journal of American History* 70, no. 3 (1983): 602-620, 602; William Littmann, “Designing Obedience: The Architecture and Landscape of Welfare Capitalism, 1880-1930,” *International Labor and Working-Class History* 53 (1998): 88-114.

<sup>41</sup> Elizabeth Fones-Wolf, “Industrial Recreation, the Second World War, and the Revival of Welfare Capitalism, 1934-1960,” *The Business History Review* 60, no. 2 (1986): 232-257.

<sup>42</sup> Littmann, “Designing Obedience,” 92.

<sup>43</sup> William Norton, *Historical Analysis in Geography* (London and New York: Longman, 1984), 1.

what data may be missing. It is not a simple task. Cole Harris, for example, has observed that deciding which records to consult can be problematic because no formal rules exist for the acceptance or rejection of archival material.<sup>44</sup> Similarly, David Wishart argued that an exact replication of the past in a historical narrative is not possible since everything must be based on “biased accounts.”<sup>45</sup> No two researchers are likely to utilize the exact same resources or to interpret the evidence in the same way.<sup>46</sup> Therefore, one must recognize that he or she is providing only a single interpretation of the past that is inherently biased. One obvious example for me is that most available archival materials about the paper mills reflect the experiences and thoughts of business owners, rather than the workers. Indeed, much of this dissertation focused on the decisions made by capitalists and their contributions to the study area.

To attempt to tell the story of my three case-study paper communities, I have utilized a variety of sources. Archival materials were a crucial resource, ranging from photographs and maps to personal correspondence. Newspapers and county histories were also an excellent source of information. Some historic newspaper clippings regarding the local industry and related commerce were easily available online on the Wisconsin State Historical Society website and also through, *Newspaperarchive.com*, a digital newspaper repository available through the McMillan Public Library in Wisconsin Rapids. Business records such

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<sup>44</sup> Cole Harris, “The Historical Mind and the Practice of Geography,” in *Humanistic Geography: Problems and Prospects*, eds. David Ley and Marwyn Samuels (Chicago: Maaroufa Press, 1978), 123-137.

<sup>45</sup> David Wishart, “The Selectivity of Historical Representation,” *Journal of Historical Geography* 23, no. 2 (1997): 111-118.

as those of the Nekoosa-Edwards Paper Company of Port Edwards and Nekoosa are held at the historical society's research center in Stevens Point as well as at The Alexander House, a private archive in Port Edwards. These include the personal correspondence of Thomas E. Nash, founder of the Nekoosa Paper Company, and the reminiscences of George W. Mead, founder of Consolidated Papers, Inc. in Wisconsin Rapids. Although not the focus of this dissertation, the business records of Cyrus C. Yawkey provided useful insight into the business conditions surrounding the paper industry in the early decades of the twentieth century. Visual resources are also key to constructing any historical geography and for this work I relied heavily on photographs, Sanborn Fire Insurance maps, and maps from county atlases, many of which are digitized and available online, to chart various changes in the economic landscape.

In addition to archival mining, secondary data collected by the U.S. Census Bureau, government agencies, and various private companies also were important in this dissertation.<sup>47</sup> Such statistics have their biases as well, but they often provide larger perspectives than one can obtain from local field information. These biases notwithstanding, I utilized the U.S. Census data for population and economic data. I also examined city directories as a way to indicate employment at the mills and examine the employment structure of the region, particularly in the early twentieth century when other forms of numerical data were less complete. Directories for the area were available at the McMillan Memorial Library in Wisconsin Rapids. Other directories, such as *Lockwood's Directory of*

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<sup>47</sup> Kevin St. Martin and Marianna Pavlovskaya, "Secondary Data" in *Research Methods in Geography*, eds. Basil Gomez and John Paul Jones III (Malden, Massachusetts and Oxford: Wiley-Blackwell, 2010), 173-193.

*the Paper Trade*, an annual publication, helped document the expansion of the industry at a larger scale.

To examine changes for more recent decades, I interviewed community leaders, residents, and industry veterans regarding the future of their respective communities (Appendix A). These perspectives are not intended to be representative of all area residents, but they do provide insight into the changing economy's impact on the individual. These interviews were semi-structured, generally about one hour in length, and took place in person, over the phone, and through email.

## DISSERTATION OUTLINE

This dissertation traces the industrial history and development of the Wisconsin River valley through the lens of paper manufacturing. It starts with a broad-based introduction to the history of paper production. Chapter two sketches technological developments within the industry as well as the process of mill expansion within the United States from the first factory in seventeenth-century Pennsylvania to its emergence in the Fox River valley. Chapter three looks at the early Wisconsin River valley, its lumber industry, and its gradual transition to paper manufacturing. It also discusses the early economic activities present in the case-study towns of Wisconsin Rapids, Port Edwards, and Nekoosa. Chapter four looks closer at the entrepreneurial decisions leading up to an investment in paper manufacturing in the study area. Chapters five and six then examine how the paper company affected the landscapes of Port Edwards/Nekoosa and Wisconsin Rapids, respectively. Chapter seven explores the present state of the industry in these three communities, including the impact of

mill closures. Chapter eight, a conclusion, summarizes the findings and revisits basic questions asked at the outset of this chapter.

## Chapter Two: Background

Paper has roots in ancient civilization, starting with small-scale, artisanal production. Ancient Egyptians are known to have created writing surfaces from papyrus leaves, and people in Asia Minor modified animal skins for the same purpose. However, it was Chinese developments in calligraphy that created the first major drive for more and better surfaces and it was in China that the first rag-based paper was produced.<sup>1</sup> For several centuries thereafter, modest amounts of paper were made by hand from linen. Then, in eighteenth century Europe, demand increased with growing literacy and the printing of more books and pamphlets.

This chapter provides background to the dissertation by exploring the various technological changes associated with paper manufacture. I review the mechanization of the papermaking process as well as the transition from rag-based paper to wood. I also discuss a geographical shift of the industry in the United States from the East Coast to Wisconsin and then the localization of the industry within the state.

### MECHANIZATION AND PAPER PRODUCTION

Similar to the history of many products, paper has changed from being an expensive item produced on a small scale and consumed locally to an inexpensive one produced in a few locations. For the most part, its production was a hand process until the

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<sup>1</sup> Dard Hunter, *Papermaking: The History and Technique of an Ancient Craft* (New York: Alfred A. Knopf, 1943).

nineteenth century. Rags were the chief raw material for early mills in the United States and Europe and these typically were obtained from a mill's immediate vicinity. In general, the rags were weighed and sorted when they first arrived at the mill, washed, and then beaten into a pulp that would be pressed into sheets of paper.

The hand process was slow, and rising demand for paper encouraged owners to increase the speed and volume of production. They began by mechanizing how rags were turned into pulp. Rags first had to be beaten in order to separate out their cellulose content and to enable these fibers to stick together during the paper molding process.<sup>2</sup> Originally, this beating was done using a hammering device powered by wheels. The rags were then placed in vats to ferment for a few days in order to further break down the materials.<sup>3</sup> A machine to improve this stamping process first appeared in the seventeenth century. The Hollander Beater, named for its country of origin, resembled a large wooden tub. At its base was a plate with knives. A wooden cylinder that also contained knives would roll over this plate. To operate the device, a rag-and-water mix was placed in the tub and the cylindrical roller lowered towards the plate. The rags then were pulled by the

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<sup>2</sup> Gary Bryan Magee, *Productivity and Performance in the Paper Industry: Labour, Capital, and Technology in Britain and America, 1860-1914* (Cambridge, UK: Cambridge University Press, 1997).

<sup>3</sup> Lyman Horace Weeks, *A History of Paper Manufacturing in the United States, 1690-1916* (New York: Burt Franklin, 1969), 57-58.

roller along the knives. The arrangement and sharpness of the knives both affected paper quality, and it took a skilled person to adjust the blades and keep them in good repair.<sup>4</sup>

Once the rags had been cut up and left to ferment for a few days, the resulting pulp was placed into a dipping vat. The vatman would then select a mold, which consisted of a screened bottom and removable frame, and dip it into this vat. The mold then would be shaken in order to draw away waters and evenly distribute the pulp across its surface. Once this task was finished, the vatman removed the frame and passed the newly created sheet of paper and its mold on to the coucher. This operator drained the new sheet, laid it upon a piece of felt, and then returned the mold to the vatman. As this process continued, a stack of paper sheets and pieces of felt emerged in an alternating pattern. The coucher would compress the stack to further remove water from the sheets. Finally, a worker known as the layboy would separate the sheets of paper from the felt pieces, press them again to remove even more moisture, and hang them up to dry.<sup>5</sup>

The success of the Hollander Beater not only enabled mills to produce a better quality product and in higher volumes, but it also spurred innovation elsewhere in the manufacturing process so as to avoid bottlenecks. Because the Hollander created pulp in larger quantities and at a faster pace, a better process for turning this pulp into paper

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<sup>4</sup> Judith McGaw, *Most Wonderful Machine: Mechanization and Social Change in Berkshire Papermaking, 1801-1885* (Princeton, NJ: Princeton University Press, 1987), 41.

<sup>5</sup> Steven Burton Karges, "David Clark Everest and the Marathon Paper Mills Company: A Study of a Wisconsin Entrepreneur, 1909-1931" (Ph.D. diss., University of Wisconsin-Madison, 1968).

sheets became increasingly important. The vatman and other workers could not keep pace with the new volumes of pulp.<sup>6</sup>

Two papermaking machines emerged within a twenty-year period in the late eighteenth and early nineteenth century that replaced the jobs of vatman, couner, and layboy. The first, the fourdrinier, was patented in France by Nicholas Lewis Robert in 1799. The development was financed by two English stationers, Henry and Sealy Fourdrinier, along with John Gamble, another Englishman who was a brother-in-law to Robert's employer. Unfortunately, neither the inventor nor the investors profited from their machine, but the devices were exported to the United States in 1827, nearly thirty years after the patent had been awarded.<sup>7</sup>

The fourdrinier changed the manufacturing process greatly. Instead of pouring pulp by hand into a mold to form individual sheets, the fourdrinier created a long continuous roll of paper. The pulp (also known as stuff) was stored at one end of the machine and then dropped through a strainer to remove extraneous matter such as sand, dirt, and twigs. The pulp then was directed onto a conveyor belt made of a wire cloth. Paper would begin to mold around this wire cloth while excess water drained away. As a series of rollers kept the belt moving along the machine, another mechanical device

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<sup>6</sup> Weeks, *A History of Paper Manufacturing in the United States*, 172.

<sup>7</sup> McGaw, *Most Wonderful Machine*; Weeks, *A History of Paper Manufacturing in the United States*, 172-174.

would give the frame that holds the rollers a horizontal shake. This motion would drain more water from the newly matted fibers.<sup>8</sup>

The half-formed paper from the wire cloth was then fed into a series of felt-covered cylinders known as couch rollers (designed to replace the coucher). These rollers squeezed more water from the paper before the emerging product was pushed through several steam-heated cylinders that continued the drying process and then onto polished rolls. After coming off the machine, the paper would be cut into squares, dried some more, and then automatically wound onto another roller that was ready for shipment.<sup>9</sup>

Another papermaking machine that expanded the mechanization process was the cylinder. Credit for its invention is given to two men who worked on different sides of the Atlantic Ocean. The first, Englishman John Dickinson, created the machine in 1812 but chose not to take out a patent. A few years later, in 1817, Thomas Gilpin of Delaware produced his version. Gilpin probably got the idea from Dickinson, because Gilpin's brother had visited Dickinson's paper mills the year before, and the Gilpin version was similar to the British invention.<sup>10</sup> The new cylinder did the same job as the fourdrinier except that, instead of the pulp running along a wire, it moved along a cylinder in a continuous rotation. The pulp, in a more diluted form than used in the fourdrinier, was

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<sup>8</sup> Magee, *Productivity and Performance in the Paper Industry*, 33.

<sup>9</sup> Charles N. Glaab and Lawrence H. Larsen, *Factories in the Valley: Neenah-Menasha, 1870-1915* (Madison: The State Historical Society of Wisconsin, 1969), 80-81; Magee, *Productivity and Performance in the Paper Industry*.

<sup>10</sup> Magee, *Productivity and Performance in the Paper Industry*.

poured into the machine. It fell into a trough while a partially submerged cylinder rotated. There, a suction pump helped the pulp fibers to stick to the cylinder as it rotated out of the water and then onto another cylinder with a wired surface. Water would drain from the product while it was on these cylinders. The fibers then traveled along a felt sheet where they were pressed and dried into a long stretch of paper.<sup>11</sup>

The new machines solved many problems for the papermaker, but they were far from perfect. Workers had to closely monitor the fourdrinier, for example, adjusting various parts to ensure that the machine's different sections were moving at consistent speeds so that the sheet would stay intact. Machines at first did not even reduce the need for labor in the mills. But throughout the years, improvements to the machines by various inventors and builders increased their operating speeds and reliability. They also increased the width of the machine in order to prepare more paper. As a result, between the year 1867 and 1880, production capabilities in the United States doubled from 100 feet per minute to 200 feet per minute.<sup>12</sup>

Both the fourdrinier and the cylinder were common in the United States in the decades that preceded the Civil War. They had been adopted quickly, and only a handful of mills still produced handmade paper in 1860.<sup>13</sup> The cylinder had a quicker initial

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<sup>11</sup> McGaw, *Most Wonderful Machine*, 101.

<sup>12</sup> Ibid.

<sup>13</sup> Glaab and Larsen, *Factories in the Valley*, 81.

dispersion throughout the United States than the fourdrinier, possibly because the cylinder machine was cheaper to produce. Later, however, paper manufacturers came to favor the fourdrinier. Both machines had drawbacks and benefits. The cylinder was actually less likely to break down and wasted less pulp than its counterpart, but it also moved much more slowly and created an inferior product.<sup>14</sup>

Variations on these original machines can still be found in paper mills today, a radical change from the older, labor-intensive process of sorting, beating, and molding rags. Mechanization, however, did not impact every process of production evenly and there were still many parts of the paper manufacturing left largely untouched. As Judith McGaw has pointed out, positions such as rag sorting (often performed by women) that were repetitive and less demanding of skill were often neglected by innovators.<sup>15</sup> Such observations speak to the unevenness of technological development.

#### RAW MATERIALS: THE SHIFT FROM LINEN AND COTTON TO WOOD

Mechanical innovations definitely enabled papermakers to increase production, but such growth put a strain on the industry's raw material--linen and cotton rags that provided the cellulose for the pulp. Simply put, the nation's supply of rags was insufficient to meet the growing demand for paper. So, another engineering challenge arose. What alternative substances existed that could be transformed into paper? Wood,

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<sup>14</sup> David C. Smith, *A History of Papermaking in the United States, 1691-1969* (New York: Lockwood Publication Co., 1970); McGaw, *Most Wonderful Machine*.

<sup>15</sup> McGaw, *Most Wonderful Machine*.

of course, eventually emerged as the best answer to this question, but the shift from rags to wood was not an even process. Scientists suggested several possible alternatives to linen, and even after the technology to create wood-based pulps was available, some mills chose to continue using rags.<sup>16</sup>

For many centuries, efforts existed to ensure a steady supply of rags for the mills. In England, for example, laws were passed in the mid-seventeenth century to force the dead to be buried only in wool, thereby assuring that linen would be available for rags. In Germany it was simply considered the act of responsible countrymen to use wool, rather than linen or cotton.<sup>17</sup> Problems with rag scarcity were present in the American colonies and later United States as well. Newspapers even launched campaigns that encouraged local families to save their rags for the paper mills.<sup>18</sup>

As demand for paper increased throughout the nineteenth century and mechanization increased industrial output, rags increasingly became viewed as an unsustainable raw material. Prices rose rapidly after about 1850 to the point where rag availability and costs became a concern for those establishing new mills. The owners of

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<sup>16</sup> Thomas Heinrich and Bob Batchelor, *Kotex, Kleenex, and Huggies: Kimberly-Clark and the Consumer Revolution in American Business* (Columbus: The Ohio State University Press, 2004).

<sup>17</sup> Hunter, *Papermaking through Eighteen Centuries*, 311.

<sup>18</sup> Weeks, *A History of Paper Manufacturing in the United States*, 60.

one of the earliest mills in Wisconsin cited rag costs as their highest concern regarding the future success of their business.<sup>19</sup>

It was not just scarcity that made rags a problem for papermakers. The quality of this material was also declining as clothing came to be made more from cotton than linen.

One mill owner in 1850 commented:

About the year 1810 we began to experience a deficiency of raw material and were obliged to resort to Europe for supplies. At present we have an additional inducement to import our material. The article of cotton has here almost entirely superseded the used of linen for wearing apparel and when much worn and reduced to rags becomes a very tender substance; in fact scarcely able to support its weight when made into paper. The foreign rags, we suppose average about 80 per cent of linen, which, when mixed with the domestic cotton imparts to the paper strength and firmness which it could not have without it. The best qualities of writing and printing papers contain from 30 to 50 per cent of linen, for which we are entirely depending on foreign countries. But as the use of cotton for clothing is yearly increasing all over the civilized world, we find the proportion of linen in imported rags decreasing from 5 to 10 per cent from year to year.<sup>20</sup>

The pressure on rag supplies and the eventual shift in materials used for the production of paper in the nineteenth century led to changing interactions between manufacturers and rag merchants as well as a new geography of paper production in the United States. In Europe, a tradition of middlemen existed between mill owners and independent rag collectors, who would scour the countryside with carts. In mid-nineteenth century Paris, for example, a force of 25,000 young persons worked the streets

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<sup>19</sup> *A History of the Wisconsin Paper Industry*, 6.

<sup>20</sup> As quoted in Weeks, *A History of Paper Manufacturing in the United States*, 219.

in search of rags. Some paper companies formed pacts and agreed to restrict themselves to separate territories where only they would collect rags as in the case of the Berkshire paper mills in Massachusetts.<sup>21</sup> Despite such agreements, rag shortages still plagued mills. One response was to expand the collecting routes to ever more distant sources. The alternatives to accept lower quality rags and/or to experiment with other materials.<sup>22</sup>

The strain on the rag supply in the United States increased with the start of the Civil War. A blockade imposed on trade with the South forced northern mill owners to import more rags from overseas. Simultaneously, the demand for newspapers increased sharply as citizens became interested in the progress of the war. The result, referred to as the “American Paper Panic,” forced manufacturers to look even harder for new materials that could produce a decent product, even if it was not as durable or soft as the paper constructed from rags.<sup>23</sup>

The search for an alternative to rags actually can be traced back to the seventeenth century. One of the earliest suggestions, asbestos, came from a don at Oxford. Another Englishman argued that hemp might work, and in 1741, Jean Étienne Guettard, the physician to the Duke of Orléans, made a case for swamp moss.<sup>24</sup>The British had decent

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<sup>21</sup> Magee, *Productivity and Performance in the Paper Industry*, 107-109; McGaw, *Most Wonderful Machine*.

<sup>22</sup> McGaw, *Most Wonderful Machine*.

<sup>23</sup> Magee, *Productivity and Performance in the Paper Industry*.

<sup>24</sup> *Ibid.*; Hunter, *Papermaking through Eighteen Centuries*.

results in the early nineteenth century using esparto grass, but American producers thought straw and corn husks offered more potential. Straw, used as early as 1820, reached its peak of popularity during the Civil War. It had advantages in being renewable and easily grown. An entire year's supply had to be harvested over a very short period of time, however, creating concerns over the costs associated with storage.<sup>25</sup> Straw also required tedious sorting to pick out roots and other plant debris.

Experimentation with wood as a raw material for paper production went on simultaneously with that for straw, moss, and hemp. A French naturalist, Rene Antoine Ferchault de Reamur, after observing that wasps used wood filaments to build their nests, made the case as early as 1719.<sup>26</sup> Wood had an advantage over straw in that a year's supply did not have to be harvested at one time and it produced more pulp per pound.<sup>27</sup> Knowing this, several scientists followed up on de Reamur's thesis. One mill in New York produced paper from basswood and even sent samples to the Buffalo newspaper, but the innovation failed to catch on.<sup>28</sup> The problem was how to extract the cellulose fibers from the wood efficiently and on a scale large enough to sustain the growing production of paper. A technological breakthrough came in the mid-nineteenth century,

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<sup>25</sup> Karges, "David Clark Everest and the Marathon Paper Mills Company."

<sup>26</sup> Weeks, *A History of Paper Manufacturing in the United States*; Hunter, *Papermaking through Eighteen Centuries*.

<sup>27</sup> Karges, "David Clark Everest and the Marathon Paper Mills Company."

<sup>28</sup> Weeks, *A History of Paper Manufacturing in the United States*; Hunter, *Papermaking through Eighteen Centuries*.

led by the Germans Friedrich Keller and Heinrich Völter. Keller constructed a grinder that could successfully break down wood and patented it in 1840. This machine consisted of a rotating stone against which wood was pressed with the resultant chips carried away on a stream of water.<sup>29</sup> Völter, in turn, bought the patent from Keller, made improvements, and marketed the idea around the world. The first Völter grinder in the United States was installed at Curtisville, Massachusetts, in the late 1860s.

Wood-based pulp had been produced in the United States prior to the Völter introduction, but only in an experimental way. The switch from rag-based to wood-based paper was slow and uneven. The founders of Kimberly-Clark, for example, produced rag paper despite their proximity to the forests of Wisconsin and convinced newspapers to purchase their more expensive newsprint by arguing that it was a higher quality product.<sup>30</sup> Other mill owners delayed the switch because of costs. Wood-pulp technology was protected under exclusive patent rights and so did not become widely available until the 1880s.<sup>31</sup> Early attempts at wood-based papers produced a lower quality product. The paper became much stronger when a sulphite process was developed that not only bleached the pulp, but also made a better product. This improvement, in turn, also

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<sup>29</sup> Hunter, *Papermaking through Eighteen Centuries*; Magee, *Productivity and Performance in the Paper Industry*.

<sup>30</sup> Heinrich and Batchelor, *Kotex, Kleenex, and Huggies*.

<sup>31</sup> Hannes Toivanen, "Learning and Corporate Strategy: The Dynamic Evolution of the North American Pulp and Paper Industry, 1860-1960" (Ph.D. diss., Georgia Institute of Technology, 2004).

enabled firms to expand their production as the stronger paper could be produced in larger batches.<sup>32</sup>

Hannes Toivanen has argued that the early days of wood-based pulp and paper mills in the United States were marked by a high level of entrepreneurialism. Businessmen and scientists searched frantically to increase the quality of wood-based paper to serve as a cheap alternative to rags, and once a process was discovered, it changed the strategies of many firms. Gradually, as the stigma of wood pulp's poor quality was overcome, more and more companies made the switch. In addition, mills that had purchased their pulp from specialty firms now became vertically integrated, producing their own pulp as well as paper.<sup>33</sup>

Wood pulp offered two big advantages over rags. The supply was larger and the labor costs less. Rags required much manpower to find, sort, and clean before turning them into pulp. When bales of rags arrived at a mill, they first had to be placed into a machine known as a duster to remove dirt. Then they were sorted by color, age, material, and level of cleanliness.<sup>34</sup> This was a tedious process, most of which was undertaken by unskilled female workers. All these jobs would be eliminated with wood. If the pulp were

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<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Magee, *Productivity and Performance in the Paper Industry*, 183.

to be prepared on-site, the mill would have to employ laborers to operate the Völter grinders, but the number would be many fewer than needed at a rag-based mill.<sup>35</sup>

The destruction of jobs in the changeover from rags to wood affected the gender ratio at the mills. Women's jobs plummeted. They had been mainstays in the rag room and the finishing area, places where machinery eventually did most of the work. Using primary and secondary sources, Gary Bryan Magee has noted that the proportion of women employed in the workforce in the United States and the United Kingdom consistently declined from 1850 to 1907, the years that mark the transition from rag-based to wood-based paper.<sup>36</sup>

#### THE PAPER INDUSTRY IN THE UNITED STATES

The first paper mill in the present-day United States was established in Germantown, Pennsylvania, in 1691. Prior to this, most of the paper in the American colonies had been imported. Demand was not high, however. Few people at the time were literate and no newspaper was printed in the colonies until 1704. A small printing press had been founded in Massachusetts in 1638, but it produced only a few pamphlets. The Germantown mill was established by William Rittenhouse, a skilled papermaker from Germany, along with a Philadelphia printer named William Bradford. Bradford and

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<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

Rittenhouse saw a growing market for locally produced paper and Bradford wanted a mill as a way to supply his own business.<sup>37</sup>

The original mill was successful by all accounts, and the two partners established others in the following decades. Still, despite their efforts and those of other colonial mills in New England and the Mid-Atlantic region, the demand for paper began to outpace domestic production. This problem was exacerbated by politics. The British government was often reluctant to encourage industrial development in their colonial holdings that would compete with their own manufacturing enterprises.<sup>38</sup>

During the Revolutionary War, paper became so scarce that manufacturers were exempted from military service for fear that the supply would be depleted. Thereafter mill numbers increased rapidly. An estimated one hundred operated by 1800, and just a decade later, the number was said to be two hundred.<sup>39</sup> Most of these were in Pennsylvania and New England, clustered near urban centers where markets existed for both paper products and rags. The first mills west of the Appalachian Mountains were established in Kentucky and western Pennsylvania in 1793 and 1796, respectively. Ohio joined the group in 1807.<sup>40</sup>

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<sup>37</sup> Smith, *History of Papermaking in the United States*.

<sup>38</sup> Weeks, *History of Paper Manufacturing in the United States*, 42.

<sup>39</sup> Smith, *History of Papermaking in the United States*.

<sup>40</sup> Maurice Branch, "The Paper Industry in the Lake States Region, 1834-1947" (Ph.D. diss., University of Wisconsin-Madison, 1954).

Mills continued to open in westward locations throughout the nineteenth century. These new facilities, primarily in the northern Midwestern states, were mainly in response to the growing demand for paper products in these newly colonized regions and not because of their location near timber supplies. They were established before the development of wood-pulp technology and so relied on rags like the eastern mills. With the introduction of wood-based pulp, a new location trend emerged, whereby mills began to be located nearer to timber sources and farther from the paper market. After wood grinders first became common in the later decades of the nineteenth century, the center of the paper industry moved westward to upstate New York and then southward to the forested regions of Appalachia. Paper production also expanded in the Great Lakes area with mills now able to take advantage of their proximity to northern forests and the lumber industry that was already in place.

Not surprisingly, papermakers throughout Michigan, Wisconsin, and Minnesota adopted wood-based paper at a faster rate than those in other regions. Branch has noted that, by 1900, wood pulp comprised roughly sixty-three percent of the raw materials for papermaking in the Great Lake states compared to only fifty-two percent as the average for the United States. Nearly twenty years later, the proportion of wood pulp in paper manufacture was at seventy percent for the upper Midwest but only sixty percent for the United States as a whole.<sup>41</sup> These regional mills grew rapidly. Not only were they able to

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<sup>41</sup> Ibid.

harness the resources of the north woods, but they were also able to expand markets with a lowering of transportation costs. A golden age was at hand.

## THE EMERGENCE OF PAPER PRODUCTION IN WISCONSIN

Paper production first came to the upper Midwest in 1834 with a mill in Michigan. The first operation in Wisconsin came to Milwaukee in 1848 to supply local newspapers. Both were rag-based operations and the owners of the first Milwaukee mill, a Mr. Luddington and a Mr. Garland, were concerned if they could find rags enough to stay in production. The mill changed owners several times in a ten-year period and was relocated a few miles up the river. A flood then destroyed the entire operation, a fairly common fate for nineteenth-century mills.<sup>42</sup>

In the very early years, Wisconsin paper production was concentrated in the southeastern part of the state near Milwaukee, but it then shifted northward. Two major regions emerged: the Wisconsin River Valley and the Fox River Valley (Fig. 2.1). Although this dissertation research concentrates on the activities in the former valley, one region cannot be understood without comparison to the other.

The paper industry came to the Fox River area before it did the Wisconsin Valley, and grew out of an earlier experience there with flour milling. Agriculture dominated the local economy at the time, with the most popular crop being wheat. This choice made sense. Wheat required attention only during periods of sowing and harvesting and could

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<sup>42</sup> *A History of Wisconsin Paper Industry*, 5-6.

be stored and shipped easily. In addition, it was perceived to be a secure source of income.<sup>43</sup> Wheat, in turn, led to the development of a flour industry. A government-owned mill existed in the Neenah-Menasha area as early as the 1830s, and the industry grew through the 1860s. Millers would utilize the Fox River and adjacent Great Lakes to ship surpluses to outside markets. This industry reached a peak in the late 1860s, just as railroads were becoming common and disrupting established geographies of trade (Fig. 2.2).

Two factors contributed to the decline of flour milling in the Neenah-Menasha area. First, investors started to appreciate the advantages of Minneapolis as an alternative site. A Minneapolis mill would have easy access to wheat from the newly homesteaded Dakota territories and new construction there would allow the incorporation of newer mill technologies that could boost output. At the same time, agriculture in Wisconsin was slowly changing from wheat production to dairying wheat production. It became increasingly more difficult for Fox Valley mill owners to secure the grain they needed.<sup>44</sup>

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<sup>43</sup> Gregory Summers, *Consuming Nature: Environmentalism in the Fox River Valley, 1850-1950* (Lawrence: University Press of Kansas, 2006).

<sup>44</sup> Glaab and Larsen, *Factories in the Valley*, 73-75.



Figure 2.1. The Fox River Valley. Map by Ryan Weichelt.



Figure 2.2. A Flour Mill District on the Fox River, circa 1870. From left to right: Winnebago Flour Mills, Patterns Flouring Mills, Island City Mills, Keystone Mills. Stereograph by C. B. Manville.  
Source: Wisconsin State Historical Society.

Flour milling along the Fox River virtually disappeared by the end of the nineteenth century, but before this decline was complete, investors slowly had shifted their attention to paper and to funnel capital into this new industry. As this process continued, the Fox River Valley emerged as the central papermaking region in the state (Fig. 2.3).<sup>45</sup>



Figure 2.3. Industrial Section along the Fox River, 1870. Stereograph by C. B. Manville. Source: Wisconsin State Historical Society.

Investors in the Fox Valley's first paper mills were not primarily owners of existing paper factories seeking new locations. Rather, they were businessmen rooted to the communities in which they lived and wanting to develop business opportunities in

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<sup>45</sup> Ibid.

place. Maurice Branch, who compiled data on the paper entrepreneurs of this region, has noted that the average length of time between their arrival in Wisconsin and their establishment of a paper enterprise was fifteen and a half years. Their average age at the time of investment was forty-one years. Branch found only a few entrepreneurs who came to Wisconsin with the intention of developing paper mills, and these did not arrive until the 1890s, well after the original investors had made their plays.<sup>46</sup>

The Fox River Valley possessed several natural and historical features that were advantageous for paper mills. One was an abundance of water. When rags entered the mills they needed to be boiled and bleached, and water obviously was a big component of the pulp. At that time the Fox was clear flowing, and its lack of impurities and coloration helped to make a quality product. The river also powered the mills themselves as it descended in elevation by 166 feet. When fitted with locks and canals, it became even more powerful as a source of energy, a trait often touted by regional promoters.<sup>47</sup>

In addition, the terrain along the river banks, particularly near Neenah-Menasha, helped to hold down the cost of mill construction. It was somewhat level, so there was no need to alter the landscape extensively, and also contained older industrial buildings that investors were able to convert to this new use.<sup>48</sup> Such conversions saved money, and this

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<sup>46</sup> Branch, "The Paper Industry in the Lake States Region," 36.

<sup>47</sup> Glaab and Larsen, *Factories in the Valley*; 83; Summers, *Consuming Nature*.

<sup>48</sup> Glaab and Larsen, *Factories in the Valley*.

was important since paper mills required a great deal more capital than had the earlier generation's flour mills.<sup>49</sup> In his study of the local industry in the Fox River valley, Maurice Branch noted that, prior to 1890, the startup capital required for a paper mill was anywhere between \$10,000 to \$150,000 with an average of \$74,000. This requirement only increased over the years.<sup>50</sup>

### *Early Beginnings*

The first paper company on the Fox River was established in Appleton by three brothers from the East. This 1853 operation, known as the Richmond Mill, used both rags and straw as raw materials. As their business prospered and the brothers recruited new employees, they often sought out experienced help from other regions of the United States. Papermaking at the time was at least as much art as science, and mill owners needed skilled hands in areas outside of the rag-sorting room.<sup>51</sup> The Richmond plant was a success, with paper quality improving over the years and their market expanding. With the Midwest increasingly industrializing, a market existed without much competition. A fire temporarily shut down the business, but it was later revived in the mid-1860s.<sup>52</sup>

The success of the mill at Appleton inspired other investors to consider paper as a viable business. In 1866 the Neenah Paper Company was formed by six residents from that

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<sup>49</sup> Ibid.

<sup>50</sup> Branch, "The Paper Industry in the Lake States Region," 167.

<sup>51</sup> Karges, "David Clark Everest;" *A History of the Wisconsin Paper Industry*, 8.

<sup>52</sup> *A History of the Wisconsin Paper Industry*; Glaab and Larsen, *Factories in the Valley*, 89-90.

community, all of whom were novices to the paper industry. This venture failed, most likely because of inexperience and frictions among the investors. The failure was part of a process, however, and as business knowledge accumulated and the supply of skilled labor increased, success became the norm.

*Kimberly & Clark and Company and the Creation of a Paper Region*

The most famous business narrative in the history of the Fox River is that of the Kimberly-Clark Corporation. Much of the growth of the industry in the region can be attributed its success. Formed in Neenah in February 1872, the business was a partnership among five local men, none of whom had any previous experience in paper production. They were John R. Kimberly, a son of a local flour miller; Charles B. Clark; Havilah Babcock; Franck C. Shattuck; and George A. Whiting (who would go on to establish the first paper mill on the Wisconsin River). The most important of the group, according to Glaab and Larsen, was Kimberly. He had invested in a flour mill and a general store with Babcock, and his family had the capital and influence necessary to undertake such a large economic risk. The new enterprise, operating under the title Fox River Paper Mill Company, lasted only one month because of disagreements, but was reorganized with the original members, minus Whiting, under the name Kimberly and Clark Company.<sup>53</sup>

The Kimberly and Clark Company was successful almost at once, and its success likely inspired other local entrepreneurs to invest in papermaking. Kimberly's strategy was to accumulate capital continually by plowing nearly all profits back into the business.

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<sup>53</sup>Glaab and Larsen, *Factories in the Valley*, 94-95.

As a result, the company added a second mill in Neenah and another in nearby Appleton during the 1870s and 1880s. They also eventually purchased the failed paper mill operation at Neenah, and operated it under the original name of the Neenah Paper Company. At the same time, other men also constructed mills along the Fox, extending the industrialization from the Neenah-Menasha area into other towns such as Kaukauna, Little Chute, and Combined Locks.<sup>54</sup>

In their book on the Neenah-Menasha area, Glaab and Larson describe the expansion of Kimberly and Clark and its importance to the Fox valley as a whole. The authors attribute the company's success to effective management, noting the frequent updating of machinery and expansion into the town of Appleton. Later, in the 1880s, the company built a new mill in Appleton, transformed another two flour mills in Neenah to paper factories, and diversified their production into wrapping paper and book paper. By 1899, the company had expanded its holdings to five paper mills in addition to other holdings and total assets value had ballooned to 1.5 million dollars.

### *Growth Along the River*

Although Kimberly and Clark was an important component to the growth of the industry in the region, they were not the only paper entrepreneurs. Perhaps nine mills in the Fox River valley existed in 1880, seven years after the original founding of Kimberly

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<sup>54</sup> Ibid.; John D. Buenker, *History of Wisconsin: The Progressive Era, 1893-1914*, Vol. 4 (Madison: The State Historical Society of Wisconsin, 1998).

and Clark, but by 1895 that number had increased substantially (Figs. 2.4, 2.5).

According to *Lockwood's Directory of the Paper Trade*, most of the growth occurred in

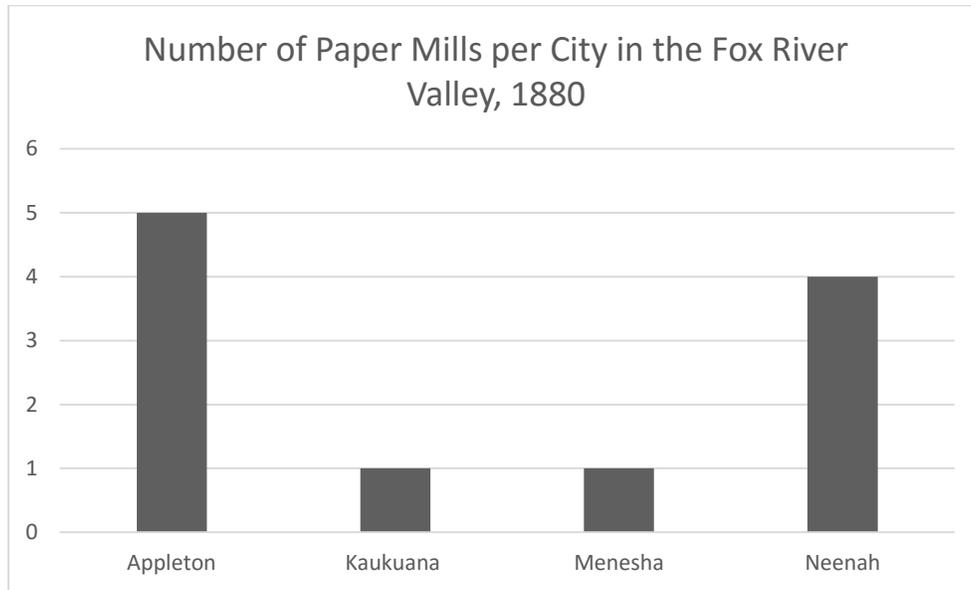


Figure 2.4. Number of Paper Mills per City in the Fox River Valley, 1880. Source: *Lockwood's Directory of the Paper Trade*, 1880.

Outagamie County in and near Appleton and in nearby Winnebago County, close to the twin towns of Neenah and Menasha.<sup>55</sup> These developments were driven by local entrepreneurs who became excited about the opportunities posed by the new wood-pulp technologies. Pulp was first utilized in Wisconsin until 1872 at a mill in Kaukauna.

Expansion continued, and by 1906, paper mills had diffused as far as De Pere and Green

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<sup>55</sup> *Lockwood's Directory of the Paper Trade*, vol.6. (New York: Howard Lockwood, 1880); *Lockwood's Directory of the Paper, Stationery and Allied Trades*.

Bay.<sup>56</sup> This local success came at the expense of similar growth in the southern part of Wisconsin. Mills that had been founded in the vicinity of Beloit never made much headway. In 1880, Lockwood lists three paper mills in this area, but by 1895, that figure had been reduced to one.<sup>57</sup>

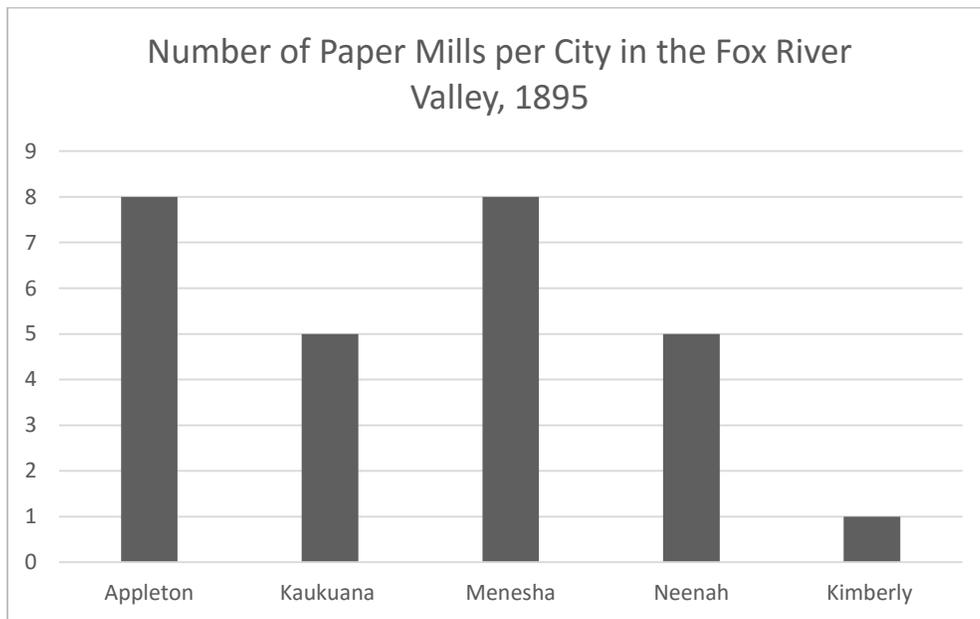


Figure 2.5. Number of Paper Mills per City in the Fox River Valley, 1895. Source: *Lockwood's Directory of the Paper, Stationery, and Allied Trades 1894-1895*.

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<sup>56</sup> *Lockwood's Directory of the Paper, Stationery, and Allied Trades*, Vol. 31. (New York: The Lockwood Trade Journal Co., 1906).

<sup>57</sup> *Lockwood's Directory of the Paper Trade*, Vol. 6. (New York: Howard Lockwood, 1880); *Lockwood's Directory of the Paper, Stationery and Allied Trades*, Vol. 21. (New York: Howard Lockwood, 1895).

### *The Fox River as Geographic Cluster*

The growth of the paper industry along the Fox River can be partially attributed to a process of clustering. Much like the clusters Michael Porter described in his work, several firms in the region arose by forming direct linkages to the paper industry. Those firms in turn supported the mills.<sup>58</sup> For example, companies that produced the necessary machinery for paper production emerged. The Merrill and Houston Iron Works in Beloit began producing cylinder machines in 1868 and later fourdriniers. This company struggled through the 1870s and was reorganized in the 1880s under the name of the Beloit Ironworks. The proximity of the Beloit foundry to the mills meant a savings on transportation costs. Paper machines were large, expensive, and difficult to transport, often requiring several train cars to carry the parts. In addition, the proximity of the Ironworks meant that mills could easily reach out to the manufacturer if problems occurred with the machines. The company provided assistance for complicated repairs that could not be fixed with an onsite blacksmith.<sup>59</sup>

The Beloit Ironworks company became quite successful in the years after its reorganization, and eventually grew to become the largest and most innovative producer of paper machines in the United States. This company benefitted by having a market for their machines in such close proximity. The nearness presumably helped innovation

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<sup>58</sup> Michael E. Porter, "Location, Competition, and Economic Development: Local Clusters in a Global Economy," *Economic Development Quarterly* 14 (2000): 15.

<sup>59</sup> Glaab and Larsen, *Factories in the Valley*.

because they could be easily notified of problems with machines and thereby could identify areas of opportunity.

The Appleton Machine company was another important supplier to the Fox paper mills. Formed originally in 1857 as the Crosby Ketchum blacksmith shop, the business was bought and sold a few times before three brothers purchased it and formed Appleton Machine. Like Beloit, the company specialized in making machinery and providing repair services and it used its local success to branch out beyond the Fox River valley.<sup>60</sup> Other highly specialized businesses produced specific products for the industry. The Appleton Woolen Factory supplied felts, for example, and company in Green Bay produced instruments such as napkin folders and toilet paper winders for local mills.<sup>61</sup>

#### *Paper Mills and the Creating and Changing of Place*

Paper firms had direct impacts in the creation of urban landscapes along the Fox River. They built dams to power their mills and in some cases were responsible for creating whole new communities. When a manufacturer desired to build a new mill they might acquire land at some distance from established town centers. Companies would then build housing for their workers and, over time, these outposts often became independent legal entities. Such was the case for the towns of Combined Locks and Kimberly. Combined Locks carries the name of the mill responsible for its creation. As

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<sup>60</sup> *History of Wisconsin Paper Industry*, 8, 28.

<sup>61</sup> *Ibid.*

this mill prospered, residents recognized that incorporation would be advantageous in order to benefit from the mill-generated tax revenue.<sup>62</sup> The town of Kimberly was developed in a similar way and named after Kimberly & Clark Company. Such towns were typically small but strongly intertwined with the success of the mill.

The paper industry also impacted previously established towns such as Neenah, Menasha, and Appleton. The industry brought growth, of course, and supplied certain amenities. Appleton, for example, was the site of the world's first hydroelectric station and the second electric plant in the nation, providing power to local residents and businesses. Such an undertaking was the result of the collaborative efforts of several local businessmen, but H. J. Rodgers, the head of the Appleton Paper and Pulp Company, was the lead investor. He ordered and installed two dynamos from the Western Edison Company. The first areas to be wired, of course, were his mills and his personal residence, but he then extended service to the nearby town.<sup>63</sup>

Electricity slowly expanded its way across the valley. This, along with the prosperous economy, fueled demand for more consumption. By the 1920s, the paper industry was the largest employer in the area and cities were eager to capitalize on the success. They added basic infrastructure and then turned to more specialized endeavors. As Gregory Summers has argued, Appleton city leaders sought to develop retail business,

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<sup>62</sup> "History," *Village of Combined Locks, WI*, accessed March 3, 2014, <http://www.combinedlocks.org/combinedlocks/about+combined+locks/history.asp>.

<sup>63</sup> Summers, *Consuming Nature*.

good schools, and public spaces with the goal of creating a more pleasant community in which to live. Roads were another investment, a way to attract people and hence to bring more revenue to the city.<sup>64</sup>

Appleton was not unique in its pursuits. As Glaab and Larsen have argued, the growth in one town often stimulated growth in a neighbor. In addition, businessmen formed connections with other businessmen in nearby communities, creating networks as they traveled back and forth.<sup>65</sup> In the end, the valley became a strong and steady industrial region even though it never attracted investment sufficient to compete with Chicago and Milwaukee.<sup>66</sup> After a few decades, the Fox valley companies consolidated and began to expand their interests beyond the valley. Kimberly and Clark and Co., for example, acquired several mills in the region and changed their name to Kimberly-Clark. They also invested in other parts of Wisconsin.<sup>67</sup> George Whiting, an original company partner, broke away from the organization to set up his own mill along the Fox, and then looked farther afield and helped to establish a paper mill along the Wisconsin River.

## CONCLUSION

The early days of paper manufacturing, like that of many products, were marked by labor-intensive, artisanal practices. With technological improvements, paper became

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<sup>64</sup> Ibid.

<sup>65</sup> Glaab and Larsen, *Factories in the Valley*.

<sup>66</sup> Ibid., 128-129.

<sup>67</sup> Ibid.

more widely available and cheaper. As newspaper and book readership increased throughout the nineteenth century, demand for paper grew rapidly, and soon the industry needed to find a raw material cheaper and more reliable than rags. The development of the Völter grinder enabled a switch to wood-based pulp and thereby the creation of a new geography of production. Paper mills moved away from the large cities where there was a steady supply of rags to timbered locales. In Wisconsin, the industrialization of the Fox River valley was an early result of this shift. Then, just as the Fox was emerging as a distinctive paper region, trickles of investment appeared along the Wisconsin River, the heart of the northern forest. The next chapter explores the transformation of the Wisconsin Valley from a center of lumber production to one of paper manufacturing.

## Chapter Three: From Lumber Barons to Paper Kings in the Wisconsin River Valley

In 1888, George Whiting and investors from Wood County developed the first paper mill in the Wisconsin River valley at Centralia. This was an important step in the area's economic transition away from the lumber industry, and one that would boost the prosperity of many communities for decades.<sup>1</sup> But it was a wrenching change as well, in that the harvesting of lush white pine forests, had a presence in the region even before Wisconsin became a state in 1848. These two economic endeavors are also linked, for it was the decline of lumbering that opened the way for paper manufacturers. This chapter explores early connections between two industries in the region and explains why the lumber industry declined and why investors and entrepreneurs chose to move on to paper.

### THE EMERGENCE OF THE LUMBER INDUSTRY IN WISCONSIN

The forested region that once stretched unbroken across the northeastern United States was impressive. Approximately forty-five percent of the contiguous United States was originally covered in forest, including a swath from Minnesota eastward across the Great Lakes region to New England.<sup>2</sup> Timber blanketed more than half of Minnesota,

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<sup>1</sup> Randall Rohe, "Settlement Patterns of Logging Camps in the Great Lakes Region," *Journal of Cultural Geography* 6 (1985): 79-107; Barney Warf, "Regional Transformation, Everyday Life, and Pacific Northwest Lumber Production," *Annals of the Association of American Geographers* 78 (1988): 326-346.

<sup>2</sup> Michael Williams, *Americans and Their Forests: A Historical Geography* (Cambridge: Cambridge University Press, 1989).

Wisconsin, and Michigan and a fairly sharp line separated major species (Fig. 3.1).<sup>3</sup> A mixed conifer-hardwood forest dominated most of the north with pines found in places with poorer soils. The white pine species preferred by lumberman was common nearly

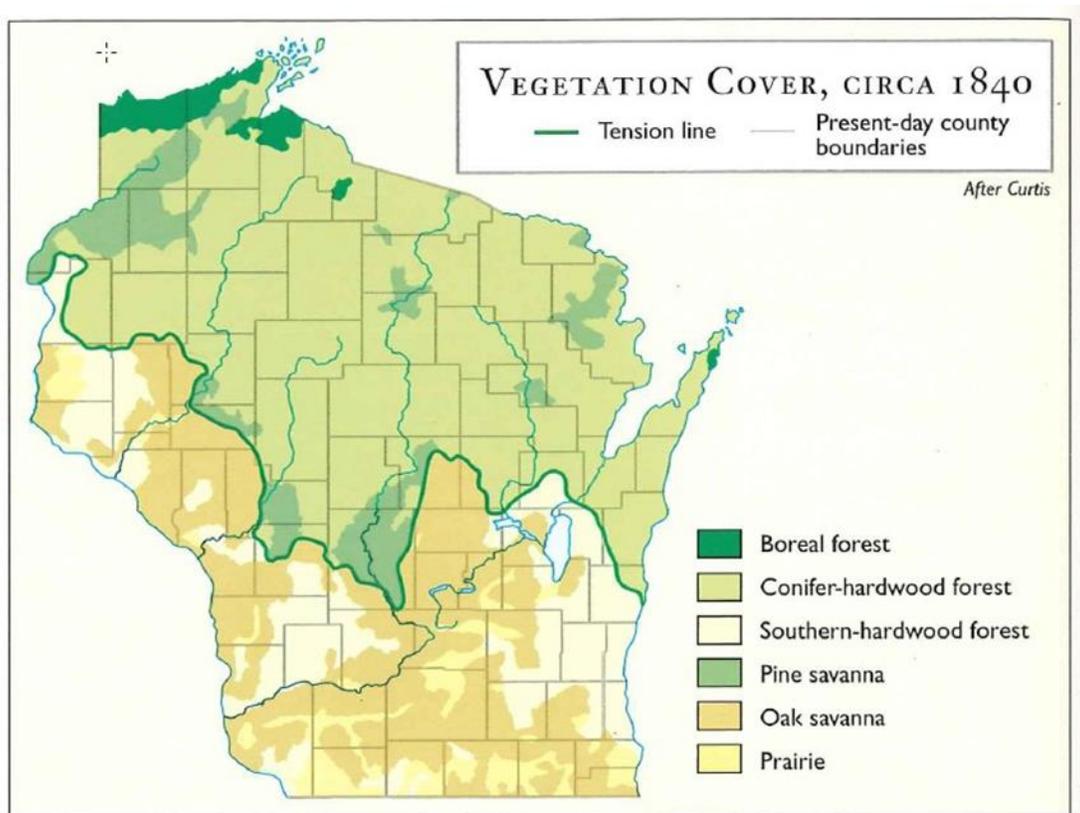


Figure 3.1. Vegetation before Widespread Logging Operations, 1840. Source: *Wisconsin's Past and Present: A Historical Atlas* (Madison: University of Wisconsin Press, 1998), 40.

<sup>3</sup> Lawrence C. Walker, *The North American Forests: Geography, Ecology, and Silviculture* (Boca Raton, London, New York, and Washington, D.C.: CRC Press, 1999).

everywhere.<sup>4</sup> An 1857 publication on the Upper Wisconsin Valley, written for new and potential settlers, noted that pine was found “generally near the banks of the streams (the Wisconsin) and its tributaries, gradually diminishing at a distance from them, and giving place to the several varieties of hard timber, sugar tree, oak, bass, birch and hemlock, with a few scattering, but majestic pines.”<sup>5</sup> Such a rich diversity of timber made Wisconsin an appealing location for capitalists wishing to tap into natural resources.

Indigenous populations that inhabited North American forests before and after European settlement certainly impacted the landscape through clearing as evidenced by European accounts of meadows and other open spaces.<sup>6</sup> The first European settlers in North America had their own perceptions of the forest. Eighteenth-century American attitudes framed the forest as a dark and dangerous place. This fear was rooted and reflected in folklore and literature, where the forest was portrayed as a sinister locale. This is not to say alterations to the forest did not occur, because clearing was necessary to convert land for agrarian purposes. Those who cut down the trees, however, saw their

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<sup>4</sup> Duane Griffin, “Wisconsin’s Vegetation History and the Balancing of Nature,” in *Wisconsin Land and Life*, eds. Robert C. Ostegren and Thomas R. Vale (Madison: University of Wisconsin Press, 1997), 95-113.

<sup>5</sup> Albert Gallatin Ellis, *Hand-Book of Stevens Point and the Upper Wisconsin: Its Character, Early Settlement, Villages, Population and General Advantages* (Stevens Point, WI: Ellis, Tracy & Swayze, Publishers, 1857), 7.

<sup>6</sup> Michael Williams, “Clearing the Forests” in *The Making of the American Landscape*, ed. Michael Conzen, 2<sup>nd</sup> ed. (New York and London: Routledge, Taylor & Francis, 2010), 162-187.

task as metaphysical as well as physical. It was a religious act whereby goodness was ushered in and darkness and evil out.<sup>7</sup>

There were also more practical and economic incentives. Most logging practices in the eighteenth and early nineteenth centuries had been small in scale and part of the process of agricultural settlement. But, as the nineteenth century progressed, so did the scale of logging operations in the northeastern United States to meet the demands of a rapidly expanding nation and a growing industrial economy.<sup>8</sup> By the time European-American settlement reached present-day Wisconsin, capitalists were beginning to view forests as resources in their own right. For a while, many saw this potential as unlimited although voices noting the decline in the forest also were present even before the peak of the lumber years.<sup>9</sup>

#### *The U.S. Government Secures the Land*

The federal government played a strong role in making the Wisconsin forests available to capitalists. This process began in the first half of the nineteenth century via a series of treaties and violent action against the indigenous peoples who occupied the territory. It began in 1804 when the Sauk and Fox surrendered acreage in what is now southern Wisconsin, followed by Menominee forfeitures along the Fox River. As the

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<sup>7</sup> Williams, *Americans and their Forests*, 10-11.

<sup>8</sup> Ibid, 146.

<sup>9</sup> Ibid.

seemingly insatiable Euro-American appetite for land reached the Mississippi River, officials convened a council of several Native American tribes in 1825 to determine territorial boundaries. This was anything but a fair hearing. U.S. agents manipulated facts in a strategy that pitted one tribe against another, while potential white settlers waited impatiently on the sidelines.<sup>10</sup> Migrants, in fact, illegally squatted on Indian lands and resented any protection of tribal territory by the military.<sup>11</sup> In another blow to local tribal autonomy, native groups from northeastern states, such as the Oneida, relocated to present-day Wisconsin and purchased land from the Ho-Chunk and Menominee. The Menominee would lose another block of land that extending from Door County to Milwaukee in an 1831 treaty.<sup>12</sup>

Tensions between natives and settlers came to a head with the Black Hawk War of 1832, a conflict arising from Sauk anger over illegal squatting on their lands and their impending forced removal west of the Mississippi River. In the wake of this fighting, all the tribes that occupied southern Wisconsin (Ho-Chunk, Menominee, and Potawatomie) were forced to cede their lands as punishment for aid they supposedly gave to Black Hawk's rebellion.<sup>13</sup> The Ho-Chunk lost their lands south of the Wisconsin River, the

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<sup>10</sup> Robert E. Bieder, *Native American Communities in Wisconsin, 1600-1960: A Study of Tradition and Change* (Madison: The University of Wisconsin Press, 1995), 126.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*, 129.

<sup>13</sup> Mark Wyman, *The Wisconsin Frontier* (Bloomington and Indianapolis: Indiana University Press, 1998), 160; Bieder, *Native American Communities in Wisconsin*, 131.

Potawatomie theirs in southeastern Wisconsin, and the Menominee theirs from Door County to Milwaukee.<sup>14</sup>

Southern Wisconsin was controlled by the United States government by 1833. As people poured in, officials then turned their attention toward Indian removal in the forested region to the north.<sup>15</sup> Three years later, the Menominee people lost control of four million acres of timber along with a swath of land flanking the Wisconsin River. Known as the “Three Mile Strip” treaty, this agreement paid the Menominee \$700,000 for a ribbon of land three miles wide on either side of the river from Point Bas (Nekoosa, in Wood County) north to present-day Wausau. This treaty was crucial for the historical geography of the area, creating a potential location for sawmill communities such as Nekoosa, Port Edwards, and Wisconsin Rapids that would eventually reinvent themselves as paper towns. As Ellis wrote in his book for Wisconsin settlers, the treaty “was done specially to open the country to the lumberman. The high price and great demand for the article, quickened the business . . . and the occupation and claiming of the most eligible

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<sup>14</sup> Bieder, *Native American Communities in Wisconsin*, 131.

<sup>15</sup> Robert F. Fries, *Empire in Pine: The Story of Lumbering in Wisconsin, 1830-1900* (Madison: The State Historical Society of Wisconsin, 1951), 10.

sites, quickly followed.”<sup>16</sup> Soon after, the government acquired virtually all of northwestern Wisconsin.<sup>17</sup>

### *The Industry Expands*

Logging in northern Wisconsin began as early as the 1820s with a small-scale operation established to serve federal officials posted to the region. Soon though, even before the natives had fully ceded their lands, entrepreneurs set up bigger and illegal logging camps. Millions of feet of pine likely were harvested near the big rivers in the 1840s.<sup>18</sup> Such numbers, although large, soon paled as even more entrepreneurs migrated from the eastern states.<sup>19</sup>

As towns began to grow across the prairies of the Midwest and Great Plains, demand for lumber increased. It was essential for houses, of course, and also for barns, fences, corncribs, and other basic agricultural structures. Town builders required it as well, and it was still an important source of fuel for heating and cooking.<sup>20</sup> In essence,

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<sup>16</sup> Ellis, *Hand-Book of Stevens Point and the Upper Wisconsin*, 8.

<sup>17</sup> Bieder, *Native American Communities in Wisconsin*; August Derleth, *The Wisconsin: River of a Thousand Isles* (New York and Toronto: Farrar and Rinehart Incorporated, 1942), 174-177; J. Marshall Buehler, *Looking Back: A History of Port Edwards* (The Village of Port Edwards, 2002), 4-5.

<sup>18</sup> Fries, *Empire in Pine*, 17.

<sup>19</sup> *Ibid.*

<sup>20</sup> *Ibid.*, 3; William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W.W. Norton & Company, 1991), 153; William Rector, *Log Transportation in the Lake States Lumber Industry, 1840-1918* (Glendale, CA: The Arthur H. Clark Company, 1953), 58.

the entire culture and economy of the new farming belt was tied directly to the lumber regions of the upper Midwest.<sup>21</sup>

Lumbering in Wisconsin developed rapidly in the 1850s as regional promoters advertised the newly opened landscape in eastern newspapers. Fries has argued, however, that a fiscal depression in the pineries of the eastern United States was more important in attracting experienced lumbermen from New York, Maine, Pennsylvania, and Canada.<sup>22</sup> Some of these entrepreneurs came as speculators to purchase land; others were simply looking for work.<sup>23</sup>

The tree most sought by lumbering operators was the white pine. This species grew widely, but occurred in homogenous tracts in sandy-soiled areas and in marginal locations such as the edges of swamps, hill slopes, and ridge tops. White pines could reach heights of fifty feet with trunks six feet in diameter. They produced a durable wood that was also lightweight and easy to work.<sup>24</sup> Lumbermen also liked its buoyancy, which enabled simple flotation down river to sawmills.<sup>25</sup>

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<sup>21</sup> Ibid.

<sup>22</sup> Robert F. Fries, "The Founding of the Lumber Industry in Wisconsin," *The Wisconsin Magazine of History* 26 (1942): 23-35, 31.

<sup>23</sup> Ingolf Vogeler, *Wisconsin: A Geography* (Boulder and London: Westview Press, 1986), 92.

<sup>24</sup> Ibid.; Michelle M. Steen Adams, Nancy Langston, and David J. Mladenoff, "White Pine in the Northern Forests: An Ecological and Management History of White Pine on the Bad River Reservation of Wisconsin," *Environmental History* 12 (2007): 614-648; Fries, *Empire in Pine*, 6.

<sup>25</sup> William F. Ranney, "Pine Lumbering in Wisconsin," *The Wisconsin Magazine of History* 19 (1935): 71-90.

The arrangement of Wisconsin's natural landscape facilitated the development of the lumbering industry in several ways. According to Robert Fries, the continental glaciation that had once engulfed the region had not only "pulverized the soil of the northern part of the state into which the white pine thrives, but it had also carved out numerous lakes ideal for storage and the streams upon which lumberman depended for transportation before railroads were built into the forest."<sup>26</sup> No steep topography existed to hinder the movement of lumber. In addition, having the swamp areas of the region frozen several months out of the year allowed logs to be skidded easily over the icy ground, a method that had emerged at earlier lumbering operations in Maine and New Brunswick.<sup>27</sup>

### *Lumber on the Move*

Transportation of logs was a dramatic undertaking and the costs associated with such moving accounted for a majority of any company's operational costs.<sup>28</sup> Winter was the optimal harvest time. Workers were more available in this season because of less labor competition from farms. The landscape in winter was also more adaptable to moving logs overland to river banks. To do this, workers would flood skidways, producing low-friction, icy surfaces on which animal teams could haul loads far easier

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<sup>26</sup> Fries, *Empire in Pine*, 6.

<sup>27</sup> Williams, *Americans and Their Forests*; Robert C. Nesbit, *Wisconsin: A History* (Madison: University of Wisconsin Press, 1989), 7-8.

<sup>28</sup> Rector, *Log Transportation in the Lake States Lumber Industry*.

than through the muddy routes found the rest of the year.<sup>29</sup> At the end of the skidways, logs were piled to await the spring thaw, which in Wisconsin, often does not occur until April.<sup>30</sup>

Springtime greatly aided log transportation. As the heavy snows melted, the velocity and depth of area streams would increase.<sup>31</sup> Sometimes, these rises were sufficient by themselves to allow easy movement of the logs, but rivers often were altered to facilitate the process. This usually meant the construction of dams and reservoirs that would raise the water levels for a few weeks, enough time to move the lumber downriver.<sup>32</sup>

One problem with water transport was a risk of logjams. Historian William Cronon has noted how easy it was for journalists to overdramatize their descriptions of such pileups, but words sometimes could hardly do justice to these sites. Historic photographs display massive numbers of logs, and if workers were present, they always seem to be dwarfed by veritable mountains of wood (Fig. 3.2). Logjams were serious problems. Not only would they stop the movement of logs, but they also disrupted the river's flow and therefore caused floods.<sup>33</sup> One method of combating such risk was

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<sup>29</sup> Cronon, *Nature's Metropolis*, 157.

<sup>30</sup> Derleth, *The Wisconsin*.

<sup>31</sup> Fries, *Empire in Pine*.

<sup>32</sup> Nesbit, *Wisconsin: A History*, 300.

<sup>33</sup> Cronon, *Nature's Metropolis*, 157-158.

coordination, informal agreements among crews and companies not to have workers driving the logs downstream at the same time.

Once logs had reached the mill, they were sawed into boards and then rafted down the river again. Usually, such planks were stacked together into large blocks known as a “cribs.” Each of these units were upwards of 112 feet long and sixteen feet wide, and their navigation took a huge level of daring and skill. A company sometimes might even dynamite a competitor’s dam to allow safe navigation of their cribs to their destination.



Figure 3.2. Log Jam on the Wisconsin River, 1900. The logs in this image stretch to the horizon. Source: State Historical Society of Wisconsin.

After the 1870s, rafting was largely replaced by railroad transportation. This change transformed lumber industry geography. Railroads made previously inaccessible land highly valuable, opened new markets, altered business networks, breathed new life into dying communities, and created new industrial centers. It also enhanced the speed of logging.<sup>34</sup> After the Civil War, as markets began to expand, lumber entrepreneurs had seen the limited number of serviceable rivers as a major hindrance to growth. In addition, river transportation hindered product quality (since logs floated downstream would emerge soaked and caked in mud) and would not work at all for hardwood species, which lacked the buoyancy of pine. Rafting and floating logs downstream also was problematic in that it depended on mild weather and good water conditions. Loggers had to wait until spring to float their logs down the river and droughts could potentially leave the logs stranded.<sup>35</sup> Railroads cured all these problems, but because rail transport also was expensive, river rafting did not fully disappear from the landscape for some time.

Railroad access soon became such an attractive for lumberman that they went to considerable lengths to encourage their construction. Lumberman usually did not own railroads directly, but they certainly lobbied local and national governments to provide subsidies and gave reduced rates for any lumber the railroad companies might purchase.

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<sup>34</sup> Randall Rohe, "Settlement Patterns of Logging Camps in the Great Lakes Region," *Journal of Cultural Geography* 6, no. 1 (1985): 79-107, 95.

<sup>35</sup> Rector, *Log Transportation in the Lake States Lumber Industry*, 194.

They also individually invested in railroad stock and occasionally financed railroad projects themselves.<sup>36</sup>

Lumber companies utilized a combination of their own rail lines and common carriers. Generally, lines that had already been in existence were modified in order to supply lumber clientele. Once implemented, railroad operations transformed the lumber industry. Because tracks were expensive to install in a given area, clear-cutting operations became more common as a way to recoup the costs. Railroads also liberated loggers from the seasonal pattern of winter harvest and spring transport. New year-round operations greatly increased the volume of timber production.<sup>37</sup> The geography of lumbering changed as well. Railroads gave the industry more spatial freedom, enabling an expansion into regions remote from navigable waterways. One notable example was the territory between the Wisconsin and Chippewa rivers, made accessible by the construction of the Wisconsin Central's main line north from Grand Rapids to Ashland.

At another scale, the switch to railroad transportation allowed lumber companies to ship products directly to newly settled regions in the west, rather than going through the traditional markets of Chicago or St. Louis. The increased cost to ship lumber to Omaha or Iowa was small when compared to the potential increase in profit that came from bypassing major market centers. By 1879, the lumbermen had developed agreements with several railway companies that allowed them to ship easily to a number

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<sup>36</sup> Fries, *Empire in Pine*, 86.

<sup>37</sup> *Ibid.*

of western markets. Then, since they could now sell directly to the retail market, they began to create more specialized products such as kiln-dried lumber, doors, and moldings. These moves challenged established lumber dealers downstream on the Mississippi River system who had depended on steady streams of timber from the North. In particular, the large St. Louis lumber market eventually fell into decline as lumbermen utilized railroads more and water transportation less.<sup>38</sup>

### *Logging Camps and Sawmill Towns*

Lumbering spawned two types of settlements: the logging camp and the sawmill town. Logging camps, located near the cutting sites, were numerous but crude. In the 1830s and 1840s, these settlements were small, often including no more than one or two buildings. Originally they were located near rivers, but as the demand for lumber increased in the years following the Civil War, they relocated inland to stay close to the resources.<sup>39</sup> As the scale of lumbering operations grew and the size of crews increased, camps became more complex. And, when railroads were introduced, they changed again, becoming more fixed in place and laid out in organized patterns along the tracks.<sup>40</sup>

Despite the increasing complexity and stability of camps, they never were intended to be permanent settlements. To find true communities, one had to follow the

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<sup>38</sup> Ibid., 85; Cronon, *Nature's Metropolis*, 157.

<sup>39</sup> Rohe, "Settlement Patterns of Logging Camps in the Great Lakes Region," 93-94.

<sup>40</sup> Ibid.

logs down river to a sawmill town. Sawmills were a pervasive part of the nineteenth-century landscape in Wisconsin. They were limited to the banks of waterways, but could be found on almost every stream large enough to transport logs.<sup>41</sup> The ideal sites were at waterfalls or rapids; there mills could utilize water not only to transport logs, but also to power their saws. Sawmilling, of course, was the practice of converting logs into boards. These, boards, in turn, would be sent on to merchants.

At least in the early decades, sawmill towns were marked by seasonality. They were most active in the spring and summer when logs harvested during the winter months made their way down river on the momentum of the spring thaw. Camp laborers, freed temporarily from their tasks of sawing and skidding, came to these sites ready to spend their season's pay. Similar to other frontier communities, such incursions led to violence and mayhem.<sup>42</sup> A great deal of gender discrepancy existed at these early sites, of course, and the presence of prostitution and saloons was an accepted part of local commerce.<sup>43</sup>

When railroads became part of the lumbering landscape, they brought new communities into existence. Mills located along railroads had an advantage over those that relied on water transport because trains could carry lumber year round. In the case of

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<sup>41</sup> Randall Rohe, "Lumbering: Wisconsin's Northern Urban Frontier," in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale (Madison: The University of Wisconsin Press, 1997), 221-240.

<sup>42</sup> Jeremy W. Kilar, "Great Lakes Lumber Towns and Frontier Violence: A Comparative Study," *Journal of Forest History* 11 (1985): 71-85.

<sup>43</sup> *Ibid.*; Rohe, "Lumbering."

Stevens Point, the first railroad revitalized a river town that had fallen on hard times. Elsewhere, towns far away from waterways were now able to host steam-powered sawmills. Notable among these was a string of communities midway between the valleys of the Chippewa and Wisconsin rivers that became known as “the Wisconsin Central Railroad lumbering district:” Medford, Colby, Auburndale, Manville, and Spencer.<sup>44</sup>

#### THE ORIGINS OF NEKOOSA, PORT EDWARDS, AND WISCONSIN RAPIDS

Lumbering along the Wisconsin River can be traced to the 1820s and early 1830s when the U.S. government increased its presence locally during and after the Winnebago War of 1827. The river itself was vital to this industry, of course, as its waters transported logs to the sawmills, and then sawed lumber out to the Mississippi. The flow also powered the sawmills that transformed the logs into boards. By the 1840s, nearly every acre made available by the treaty with the Menominee in 1836 had been claimed. Then, as more lumbermen entered the valley, officials noticed that cutting trees not only on their purchased properties, but also on adjacent strips of land for which they had no legal right. These were still early days, but the practice was part of the larger process of waste that ultimately led to the decline of the industry in the region.<sup>45</sup>

Point Basse and Port Edwards were two among a long strip of sawmill towns that dotted the central portion of the Wisconsin River. Trees were available and the river had the volume required for transportation, but a series of swooping bends made the

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<sup>44</sup> Wyman, *The Wisconsin Frontier*, 272.

<sup>45</sup> Derleth, *The Wisconsin*.

navigation of logs difficult. In fact, the Wisconsin was considered one of the most dangerous rivers in the state. In a pamphlet for settlers, one observer described the section above Point Basse as a “succession of rapids” that, “surge over rocky bottoms, with a wild current of ten to twenty miles an hour, the channel broken and divided, offering almost insurmountable obstacles to anything like navigation: yet over all these the lumber has to pass.”<sup>46</sup> To deal with this problem, entrepreneurs established mills at frequent intervals. Each operation was small and did not require a great deal of capital investment. From Point Basse to Grand Rapids, for example, (a distance of only ten miles) eight sawmills once existed.<sup>47</sup> Some of these failed, but many urban centers of the present-day river valley owe their origins to such sawmills, including Wisconsin Rapids, Stevens Point, and Wausau.<sup>48</sup>

*Point Basse (Nekoosa)*

The Anglo occupation of the middle section of the Wisconsin River began during the late 1820s when conflict led to the erection of Fort Winnebago, near Portage. Soon after, Daniel Whitney, an entrepreneur from Green Bay, constructed a mill at Whitney Rapids, near present-day Nekoosa.<sup>49</sup> Whitney’s first mill was small, but he had big

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<sup>46</sup> Ellis, *Hand-Book of Stevens Point and Upper Wisconsin*, 8

<sup>47</sup> Ibid.

<sup>48</sup> Rohe, “Lumbering;” Derleth, *The Wisconsin*.

<sup>49</sup> Ranney, “Pine Lumbering in Wisconsin;” John Hudson, “The Creation of Towns in Wisconsin,” in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale (Madison: The University of Wisconsin Press, 1997).

ambitions and was soon accused by U.S. Army officials of illegally harvesting timber from native-controlled lands. Whitney responded to this by erecting a second sawmill in 1831, this one with the blessing of the federal government.<sup>50</sup> His site this time was Point Basse, a name that refers to a low point on the river where the water smoothed out downstream from some rapids. Point Basse developed into a small settlement with a handful of homes, a general store, and a tavern.

Point Basse was the southernmost point for the 1836 “Three Mile Strip” treaty noted previously that changed the commercial geographies of the river valley. The success of early logging in this region depended entirely upon native peoples ceding titles to their lands. When the federal government secured this narrow band of acreage from the Ho-Chunk Nation, Whitney suddenly had access to a broad resource base. Still, despite this potential, the Whitney mill was not successful. It passed into the hands of the Nekoosa Lumber Company, then a flood wiped out a portion of their dam that was in the process of being developed. The company went bankrupt and the water rights reverted to the previous owner who decided not to develop. Because of this, settlement at Point Basse stalled and the original community plan never came to fruition. Fate changed in the late 1880s, however, when two brothers purchased the Nekoosa Lumber Company’s timber and property rights. The brothers promptly sold again to Thomas Nash, who used

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<sup>50</sup> Buehler, *Looking Back*, 3.

this location to develop a major paper business.<sup>51</sup> So, the failure of a sawmill town on the site ultimately led to paper production.

### *Port Edwards*

A mill was established at the future site of Port Edwards (a few miles upstream from Point Basse) when a man named Grignon acquired a permit to harvest timber in 1836. This disrupted a monopoly held by Daniel Whitney for the previous four years.<sup>52</sup> Grignon's operation, like the one at Point Basse was small, but together their lumber facilitated the building of homes in Madison and other growing cities to the south.<sup>53</sup> Ownership of the mill soon was transferred to Henry Clinton and John Edwards. Clinton was an alcoholic who died soon after the purchase, leaving the business solely in the hands of John Edwards. It thrived, yielding a settlement around the mill site known as Frenchtown, after a number of French-Canadian migrants who worked at the mill.

Frenchtown had several amenities: a store, school, and blacksmith shop, and two boarding houses utilized by the single men employed by Edwards. Some indigenous peoples also remained in the area in the late 1830s and 1840s, but most Ho-Chunk emigrated elsewhere. As an elderly resident in Port Edwards reminisced in 1921, "the Indians did not stay in that neighborhood very long as they could not beg enough to live

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<sup>51</sup> J. Marshall Buehler, *The Nekoosa Story* (Port Edwards, WI: Nekoosa Papers Inc, 1987), 8.

<sup>52</sup> Derleth, *The Wisconsin*.

<sup>53</sup>Ibid.

on and there was not a great deal raised to live upon.”<sup>54</sup> Although some cranberry farmers employed them as seasonal workers, they largely were shut out of other economic opportunities.

Frenchtown was renamed Port Edwards in 1869 to honor the mill owner and its success continued. The Edwards Lumber Company harvested lumber north of present-day Wisconsin Rapids, and from there the logs would travel past other mills at Grand Rapids and on to Port Edwards. An 1881 sketch of the village describes it as “handsomely laid out, well above the high water mark, and with its manufacturing establishments and business places, is attracting a thrifty population. It has quite a number of French Canadians, who are an industrious class of citizens.”<sup>55</sup> The author goes on to point out the economic potential of the site, but notes that it will require capital to “develop and secure the best results.”<sup>56</sup>

John Edwards died in 1871 but his son took over the company and expanded its operations. Later, on a trip to California, Edwards Jr. met and recruited banker Louis M. Alexander to manage the business. Alexander agreed and also joined the family by marrying Edwards’s only daughter.<sup>57</sup> With operations diversifying, the company name

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<sup>54</sup> Wisconsin Historical Society. Wisconsin Local History & Biography Articles: “Tells of Early History of Port Edwards,” *Wisconsin Rapids Tribune*. February 17, 1921; viewed online at <http://wisconsinhistory.org> (accessed Nov. 27, 2015).

<sup>55</sup> *History of Northern Wisconsin* (Chicago: Western Historical Company, 1881), 1207.

<sup>56</sup> *Ibid.*

<sup>57</sup> Buehler, *The Nekoosa Story*, 11.

was changed to the John Edwards Manufacturing Company in 1890. Shingles and lumber were the chief products. Later, faced with a diminishing supply of white pine, an abundance of trees not suitable for lumber, and Edwards's election to the state assembly in 1890, Alexander had to consider new options.<sup>58</sup> He decided to enter the paper business.

*Grand Rapids and Centralia (Wisconsin Rapids)*

Wisconsin Rapids, a few miles north of the site at Frenchtown, was the descendant of two adjacent sawmill towns: Grand Rapids and Centralia. The two early towns merged in 1900 under the Grand Rapids name, and changed the label again in 1920 to Wisconsin Rapids. By whatever name, Grand Rapids had about a thousand residents by the 1850s.<sup>59</sup> One description from that time noted a total of 187 buildings with another thirty in the process of construction. The town also boasted five taverns, two tailors, two shoe shops and a bakery. Three sawmills with a total of nine saws in operation provided most of the local jobs.<sup>60</sup>

Census data for 1850 show Grand Rapids as a young community with many residents in their twenties or late teens. Occupations of laborer, miller, and lumberman were common, and many settlers hailed from eastern states such as New York, Pennsylvania, and Vermont. Others listed Canada as their original home. Those people

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<sup>58</sup> Buehler, *Looking Back*, 12.

<sup>59</sup> Ellis, *Hand-Book of Stevens Point*, 38-39.

<sup>60</sup> *Ibid.*

were from Quebec. County histories note this point and their ethnicity is confirmed by their last names.<sup>61</sup>

Several businessmen who would later be responsible for the implementation of the paper industry in Grand Rapids already present in 1880. Jere Witter was a banker who also had interests in lumber and real estate. Nels Johnson, a former sawman, was a merchant in town; Falkland Mackinnon owned the Centralia Hub and Spoke mill.<sup>62</sup>

Maps of the community in its early years reveal a string of development along the Wisconsin River with other blocks extending away at a diagonal (Fig. 3.3). The river definitely is a central feature with many businesses and industries aligned parallel to the river channel.<sup>63</sup> Note the lack of railroads at this time. This newer mode of transportation eventually came to the area, but the river remained important to the town. Sanborn maps created a decade after the map shown in Figure 3.3, display other industries farther out from the river banks in less densely populated areas.<sup>64</sup>

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<sup>61</sup> Census Record of Grand Rapids, 1850.

<sup>62</sup> Engel, *The Age of Paper*.

<sup>63</sup> Sanborn Map and Publishing Company, *Grand Rapids and Centralia, Wisconsin*. Map. New York: Sanborn Map and Publishing Company Limited, 1884. From Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5231/rec/4> (accessed April 2, 2015).

<sup>64</sup> Ibid.



Figure. 3.3. Birds-Eye View of the City of Grand Rapids, 1874. Source: Wisconsin State Historical Society.

## A NEW INDUSTRY IS BORN

Three important factors converged starting in the 1870s to make local investment in the paper industry an attractive option. First, a decline of the lumber industry following the exhaustion of white pine reserves in the state. Second, changing literacy rates and industrialization in the latter half of the nineteenth century increased demand for paper, and third, the invention of the Völter grinder a few decades earlier allowed paper to be manufactured from wood pulp rather than rags. Since I already have provided brief history of this technological development and the changing demand for paper in chapter two, the following concerns the impact of these changing conditions on central Wisconsin.

### *Lumber Loses Its Luster*

For many decades, lumber was Wisconsin's most important industry, one that created prosperity for many entrepreneurs. These so-called lumber barons wielded considerable influence regionally and some eventually found their way to political positions with the state.<sup>179</sup> It would be inaccurate to say, however, that lumber was an unusually profitable industry. Even during its peak decades, it was plagued by business cycles, some of which were self-inflicted via overproduction.<sup>180</sup> Still, fortunes were made until about 1900 when it became clear that the state's pine forests were quickly

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<sup>179</sup> Ibid.

<sup>180</sup> Cronon, *Nature's Metropolis*, 198.

diminishing. The emergence of the railroad had accelerated the decline, but more basically, virtually no conservation had been practiced and workers were wasteful of the resource both at the mill and the cutting site. Lumberjacks often cut down young and old trees alike and the debris they left in the area provided tinder for forest fires. Mills and lumber yards were also at risk of fire. In addition, one study has estimated that nearly one billion board feet were wasted simply by continued use of circular saws rather than band saws.<sup>181</sup>

The decline of lumbering meant changes to the economic geography of the region. Huge acreages once owned by logging companies were forfeited to the government for nonpayment of taxes, for example, and much of this land was then sold cheaply to speculators to be turned into farms. Sometimes the timber companies also sold land directly to settlers when faced with declining profits.<sup>182</sup> The phrase “cut out and get out” referred to the common business model at the time. Lumber companies simply would leave places of declining timber resources and find new forested areas to exploit. Just as the lumbermen who first had come to Wisconsin were escaping a bust cycle with the eastern pineries, so now many Wisconsin owners headed farther west to Washington and Oregon. An alternative existed to this strategy, however. Rather than selling out, some lumbermen in the Wisconsin River Valley sought out other local industries in

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<sup>181</sup> Buenker, *The History of Wisconsin*, 86.

<sup>182</sup> Vogeler, *Wisconsin*, 105.

which to invest their capital. The circumstances that led to lumber's decline in central Wisconsin happened to coincide with the rise of industrial manufacturing in the region.<sup>183</sup>

Even with the pines gone, the tracts of land the lumbermen owned still contained other types of trees that could be processed into value-added goods. The paper industry looked especially promising because its recent technological advances now tied its production directly to timber supplies. The entrepreneurs needed to look no farther away than the Fox River valley, in fact, for a demonstration that paper manufacturing was now economically viable in Wisconsin. Still, the decision to build was not easy, because a paper mill required a substantial investment and commitment. The fixed costs for one facility dwarfed those associated with sawmills. For example, in 1890 the average capitalization for sawmills was over \$198,000 compared to a lumber milling operation with an average capitalization of roughly \$61,000.<sup>184</sup> A businessman with the desire to move into paper would need a great deal of capital plus a gambling attitude.

Businessmen recognized that many sites along the Wisconsin River would be suitable for the new paper mills. Old sawmill locations were ideal since most of these were near river rapids so as to take advantage of the natural power that came from the water flow. Elevated banks also were useful for the construction of dams. Near Nekoosa, there was a natural drop of eighteen feet. This site also had high banks overlooking a

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<sup>183</sup> Buenker, *The History of Wisconsin: The Progressive Era*, 82.

<sup>184</sup> U.S. Census Bureau, *Report on Manufacturing Industries in the United States, 1890 (Wisconsin): Table 6* (Washington D.C.: Government Printing Office, 1895), 632.

somewhat narrow channel that was ideal for damming.<sup>185</sup> A somewhat level landscape near the river was advantageous as well in order to construct the large and more complex structure of a paper mill.

### *Expansion and Diffusion of the Industry*

The paper industry in central Wisconsin arose first in what is today the city of Wisconsin Rapids. The initial company, Centralia Pulp and Paper, was formed in 1888 and the first mill erected in south Centralia in 1890. Another mill was constructed south of this location at Nekoosa a few years later. The village of Port Edwards, which sits in between Nekoosa and Wisconsin Rapids, moved into the paper industry in 1896 (Fig 3.4). The details of the founding of these mills will be discussed in greater detail in the following chapter, but it is no surprise that the early mills in this area all were established within a short span of time. Consistent with Porter's cluster theory, the businessman responsible for bringing about these industrial changes were competitors, but they also worked closely together through mutual investments or serving as board members. They also cooperated with one another if a given mill was in need.<sup>186</sup>

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<sup>185</sup> William E. Collar, "The Utilization of Whitney Rapids: From Sawmill to Paper Company, 1831-1908" (Master's Thesis: Wisconsin State University – La Crosse, 1967), 20-21, 40.

<sup>186</sup> Michael E. Porter, "Location, Competition, and Economic Development: Local Clusters in a Global Economy," *Economic Development Quarterly* 14 (2000): 15-34; Buehler, *The Nekoosa Story*, 43.

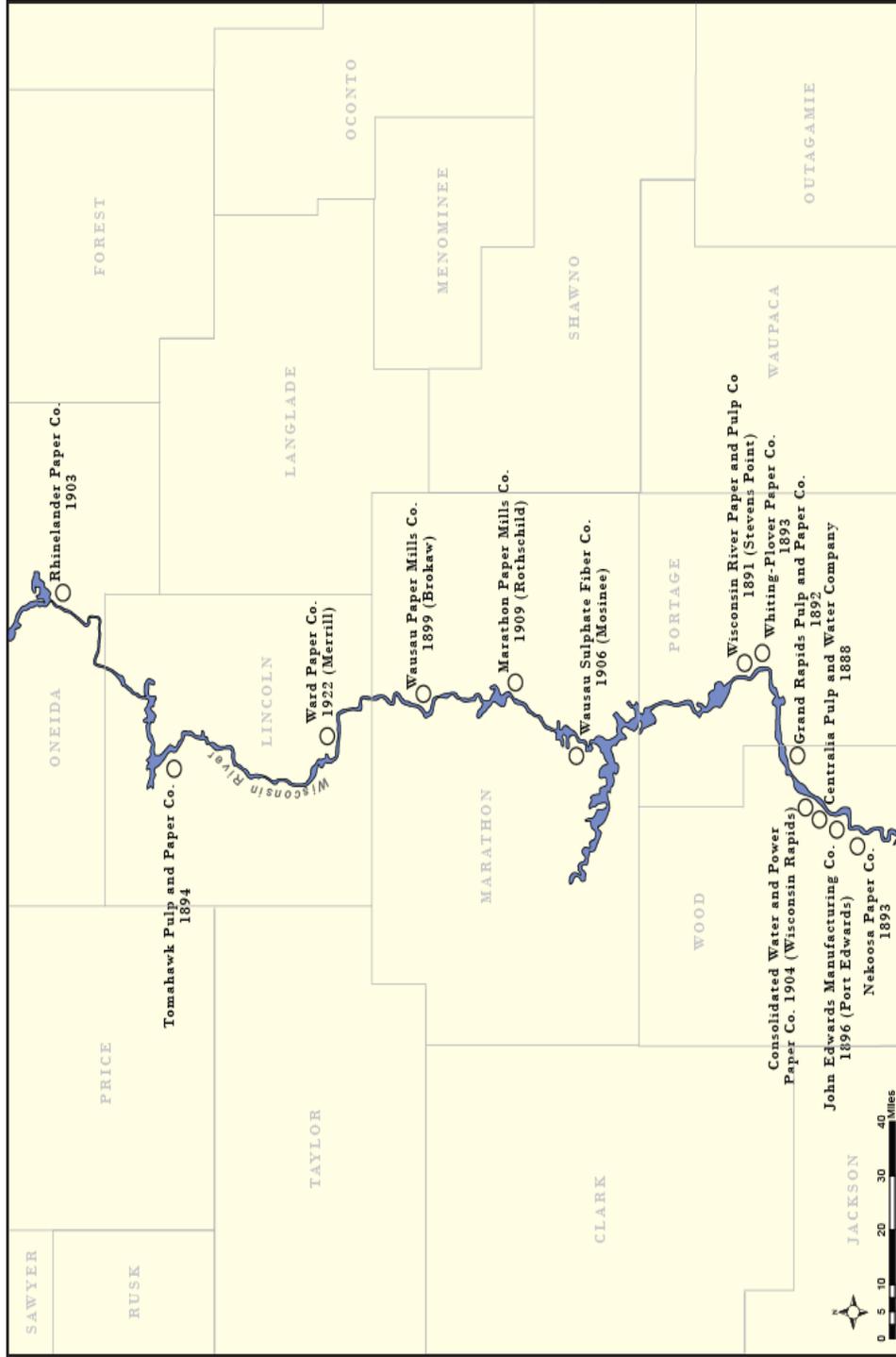


Figure 3.4. Map of Paper Mills in the Wisconsin River Valley, 1888-1922. Compiled from: *A History of Wisconsin Paper Industry, 1848-1948*; Buehler, *The Nekoosa Story*; Schmid, "Paper Cuts," *Milwaukee Journal Sentinel*.

In the town of Biron, a village five miles from present-day Wisconsin Rapids, the Grand Rapids Pulp and Paper Company produced its first run of paper in 1896. This mill was established by Nels Johnson, a local businessman who eventually would become an important figure in the city. His Grand Rapids Pulp and Paper Company, however, struggled on its own. The mill went through several managers and was eventually incorporated into the Consolidated Water Power Company in 1911, a company that Johnson had also helped to establish just eight years earlier.<sup>187</sup>

Paper making quickly diffused throughout the river valley, with mills established in and around Stevens Point (including the Wisconsin Valley Paper Company) at around the same time as the Nekoosa mill. A few years later, George Whiting made further investments in the industry and established the Whiting-Plover Paper Mill just south of Stevens Point. The area later became the village of Whiting and is today a suburb of Stevens Point. This mill is unique in that it was the only one in the Wisconsin Valley to manufacture rag stock paper.<sup>188</sup>

For the most part, the industry in central Wisconsin diffused from south to north, although mills were founded in the northerly towns of Tomahawk and Rhinelander as early as 1894 and 1903 respectively (Fig. 3.4). Both of these operations also had strong links to the lumber business. When Rhinelander was at risk of losing its initial livelihood

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<sup>187</sup> King, *The Evolution of the Paper Giants*, 46.

<sup>188</sup> Phil Salkin and Gordon Orr, "Historic American Engineering Record: Whiting-Plover Paper Mill," No. WI-56 (Denver: National Park Service, 1988).

with the decline of pine stands, local businessman and city leaders pooled resources to create the Rhinelander Paper Company. This mill, which began with 150 employees, remained independent until the 1950s when it was purchased and became a subsidiary of the St. Regis Paper Company.<sup>189</sup>

Between the southern cluster of mills and the two outliers in the north, the collective known as the “Wausau Group” made a large investment with their Wausau Paper Mill Company in 1899 (Fig. 3.4). These were local men who actively searched for new investments when lumber began to decline. They purchased tracts of timber in the southeastern United States early on, but then decided to build a paper mill just outside of Wausau in the village of Brokaw. This company was a boon for Wausau, a town of impressive size (20,000 people) but one highly dependent on the failing lumber industry. Soon, the businessmen’s group erected a second mill, this one at Rothschild, just south of Wausau. Cyrus Yawkey, Walter Alexander, Alexander Stewart, and other members of this influential alliance also invested in other paper mills even after they began to build their own. It did not take long before they became leaders in the paper industry.

Paper mills rapidly became a growth industry in the valley. In the mid-1890s, just a few years after the erection to the first Centralia operation, the total count was five (Fig. 3.5). Ten years later the number of communities with mills as well as the total number of mills had doubled (Fig. 3.6). The following decades saw continued, though slower growth.

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<sup>189</sup> King, *The Evolution of the Paper Giants*, 15.

From 1906 to 1911, an additional four mills were added, bringing the total in the valley to fourteen (Fig. 3.7). One more was added in 1921 (Fig. 3.8).

The expansion of the paper industry throughout the Wisconsin River valley now made this area a second important paper region in the state. As these new mills joined with the older ones in the Fox River valley, Wisconsin had ranked eighth nationally in paper production in 1900. It moved up to fourth nationally in 1910 and to second in 1925. Only New York had more output.<sup>190</sup> The U.S. Census of Manufactures reported that, in the initial decades of the twentieth century, Wisconsin's importance in paper production climbed from eighth in the nation in 1900 to third by 1921.<sup>191</sup>

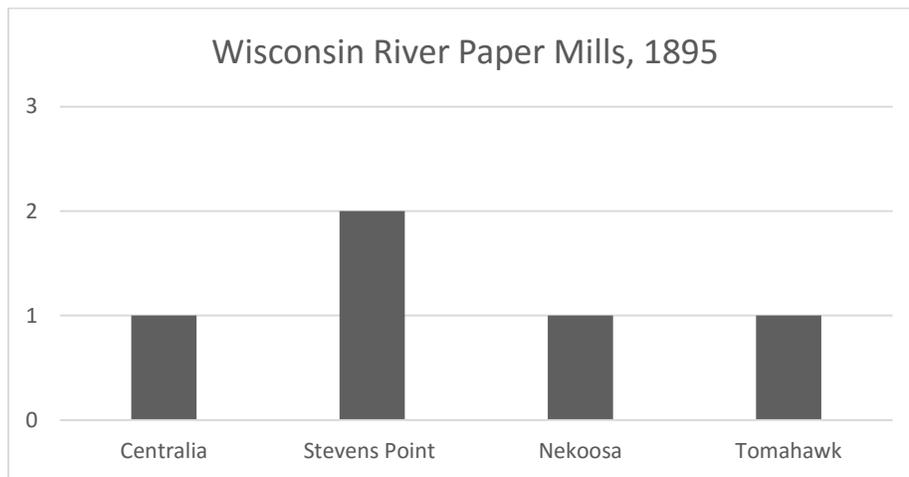


Figure 3.5. Wisconsin River Paper Mills, 1895. Source: *Lockwood's Directory of the Paper Trades, 1894-1895*.

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<sup>190</sup> Karges, "David Clark Everest and the Marathon Paper Mills Company."

<sup>191</sup> *Census of Manufactures* 1905, 1921, 1930.

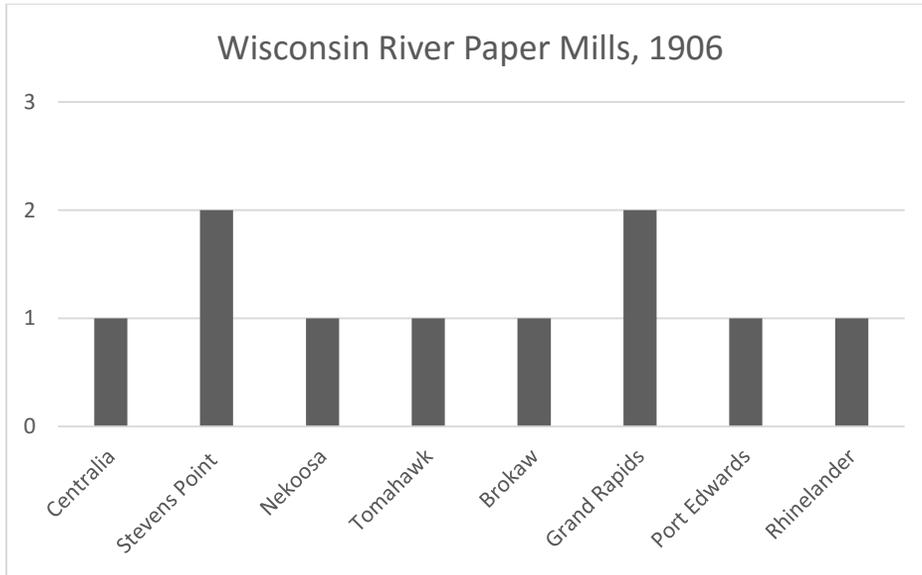


Figure 3.6. Number of Paper Mills in the Wisconsin River Valley by Town.  
 Source: *Lockwoods Directory of Paper and Allied Trade, 1906.*

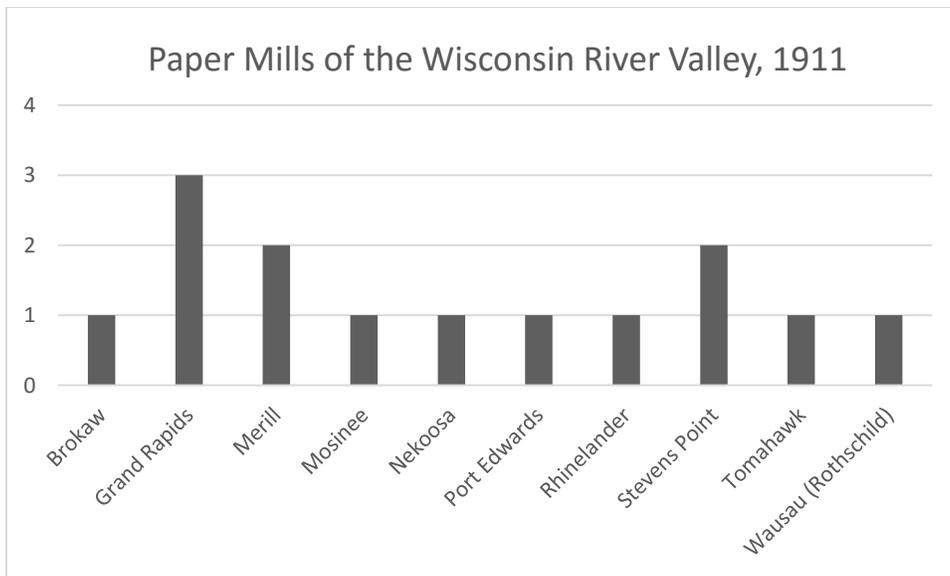


Figure 3.7. Number of Paper Mills in the Wisconsin River Valley by Town, 1911.  
 Source: *Lockwoods Directory of the Paper and Allied Trades, 1911.*

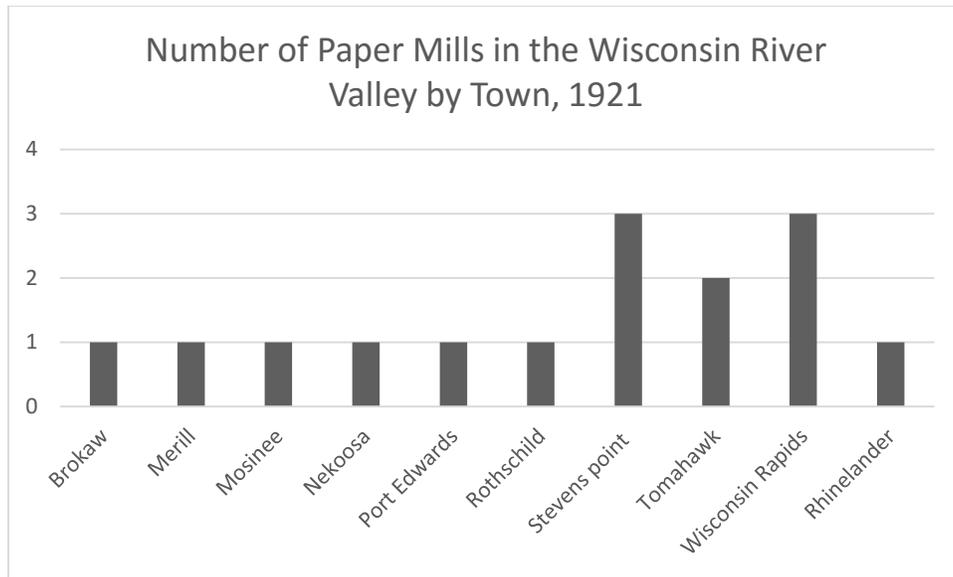


Figure 3.8. Number of Paper Mills in the Wisconsin River Valley by Town, 1921. Source: *Lockwoods Directory of the Paper and Allied Trades, 1921*.

With the expansion of paper manufacturing in the Wisconsin River Valley, there was also a corresponding decline in the presence of the lumber industry. Census data reveals that in 1890 there were over 930 lumber and lumber milling establishments employing over 36,000 workers.<sup>192</sup> By 1919, this number was reduced to just over 26,000

<sup>192</sup> U.S. Census Bureau, *Report on Manufacturing Industries in the United States, 1890 (Wisconsin): Table 6*, 632.

workers for lumber and planing mills combined.<sup>193</sup> Over the same period of time, paper and wood pulp mills in Wisconsin grew from 1800 workers to over 12,000.<sup>194</sup>

## CONCLUSION

The story of the logging industry in nineteenth-century Wisconsin mirrored that of New England several generations before. Immigrants, infused with a sense of capitalism, saw the new state's forested lands as a place of potential profit. Logging camps soon dotted the landscape and the large Wisconsin and Chippewa rivers, became highways of white pine. Sawmill towns grew up at strategic sites downstream.

The industry adopted rail transportation soon after this technology became available. Trains moved wood quicker and more safely than had the rivers; they also enabled operations to function year round. From another perspective, however, railroads sped the decline of the lumber industry. Companies were able now to exploit heretofore untouched lands and to do so quickly. So, supplies dwindled and so did profits. Faced with this new reality, many of the lumbermen and other investors diversified into the paper business. This new industry offered opportunities not only for themselves, but also for the local communities that most certainly would have declined had they stayed with lumber. In essence, the paper industry replaced the lumber one, modifying the old geography in

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<sup>193</sup> U.S. Census Bureau, *Manufacturers, 1919 (Wisconsin): Table 9* (Washington D.C: Government Printing Office, 1923), 1618.

<sup>194</sup> U.S. Census Bureau, *Report on Manufacturing Industries in the United States, 1890 (Wisconsin): Table 6*, 632; U.S. Census Bureau, *Manufacturers, 1919 (Wisconsin): Table 9*, 1618.

some ways, but also maintaining a certain sense of continuity. In addition, much like the Fox River region, the growth of the industry along the Wisconsin can also be explained as a process of clustering. Investors, pulp mills, paper mills, timber producers, and other related firms worked to fashion networks that would create a new economic region.

## Chapter Four: Entrepreneurship and the Origin of a New Industrial Landscape

With the decline of lumber in the Wisconsin Valley, established businessmen searched for ways to diversify their interests. Many of them saw paper as a logical choice especially those who were in possession of timber stands unsuited for sawing into boards. Such trees could be put into grinders and made into wood pulp. The paper business also appealed to local people with no direct ties to lumber, for the demand for paper had increased in the latter decades of the nineteenth century. The chief problem with the new business was a steep initial cost to construct a mill, but early entrepreneurs often pooled their resources and sought outside advice when needed. The earliest development of the Wisconsin paper industry was in the area of Wisconsin Rapids, Port Edwards, and Nekoosa where growth was facilitated by a series of business partnerships among a small group of local men. This chapter traces the histories of these companies and the entrepreneurial decisions that ultimately led to the reshaping of the valley economy.

### CENTRALIA AND GRAND RAPIDS

Centralia and Grand Rapids, twin cities that once flanked the Wisconsin River near the southern edge of the forested half of the state, initiated the move toward pulp and paper production in the region. Lumber, as was discussed in the previous chapter, had served as the base economy for these communities and was the reason for their creation. Other economic actors were present, of course, including flour mills and small manufacturing enterprises, but these firms were insufficient to offset decline once the

lumber industry failed. The turn towards paper manufacturing was a shrewd decision, but it began indirectly. Entrepreneurs first invested in pulp mills.

### *Pulp Manufacture*

The first pulp mill on the Wisconsin River, Hyde and Company, was opened at Grand Rapids in 1882 by Appleton businessman Welcome Hyde. This enterprise was seen as a great boon to the community, which had experienced economic depression. The local newspaper claimed that townspeople “mainly owe our deliverance” to the new company,<sup>1</sup> but the city itself actually played a significant role in securing the mill. Hyde had stated that he would build only if residents were willing to donate \$3,000 towards the cost. He had made a similar proposal to the town of Stevens Point, but when Grand Rapids agreed with the terms, Hyde purchased an old sawmill and brought in pulp machinery from Appleton.<sup>2</sup>

Welcome Hyde turned out to be more of a speculator than someone interested in cultivating a long-lasting enterprise. He sold the mill after a year to new investors who changed the name to Pioneer Pulp. At the same time, two partners from Chicago purchased an old shingle mill in Centralia and converted it into the Wisconsin Wood Pulp Company. Clustering had begun.

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<sup>1</sup> Dave Engel, *The Age of Paper: Consolidation of the Water Power at Wisconsin Rapids, 1886-1904* (Wisconsin Rapids: River City Memoirs, 1986), 21.

<sup>2</sup> Ibid.

Talk about pulp production was in the air continuously in the middle 1880s. A third mill came about indirectly when a wealthy couple from California, John and Marion Bensley, came into possession of a dilapidated sawmill along the Centralia side of the river once owned by John's nephew. The Bensleys invested in upgrades and new machinery, but their timing was poor as sawmilling had migrated north up the valley closer to the remaining supplies of timber. As a result, the couple transitioned their sawmill into a pulp operation and planned eventually to convert it to a paper mill utilizing straw as its raw material.

The Bensley plan did not go smoothly. At the time of their initial investment, John became ill, leaving control of the operation to Marion. The paper mill never materialized, but Marion Bensley nevertheless influenced the local industry. According to one story, she noticed that her mill could not produce at capacity if the river was low. Following the appropriate procedures, she therefore sought permission from the state to build a dam. Unfortunately, her request was denied because of opposition from rival Pioneer Pulp. Angered by this action, on March 28, 1887, Bensley told Pioneer's owners to remove a dam of theirs that rested on land she owned. Pioneer demurred, and so taking matters into her own hands, in early April 1887, Bensley dynamited several holes throughout the dam's structure. The impact was immediate. Water rushed out and the level at the storage pond of her rival mill dropped eight inches. The local newspaper scolded her actions, but a point had been made.<sup>3</sup>

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<sup>3</sup> Ibid., 54.

### *Centralia Pulp and Paper Company*

Many of the early wood-pulp investors along the Wisconsin River likely had ambitions to move into paper manufacturing. The first to do so, however, was a small group of local businessmen who cooperated with established paper men from the Fox Valley to create the Centralia Pulp and Paper Company. The original idea came from Centralia resident Frank Garrison, the son of an entrepreneur who owned tracts of forest and a local sawmill. After working several years in the family business, Garrison started a general store in 1875. In 1887, he sold this business to another local man, Jeremiah Witter and used the cash to plan a paper mill. He joined with other local businessmen in 1886 to form the Centralia Pulp and Water Power Company, but it took considerable time and effort to see his project come to completion.<sup>4</sup>

Garrison had enthusiasm but lacked experience and capital. These deficiencies were remedied when the initial investors reached out to George Whiting, a veteran of the paper industry. He was part of the original Kimberly and Clark Company, but had sold his interest after a year and went on to establish a successful mill at Appleton. After a visit to Centralia, Whiting agreed that the mill should be pursued and invested with the partnership. He sold out a year later but his capital served as a crucial impetus to the river

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<sup>4</sup> Ibid., 17.

valley's paper industry.<sup>5</sup> Construction on the Centralia paper mill finally began in 1891. The site was an old lumber community, informally known as Hurleyville, located in south Centralia (Figs. 4.1 and 4.2). This site had fallen into disuse with the decline of the

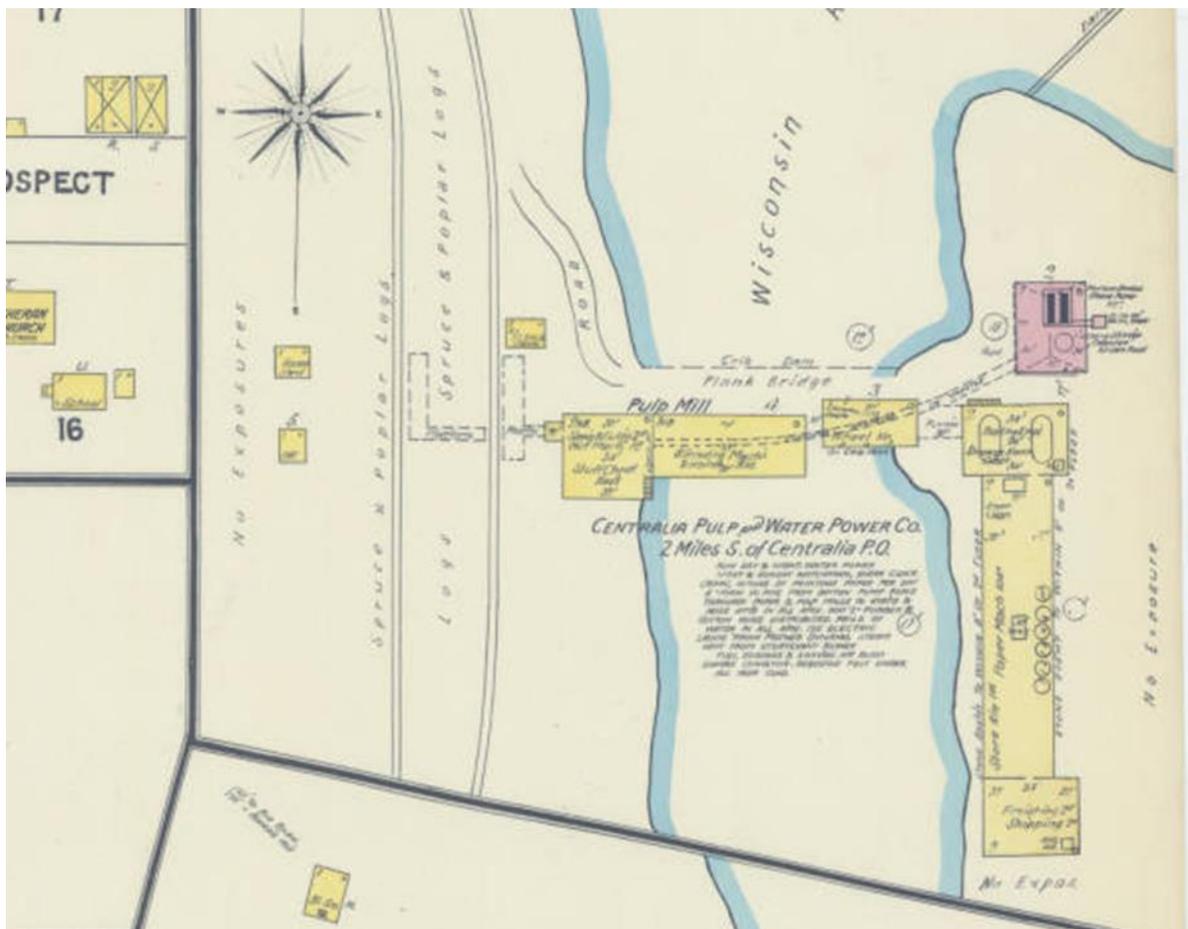


Figure 4.1. Sanborn Map of Grand Rapids and Centralia, 1891. Note the presence of the Centralia Pulp and Water Power Co. Source: State Historical Society of Wisconsin.

<sup>5</sup> Though he moved on from Centralia, Whiting continued to invest in the region's growing industry leaving a lasting impact on the area. He eventually established the Wisconsin River Paper Company at a site near Stevens Point that would later be renamed Whiting. See Shonda King, *Evolution of the Paper Giants: The Story of the Wisconsin River Papermakers* (Rhineland: Explorer's Guide Publishing, 1998), 45.

lumber industry, and many of the ruins had to be cleared. An old boarding house, however, was repaired to house the builders. Investors were apprehensive in January 1888 when the mill produced its first batch of wood pulp, but the product was high in quality and produced first-rate newsprint.<sup>6</sup>



Figure 4.2. The Centralia Pulp and Paper Mill, 1891. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

Despite local excitement for the project and the growing market for paper products, the Centralia mill never reached high levels of production. It had merged with

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<sup>6</sup> Engel, *The Age of Paper*, 19.

two other mills in the region in 1908, and endured fires in 1908 and 1912. The 1912 blaze burned the facility to the ground. Then, instead of being rebuilt, the mill was replaced with a hydroelectric power plant. Though the Centralia mill was ultimately unsuccessful, its early output solidified the area's possibilities as an alternative paper-producing region to the much larger Fox River valley. It also illustrated that the newly emerging paper industry in central Wisconsin would be dependent on the ability of entrepreneurs to work with one another.

### *Consolidated Water Power Company*

The Consolidated Water Power Company, an enterprise that eventually would become a major player within the Wisconsin River paper industry, was originally developed to generate electric power from the river. It began with a business agreement formulated a decade before the mill's actual construction in 1903.<sup>7</sup> At that time, the potential for hydroelectric power was being promoted heavily, and legal rights to create dams for this purpose had been acquired up and down the river by numerous individuals and businesses.<sup>8</sup> Unregulated uses of the river upstream, however, soon led to production shortfalls downstream because of a lack of water. People also argued that a fragmented ownership of the water power had a detrimental effect on the economy because some of

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<sup>7</sup> A. Decker, *Grand Rapids: Descriptive of Grand Rapids, Wood County and the Wisconsin River* (Grand Rapids, 1907), 29; Roy Urban and Max Andrea, *Consolidated Water Power Company: One Hundred Years of Water Power* (Wisconsin Rapids, WI: Consolidated Papers International, 1994), 4.

<sup>8</sup> J. Marshall Buehler, *The Nekoosa Story* (Port Edwards, WI: Nekoosa Papers Inc, 1987), 19-21.

the river's potential would be left undeveloped and untapped.<sup>9</sup> Therefore business leaders of the area gradually agreed that a consolidated approach was needed.

Jeremiah Witter (Fig. 4.3), also known as Jere or J.D., led the move to consolidate. He was a banker who had considerable lumber and real estate interests and was also a stockholder of the Centralia pulp mill.<sup>10</sup> To consolidate the river's power, Witter convinced numerous owners to deed their properties to a new company in exchange for shares of stock that would be equivalent to the value of their businesses. Signees to this agreement included owners a lengthy list of business interests along this section of the river including the Wisconsin Wood Pulp Company, Thomas and John Nash (owners of a flour mill), Pioneer Wood Pulp Company, and administrators of the Marion Bensley estate. Witter himself, had invested in many of the companies listed.<sup>11</sup>

Such cooperation could not occur without some stumbles. Thomas and John Nash strongly disagreed with the value assigned to their business, for example, and wanted out of the deal. When other members of the Consolidated Corporation attempted to force the brothers to take the deal, they spent seven years in court. The Nashes

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<sup>9</sup> Engel, *The Age of Paper*, 47.

<sup>10</sup> *Ibid.*, 33.

<sup>11</sup> Urban and Andrae, *Consolidated Water Power Company*, 5.

eventually won the case and, subsequently, sold the property to the corporation for their original desired amount.<sup>12</sup>

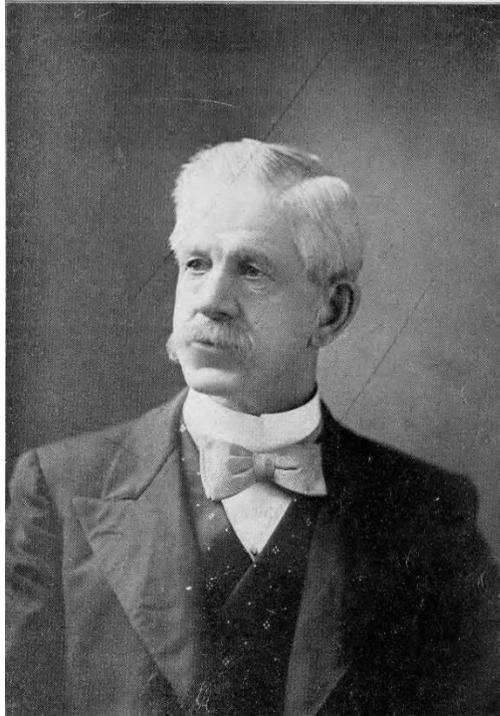


Figure 4.3. Jeremiah (Jere) Witter. Date unknown. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

At the same time that entrepreneurs were consolidating water rights on the river, residents of Centralia and Grand Rapids were working to merge themselves politically. They voted to do so in the spring of 1900 calling themselves Grand Rapids for twenty years before adopting Wisconsin Rapids as their new name, only because the postal

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<sup>12</sup> Buehler, *The Nekoosa Story*, 53.

service consistently sent mail to Grand Rapids, Michigan. One local newspaper connected the decision to merge with economic prosperity. At “the time of consolidation,” it stated, “both cities were equally favored in point of population . . . and already negotiations are pending with several manufacturing institutions to locate here.”<sup>13</sup>

The same article went on to discuss how the consolidation of water power along the Wisconsin would be another boon to the local economy. The journalist wrote that:

It is apparent to all that the businessmen of the two sides of the city are more earnest and active in their efforts to build up and increase the population of Greater Grand Rapids than ever before . . . . It is predicted that the proper development of this power will result in doubling the population of this city in the next five years or less.<sup>14</sup>

Whereas the original goal was to develop a power source, investors soon realized that their ultimate goal should be a mill. Witter wanted to partner in this venture with Nels Johnson, founder of the Wisconsin Rapids Paper Company. He was in the process of doing so via the Consolidated Company and the purchase of more property and rights along the river when he died suddenly. It was because of this unfortunate event that his son-in-law, George Mead (Fig. 4.4), came to head the corporation. Years later, in a retrospective essay, Mead wrote as follows:

In 1902 I again came to Wisconsin Rapids shortly after the death of Mr. J.D. Witter who in company with Mr. Nels Johnson had acquired

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<sup>13</sup>“Rapidly Progressing: Greater Grand Rapids One of the Most Prosperous Cities in the State,” *Grand Rapids Tribune*, May 19, 1900. Vol. 28, No. 2.

<sup>14</sup> *Ibid.*

the several small water powers formerly owned by various corporations. They had planned to develop all these small powers into one big power under the name of Consolidated Water Power Co. They had purchased all the shoreline on both sides of the river and all the islands, literally owning the shores and bed of the river from Wisconsin Rapids to Biron.<sup>15</sup>



Figure 4.4. George Mead, Date Unknown. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

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<sup>15</sup> George Mead, "Wisconsin River," in *Consolidated News*, April 1926, reprinted in Engel, *The Age of Paper*, 97.

Mead, unlike other paper entrepreneurs in the valley, had only a weak connection to the lumber industry. He had been a student at the University of Wisconsin when he formed a friendship with Isaac Witter, Jere's son. His original intention had been to become a professor of classics, but he had considerable business experience and was a talented salesman. Through his friendship with Isaac he met and married Jere Witter's daughter. The couple then moved to Mead's hometown of Rockford, Illinois, where they operated a furniture store with his brother.<sup>16</sup>

Mead's involvement with the paper business initially was just as a favor to his mother-in-law. Witter's son Isaac had wanted to abandon the scheme since he viewed it as risky. Abandonment upset Jere's widow, however, as she wished to see her husband's dream come to fruition. Mead was also pushed into taking on the project by Nels Johnson. "Johnson was eager, almost crazy to develop the power," he wrote. "He wanted to build a paper mill along with it."<sup>17</sup> So Mead decided to endorse the plan:

The next day I called in Isaac Witter and told him that Johnson had converted me to his side and that we ought to go ahead with the building. Isaac was dumbfounded and asked me how I plan to pay for it. I told him I had no plan but we would work on that. He [Isaac] said, "George, if you will raise the capital stock to \$400,000 and get two strong men each to take \$50,000 of the stock I will try and go along with you."<sup>18</sup>

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<sup>16</sup>Engel, *The Age of Paper*.

<sup>17</sup> George Mead, "Mead Remembers," November 9, 1950, in Archives of the Wisconsin State Historical Society, Folder 1.

<sup>18</sup> *Ibid.*

Mead later wrote in a company newsletter that he “knew nothing about water power and little dreamed that it would one day in the future become my task to harness and set to work that majestic force of the river.”<sup>19</sup> He learned quickly, however, and eventually created an industry in Grand Rapids that would continue for a century.

Construction on Consolidated’s mill and dam began in the summer of 1903. Dam placement was critical, and Mead later described the act of choosing where to place his dam:

I sat there one morning on a large rock at the site of the present powerhouse facing north to the long island covered with trees that divided the river into its two channels. A voice seemed to speak to me from behind my back saying, “Why don’t you build your dam on the top of those granite rocks of that island coming right down to the powerhouse instead of going straight across the river?” I turned to see who it was, and then I remembered that old Bill Brown had said to me the year before that we might use that island as a part of our dam.<sup>20</sup>

Mill construction, which used to be simple in the days of handmade papermaking, had grown complex with the arrival of the fourdrinier and the cylinder. Mills of the late nineteenth and early twentieth century were more complex still, as was illustrated by the process at the Consolidated site in Grand Rapids (Fig. 4.5). When Mead began construction there, he reflected on the endeavor’s scale: “I don’t remember how many men we had on the pay roll. It was a beehive of action, night and day in the tailrace and ten hours a day on the other work. We paid the men 15 cents an hour and had no

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<sup>19</sup> “Wisconsin River,” in *Consolidated News*, reprinted in Engel, *The Age of Paper*.

<sup>20</sup> Mead, “Mead Remembers.”

difficulty in getting all the men we could use.”<sup>21</sup> The ease that Mead describes in contracting labor is interesting, too, in that it demonstrates the dearth of employment opportunities in the area following the decline of the lumber industry.

The earliest mills along the Wisconsin River typically were made of brick or stone. The roofs featured wooden planks placed over steel trusses, covered with shingles.<sup>22</sup> Several small windows dotted the exterior of the structures. Their small size most likely was because anything larger would let in more cold air.

Following initial construction, Mead’s company gradually added more machines to their operations over the decades to increase production. They also diversified into other grades of paper and eventually took over the Grand Rapids Pulp and Paper Mill at Biron.<sup>23</sup> This triumph was the result, in part, of smart business decisions, the most important of which probably was a willingness of several investors to work together. While the pulp industry in the Wisconsin Rapids area was marked at times by acrimonious rivalry, the paper industry emerged specifically because of entrepreneurial cooperation. This strategy can be seen again in looking at the origin stories at Nekoosa and Port Edwards.

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<sup>21</sup> Ibid.

<sup>22</sup> King, *Evolution of the Paper Giants*, 11.

<sup>23</sup> Ibid., 54.



Figure 4.5. Foundation of the Consolidated Paper Mill, Grand Rapids Wisconsin, 1903.  
Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

## NEKOOSA AND PORT EDWARDS

### *Nekoosa*

Nekoosa and Port Edwards are geographically close and have featured intertwined business relations for most of their existence. Their origin stories are somewhat distinctive, but the two communities developed a common path when their respective paper businesses merged. Nekoosa differs from Port Edwards, however, in that it never developed a strong lumber industry. Still, it was this history of lumber failure that enabled the town's brighter future. Because the Nekoosa sawmill site had fallen into disuse, Thomas Nash (Fig. 4.6), an entrepreneur who had no previous experience in the paper business, was able to purchase the property.

Nash was the son of an Irish fisherman who had immigrated to the United States during the potato famine. The family moved across the Midwest, eventually settling in Milwaukee County. Thomas learned telegraphy as a young man and went to work in various towns across Wisconsin. He came to Port Edwards in the 1870s hoping to set up a cranberry operation with his brother, but also ended up purchasing a flour mill in Grand Rapids. In 1884, having become prosperous, he was elected to the state assembly. Finally, in the late 1880s, he was ready for a bigger venture. Using the proceeds from a recent cranberry harvest, he purchased the land where he would build his paper mill. The next step was to find investors who would help fund the project.<sup>24</sup>

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<sup>24</sup> Buehler, *The Nekoosa Story*, 29; Engel, *The Age of Paper*, 37.

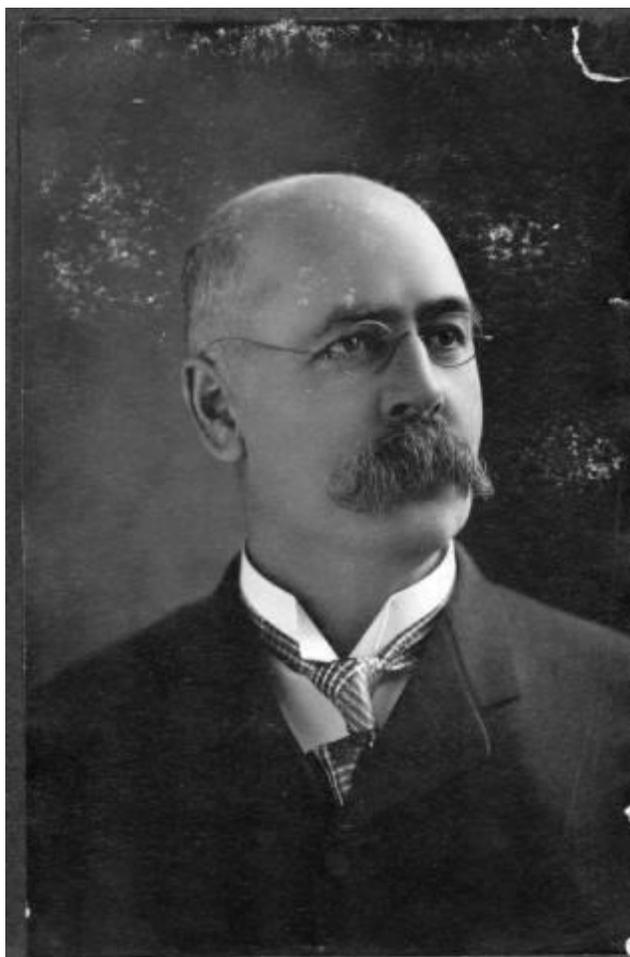


Figure 4.6. Thomas E. Nash. Date unknown. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

Nash had business managerial sense, but like other paper entrepreneurs in the valley, he saw the need for specialized assistance. So, he wrote to the managers at Kimberly-Clark and at another mill in Michigan with an offer to form a partnership. Nash had some cash for the project, but needed more capital and expertise. The response to these inquiries was not positive. Kimberly-Clark's letter, while respectful, asserted a general lack of faith in the industry's immediate future. Not only did these men have no

immediate plans to expand their own company, they wrote that the industry in Wisconsin was already fully saturated.<sup>25</sup>

Nash persisted, and eventually found an investor in his backyard: John Edwards, Jr. of the John Edwards Manufacturing Company. Then, with capital flowing, the next step was to construct a dam. Work began in the spring of 1893 for a structure 888 feet long. Laborers were secured at a rate \$1.75 per day plus \$3.50 per week allowance for board. Using large timbers, they created a crib-like structure and filled the openings with rocks.<sup>26</sup> Work then began on the mill. On average, labor was slightly cheaper for this activity (\$1.50 per day). Skilled positions attracted higher wages, of course, with masons paid \$4.00 for every thousand bricks laid. The new mill opened in 1894 and employed twenty-five men.<sup>27</sup> U.S Senator William Vilas congratulated Nash on his achievement, particularly his courage for doing so in the midst of a nationwide depression:

We ought to succeed in this enterprise for it was a very plucky thing to push it through in the panic year, and in the face of all the trouble that both threatened and befell the country. The community up there certainly derived a great measure of benefit at a time when it was an especial benefit to have so much labor done.<sup>28</sup>

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<sup>25</sup> Buehler, *The Nekoosa Story*, 29; Engel, *The Age of Paper*, 38.

<sup>26</sup> Buehler, *The Nekoosa Story*, 31.

<sup>27</sup> *Ibid.*, 31-32.

<sup>28</sup> Letter from William Vilas to Thomas Nash, September 28<sup>th</sup>, 1894. Thomas Nash Correspondence, Box 1, Folder 2. Archives of the State Historical Society of Wisconsin.

Outfitting the new mill with the proper equipment and machinery was costly. To purchase a paper machine, Nash looked to the Beloit Iron Company. This firm offered him a machine that was to be built for display at the 1893 Chicago World's Fair. Nash originally was hesitant to accept what he perceived to be a used item, but finally consented when given a discounted price of \$19,240.<sup>29</sup> Another machine was purchased for over \$21,000 and new beaters for \$920 each.<sup>30</sup>

While working to equip the mill, Nash also became deeply involved in organizing of the town of Nekoosa. He planned the village himself and named the streets after company administrators. This was the first step a long history of direct mill involvement in the creation of Nekoosa's industrial and residential landscape. Before the mill. The town was essentially a blank slate, largely untouched by industrialization.

With the new mill in place, Nekoosa attracted ancillary industries. The Nekoosa Iron Works was organized in 1918 to manufacture paper mill equipment and a paper-converting company was established the same year. The Nekoosa bank was formed in 1913 and a chamber of commerce in 1921. The town's first residential dwelling appeared the same month as work began on the dam, and soon more homes followed along with a post office and a Lutheran Church with about fifteen members.<sup>31</sup> Although growth was steady, Nekoosa remained a small town. It hovered around a thousand people before

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<sup>29</sup> Buehler, *The Nekoosa Story*, 35-37.

<sup>30</sup> King, *Evolution of the Paper Giants*, 58; *Ibid.*, 31.

<sup>31</sup> George O. Jones and Norman S. McVean, *History of Wood County* (Minneapolis: H.C. Cooper, Jr. and Company, 1923), 251-252.

1920, but grew to 2,000 over the next decade, and today has about 2,600 residents.<sup>32</sup> Its persistence throughout the decades was entirely because of the paper industry.

### *Port Edwards*

Port Edwards had a much more direct connection with lumber than its neighbor, Nekoosa, and its history is a classic case study of lumbermen moving directly into paper production. The settlement's base economy had been the John Edwards Manufacturing Company. Eventually the owner's son, John Edwards Jr., took over the business in 1873 and ran it for many years, but the younger Edwards's ambition was to enter politics rather than to continue fully in the business world. When he was elected to the state senate and headed off to Madison, he transferred control of the company to his son-in-law, Lewis M. Alexander, in 1895.

Alexander faced a major challenge. Knowing that the pine trees of central and northern Wisconsin were becoming scarce, he decided to switch the company's product from lumber to pulp and paper. Local trees in his possession would be suitable for that purpose. In addition, because he earlier had provided capital for Thomas Nash to set up the Nekoosa Paper Company, he recognized the potential of paper. The decision was made, and so Alexander sold his stake in the Nekoosa Paper Company and used the cash to develop a paper mill.<sup>33</sup>

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<sup>32</sup> Ibid.; "Welcome to Nekoosa," *City of Nekoosa*, accessed June 3, 2015, <http://nekoosawi.com/>.

<sup>33</sup> Buehler, *The Nekoosa Story*, 40.

Work began on the dam in 1895, followed by construction of a mill where an old lumber operation used to stand. At this time, the company was still known as the John Edwards Manufacturing Company. The enterprise began with two papermaking machines. Since Alexander lacked experience in the new business and was busy with a myriad of ventures, he turned to experts for assistance. This was becoming a familiar pattern. Alexander named Frank Garrison, who also oversaw the Centralia mill, as his manager. Then, upon Garrison's death in 1902, he replaced him with George Steele. Alexander at the time was living in Milwaukee, though he would later return to Port Edwards and have a much greater involvement with the community.

#### *The Nekoosa-Edwards Paper Company*

New paper mills along the Wisconsin River dealt with several challenges in order to remain competitive. They had to monitor changing technologies in the business and also changing demands for various grades of paper, making adjustments when necessary. They also realized that growth was essential to continued prosperity and so looked for opportunities to merge with other companies. Consolidation was a strategy adopted by both Nekoosa Paper Company and John Edwards Manufacturing early in the twentieth century when the two mills merged with the Centralia Pulp and Paper Company to create the Nekoosa-Edwards Paper Company. This move helped to integrate the villages of Nekoosa and Port Edwards. Having both mills under one ownership, company decisions would impact both communities. And, as will be discussed in the following chapter, interactions between management and labor led to similar landscapes in both villages.

Initial steps towards integration for the Nekoosa and Port Edwards mills actually had begun soon after these businesses were established. As early as 1897, five mills, including Nekoosa, John Edwards, Grand Rapids and Centralia, joined together in a cooperative organization called the Northern Paper Company. This was not so much an attempt to build a singular paper colossus, but to purchase pulpwood supplies collectively; and the operation did so effectively until it officially dissolved in 1909.<sup>34</sup>

In the same year that the Northern Paper cooperative was formed, the Port Edwards and Centralia mills joined another organization for the purpose of marketing. This group, known as Manufacturer's Paper Company, was a large entity representing mills from several states in the Midwest and East. The idea had merit, but faced obstacles. In particular, Wisconsin mill owners believed that company officials favored products from the eastern mills. And so, mills from Minnesota and Wisconsin formed their own cooperative sales organization called the General Paper Company and eventually entered into an agreement with Manufacturer's to restrict their sales to west of the Mississippi and Wisconsin, while Manufacturer's in turn, could supply products east of the river.

General Paper turned out to have a short life, as it was found to be in violation of federal antitrust laws and ordered to disband in 1906.<sup>35</sup> In retaliation for this ruling, over

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<sup>34</sup> Buehler, *The Nekoosa Story*, 52.

<sup>35</sup> *Ibid.*, 53.

sixty mills threatened to form one large corporation, but five mill owners in central Wisconsin decided that a medium-sized unit would be better. Instead of going back to their initial business practices with several small mills competing against one another, their leaders believed that a modest merger would best strike a balance between local control and a size big enough to remain profitable even as newsprint prices were falling and the cost of inputs were on the rise.<sup>36</sup>

Beyond joining for the purpose of marketing their product, the Port Edwards, Centralia, and Nekoosa paper mills also shared resources to enable product diversification. To move away from just newsprint and to produce a higher grade of paper that was also brighter, the owners of the three mills joined forces in 1906 to form the Port Edwards Fibre Company. This entity produced the sulphite pulp needed to create fine writing paper.<sup>37</sup> While all three companies profited from this venture, the village of Port Edwards received the most benefit, but with the tradeoff of acquiring a more intense industrial landscape. It was there that the company leased land for the new mill.<sup>38</sup>

In the summer of 1907 the three mills took more definitive steps toward becoming one company. They first looked to bring two mills from the Fox River valley into their group: Patten Paper and Outagamie Paper. When this plan failed, the Nekoosa Paper Company, John Edwards Manufacturing Company, Centralia Pulp and Water Power

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<sup>36</sup> Ibid.

<sup>37</sup> Ibid., 44-45.

<sup>38</sup> Ibid.

Company, and the Port Edwards Fibre Company officially merged in June 1908 to become the Nekoosa-Edwards Paper Company or NEPCO. This merger also included some lumber holdings acquired from Thomas Nash and L.M. Alexander. Officials placed the main offices for their new company in Port Edwards. The Centralia mill, as was mentioned previously, had a short history, but the property was fully incorporated into NEPCO as a hydroelectric plant.

The Nekoosa-Edwards Paper Company was well equipped to weather the various storms of the twentieth century with regard the economy, the market, and its own labor force. It was successful enough, in fact, that it would eventually be bought out by the gigantic Georgia Pacific company in the 1990s. Before then, the company had a strong influence on the landscape and livelihoods of Port Edwards and Nekoosa.

#### WATER, POWER, AND THE FORMATION OF THE WISCONSIN VALLEY IMPROVEMENT COMPANY, 1907

In 1906, leaders of the Wisconsin River paper industry met in Wausau to discuss how best to regulate the river's flow to assure maximum power. Their idea was simple: to create a cooperative new enterprise under their control that would fully regulate water movement. This need had become apparent as more and more entrepreneurs erected large, modern mills on the landscape, requiring a constant high water flow instead of the lesser more seasonal usage of earlier, similar units. The result of this discussion, the Wisconsin Valley Improvement Company, was a private corporation created in 1907. It was a crucial step in the development of the modern paper industry in the region and another example of how entrepreneurialism and capitalism can shape a landscape.

Companies such as Consolidated and Nekoosa-Edwards had long cooperated through business relationships, but by 1906 the Wisconsin River paper moguls sought a legislative approach. They viewed this as a necessary step because the men were eager to take advantage of the new hydroelectric power technology which would require substantial investments in infrastructure. Unfortunately, a bill that had been presented to the legislature the year before had died. This time, they were going to make a serious effort to take control of the river.

Lumberman had controlled the flow of the river in small ways. Owners used natural lakes to hold water back and release it when necessary. This was not a wholly reliable, and so they began to build wing dams that could hold back some of the river's flow and store it in ponds near the river banks. Such dams that were crudely built and disposable. If more water was needed downstream, owners could simply dynamite the dam, sending a rush of water downstream. During spring log drives, timber usually could be sent downstream via the river's natural flow, allowing for such fierce flowage meant less water would be available for storage upstream to use in other seasons. Such stream variability was anathema for a company wanting to generate hydroelectricity. In addition, the eroded land that resulted from lumber clearing was a problem. Less vegetation helped

to quicken the pace of streamflow, but it also meant greater discrepancies in stream discharge, with periods of high flow even higher and low flow, lower. <sup>39</sup>

The proposed new legislation aimed to provide a consistent water flow for power generation, but also a way to prevent flooding and water shortages. It would do this by allowing the construction of several dams and storage reservoirs that could release water in periods of low flow in the summer and winter. Not surprisingly, executives with the paper industry were the people spearheading the idea. The concept of creating a large coordinated reservoir system on the Wisconsin River had its origins in 1878 when the U.S. Corps of Engineers considered the idea for headwaters of major tributaries to the Mississippi. Their hope was to create a more uniform flow along the big river to facilitate grain shipments. That project never came to fruition.<sup>40</sup> Wisconsin lobbyists, however, saw the proposal by the paper manufacturers as a more satisfactory solution than earlier efforts because power would be turned over to a single entity, rather than have several competing interests arguing over the outcome. <sup>41</sup>

The timing, however, was poor in 1905 and 1906. Although the legislature in the past had consistently granted river rights to a variety of interests, these years were different. Bob La Follette, the progressive governor just had been elected to the U.S.

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<sup>39</sup> George R Gilkey, Lecture to the Northland Historical Society, 1961, Archives of the Wisconsin State Historical Society; Michael J. Goc, *Stewards of the Wisconsin* (Friendship, WI: New Past Press, 1993), 21.

<sup>40</sup> Goc, *Stewards of the Wisconsin*.

<sup>41</sup> *Ibid.*, 30.

Senate. He would take his seat in January 1906, but was still in power at the state capitol when the reservoir bill was submitted. La Follette thought it bad policy to grant business interests additional access to natural resources and spoke out against the measure. He won the battle at least temporarily, but the paper interests regrouped at Wausau to revise their approach. This time the initiative involved even more prominent businessmen and paper manufacturers of the Wisconsin River Valley including Thomas Nash and George Whiting. The group organized themselves into a company with a stated purpose to “establish, create, maintain, and operate a system of water reservoirs, located in, upon or along the Wisconsin . . . for the purposes of producing as nearly a uniform flow of water as practicable . . . throughout all seasons.”<sup>42</sup> Following this action in 1906 they set out to purchase the water rights to several old dams that had fallen into disuse and hired attorneys to recraft the earlier failed bill.<sup>43</sup>

Despite an extensive lobbying effort on the positive aspects of hydroelectric power, the Wisconsin Valley Improvement Company had its detractors. Mainly these were owners of resorts or other properties along the existing lakes near the Wisconsin River. Their concern was that too much land would be flooded, with a consequent loss of trees, wildlife, and small lakes. This opposition was small but powerful, as it represented the recreational interests as some of the wealthiest families in the state. Beyond tourism,

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<sup>42</sup> “Articles of Incorporation,” *Wisconsin Valley Improvement Company: A Record of its Organization, its Articles of Incorporation and By- Laws, the Law Enacted for its Government. A Statement of its Purposes* (Wausau: Record-Herald Co., 1908), 4.

<sup>43</sup> *Ibid.*, 36.

the project also faced scrutiny from people who perceived the industrialists as robber barons seeking to strip still another natural resource from the state. The company had to consider all of this when submitting its revised piece of legislation.<sup>44</sup>

As part of their lobbying efforts, company executives toured the river basin to ensure resort owners that the environmental impacts would be minimal. They also showed a willingness to accept amendments to the bill and to compromise on some of the demands presented in 1905. One of these was to insert a two-year deadline (i.e. until January 1, 1909) to acquire two billion cubic feet of reservoir capacity. This timeline was in response to previous instances wherein businessmen were granted permission to build a dam but took several years to complete the process. These compromises made the legislation palatable enough to pass in 1907, and with it came a new era on the river. The paper executives via their cooperative Improvement Company quickly acquired old reservoirs and dams that had sat unused since the day of the lumber industry. By 1908 they had accumulated rights to over three billion cubic feet of water.<sup>45</sup>

The company worked first to acquire “natural” reservoirs, those created by natural forces, and then began to develop a system of artificial reservoirs. Its first project was at the junction of the Tomahawk and Rice rivers in 1911. Throughout the next decade the company methodically replaced wooden dams up and down the river with sturdier

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<sup>44</sup> Ibid.

<sup>45</sup> Ibid., 48-49.

concrete forms.<sup>46</sup> The result of all these efforts was a dramatic redesign of the Wisconsin River, with an integrated system of reservoirs all along its length. Dubbed “the hardest working river in the country,” it was said to be a triumph of American private enterprise.<sup>47</sup> Construction projects along the river would carry on well into the twentieth century and the Wisconsin Valley Improvement Company still is in existence today. Although its purposes varied, certainly one big beneficiary was the paper industry. The new reservoirs produced a stable water supply that would assist mills in creating profitable outcomes.

## CONCLUSION

This chapter has outlined the entrepreneurial ambitions that led to the formation of a paper region. Although it is important to recognize individual agency and foresight, it also should be noted that such actions taken by business leaders were not in a vacuum and often depended on the capital and cooperation of other entrepreneurs in the region. In many cases, the decision to move into paper manufacture was one man’s idea, but getting such a business off the ground was the result of several individuals creating relationships and pooling capital. In the case of the Consolidated Water Power Company, its formation was a complex web of individuals pooling resources and purchasing water rights. The

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<sup>46</sup> *Ibid.*, 61.

<sup>47</sup> “One Less River to Boss: The Story of the Wisconsin River,” *Electrical World*, August 14, 1948, 1.

mills in Nekoosa and Port Edwards definitely relied on capital and knowledge from others in the valley.

Once a mill was up and running, cooperative business relationships continued to be vital. As was discussed, mills had to respond to changing market conditions and this challenge often led to mergers. Certainly this was the case of the Nekoosa Edwards Paper Company as well as the Consolidated Water Power Company. Businessmen would also work together to create entities such as the Wisconsin Valley Improvement Company that would serve their purposes. In smaller ways, the companies would diversify into other product lines, requiring further investment into the business.

Company actions had an immediate and lasting impact on the landscape. This began with the erection of dams and mills but also included residential landscapes and social outlets. Also, as the mills' capital infused into the local economy, it led to further growth, including new businesses. The next chapter takes a closer look at the Paper industry in Port Edwards and Nekoosa with an emphasis on how their industrial and residential landscapes were made and remade following the arrival of the mills.

## Chapter Five: Port Edwards and Nekoosa: The Making of Two Company Towns

Port Edwards and Nekoosa, both on the western bank of the Wisconsin River, are separated by a mere four miles. Each town owes its existence to the paper industry and their histories became intertwined with the merger the Nekoosa Paper Company and the John Edwards Manufacturing Company. Once this merger occurred, many of the initiatives undertaken by the new Nekoosa-Edwards Paper Company (NEPCO) applied to both communities, putting their futures on similar trajectories.

Although Nekoosa and Port Edwards would remain small communities, they would experience steady growth throughout the twentieth century (Fig. 5.1). These gains

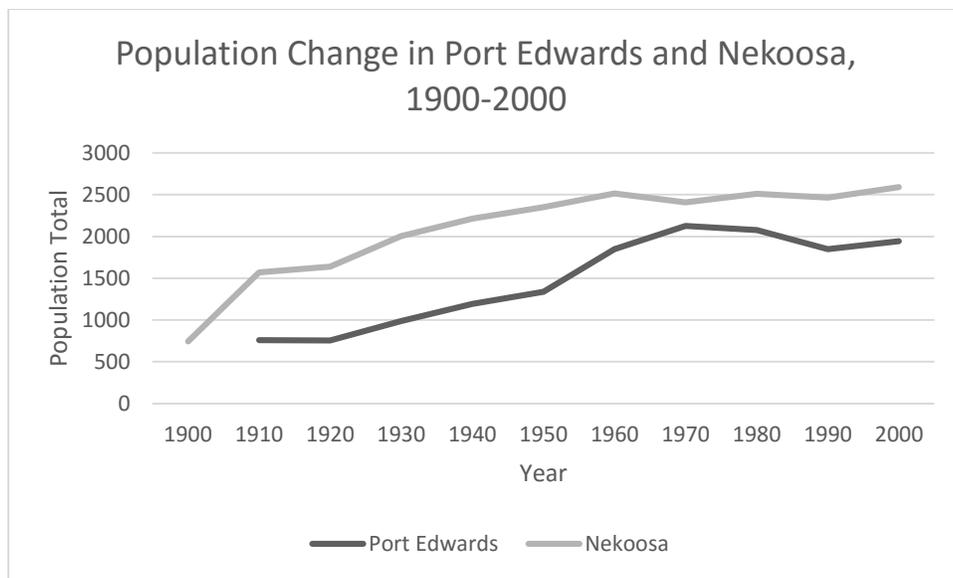


Figure 5.1. Population Change in Port Edwards and Nekoosa, 1900–2000. Source: U.S. Census of the Population, 1900-2000.

can be directly attributable to NEPCO providing a steady, reliable place of employment. Nekoosa and Port Edwards, in fact, can be classified as “company towns.” This chapter will explore how these places evolved in the twentieth century, moving from outposts of the lumber industry to small but vibrant manufacturing communities.

## THE COMPANY TOWNS

The term company town commonly refers to communities constructed by a mining, lumbering, or manufacturing enterprise to house workers. In such centers, the company was not only an employer, but also the provider of housing and other goods and services.<sup>1</sup> The earliest example of a company town in North America was the Braintree Iron Works, founded in 1645. More villages of this type began to appear in Europe and North America during the age of industrialization, where they assumed a variety of forms.<sup>2</sup> Often scholars have characterized a company town as one that is isolated and where residents are beholden to the company for all aspects of their livelihood. In other words, they are perceived as difficult places to live. Such characterizations, while accurate for many communities, ignore the diversity of these settlements and often apply more to company towns in the nineteenth century than to newer creations. Before 1900,

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<sup>1</sup> Marcelo J. Borges and Susana B. Torres, “Company Towns: Concepts, Historiography, and Approaches,” in *Company Towns: Labor, Space, and Power Relations Across Time and Continents*, eds. Marcelo J. Borges and Susana B. Torres (New York: Palgrave MacMillan, 2012), 2.

<sup>2</sup> Mary Crawford, *Building the Workingman’s Paradise: The Design of American Company Towns* (New York: Verso, 1995), 2.

many company towns were almost entirely industrial landscapes. Residences were utilitarian structures built to house multiple workers and were erected by the company owner simply because other housing was nonexistent. Reduced isolation and heightened social expectations after 1900 gradually led to changes. Owners began to implement community amenities, consistent with the principles of “welfare capitalism,” as a way to attract and keep workers. Some even employed architecture firms to redesign and beautify their communities.<sup>3</sup>

The new company town designs were highly influenced by ideals associated with English garden cities. These, in turn, were inspired by rural English villages with tree-lined streets, quaint housing, and open spaces incorporated into their plans.<sup>4</sup> This movement towards picturesque community planning emerged from tensions between labor and management. Throughout the latter decades of the nineteenth century and into the twentieth, an increase in unionization occurred. Workers became much bolder in its demands, strikes were more frequent, and labor organizations grew in national importance. By creating pleasant communities, management hoped to engender fidelity and attract a stable, skilled workforce. Management also realized that too much control in their workers lives could be detrimental and sought a solution that would at least give the impression of a reduced company role in building the town. Hiring an architectural firm

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<sup>3</sup> Christopher Post, “Modifying Sense of Place in a Federal Company Town: Sunflower Village, Kansas, 1942-1959,” *Journal of Cultural Geography* 25, no. 2 (2008): 137-159; Margaret Crawford, “The ‘New’ Company Town,” *Perspecta* 30 (1999): 48-57.

<sup>4</sup> Crawford, “The ‘New’ Company Town,” 54.

to plan such communities was one such strategy. By encouraging workers to select home styles of their preference, management hoped they would feel a greater sense of ownership of their community.<sup>5</sup>

Port Edwards and Nekoosa serve as imperfect examples of the new management policies, in that they display characteristics of the old and new company town designs. Both were somewhat isolated places in their early years, with primarily male populations clustered near the mills in bunk houses or rented single-family homes. But, as the decades passed and the Nekoosa-Edwards company experienced its own series of labor struggles, the managers incorporated elements of the new company town into their planning initiatives. Meanwhile, the mills remained the central feature on the landscape and became even more impressive as company success increased.

#### THE NEKOOSA-EDWARDS PAPER COMPANY

After the Nekoosa–Edwards Paper Company was created through the series of mergers discussed previously, its leaders continued to adopt progressive business strategies. Once critical decision occurred in 1911, the year that the United States lifted tariffs on Canadian newsprint. Company officials wanted to produce a top-grade paper that would command a good price, and with cheap newsprint imports flooding the market from the north, it was vital that NEPCO find a profitable niche.

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<sup>5</sup> Ibid., 51-52.

The company slowly stepped away from the production of newsprint and turned instead to the manufacture of manila printing paper, a product that also utilized ground wood pulp. From there, the company diversified into higher grades, adding more and more specialty papers to their product line. These included oil and wax-treated products and ones that could be advertised as flame proof and waterproof. The company also produced a variety of wrapping papers which might be used at outlets such as the butcher counter or delicatessens. Overall Nekoosa-Edwards manufactured over 150 kinds of wrapping paper, with King William wrapping paper being its hallmark product. This was a butcher paper with excellent resistance to punctures from bones and to blood leakage.<sup>6</sup>

Despite their success with wrapping papers, management in the late 1920s continued to experiment with higher-value paper grades. Competition from other mills in Wisconsin as well as from newsprint producers in the southeastern United States. John Alexander, the son of Lewis, was now the general manager of the company and invested heavily in higher-value paper grades, particularly business papers. He also wanted to become more innovative with product lines.<sup>7</sup> Less than ten years later, the company moved into school and office supplies such as index cards, blue books, and adding machine tape. This line was not very profitable, however, and was abandoned after two years.<sup>8</sup>

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<sup>6</sup> J. Marshall Buehler, *The Nekoosa Story* (Port Edwards, WI: Nekoosa Papers Inc., 1987), 67-70.

<sup>7</sup> *Ibid.*, 113-116.

<sup>8</sup> *Ibid.*, 117-118.

The ability to stay nimble in the face of changing economic circumstances was critical to survival in the modern paper marketplace. Firms also tried to be innovative, creating demand for their new products, rather than simply reacting to the whims of the market.<sup>9</sup> NEPCO was part of this process, but changing product lines was not simple and usually required large investments in new equipment or additional infrastructure. The company was able to limp through the prolonged economic depression of the 1930s. Trying to avoid layoffs as much as possible, officials would create work for employees in the wood yard to fill in time when they were not needed at the mill.<sup>10</sup> The company also continued to produce and build an inventory of business and fine writing papers that they wanted to make a central feature of their business. This latter decision proved to be wise, as the market for such papers grew over the next several decades. By the 1960s, the new products accounted for almost all of their production and the older line of wrapping paper was sold.<sup>11</sup>

The addition of different grades to the production list helped to ensure that the company itself would continue to grow. In the late 1920s, officials also invested in a larger sales force and added a research division that provided employment opportunities

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<sup>9</sup> Avi Cohen, "Technological Change as Historical Process: The Case of the U.S. Pulp and Paper Industry, 1914-1940," *The Journal of Economic History* 44 (1984): 774-779.

<sup>10</sup> Interview with J. Marshall Buehler, November 15, 2014.

<sup>11</sup> Richard Montaba, *Fact Book: Nekoosa-Edwards Paper Company* (Chicago: Gardner, Jones, and Cowell, Inc., 1966), 12.

beyond those of the lumber yard or machine floor.<sup>12</sup> Nekoosa-Edwards expanded beyond the production facilities in Wood County as well. Its leaders purchased a mill in Potsdam, New York, in 1957, and the Whiting–Plover operation near Stevens Point in 1963. Next, in the mid-1960s, they went a step further and built a pulp and paper mill from the ground up in Ashdown, Arkansas. NEPCO had now officially transformed itself from a small collection of mills in southern Wood County into a major corporation with a nationwide market and mills in three states.

#### THE CHANGING MATERIAL LANDSCAPE

The success of the Nekoosa-Edwards company had important implications for the towns in which they resided. Clearly, had their paper mills failed, Nekoosa and Port Edwards likely would have ceased to exist since their populations were so small and their economies so narrowly based. Through a combination of industrial restructuring and welfare capitalism, however, the two communities evolved from sparsely populated sawmill settlements to modern industrial towns. This change was well underway by 1910. In Port Edwards, the old saw mill had been jettisoned and a new paper mill erected in its place; in Nekoosa, an entirely new community was taking shape where a sawmill had failed to thrive.

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<sup>12</sup> *Versatile Nekoosa* (Port Edwards, WI: Nekoosa-Edwards Paper Company, 1966), 25.

## *The Changing Industrial Landscape*

When Port Edwards was a sawmill town, the mill served as the center of the village and the community emanated from there. The Sanborn Map of 1891 depicted the sawmill as a series of buildings located on the site of the future paper mill. The main structure, straddling the river and its bank, housed the saws themselves. A water wheel occupied the northeast corner and shingle and lath mills occupied outbuildings near the main building. Long log piles some twenty feet tall stretched nearly four hundred feet to the east and iron tramways connected them to the mills. At this time while the area was becoming known as Port Edwards, officials at the Sanborn Company regarded it as merely an extension of the town of Centralia and they deemed nothing else in the area worthy of documentation.<sup>13</sup>

The Sanborn map of 1895, one year before the founding of the paper mill, shows just the sawmill and notes that it is no longer running.<sup>14</sup> Seven years later, however, another Sanborn edition reveals progress. The town had been officially surveyed just five years before and the sawmill had been replaced by the paper mill, complete with grinder

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<sup>13</sup> Sanborn-Perris Map Co. *Grand Rapids and Centralia*, 1891. 1:600. Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5239/rec/4>> Sept. 3, 2015.

<sup>14</sup> Sanborn-Perris Map Co. *Grand Rapids, Centralia and Nekoosa*, 1895. 1:600. Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5214/rec/2>> Sept 3, 2015.

room and two paper machines. Gone are the huge piles of logs. Instead, smaller stacks of logs for pulp rest to the northwest of the paper mill.<sup>15</sup>

The 1909 map reveals how much the landscape changed over a fourteen-year period (Fig. 5.2). The new mill is much more complex, for example. It included a grinder room above the tailrace and eight water wheels. The paper machines were located in the largest section of the building and attached to this, on the west side, was a finishing room. A sulphite mill, a fairly recent addition at this time, was in a separate building to the west of the main mill (Fig. 5.3). Huge log piles north of the buildings supplied the basic raw material. Finally, about two hundred feet north of the big piles, was the Port Edwards Hotel where many workers lived. The post office was also located on this street, north of the hotel.<sup>16</sup> It is clear that the mill is center of the village (Fig. 5.4).

Nekoosa, as was discussed in previous chapters, emerged at the same time as the building of the Nekoosa paper mill (Fig. 5.5). Within a few years, the town was able to attract several other businesses while the mill itself underwent a series of changes. Along Market Street, Nekoosa's main street, one could find a meat store, hardware and furniture

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<sup>15</sup> Sanborn-Perris Map Co. *Grand Rapids and Nekoosa*, 1902. 1:600. Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5525/rec/5> Sept. 3, 2015.

<sup>16</sup> Sanborn-Perris Map Co. *Grand Rapids and Nekoosa*, 1902. 1:600. Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/8861/rec/3> Sept. 3, 2015.

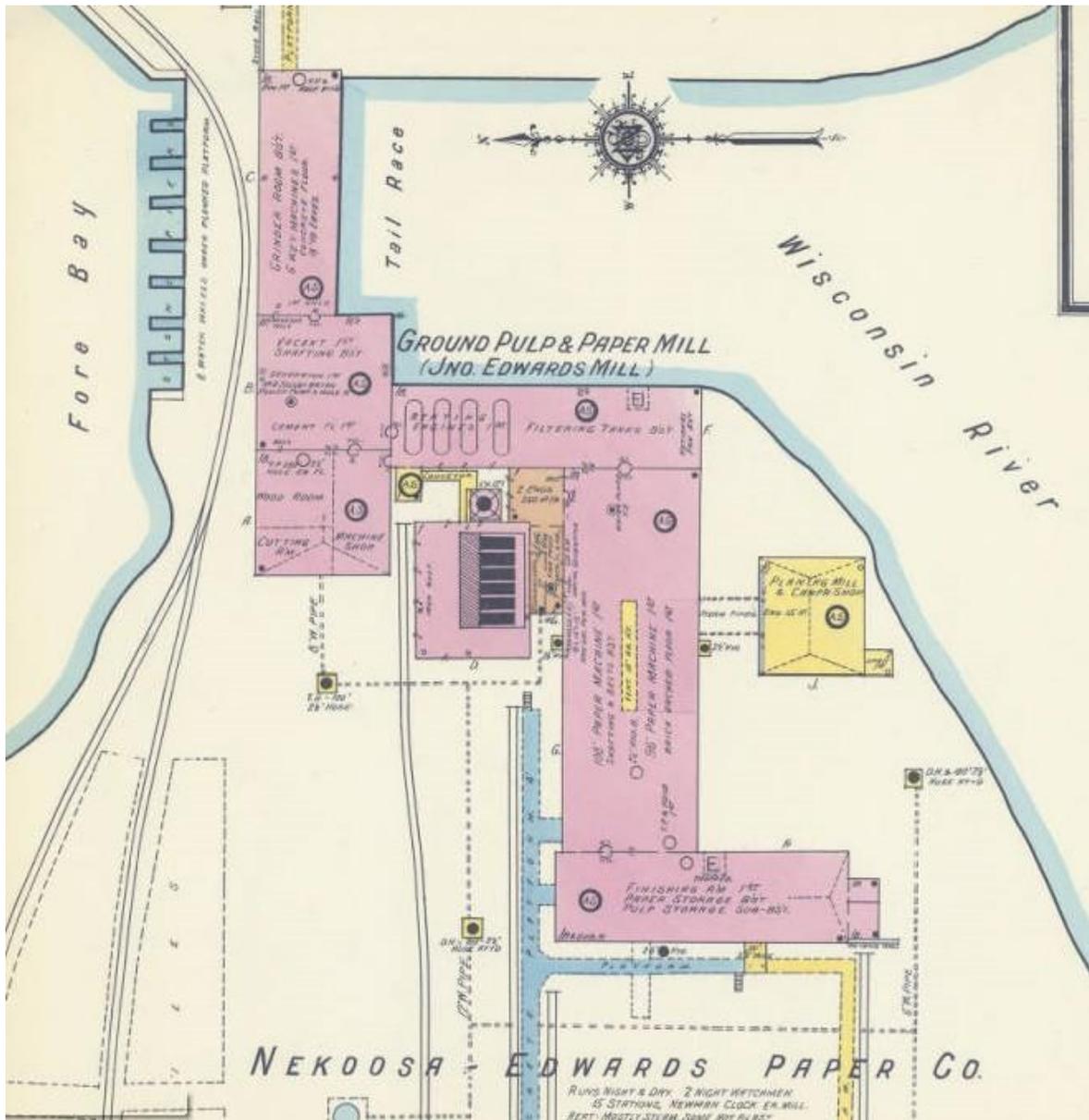


Figure 5.2. Sanborn Map of the Pulp and Paper Mill at Port Edwards, 1909. Source: Wisconsin State Historical Society.





Figure 5.4. “The Well Beaten Path to the Mill” Postcard. Port Edwards, Wisconsin, 1915. Source: South Wood County Historical Museum. This postcard places the paper mill in the background, yet still recognizes its centrality to the village by implying that it was a daily destination.

store, a barber shop, general store, and more (Fig. 5.6). Every time the company chose to manufacture a new paper grade, adjustments had to be made to the mill. Sometimes, this meant physical expansion as when officials added a separate sulphite mill to create a higher quality pulp. Flanking the mill was a small system of train tracks. A steam

locomotive had been added in 1900 to transport logs and other materials around the property and into the pulp mill.<sup>17</sup>



Figure 5.5. The Nekoosa Paper Mill, 1905. The sulphite mill is the taller structure on the right. Source: Wisconsin State Historical Society.

In the 1920s, when NEPCO wanted to produce higher-value paper grades, they became concerned about the quality of water they were getting from the Wisconsin River. Its brown color was acceptable for lower grades, but more expensive, whiter papers demanded a purer water source. Local wells in the area were considered but found to be inadequate. So, in 1925, NEPCO purchased 1,200 acres east of town along Four Mile Creek, a tributary to the Wisconsin River. The water from this creek had much less color

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<sup>17</sup> Buehler, *The Nekoosa Story*, 86.

than the larger stream and the company improved the water quality even more by constructing a lake. Officials reasoned that a lake would allow many of the water's impurities to settle out and thereby make final purification more efficient.<sup>18</sup>



Figure 5.6. Postcard of West Market Street, Nekoosa, 1907. Dirt roads were a common feature of Nekoosa and Port Edwards in their early years as were wooden store fronts. Source: South Wood County Historical Museum.

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<sup>18</sup> Buehler, *The Nekoosa Story*, 58.

Nepco Lake, as the completed reservoir was called, eventually covered over four hundred acres and was equipped so that water could be pumped directly to the mill. A simple pipeline sufficed in the 1930s, but as more water was required, the company installed a second pipe to import water from nearby Five-Mile Creek. The lake was a boon to Port Edwards as well as the company. Its water supplemented the municipal supply to the town and its shoreline became a recreational site for residents, who used it for swimming, boating, and fishing.<sup>19</sup>

As Nekoosa-Edwards expanded and became more complex, company officials altered the local landscape further. To fly customers to their mills for tours, they invested \$50,000 dollars in an airplane in the 1920s and then even more money in land for a landing field. The resulting facility, known as the Tri-City Airport, has experienced varied usage throughout the decades (Fig. 5.7). Plane operations ceased in the 1930s and in the 1940s, and the site was converted temporarily into a German prisoner-of-war camp. The facility then came back into use by the company and was renamed Alexander Field.<sup>20</sup>

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<sup>19</sup> Ibid., 59; Robert James Karnauskas, “The Hydrogeology of the Nepco Lake Watershed in Central Wisconsin with a Discussion of Management Implications,” (Master’s Thesis, University of Wisconsin-Madison, 1977), 13.

<sup>20</sup> Buehler, *The Nekoosa Story*, 83-85.



Figure 5.7. Tri-City Airport, 1928. Source: Wisconsin State Historical Society.

### *Home in Nekoosa and Port Edwards*

Laborers in the nineteenth century often lived in space provided by their employers. This was particularly true in isolated company towns such as those associated with the lumber industry. The predecessor companies of Nekoosa-Edwards were no different and constructed bunkhouses at their winter camps in the woods. Generally, a practical need for similar housing existed even beyond these isolated conditions. The towns where sawmills and paper mills were located were at times new creations, lacking affordable spaces for workers to rent or buy. Rather than waiting for other entrepreneurs to provide the needed facilities, companies often found it more convenient to set up their own employee housing.

Living spaces for laborers and managers evolved throughout the decades from barracks to more individualized single-family residences. In the early days of one of the mills, workers were housed in a company-owned structure called the Port Edwards Hotel. It contained 125 beds and was a definite upgrade from the rougher lodgings of the logging camps. To accommodate more workers, NEPCO eventually added a second building to the hotel known as the “annex” (Fig. 5.8). Then, as more years went on and workers became less transitory, the company began to construct and rent out small single-family houses to its workers.<sup>21</sup>

The paper company located all of their new rental properties near the mills. Everything else in Nekoosa and Port Edwards was similarly clustered. The *Standard Atlas of Wood County* of 1909 shows Nekoosa to be considerably larger than Port Edwards. It had expanded to the north some fifteen blocks and had another addition southwest of the mill (Fig. 5.9).<sup>22</sup> Port Edwards also had grown towards the north, away from its mill. Six streets ran east-west and five north-south, and plans existed for a school north of Lavigne Avenue (Fig. 5.10).<sup>23</sup>

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<sup>21</sup> Interview with J. Marshall Beuhler, November 15, 2014.

<sup>22</sup> *Nekoosa: Port Edwards, TWP*. 1:4200. In: *Standard Atlas of Wood County, Wisconsin* (Chicago: Geo. A. Ogle & Co., 1909), 28-29.

<sup>23</sup> *Nekoosa: Port Edwards, TWP*. 1:3600. In: *Standard Atlas of Wood County, Wisconsin* (Chicago: Geo. A. Ogle & Co., 1909), 74.



Figure 5.8. Panoramic View of Port Edwards, 1908. The Port Edwards Hotel and Annex are at the middle right with the mill and smokestack can be seen in the background. Source: South Wood County Historical Museum.

Beyond housing, NEPCO provided basic utility service to these homes. The company's electric company was called Nekoosa-Edwards Power and Light. Created in 1913, it supplied not only Port Edwards and Nekoosa, but also their surrounding townships plus the city of Wisconsin Rapids. This company purchased its power from the parent paper mill. Likewise, the mill also created a water distribution system for Nekoosa

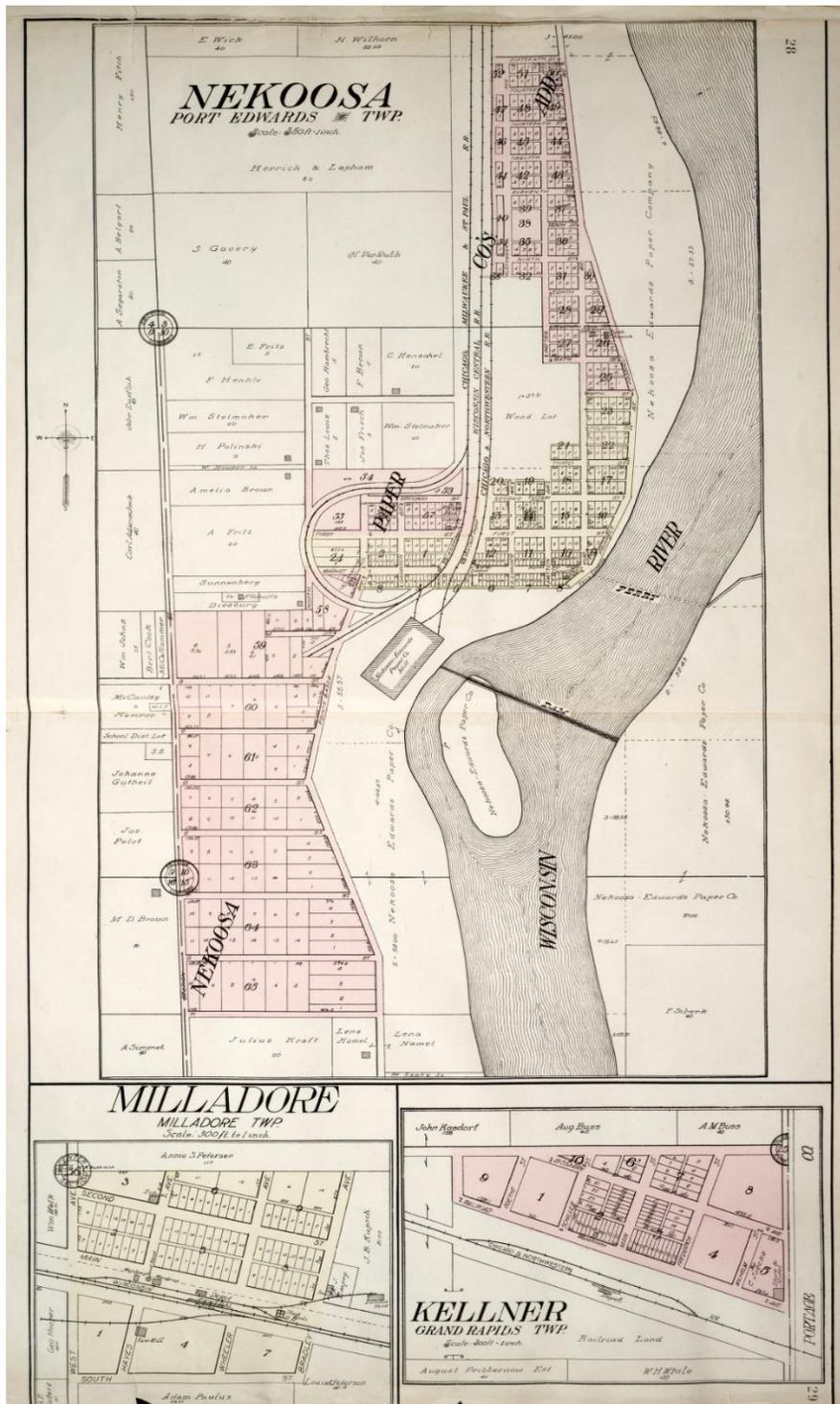


Figure 5.9. Nekoosa: Port Edwards, Township, 1909. Source: *Standard Atlas of Wood County Wisconsin* (Chicago: Geo. A. Ogle & Co., 1909), 28-29.

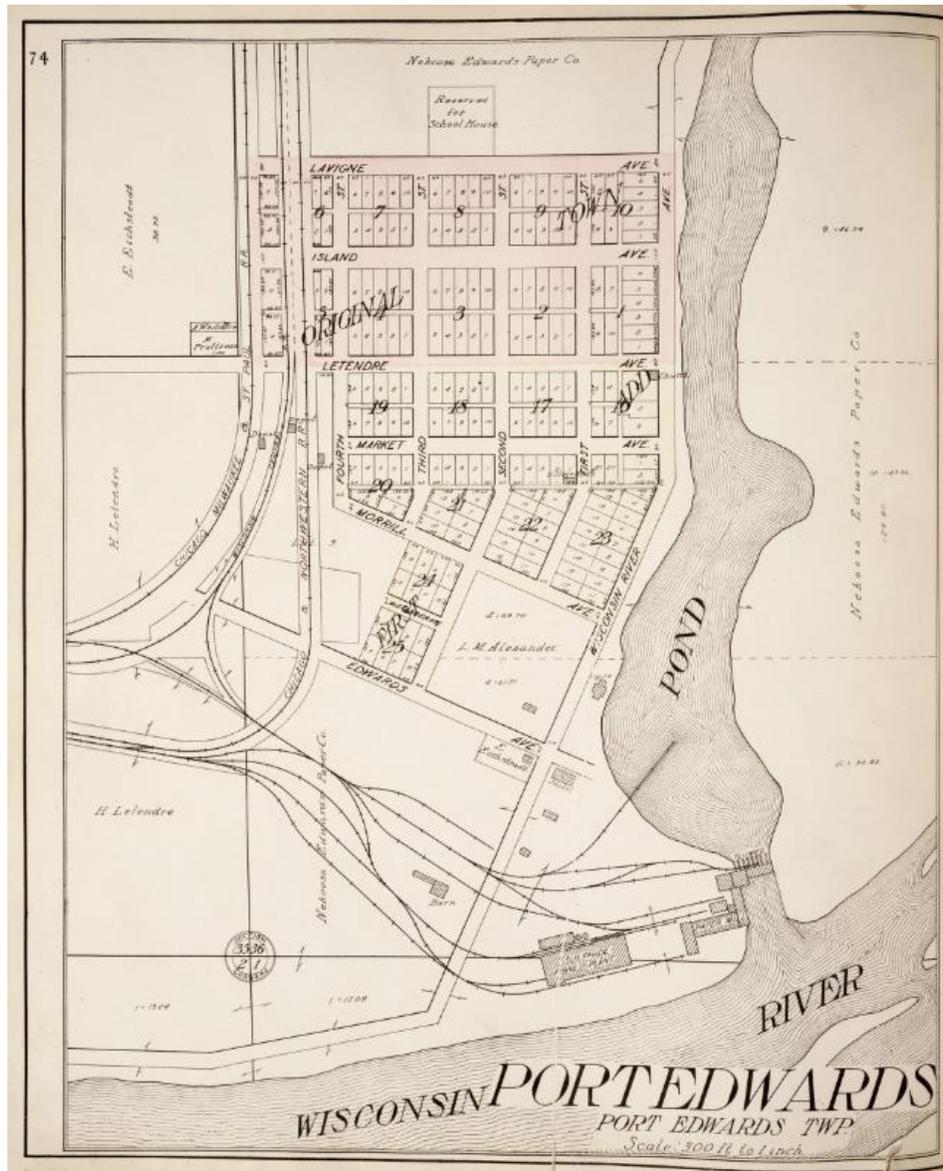


Figure 5.10. Port Edwards: Port Edwards, Township, 1909. Source: *Standard Atlas of Wood County Wisconsin* (Chicago: Geo. A. Ogle & Co., 1909), 74.

and Port Edwards.<sup>24</sup> Overall, NEPCO, by the late 1910s, had established a strong presence in the day-to-day life of everybody in the Nekoosa-Port Edwards area.

*Nekoosa, Port Edwards, and the Strike of 1919*

In 1919, the Nekoosa-Edwards Paper Company faced a crisis when nearly nine hundred workers failed to report to work on Monday, June 21. This walkout was not unexpected. Local newspapers had been noting a discord between labor and management for weeks and the U.S. Department of Labor had sent out an attorney to mediate between the two sides. Workers were demanding that the company recognize their union as a bargaining agent for wages. They also sought an eight-hour work day and the right of a committee made up of employees to approve new hires.<sup>25</sup> When the company failed to meet these demands, the work stoppage occurred.

Strikes were relatively infrequent at Port Edwards and Nekoosa. In the late 1870s, the sawmill crew at John Edwards had walked off the job, although the reasons for this are not known.<sup>26</sup> The only other event occurred in 1902, nine years after Nekoosa Paper opened its doors. This dispute was over the right of employees to organize a union; management, predictably, was not in favor. After workers struck, management brought in

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<sup>24</sup> Buehler, *Looking Back: A History of Port Edwards* (Port Edwards, WI: The Village of Port Edwards, 2002), 38-42.

<sup>25</sup> "Labor Situation at Nekoosa-Edwards is Nearing Danger Line," *Grand Rapids Daily Leader*, June 20, 1919. Vol. 5, No. 1580.

<sup>26</sup> Buehler, *The Nekoosa Story*, 106-108.

scab labor from Chicago. This heightened tensions. Strikers often met the new laborers at the train station, and one evening Thomas Nash reportedly waved a revolver at the crowd. Soon after the original workers returned to work, but not as part of a union.<sup>27</sup>

The strikes of 1902 and 1919 were not isolated events, but rather part of a larger labor struggle within the Wisconsin paper industry. At the turn of the twentieth century, virtually no paper unions existed in the state. Mill work was dangerous, however, and people began to lobby for compensation when accidents occurred. An increased rootedness of laborers led to more demands for financial security.<sup>28</sup> One particular desire was to remove the Saturday night shift. Mills typically ran all day and night for six days every week, but a new proposal would have shortened this period slightly by ending the week at six on Saturday evening. Such an idea was met with trepidation by mill owners. It would hurt output of course, and some owners argued that Saturday nights off also would encourage worker debauchery.<sup>29</sup>

The conflict began in early April 1919, when workers from Nekoosa-Edwards met with striking workers from the nearby Consolidated Paper Company to show their solidarity. The *Grand Rapids Daily Leader* reported that the Port Edwards and Nekoosa employees “are in accord with the workers here and will support them in their demand

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<sup>27</sup> Ibid.

<sup>28</sup> Robert W. Ozanne, *The Labor Movement in Wisconsin: A History* (Madison: Wisconsin Historical Society Press, 2011), 169-172.

<sup>29</sup> Ibid., 175.

for recognition.”<sup>30</sup> Nekoosa-Edwards executives responded by offering their employees a raise in an attempt to head off trouble. This ploy worked for a few months, but eventually workers sought the union as a bargaining agent. Lewis Alexander was vehemently against the idea of an outside union but was willing to consider an in-house employee committee.<sup>31</sup>

Unfortunately, management and labor were not able to come to an agreement. It was reported that NEPCO management was willing to make adjustments on wages, hours, and overtime, but unwilling to concede labor’s right to unionize. So, workers struck on June 21. Within days after the strike, workers who occupied company housing received notice that they had to vacate the property within a month. Angry workers responded by sending the notices back to the company. Company hotels in Nekoosa and Port Edwards also closed within days of the strike, not surprisingly producing even more bitterness among the workers.<sup>32</sup>

NEPCO was determined to maintain production despite the loss of labor. The company employed scabs from surrounding rural areas, including farmers, but had to cut back production from three shifts per day to two. Officials disputed any rumors that

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<sup>30</sup> “Trouble Here May Tie up Other Mills,” *Grand Rapids Daily Leader*, Grand Rapids, Wisconsin, April 7, 1919, Vol. 4, No. 1518.

<sup>31</sup> “Labor Situation at Nekoosa-Edwards is Nearing Danger Line,” *Grand Rapids Daily Leader*, June 20, 1919, Vol. 5, No. 1580.

<sup>32</sup> “Company Tenants are Ordered to Vacate in Thirty Days by Paper Mill” *Grand Rapids Daily Leader*, June 26, 1919, Vol. 5, No. 1585.

major shutdowns might occur.<sup>33</sup> The company also brought in labor from Chicago and built two new housing structures in 1919 known as “the barracks.” Both were close to the mills, one at Nekoosa and one at Port Edwards.<sup>34</sup>

The strike continued through the summer. At one point in July settlement seemed near, but again management and workers failed to come to an agreement. Wives and daughters of workers then became involved in the process, and both sides used the material landscape as leverage. In a letter to L. M. Alexander that was distributed by the company, an anonymous woman expressed her anger as follows:

A year ago you were loved and respected in Nekoosa, Port Edwards, and Grand Rapids; your name headed the list of donators to churches and for all charitable givings. Nekoosa High School bears your name. Today the people demand that that name be chiseled off and it be named after one more deserving of the honor.<sup>35</sup>

Later in the letter, the writer further attempts to minimize Alexander’s efforts at community building:

At best, we are only here for a few short years, in which God gives us to make good. The way we do it doesn’t mean how many churches, libraries, or hospitals we write a big check for; but to do unto others as you would have

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<sup>33</sup> Ibid.

<sup>34</sup> Buehler, *The Nekoosa Story*, 94.

<sup>35</sup> Letter to Louis M. Alexander from “A Woman,” Archives of the Alexander House, August 1919.

others to unto you – or, read the New Testament (5 chapters of James) if you read your Bible?<sup>36</sup>

By August 1919 many workers and their families had chosen to leave the area rather than stick out the strike. One destination was the industrial community of Janesville in southern Wisconsin where General Motors had a factory. The *Grand Rapids Daily Leader* reported that the “number from here who are now in Janesville totals more than 600 men. Quite a number of these men are preparing to move their families to the boom town, as soon as houses can be secured.”<sup>37</sup> In addition, a pamphlet distributed after the strike claimed that, “Over 100 families have been upset and forced to move, being deprived of their rightful earnings.”<sup>38</sup> Evidence that these claims are real comes from a county history written just a few years after the strike. “The U.S. census of 1920 assigned Nekoosa a population of 1, 639,” and states, “but this was taken during labor troubles which took a great many out of the village. The population today is probably nearer 2,000.”<sup>39</sup>

The strike lingered throughout the winter of 1919-1920 but lost its summer intensity. Workers returned to the job in the spring but labor failed to win the right to

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<sup>36</sup> Ibid.

<sup>37</sup> “Grand Rapids Has Sent out 600 men,” *Grand Rapids Daily Leader*, October 29, 1919, Vol.1, No. 1950.

<sup>38</sup> Ibid.

<sup>39</sup> George O. Jones and Norman S. McVean, *History of Wood County* (Minneapolis: H.C. Cooper, Jr. and Company, 1923), 246.

unionize. At some point towards the end of the strike, management distributed a pamphlet in which they blamed the strike on the unions rather than seeing the strike as the will of the employees. They wrote that the parents “who gladly sent their sons to Europe to fight for Democracy, have been turned against law and order and have upheld the hands of rampant radicals whose attitude has been anti-Government and on that would stoop to use women to perform unpleasant tasks for them.”<sup>40</sup> They go on to say how workers can go through the process of returning to their jobs.

### *Live Where You Work*

Workers at NEPCO would not strike again until the 1960s. This one, too, was unsuccessful for workers and the mill coped by bringing in employees from their other plants in Arkansas and New York using generous incentives.<sup>41</sup> Still, looking back, the strike of 1919, while acrimonious, did serve as an important step in the remaking of Port Edwards and Nekoosa. Soon after it ended the company ramped up efforts to create a more stable workforce. Instead of serving as a landlord for its employees, for example NEPCO now encouraged home ownership either through selling employees houses that the company previously had owned or, by encouraging them to build on their own. Officials likely were motivated by the success of similar strategies by other companies. Community-building efforts were proving effective at reducing turnover and mitigating

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<sup>40</sup> Nekoosa-Edwards Paper Company, “The Nekoosa–Edwards Paper Company Strike,” 1919. Archives of the Alexander House.

<sup>41</sup> Buehler, *The Nekoosa Story*, 108-109.

strikes. The first campaign, in 1924, produced ten new homes for the community of Port Edwards. Its success led to an even larger building program in 1927.

The new campaign, called “Live Where You Work,” offered generous incentives for workers to purchase homes they were renting or lots to construct their own structures. The prices were generous for the rental units and the lots were free. In addition, the company would also provide building materials at wholesale prices. Fifteen families took advantage of the program that first year, the majority of them building in Port Edwards (Fig. 5.11).<sup>42</sup>

In 1928 and 1929, the company expanded its homeowner program to provide not only lots, but also a “sidewalk in front of the lot, top dressing fertilizer, grass seed and trees – approximately \$200 in value.”<sup>43</sup> Also, people who wanted to build now could choose from several design options offered from an approved builder. Generally, these houses were single-story bungalows but two-story homes were available as well (Figs. 5.11, 5.12). The company also handled the construction work and the ordering of materials for the new homes so that the owner could purchase them at wholesale prices.<sup>44</sup>

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<sup>42</sup> Letter from Lewis M. Alexander to Nepco Employees, May 14, 1927, Archives of the Alexander House, Port Edwards, WI; “Home Building Campaign for Port, Nekoosa,” *Wisconsin Rapids Daily Tribune*, July 13, 1928. Vol. 15, No. 4601.

<sup>43</sup> Letter from John E. Alexander to NEPCO Employees, May 1, 1929, Archives of the Alexander House, Port Edwards, WI.

<sup>44</sup> “Home Building Campaign for Port, Nekoosa,” *Wisconsin Rapids Daily Tribune*. Wisconsin Rapids, Wisconsin. July 13, 1928. Vol. 15, No. 4601.

While the grants and the reduced rates certainly encouraged employees to live in Nekoosa or Port Edwards, the purchase of new homes there also earned them another big benefit. In a letter to NEPCO employees in 1929, General Manager John A. Alexander wrote that: “such employees will receive careful consideration in permanent employment and promotion.”<sup>45</sup> The incentives were generous, but these efforts were not as successful as NEPCO management had hoped. An investigation in 1929 revealed that only 24.6% of married men who worked at Port Edwards actually owned a home there. Another 34.7% of this group lived in Wisconsin Rapids with the remainder scattered. The company’s campaign at Nekoosa was more successful. Nearly 40 percent of married males who worked for the Nekoosa mill owned their own home in that community.<sup>46</sup>

During the economic depression of the 1930s, the company sold many of the remaining homes it owned as a way to raise capital. In the late 1940s, officials again experimented with building new homes and made one last push in the 1950s. This latter program offered credits to encourage employees to build in the town where they worked.<sup>47</sup>

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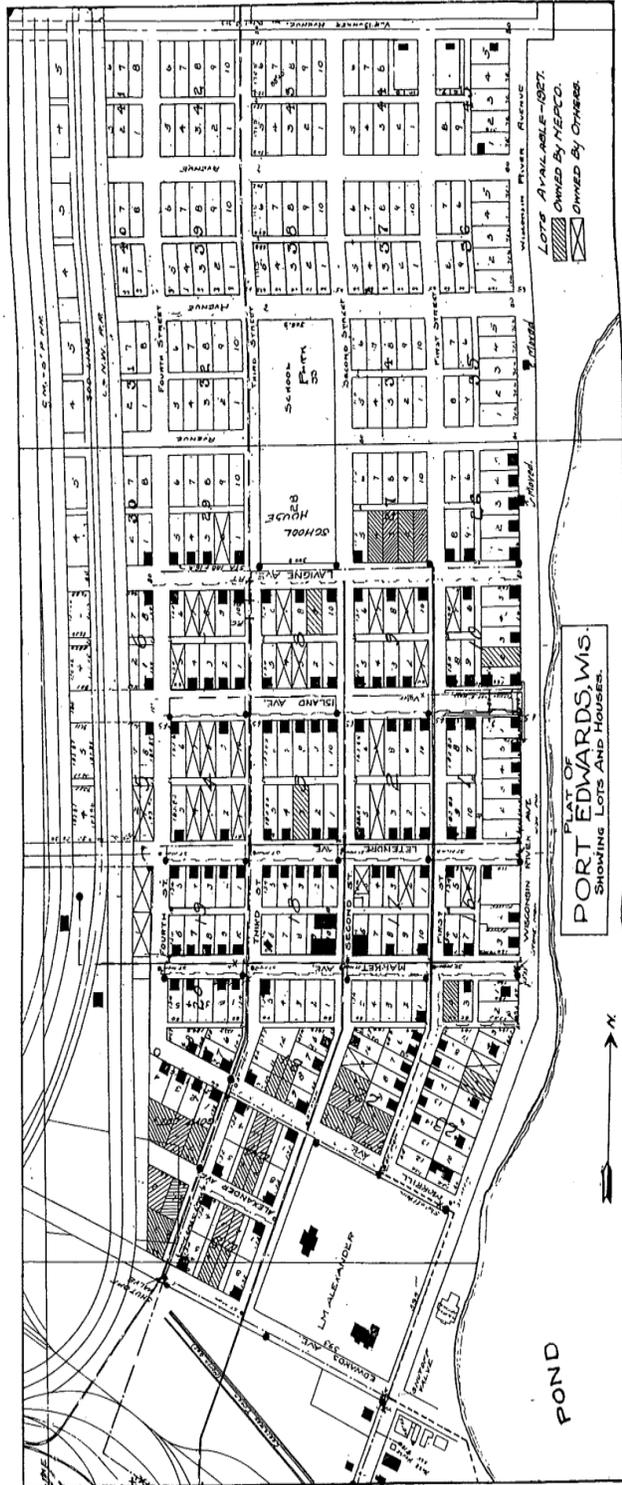
<sup>45</sup> Letter from John E. Alexander to NEPCO Employees, May 1, 1929, Archives of the Alexander House, Port Edwards, WI.

<sup>46</sup> Letter from Ray W. Herzog to E.P. Gleason, March 22, 1929, Archives of the Alexander House, Port Edwards, WI.

<sup>47</sup> Buehler, *The Nekoosa Story*, 94; Interview with J. Marshall Buehler, November 15, 2014.

# Port Edwards, Wisconsin

"The HOME OF NEKOOSA-EDWARDS PAPER CO."



The above plat shows the location of the present houses in Port Edwards.

Available building lots that are owned by the Company are shown by the cross hatched area. Vacant lots owned by others are also shown on this plat.

The section North of LaVigne Avenue has not been

platted and practically all of these lots are owned by the Company and are available for building sites.

If you are interested in a home in Port Edwards, pick out your lot and file your application with the Building Committee.

Figure 5.11. Map of available plots for purchase in Port Edwards, 1927. Source: The Alexander House, Port Edwards Wisconsin.

**Some of the 24 New Homes Built by Nekoosa-Edwards  
Employees During the Year 1927**



Figure 5.12. New Homes Built By Nekoosa-Edwards Employees, 1927. Source: *Wisconsin Rapids Daily Tribune*. Wisconsin Rapids, Wisconsin. July 13, 1928, 6.

### *Leisure, Services, and Community Building*

NEPCO and the Alexander family went beyond housing benefits to create a more harmonious relationship with employees and their communities. Schools in Port Edwards and Nekoosa had long been supported by NEPCO, for example. Officials also made a series of gifts. Sometimes these were small gestures such as purchasing uniforms for the marching band, sponsoring annual company picnics and supporting various sporting events.<sup>48</sup> The company also provided entertainment opportunities and, to this end, underwrote a new auditorium where outside artists came to perform.<sup>49</sup>

At a larger scale, the company and a foundation set up by the Alexander family paid for several local parks. Lewis Alexander was particularly interested in developing recreational outlets such as tennis courts, basketball courts, and even a natatorium. To plan his vision for Port Edwards, he contracted with a planning firm in Milwaukee. Unfortunately, Alexander died before his dream came to fruition, but the plan reveals his intentions. Incorporating many aspects of the “garden city” design movement popular at the time, it focused on a large park to be constructed on an island in the river (Fig. 5.13). Curved roads would mimic the natural shape of the river and tree-lined streets would include hundreds of new lots.<sup>50</sup>

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<sup>48</sup> Buehler, *Looking Back*, 64; Buehler, *The Nekoosa Story*, 111.

<sup>49</sup> Buehler, *Looking Back*, 64-66.

<sup>50</sup> Buehler, *Looking Back*, 54; *Preliminary Town Plan: Village of Port Edwards, WI*. 1931. 1:2400. Wisconsin State Historical Society. Viewed online at

No park ever materialized on the island because of Lewis Alexander's death and the arrival of economic depression in the 1930s. John Alexander, who assumed control of the company in 1934, scaled back his father's goals but still provided new amenities. In the 1950s, he added a recreation area to the shore of Nepco Lake. Later, he donated part of the L.M. Alexander estate for the building of a YMCA that still stands in the village.<sup>51</sup> In sum, Port Edwards and, to a lesser degree, Nekoosa saw not only an increase in population and home ownership as a result of company activities, but also an increase in overall community amenities.

## CONCLUSION

Nekoosa and Port Edwards typify nineteenth-century company towns that were able to make a successful transition into a new century through a combination of industrial transformation and welfare capitalism. Complicated histories of acrimony and harmony contributed to the present look of the towns. The strike of 1919, for example, was in many ways a catalyst that spurred growth from 1920 to 1960. Still, any dreams that Lewis or John Alexander may have had about turning Nekoosa and Port Edwards into larger communities did not materialize. The proximity of Wisconsin Rapids inhibited the process of getting employees to build homes locally and many of the lots in the Port

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<<http://www.wisconsinhistory.org/Content.aspx?dsNav=Ny:True,N:4294963828-4294955414&dsNavOnly=N:1166&dsRecordDetails=R:IM111902>>, August 31, 2015.

<sup>51</sup> Buehler, *Looking Back*, 54.



Edwards town design have never been needed. It would not be until the 1990s that more dramatic changes would come to Nekoosa and Port Edwards, after the company was scooped up by the large Georgia-Pacific Corporation. I discuss this event in chapter seven.

## Chapter Six: The Transformation of Wisconsin Rapids from Sawmill Town to Manufacturing City

At the turn of the nineteenth century, the city that is now called Wisconsin Rapids underwent two major changes: its official creation via the consolidation of Grand Rapids and Centralia, and a major capital investment into emerging paper enterprises. Previous chapters have discussed the town's early history with an economic base tied to the lumber industry. As this first economic cycle matured, local entrepreneurs reinvested some of their surplus capital into the community's infrastructure and services and in this way created an inviting place for further investment. Unlike the case in Nekoosa and Port Edwards, Wisconsin Rapids's development was driven not just by the actions of the Consolidated Paper Company, although it was one of the most important employers in town. The presence of other enterprises gave Wisconsin Rapids a more diverse industrial landscape. This chapter will explore the city's early manufacturing history and morphology. It will also detail the efforts of George Mead and other leaders to modernize and beautify the city.

### THE GROWTH OF MANUFACTURING IN WISCONSIN RAPIDS

An issue of the *Grand Rapids Tribune* in 1914 appropriately declared its city to be “a prosperous one, not a boom town.”<sup>1</sup> Although written to assure potential investors of the community's economic vitality at this time, the headline also foretold Wisconsin

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<sup>1</sup> “What the City Offers,” *Grand Rapids Tribune*, Vol. 41, No. 1, June 10, 1914.

Rapids's history throughout the next century. As sawmilling declined in the region, the city was able to transition away from it to build a much more diverse manufacturing and agricultural-based industrial landscape.

### *Advantages of Wisconsin Rapids*

As was discussed in chapter three, the site of Wisconsin Rapids had advantages that encouraged industrial success. It was located near forested lands and adjacent to the Wisconsin River at a place where it dropped abruptly in elevation, providing a good source of water power. Four railroad lines also traversed the city: the Green Bay & Western, the Chicago & Northwestern, the Minneapolis, St. Paul & Sault Ste. Marie, and the Chicago, Milwaukee & St. Paul. These provided a way to quickly move raw materials and finished products, not only to smaller villages nearby, but also to larger cities such as Madison, Milwaukee, and Chicago. Boosters bragged about how the competing rail lines running through the town would result in advantageous freight rates for manufacturers.<sup>2</sup>

In addition, Grand Rapids served as the county seat of Wood County, and therefore as a link to the state government. It was also the county's largest settlement and therefore the logical place for people in surrounding rural areas to shop and otherwise conduct business. The city's First National Bank, for example, was the first bank in the county, established in 1872. This was followed by the Bank of Grand Rapids in 1888 and the Wood County National Bank in 1891. These banks played a critical role in

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<sup>2</sup> A. Decker, *Grand Rapids: Descriptive of Grand Rapids, Wood County and the Wisconsin River* (Grand Rapids, WI: Greater Grand Rapids Illustrated, 1907), 22.

entrepreneurial financing, but they did not exist as separate, objective entities. The same businessman who invested in the paper industry were also involved with the banks, usually as investors or board members.<sup>3</sup> Sometimes, these same influential individuals also assumed political roles. George Mead served as Wisconsin Rapids's mayor, for example, and Thomas Nash was a state senator. Local entrepreneurs thereby had a direct link to state government.

### *Consolidated Water Power and Paper Company*

Much like other mills on the Wisconsin River, Consolidated Water Power and Paper Company began to produce newsprint as soon as the plant was completed in 1904. The early operation utilized two machines, but in 1917 officials added a third to diversity output into chipboard and fiberboard. Early success also led the company to purchase the nearby Biron mill in 1911 and to make more improvements at the main mill in the 1920s. The addition of a sulphite facility and a new hydroelectric plant meant an increase in paper production, which in turn, prompted expansion of other departments (such as the finishing room) to keep up with the volume.<sup>4</sup> By the end of the 1920s, Consolidated and the other local paper mills had become the most important industry in the region (Fig. 6.1).

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<sup>3</sup> Dave Engel, *River City Memoirs* (Wisconsin Rapids, WI: South Wood County Historical Corporation, 1983), 78.

<sup>4</sup> Shonda King, *Evolution of the Paper Giants: The Story of the Wisconsin River Paper Makers* (Rhinelander, WI: Explorer's Guide Publishing, 1998), 54.

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## Paper - A Source of Wealth

One of Wisconsin Rapids' most important sources of wealth is its great paper industry. One of the country's largest plants for the manufacture of paper is here located and our mills are operating twenty-four hours a day.

A small army of people is thus given steady employment at good wages. Because of our paper industry we have scarcely felt the business depression which has been experienced in other sections.

This bank has always extended a hearty welcome to the people employed in Wisconsin Rapids paper mills. With our new banking home, ample resources and a service planned to adequately meet the smallest as well as the greatest demand, we are recording a gratifying increase in both volume of business and the number of our accounts.

### THE First National Bank

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Figure 6.1. Newspaper Advertisement of the First National Bank of Wisconsin Rapids. Note how the text recognizes the importance of the paper industry to the town. Source: *Wisconsin Rapids Tribune*, August 17, 1922.

Like other mills, Consolidated constantly diversified their product line in the wake of the growing newsprint industry. In the 1920s, leaders invested heavily in equipment to manufacture book and writing papers. This venture was unsuccessful, however, as the company failed to be innovative enough and so lost their contracts to a competitor. This loss forced shutdown of one paper machine.<sup>5</sup>

In the 1930s, Consolidated's owner, George Mead, tried again, this time investing in a new method of producing coated paper for magazines. Coated papers traditionally had been tedious to produce because much of the work had to be done on a second machine after the first-stage of the paper already had been produced. But, a printer named Peter Massey recently had developed a way to produce coated paper while it was still on the original paper machine. He offered his solution to a mill in Michigan, but since this owner recently had invested in a separate coating mill, he declined Massey's invention. Massey then turned to George Mead, who saw the potential in the idea and funded Massey while he completed development of the process.<sup>6</sup>

The decision to back Massey proved to be astute, and in August 1934 Consolidated produced its first coated paper. It sold well, and within two years, officials reformatted a second paper machine to increase production (Fig. 6.2). Their new product landed the company a large and lucrative contract with *Life* magazine. The risky strategy

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<sup>5</sup> Dave Engel, *The Fat Memoirs* (Wisconsin Rapids, WI: South Wood County Historical Corporation, 1987), 184-185.

<sup>6</sup> *Ibid.*

had paid off, making Consolidated a well-known name nationally and leading to continued expansion. The *Wisconsin Rapids Tribune* excitedly reported that the “No. 5” machine, built specifically for the *Life* contract, had been installed at the Wisconsin Rapids mill. The writer called it a marvel of modern papermaking and noted that it “is but a part of the plant expansion that will mean materially increased production at Consolidated, which incidentally will bring employment to about 100 additional men.”<sup>7</sup> Such news would have been immensely gratifying for the city since Consolidated had laid off workers not many years before in response to the economic depression. George Mead himself was cautiously optimistic at the time, noting that: “We are still in a period of uncertainty. Business experts are sending out the word that there will be a slow and gradual improvement during the next twelve months.”<sup>8</sup>

Beyond buying the mill in Biron, Consolidated expanded elsewhere along the Wisconsin River. In 1919, officials purchased a pulp and paper mill at Stevens Point. The company shuttered the pulp side of this operation, choosing instead to import pulp from Biron and Wisconsin Rapids. It used the Stevens Point mill to diversify their product line further by producing specialty packaging. Nearby, the company also acquired the mill at Whiting in 1945, the only mill still producing newsprint at the time. Here the company

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<sup>7</sup> “Consolidated’s New Number 5, Last Word in Paper Machines Goes into Production Today,” *Wisconsin Rapids Daily Tribune*, Vol. 24, No. 7541, February 7, 1938.

<sup>8</sup> “Paper Industry ‘Expectant’ and ‘Hopeful’ - Mead” *Wisconsin Rapids Tribune*, Vol. 25, No. 7813, December 24, 1938.

converted the mill to produce its signature product, coated paper. It also became a testing site for equipment.<sup>9</sup>

It is clear from its rate of expansion that Consolidated was an important company for what was to become Wisconsin Rapids and also for all of central Wisconsin. Its main



Figure 6.2. The Consolidated Mill at Wisconsin Rapids, 1938. This image, taken the year that Consolidated began to produce coated paper for *Life* magazine, shows a new addition to the mill that housed machine number five. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

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<sup>9</sup> King, *Evolution of the Paper Giants*, 47.

plant and company headquarters combined with the nearby presence of the Nekoosa-Edwards Paper Company resulted in upwards of five thousand jobs for the area in the mid-1920s.<sup>10</sup>

Moreover, Consolidated was not simply another employer in town. Two Wood County residents told me recently that working in the mill always has been one of the best jobs in the community, dividing residents into the “haves and have nots” with those employed by Consolidated firmly on the prosperous side of the divide.<sup>11</sup>

### *Other Manufacturing Enterprises*

Early manufacturing enterprises in central Wisconsin often were tied to the lumber industry. The 1892 directories for Centralia and Grand Rapids list several such industries, including Centralia Pulp and Water Power, Mackinnon Manufacturing, Oberbeck Bros. Manufacturing, and Wisconsin Pulp.<sup>12</sup> Mackinnon Manufacturing began as a hub and spoke manufacturer while Oberbeck Brothers manufactured bedroom furniture with a market throughout the United States.<sup>13</sup> The twin cities also hosted multiple flour mills.

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<sup>10</sup> “Wood County’s Four Great Mills Big Producers,” *Wisconsin Rapids Tribune*. Vol. 12, No. 3746, September 30, 1925.

<sup>11</sup> Interview with Wood County residents, October 2015.

<sup>12</sup> *Bell’s Twin City Directory, 1892: A Complete City Directory of Centralia* (Wausau, WI: J.R. Bellis, Jr., 1892), 25.

<sup>13</sup> *Grand Rapids City Directory, 1905-1906* (Prairie du Chien, WI: Northwestern Directory Co., 1905).

Even though the future Wisconsin Rapids had a somewhat diverse industrial sector early in the twentieth century, paper would soon become the city's focal point. In an interview in 1957, Theodore Taylor stated that, when the first the paper mill came in, it attracted other businesses as well.<sup>14</sup> City promoters recognized this new reality quickly. A 1907 promotional publication, for example, stated that: "The saw-mill and paper mill are twin brothers of Grand Rapids. But they have now reached the parting of the roads. One is looking forwards and the other backwards."<sup>15</sup> Promoters were also delighted to report on signs of branching out into other areas.<sup>16</sup> Manufacturers at the time included those for bricks, furniture, bubble gum, and shoes.

Some of the early businesses would be able to transform themselves over the years and remain viable. One example is the Grand Rapids Foundry. Later, it branched out to manufacture ice machines and other "carbonic machinery" and was awarded large contracts to install cooling equipment in a new construction project.<sup>17</sup> Even though the company did not survive the economic depression of the 1930s, it nevertheless was an important contributor to development of the post lumber era for Wisconsin Rapids and a reminder that the city's economy was not entirely dependent on paper.

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<sup>14</sup> Oral History Interview with Theodore A. Taylor and Charles Natwick, Archives of the State Historical Society of Wisconsin, 1954.

<sup>15</sup> Decker, *Grand Rapids*, 2.

<sup>16</sup> Ibid.

<sup>17</sup> "Carbonic Wins Huge Contract," *Wisconsin Rapids Daily Tribune*, Vol. 14, No. 4444, January 10, 1928.

Throughout the city's manufacturing sector, forward and backward linkages existed with the paper mills. As an example, after Oberbeck Furniture changed its name to Ahdawagam, paper entrepreneur George Mead purchased this business during World War I in a move towards diversification. Soon, though, as the demand for furniture slackened during the war, Consolidated leaders converted this factory to produce paper cartons and tubes.<sup>18</sup> Later still, the company transformed operations again, this time having the factory manufacture laminated plastic products that adorned furniture and kitchens in the post-World War II period.<sup>19</sup> The name changed as well to Consoweld.

Miscellaneous enterprises completed the manufacturing sector in Wisconsin Rapids through the 1920s, a few of which maintained ties to the old lumber years. The city had a brewing company, for example, which became a canning factory for beans and sauerkraut once prohibition became the law. A pickling station and a creamery also contributed to the economic landscape along with Ellis Lumber and Badger Box & Lumber, both of which manufactured doors and boxes.<sup>20</sup>

Early city directories of Grand Rapids provide insight into the employment structure, although it is sometimes difficult to tell which businesses employed the bulk of the men. In 1905 and 1911, many men simply listed "laborer" as their occupation.

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<sup>18</sup> Engel, *River City Memoirs*, 56.

<sup>19</sup> Ibid.

<sup>20</sup> George O. Jones and Norman S. McVean, *History of Wood County, Wisconsin* (Minneapolis: H.C. Cooper, Jr. & Co., 1923), 156.

Seventy-six individuals listed the paper mill as their place of employment in 1905, and this number increased slightly to 84 in 1911.<sup>21</sup> The furniture factory was also an important employer, with forty-one individuals listing it as their workplace in 1905 and twenty doing so in 1911.<sup>22</sup>

Looking at the county as a whole, one sees an increase in manufacturing enterprises in the late nineteenth century, most of them small and located within Centralia and Grand Rapids. Then, although the number of manufacturing establishments fell between 1900 and 1940, the opportunities for employment increased (Fig. 6.3 and 6.4). The number of wage earners in Wood County more than doubles over this period from 1,774 in 1900 to 3,613 in 1940. Businesses throughout the county clearly were expanding. As the decades progress, paper and pulp production continue to be an important part of the economy, as does manufacturing in general. Economic statements from 1962 and 1968, for example, reveal that nearly half of the city's labor force were engaged in manufacturing.<sup>23</sup> In short, Wisconsin Rapids was able to successfully diversify as it moved away from an economic base of flour and sawmills. This reality

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<sup>21</sup> *Grand Rapids City Directory, 1905-1906; Grand Rapids City Directory, 1911* (Prairie du Chien, WI: Northwestern Directory Co., 1911).

<sup>22</sup> *Ibid.*

<sup>23</sup> Wisconsin State Employment Service, *Basic Statement for Wisconsin Rapids* (Madison: Wisconsin State Employment Service, 1962); Wisconsin State Employment Service, *Basic Statement for Wisconsin Rapids* (Madison: Wisconsin State Employment Service, 1968).

would provide new places for residents to work, of course, and impact other aspects of the city as well.

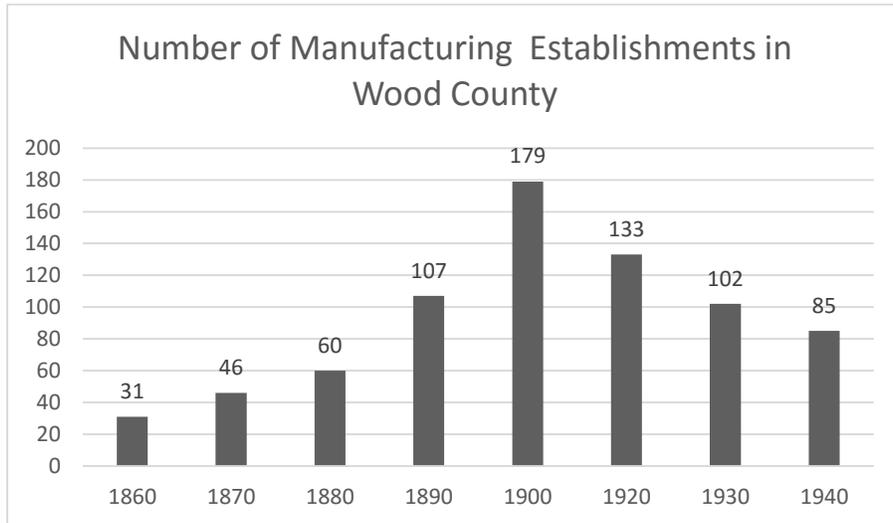


Figure 6.3. Number of Manufacturing Establishments in Wood County, 1860-1940. No data exist for 1910. Source: U.S. Census of Manufactures.



Figure 6.4. Number of Wage Earners in Manufacturing, Wood County, 1900-1940. No data exist for 1910. Source: U.S. Census of Manufactures.

## THE MORPHOLOGY OF GRAND RAPIDS/WISCONSIN RAPIDS

The story of Wisconsin Rapids is partly a story of two separate towns integrating with one another. When settlement appeared on opposite sides of the river, residents were unable to communicate with the other side except by boat. The first bridge was built in 1866, a wooden toll structure where the cost of passage would vary with the amount of cargo one carried. This bridge was destroyed by a flood in 1877, rebuilt, destroyed again by a flood in 1888, and finally replaced with an iron bridge.<sup>24</sup>

The series of bridges provided the first steps toward economic integration of the two town sites. Railroads helped as well. In addition to the lines listed previously, an electric commuter railway was added to connect Grand Rapids with Nekoosa and Port Edwards. This line, the Grand Rapids Street Railway, began in 1909 after several earlier proposals had dissipated. The Nekoosa-Edwards paper company donated property for the right of way, and after some problems and delays, construction was completed in December and the first run of the line occurred in January 1910. For ten cents, workers could take the streetcar from Grand Rapids to Port Edwards or go on to Nekoosa for an additional five cents.<sup>25</sup>

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<sup>24</sup> Theodore W. Brazeau, *Wisconsin Rapids Bridge History* (Wisconsin Rapids, WI: Bridge History Committee, 1955).

<sup>25</sup> Karl H. Blahnik, "The Grand Rapids Street Railroad" (unpublished, independent study, Wisconsin State University, 1965), 8. Available at McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

Hopes rose in the community that streetcar development would lead to a further integration of Grand Rapids with Centralia and also with Port Edwards and Nekoosa. Such integration indeed did come, but more via private automobiles than the rail lines. Automobile registration in Wisconsin increased more than fivefold from 1913 to 1923, accompanied by a corresponding drop in streetcar passengers.<sup>26</sup> In 1931, no doubt encouraged by the national economic depression, the street railway stopped operations. Its service temporarily was taken over by busses, but this also failed when automobile usage became more ubiquitous.

*The Changing Landscape and Spatial Growth of the City*

The landscape of Grand Rapids and Centralia in the late 1870s was restricted largely to the river banks. In general, plats only extended inland seven to ten blocks. Railroads intersected this riverine scene, mainly west of the stream, and flour/lumber mills lined the shore (Fig. 6.5).<sup>27</sup> The Sanborn maps of 1884 depict Centralia and Grand Rapids on the cusp of change. Both were small at that time with an industry revolving around forest products. A handful of pulp mills occupied the riverbank with a hub and spoke factory a few blocks to the west. Downtown businesses were primarily wooden

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<sup>26</sup> Ibid.

<sup>27</sup> Snyder, Van Vechten & Co., *Cities of Centralia & Grand Rapids*. 1878. 1:144. Wisconsin Rapids: McMillan Memorial Library, <<http://content.mpl.org/cdm/ref/collection/mcml/id/2193>> Accessed October 31, 2015.

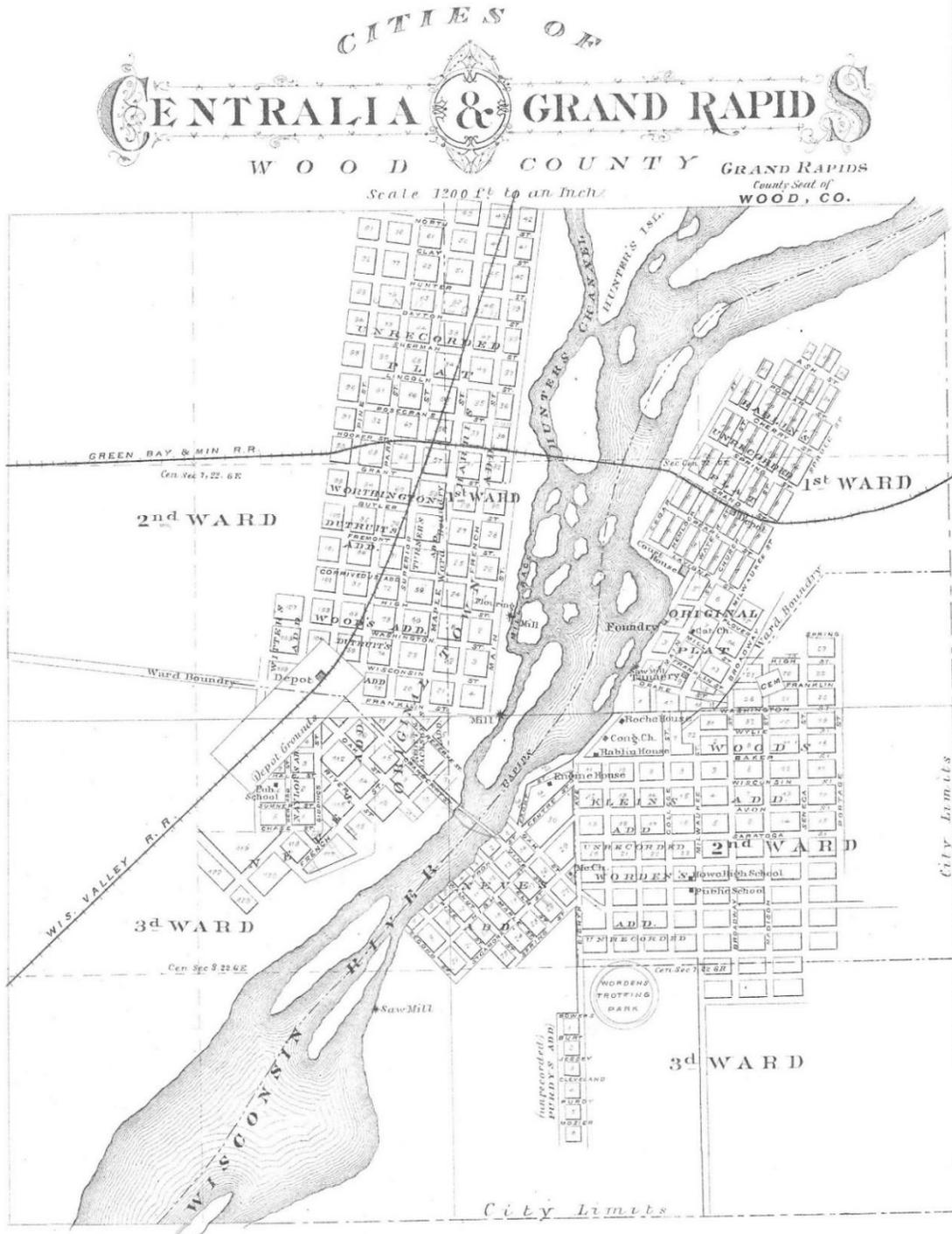


Figure 6.5. The Cities of Centralia and Grand Rapids, 1878. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

structures located on Front Street (First Avenue), with their backs to the river.<sup>28</sup> Such an arrangement allowed goods to be easily delivered by boat.

The businesses shown on Front Street include a liquor store, tailor and barber shops, a laundry, and cigar dealer. There were also two hotels, including the Witter, where single residents lived.<sup>29</sup> Over the years these businesses would change, of course, and development would expand away from the river banks. The Sanborn maps also suggest that, to some extent, industrial development was driving this spatial expansion. Industry on the Centralia side pushed west in a line perpendicular from the river (Figs. 6.6, 6.7). Most businesses here were lumber-related on sites with direct access to rail lines.<sup>30</sup> Residential development filled the gaps (Fig. 6.8). In addition, the maps reveal development springing up around the Centralia Pulp and Paper mill, even though it is spatially separated from the rest of the city.<sup>31</sup>

The Consolidated mill was located along the river in a central location in the area, formerly known as Centralia (Fig. 6.7). By 1919, industry had pushed even further west. The landscape still included several wood-related businesses, including Ellis Lumber,

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<sup>28</sup> Sanborn-Perris Map Co. *Grand Rapids and Centralia*, 1884. 1:600. Wisconsin State Historical Society. Viewed online at <http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5231/rec/3> Accessed October 26, 2015.

<sup>29</sup> Ibid.

<sup>30</sup> Snyder, Van Vechten & Co., *Cities of Centralia & Grand Rapids*, 1878.

<sup>31</sup> Geo A. Ogle and Co., *South Part of Wisconsin Rapids*, 1928.

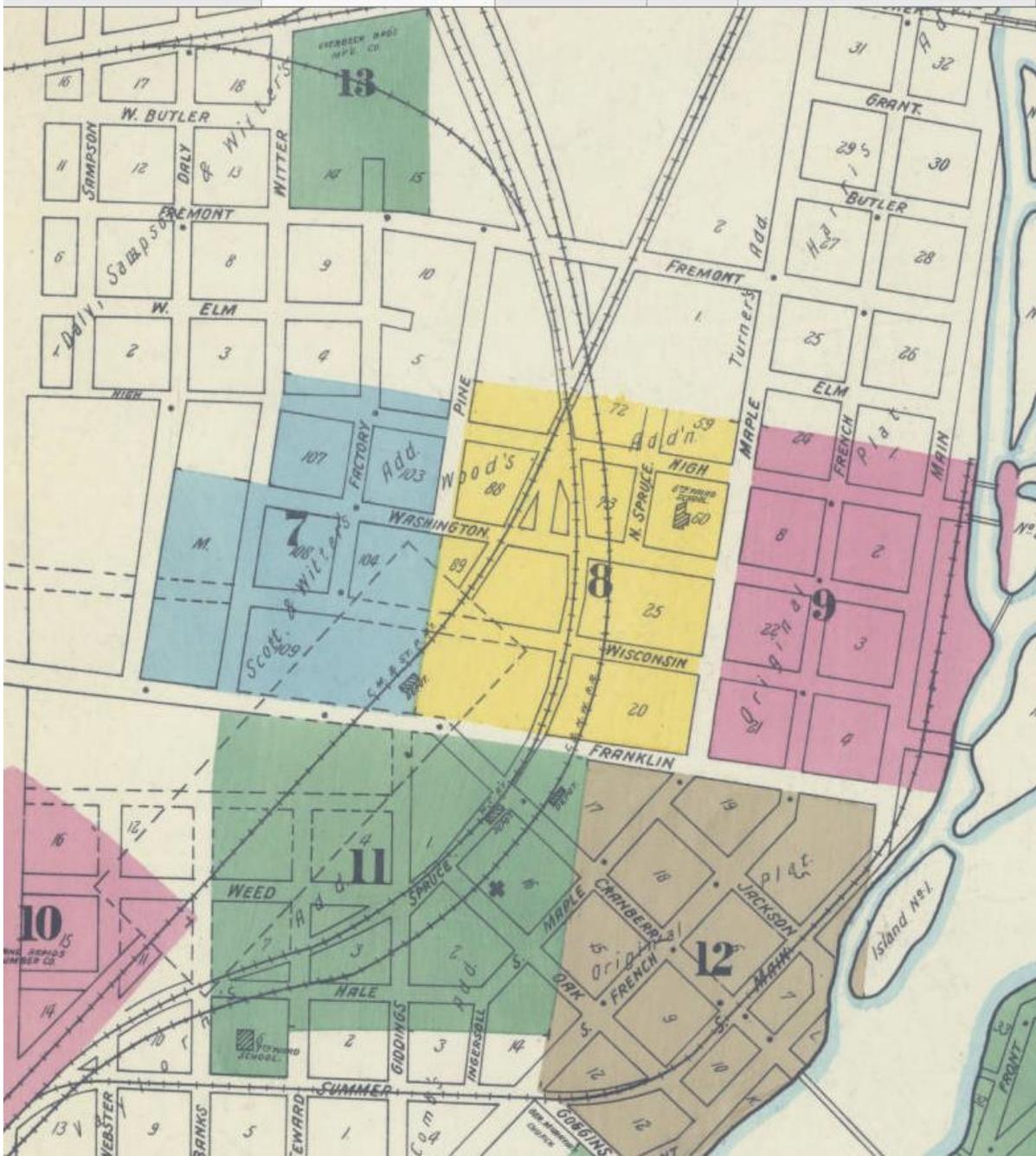


Figure 6.6. Sanborn Map of Grand Rapids, 1902. The section labeled “9” mainly consists of homes and a school while the sections to the west are dominated by industry. Source: Wisconsin State Historical Society.



Figure 6.7. North Part of Grand Rapids, 1909. The Consolidated mill is in the lower right. Note the relationship between industrial sites and railroad lines and the newer residential additions west of the industry. Source: *Standard Atlas of Wood County Wisconsin* (Chicago: Geo. A. Ogle & Co., 1909), 10-11.

# CLOVERDALE ADDITION! /

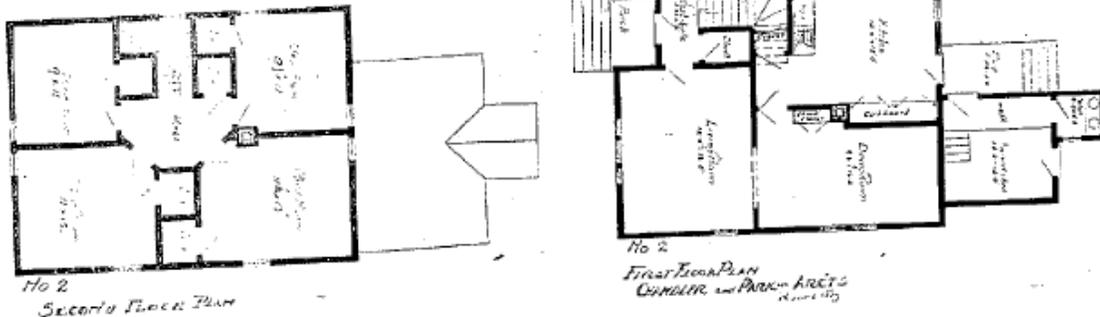
During the early part of April we will subside that portion of Cloverdale which is being opened by the new Road extending west from the box factory.

On these lots we will build for responsible purchasers, the above house finished in good shape. We will require a small amount paid down and the balance on monthly payments. We have let contracts for two houses now and have more in sight. If you want a home before fall, call and see us soon.



During the early part of April we will subside that portion of Cloverdale which is being opened by the new Road extending west from the box factory.

On these lots we will build for responsible purchasers, the above house finished in good shape. We will require a small amount paid down and the balance on monthly payments. We have let contracts for two houses now and have more in sight. If you want a home before fall, call and see us soon.



**TAYLOR & SCOTT, Agents.**

Figure 6.8. Advertisement for the Cloverdale Addition on the Western Edge of Grand Rapids. Source: *Grand Rapids Tribune*, April 03, 1907.

which had started only recently. That company's log yard stood at the western side of the city but with access to transportation routes. Industrial development was concentrated along the river. At times this included a foundry and a pulp mill, but most businesses were smaller retail establishments. It is here, along Front Street in the original Grand Rapids, where the main downtown developed (Fig. 6.9).

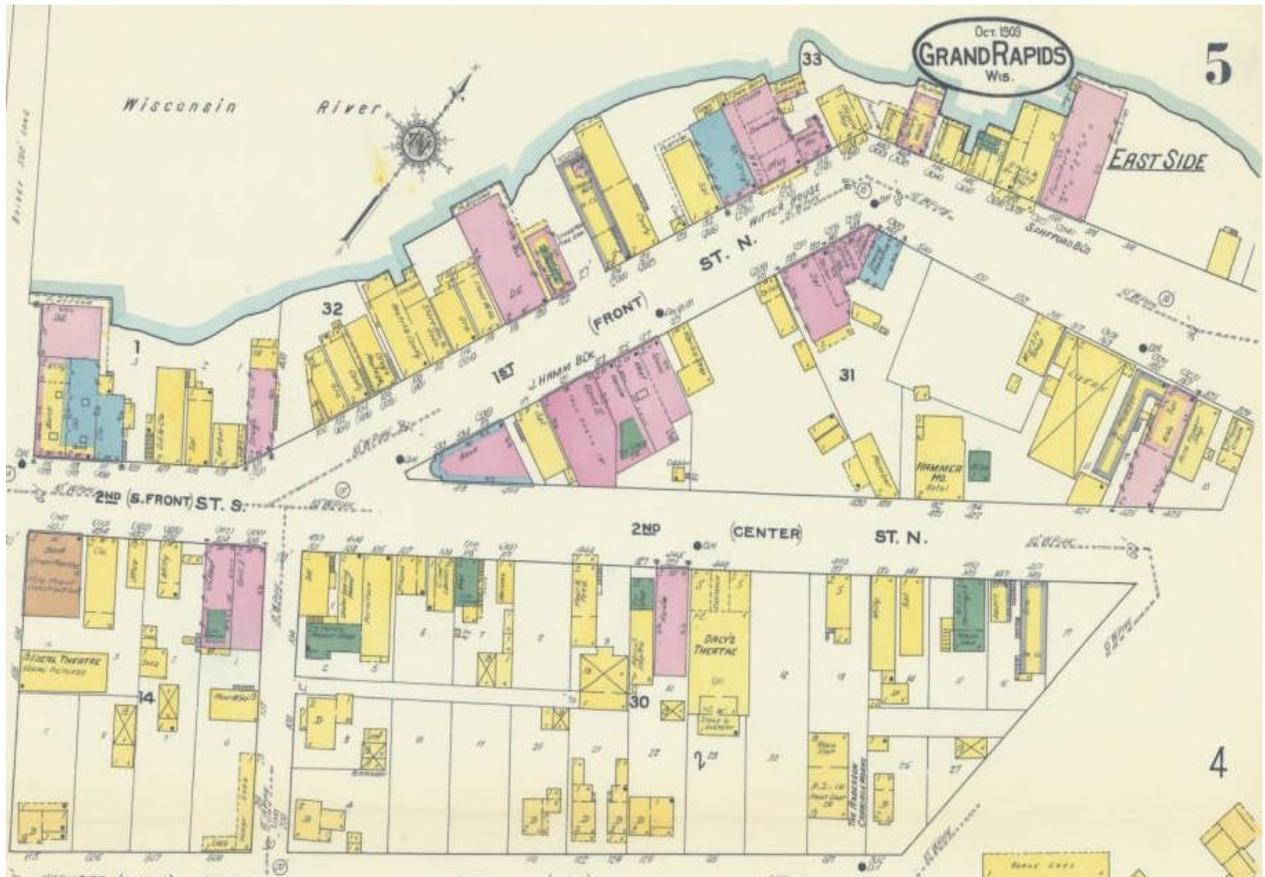


Figure 6.9. Sanborn Map of Downtown Grand Rapids (Wisconsin Rapids), 1909. Note the transformation of downtown from the wooden structures to more permanent stone and brick. The wooden buildings are shown in yellow. Source: Wisconsin State Historical Society.

Detailed maps from 1909 and 1928 depict a city showing signs of growth. Additions can be seen in nearly all sections. In one example, a large lot butting up against a railroad line on the west side of the river has been populated with a series of small lots (Fig. 6.10). On the southernmost fringe of the town was the Centralia mill. Here maps reveal an unevenness of development. A series of residential plots just behind the mill is separated from the rest of the community (Fig. 6.11).

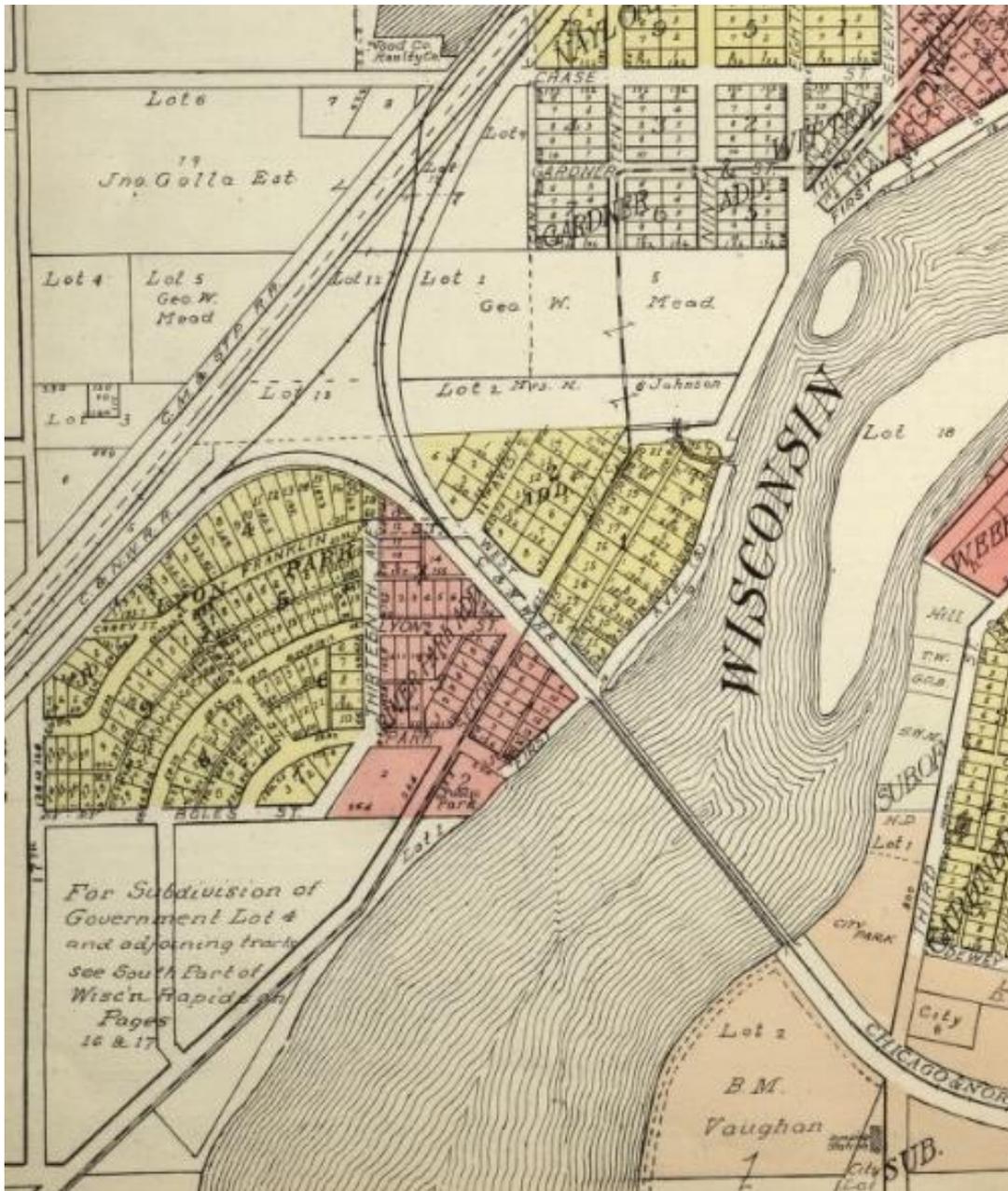


Figure 6.10. Middle Part of Wisconsin Rapids, 1928. Source: *Standard Atlas of Wood County Wisconsin* (Chicago: Geo. A. Ogle & Co., 1928), 12-13. The fan-shaped development on the left was not present in 1909.

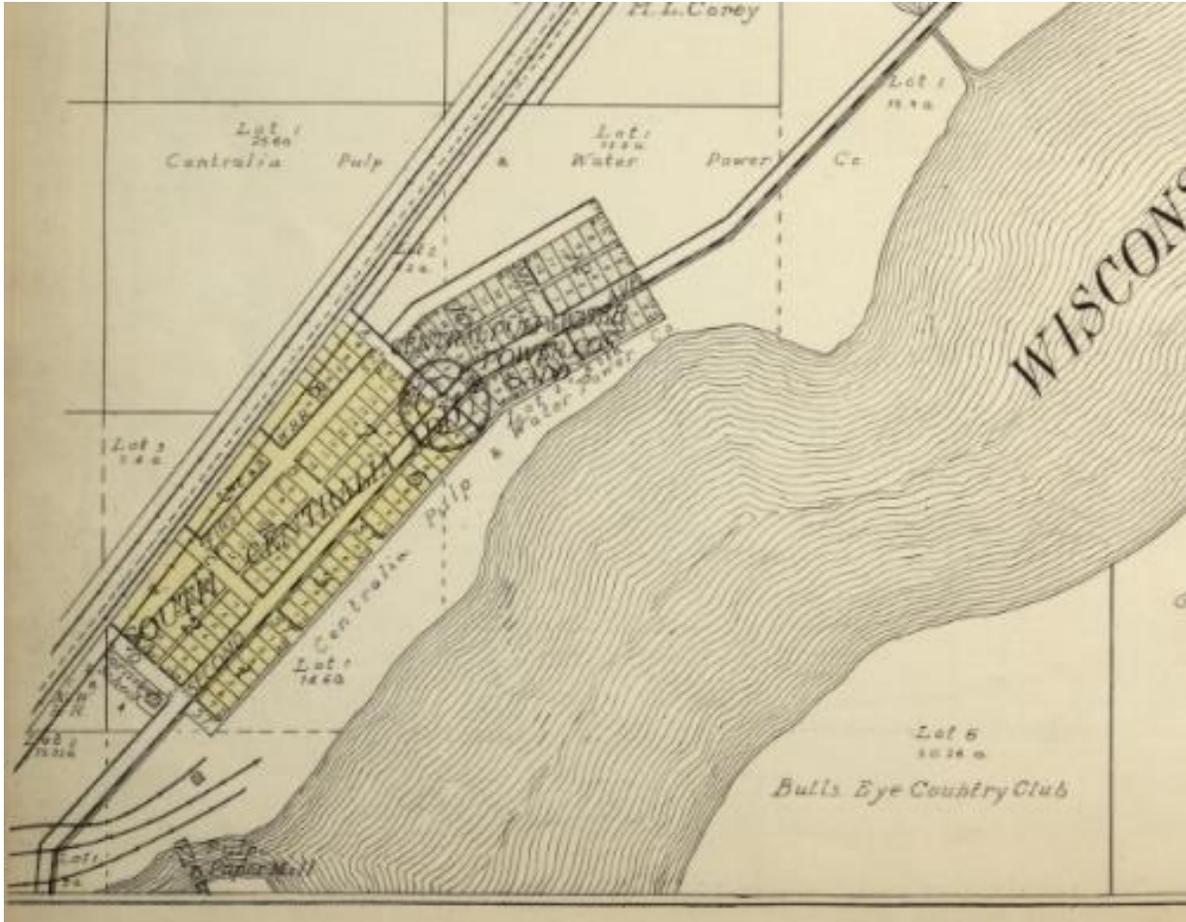


Figure 6.11. South Part of Wisconsin Rapids, 1928. Depicting developments surrounding the former site of the Centralia paper mill. Source: *Standard Atlas of Wood County, Wisconsin* (Chicago: Geo. A. Ogle & Co., 1928), 16.

## BEAUTIFYING THE CITY

Once a steadier, more prosperous economy developed in the city, residents and community leaders turned their attention to landscape amenities. Unlike in Port Edwards, the process of beautifying Grand Rapids was a group effort, but George Mead and the

paper industry were at the forefront of many initiatives. Mead was a firm believer in welfare capitalism. The local newspaper, in a glowing report of his contributions to the city, wrote that: “Beauty is a prerequisite with any development undertaken by Mr. Mead. He employs methods that cannot result in anything but the creation of handsome buildings, ideally situated, practical in every phase, but nevertheless unique for their simplicity and beauty.”<sup>32</sup>

In many ways, Mead’s beautifications were typical of his contemporaries in other industrial cities during the nineteenth and early twentieth centuries.<sup>33</sup> He and Consolidated began by creating park space around their business offices. He then spearheaded several architectural projects, one being the Mead-Witter Block, owned by himself and his brother-in-law (Fig. 6.12). Located downtown on the west side of the river, the plan was to replace a series of decaying wooden structures with a tasteful new building used for offices and retail space. Construction began in 1924, and as it neared completion the following year, the local newspaper stated that it marked a new stage of progress for Wisconsin Rapids. “From a struggling frontier town,” a reporter wrote, “this city has developed into a progressive commercial, industrial, and residential center, and

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<sup>32</sup> “George W. Mead Is Civic Leader,” *Wisconsin Rapids Tribune*, Vol. 12, No. 3746, September 30, 1925.

<sup>33</sup> Patrick M. Malone and Charles A. Parrott, “Greenways and the Industrial City: Parks and Promenades along the Lowell Canals,” *The Journal for the Society of Industrial Archeology* 24, no. 1 (1998): 19-40.

nowhere has the contrast been as sharply defined as in the block now occupied by the Mead-Witter building.”<sup>34</sup>



Figure 6.12. The Mead-Witter Block, 1934. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

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<sup>34</sup> “New Block is Symbolic of City’s Growth,” *Wisconsin Rapids Tribune*, Vol. 12, No. 3746, September 30, 1925.

The city's riverfront was another place in need of renovation. In the early years of the twentieth century, women's groups led this effort, first to remove unsightly, old buildings and then convert the sites into park land. Their efforts were part of a larger "city beautiful movement" that flourished across the country at this time. The initiative took inspiration from the redesign of Paris in the mid-nineteenth century that had introduced wide boulevards, street lighting, and green spaces.<sup>35</sup> Its ideas became popular in small cities in the Midwest as a way to advance communities beyond the frontier stage, increase civic pride, and overcome a sense of inferiority. At times, cities applied the aesthetic principles on a large scale and created grand designs such as Daniel Burnham's plan for Chicago. More often, promoters favored incremental improvement through a series of practical but fragmented efforts.<sup>36</sup> Often, as was the case for Grand Rapids, the leaders of these efforts were women's organizations. They took the initial steps to purchase land by organizing local businessmen, including George Mead, to assist with the process. And so, in 1909, the group acquired buildings on the west bank of the river and slated them for demolition (Fig. 6.13).<sup>37</sup> Mead had his own ideas as well and proposed a plan for park areas along the river bank plan did not come to fruition.<sup>38</sup>

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<sup>35</sup> Peter Hall, *Cities of Tomorrow*, 3rd ed. (Oxford: Blackwell Publishing, 2002), 189.

<sup>36</sup> Jon A. Peterson, "The City Beautiful Movement: Forgotten Origins and Lost Meanings" in *Introduction to Planning History*, ed. Donald A. Krueckeberg (New Brunswick, NJ: The Center for Urban Policy Research, 1983), 51.

<sup>37</sup> "Summarized Report of the Civics Committee of the City Federation of Womens' Club, Grand Rapids. April 2, 1909," *Grand Rapids Tribune*, April 07, 1909, Vol. 35, No. 49.

<sup>38</sup> "George W. Mead Is Civic Leader."



Figure 6.13. Buildings Acquired to Preserve the West Bank of the Wisconsin River in Grand Rapids, Date Unknown. Source: McMillan Memorial Library, Wisconsin Rapids, Wisconsin.

Beyond beautification, Mead and the Consolidated Company changed the city in more practical ways. The company had the means to produce electricity and so contracted with the city to provide power for residents.<sup>39</sup> In the 1920s, the company offered land to

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<sup>39</sup> "Raise Salaries of City's Employees," *Grand Rapids Tribune*, February 5, 1920, Vol. 66, No. 36.

the city for a garbage dump, solving a problem that had existed for a number of years.<sup>40</sup> Schools and the library also were underwritten by businessmen in the area. T.B. Scott funded the original library building and donations from J.D. Witter allowed it to expand. Then, to better prepare the local children for work in one of the growing factories, Witter donated \$50,000 dollars to construct a manual training and domestic science school. Finally, J.D.'s wife, Emily, donated \$10,000 for a new hospital.<sup>41</sup>

John Arpin, a local businessman who made his fortune in lumber, spearheaded a movement to bring a swimming pool to the city in 1913. This pool, located east of the river and slightly north of downtown, was both beautiful and practical. Drowning deaths (from swimming in the river) decreased once the pool was installed.<sup>42</sup> Another early recreation site was Lyon Park, on the river's southwestern bank. A prosperous family donated this land in 1909 and by the 1920s it was being used as a campground.<sup>43</sup>

### *Population Changes*

The prosperity of Wisconsin Rapids continued throughout the twentieth century. A local journalist in 1900 had expected the city to double in population as a result of its

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<sup>40</sup> "Consolidated Offer Solves Garbage Disposal Problem," *Wisconsin Rapids Daily Tribune*, June 06, 1923, Twelfth Year, No. 3033.

<sup>41</sup> Jones and McVean, *History of Wood County, Wisconsin*, 149.

<sup>42</sup> *Ibid.*, *Wisconsin*, 147.

<sup>43</sup> *Ibid.*

new industrialization, and indeed this prediction came to pass three decades later.<sup>44</sup> After that time, it continued to increase slowly but steadily through 1970 (Fig. 6.14). Later came a small decline, but this likely was caused by residents moving to surrounding rural areas, rather than by any loss of economic opportunity.<sup>45</sup> In recent decades, the city has stabilized in population, an indication that it had reached the limits of its growth unless a drastic change in opportunities would occur.

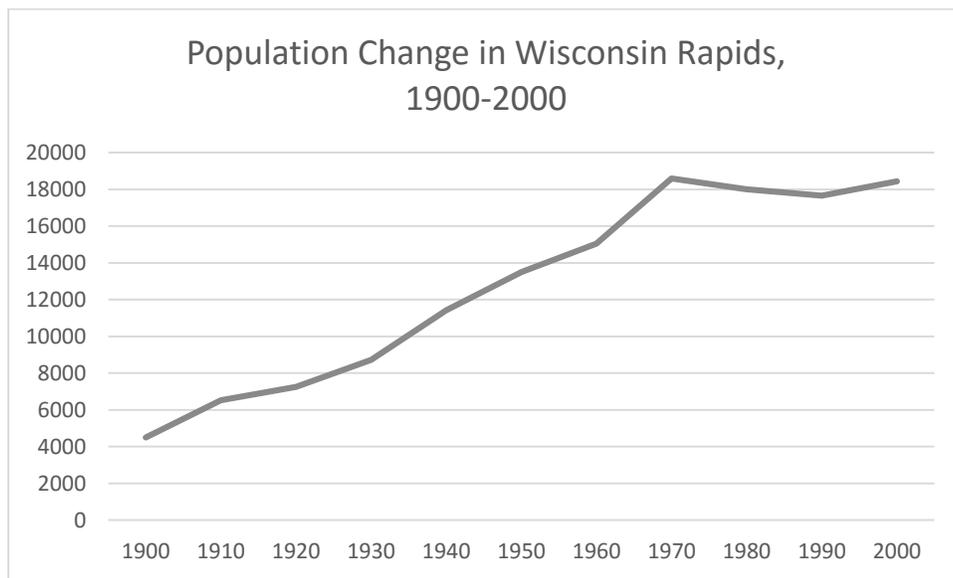


Figure 6.14. Population Change in Wisconsin Rapids, 1900 – 200. Source: U.S. Census.

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<sup>44</sup> “Rapidly Progressing: Greater Grand Rapids One of the Most Prosperous Cities in the State,” *Grand Rapids Tribune*, May 19, 1900. Vol. 28, No. 2.

<sup>45</sup> Engel, *The Fat Memoirs*, 168.

## CONCLUSION

Wisconsin Rapids had an advantageous site and several amenities suitable for industry, but most important, it had local businessmen interested in capitalizing upon such resources. A small, but diverse manufacturing sector developed about 1900, employing nearly half of the working population. Gone were many of the sawmills that dominated in the previous century, but businesses related to wood products were still part of the landscape. Paper had become the most important industry, supplemented by furniture factories, lumber suppliers, and other smaller entities. The town's population would grow over the decades, reflecting its prosperity, and acquire a new, more sophisticated landscape. Older, wooden buildings were demolished to make way for increased park space and newer, larger stone structures.

Compared with Port Edwards and Nekoosa, Wisconsin Rapids had a much more diverse economy. Although its scope would never rival that of Minneapolis, Milwaukee, or Chicago, the city was able to develop a robust manufacturing sector. Multiple entrepreneurs and other concerned individuals contributed to this process, but George Mead and his Consolidated Paper company played an outsized role. They contributed directly through employment and indirectly through efforts to beautify the surrounding landscape. Today the names of Mead and Witter are still important parts of the local landscape.

## Chapter Seven: Further Industrial Transformation of the Wisconsin River Valley

A hundred years after the first paper mill was erected at Centralia, the region is once again faced with a shifting economy. Since the 1990s, the paper industry has become increasingly competitive. Asian producers are now major contenders on the global scene, and an industrywide movement toward consolidation has threatened local control over mills. As a result, all three mills in the study area have been sold to nonlocal corporations, ending the strong tradition of local welfare capitalism. Most devastating, the mill in Port Edwards closed in 2008. Now these three communities, connected through history and geography, are on different paths. Port Edwards, once a shining example of a company town, is in the midst of decline. Nekoosa's mill is still open and the town is holding steady, but people no longer feel as secure as they did under Nekoosa-Edwards. Wisconsin Rapids, the economic and political center of the county, is better off still, but nevertheless in search of a new identity and new leadership since opportunities in paper have decreased and Consolidated has been sold.

### THE WISCONSIN PAPER INDUSTRY IN THE NEW CENTURY

Between 1969 and 1996, manufacturing employment throughout the American manufacturing belt fell by more than thirty-two percent.<sup>1</sup> Wisconsin has not escaped this pattern and neither has its top manufacturing industry, paper. Over the past two decades the

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<sup>1</sup> Matthew Kahn, "The Silver Lining of Rust Belt Manufacturing Decline," *Journal of Urban Economics* 46 (1999), 360-367, 360.

numbers of individuals employed in this industry has decreased notably from 42,828 in 1997 to 28,557 in 2012.<sup>2</sup>

The reasons for this shift are numerous and layered. As companies (and trade in general) became more globalized, paper corporations acquired mills outside their home regions in order to gain a larger market share. There was also movement, beginning in the late 1990s, to consolidate on an international scale. The first international merger was the formation of Stora Enso, when the Swedish Stora company merged with Finnish-based Enso in 1998.<sup>3</sup> This new giant would later play an important role in the paper industry of Wood County. Simultaneously, imports into the United States from Asia became cheaper and more attractive when a financial crisis in 1997 weakened the currencies of several East Asian countries, creating a more competitive market.<sup>4</sup> Finally, the trade in paper stagnated in the late twentieth and early twenty-first century as business and household functions began to move online and recessions further weakened demand.<sup>5</sup> The result is that companies are now competing for a slice of an ever-shrinking pie.

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<sup>2</sup> U.S. Census Bureau, Economic Census, 1997. *Wisconsin: Manufacturing Geographic Area Series*. EC97M31A-WI (Washington D.C.: Government Printing Office, 1997), 10. U.S. Census Bureau. Economic Census, 2012. Table EC1231A1, generated by Katie Weichelt; using American FactFinder; <[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?\\_afpt=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table)>. Accessed February 10, 2016.

<sup>3</sup> “History,” *Stora Enso*, accessed January 25, 2016. <http://www.storaenso.com/about/history>.

<sup>4</sup> *The State of Wisconsin’s Paper Industry* (Appleton: Wisconsin Paper Council, 2003).

<sup>5</sup> “iPads, China: Twin Threats to Wisconsin’s Paper Industry,” *National Public Radio*, January 06, 2013, accessed January 6, 2016. <http://www.npr.org/2013/01/06/168741373/ipads-china-twin-threats-to-wisconsins-paper-industry>.

Currently, Asia poses the biggest threat to the Wisconsin paper industry. In recent years Chinese paper production increased threefold and overtook the United States as the global production leader in 2009.<sup>6</sup> At first glance, this news is not entirely surprising as China has absorbed many manufacturing operations that were once a part of the American manufacturing landscape. The Chinese government, however has taken a special interest in the paper industry, and provided 33 billion dollars in subsidies for investment in both state of the art equipment and new tree farms to provide the resources.<sup>7</sup>

The Wisconsin River valley has not been isolated from these changes. Over the last decade, many mills have been bought out by nonlocal corporations. As will be detailed later, Georgia-Pacific acquired Nekoosa-Edwards and Stora Enso purchased Consolidated. Then, both properties were sold again to other outside companies. Most recently it was announced that still another local company, Wausau Paper, is to be acquired by Sweden-based SCA.<sup>8</sup> Many mills in the region have closed as well, starting with Merrill in 1994 and one of two at Tomahawk in 2003 (Fig.7.1). More recently, the operation at Port Edwards was closed fully

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<sup>6</sup> John Schmid, "China Becoming Mighty Oak of World's Paper Industry," *Los Angeles Times*, December 28, 2012. <<http://articles.latimes.com/2012/dec/28/business/la-fi-china-paper-industry-20121228>>. Accessed October 30, 2015.

<sup>7</sup> Ibid.

<sup>8</sup> Thomas Content, "Wausau Paper Being Sold to SCA," *Milwaukee Journal Sentinel*, October 13, 2015. <<http://www.jsonline.com/business/wausau-paper-being-sold-to-sca-b99595839z1-332427802.html>>. Accessed January 3, 2016.

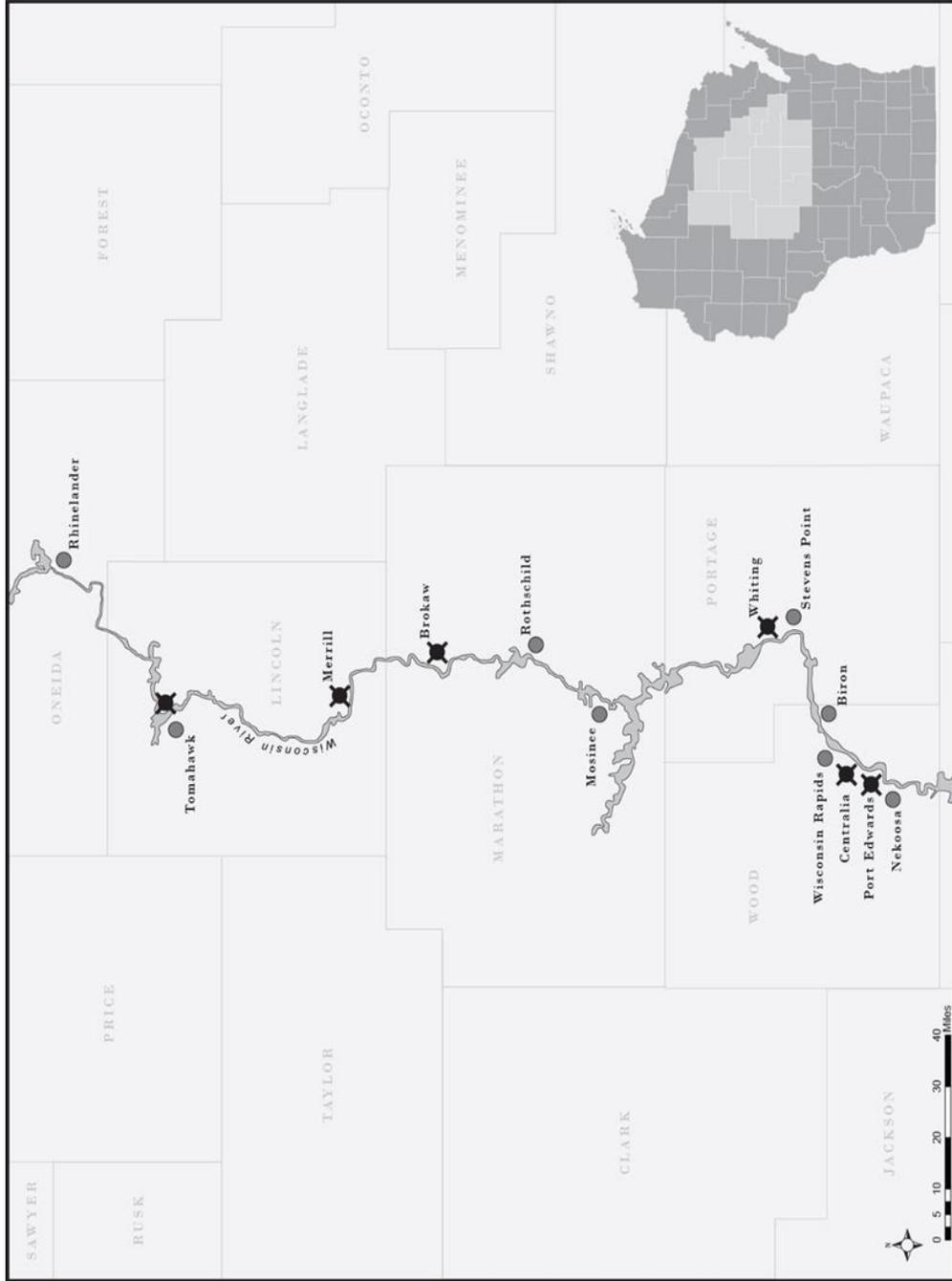


Figure 7.1. Map of Paper Mills in the Wisconsin River Valley, 2016. Open mills represented with circles and closed ones with a circle and cross symbol. Source: Schmid, "The Wisconsin Story," *Milwaukee Journal Sentinel*.

in 2008, the Whiting mill in 2011, and the Brokaw mill in 2012.<sup>1</sup> Most of the remaining plants have laid off workers and become more efficient. Such reductions in the workforce mean, of course, that fewer opportunities in the industry likely will exist in the future. One former industry employee noted that paper firms are increasingly subcontracting nonproduction aspects of the business. “Unless you work as an engineer on the line, the company is looking at many operations that can be outsourced.”<sup>2</sup>

Increased production efficiency and mill closures have affected many of the communities along the Wisconsin River. One striking change has been the decline of the culture of welfare capitalism. In the years when the paper industry served as a city’s strong economic base, local mill executives also served as civic leaders. Today, this altruistic legacy of city beautification projects, school funding, and other public gifts is threatened. The old entrepreneurs are gone and the cities need to find new leadership.

#### “THE ALEXANDERS AREN’T HERE ANYMORE”

On a drive through Port Edwards and Nekoosa, one is struck by the differences between the two towns. The latter is livelier than the former. A small, but active business district occupies the center of Nekoosa. By contrast, Port Edwards is much quieter. Once the corporate headquarters for the Nekoosa-Edwards Paper Company, this town has largely become a bedroom community occupied by commuters and retirees. The cause underlying

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<sup>1</sup> “The Wisconsin Story,” *Milwaukee Journal Sentinel*, December 8, 2012. <<http://www.jsonline.com/business/paper-industry-digital-china-wisconsin-181832171.html#timeline>>. Accessed January 3, 2016.

<sup>2</sup> Interview with Pete Taylor, November 13, 2015.

the difference also is clear: the mill at Nekoosa remains open and buzzing with activity while the mill in Port Edwards is closed.

At their peak of employment in the 1990s, the two Nekoosa-Edwards mills employed 1,700 individuals in the region.<sup>3</sup> Corporate executives, had long showered gifts upon both communities, and as was noted in chapter five, created incentives for growth through a series of “Live Where You Work” programs. When I spoke to current and former residents of Port Edwards and Nekoosa, they all held those years in high regard. Ben Will, a former Port Edwards teacher, described one example of company generosity: “Older teachers remembered the good old days. The mill used to highly support the school systems. The mill helped paid for programs, equipment and supplies. Many students would get well-paid jobs at the mill right out of high school. The mill would provide free paper and at one time helped provide the school with heat and electricity.”<sup>4</sup>

Port Edwards, in the view of many people, benefitted even more from company gifts than did Nekoosa, causing some resentment between the two communities. John Nelson, a former resident of Port Edwards, said moving there was a challenge in some ways because it was an elitist community. People in management and other corporate positions tended to live in Port Edwards while workers concentrated in Nekoosa or Wisconsin Rapids. The cultural landscape of Port Edwards still reflects this status. A series of large homes there overlooks

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<sup>3</sup> Vandewalle & Associates, “The Economic Importance of the Highway 54 Realignment for Port Edwards & the Tri-Cities Region: A Key to Connecting the Region, Repositioning the Paper Industry, Unleashing the Bio-Economy, and Creating Green Job Growth in Central Wisconsin,” unpublished report, 2009, 5.

<sup>4</sup> Email correspondence with Ben Will, November 9, 2015.

the water along Wisconsin River Drive while no parallel concentration exists in Nekoosa. Port Edwards elitism also extended to the school. As John Nelson continued: “They used to refer to the high school in Port Edwards as ‘the academy’ because it was where the corporate managers sent their kids.”<sup>5</sup>

The wealth that accumulated in Port Edwards is not surprising. The Nekoosa-Edwards Paper Company, as was discussed in previous chapters, was one of the largest and most successful paper companies in the valley. It remained independent for many decades before merging with the Great Northern, company out of Maine in 1970. This new corporation, in turn, attracted other bidders and in 1989, the Georgia-Pacific Company from Atlanta initiated a hostile takeover of Great Northern Nekoosa.

#### *Great Northern Nekoosa and Georgia-Pacific*

The interest of Georgia-Pacific in Great Northern Nekoosa came as a surprise to financial analysts since hostile takeover bids at that time were rare in the forest products industry. In fact, this was the first hostile takeover attempt in the history of American paper manufacture.<sup>6</sup> It also shocked leaders of Great Northern, since in private conversations, Georgia-Pacific executives had shared concerns that they might one day be subject to a hostile takeover.<sup>7</sup> Great Northern’s people tried to fight off the attempt through legal and

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<sup>5</sup> Interview with John Nelson, November 21, 2015.

<sup>6</sup> Johnathan P. Hicks, “Georgia-Pacific Expected to Win,” *New York Times*, January 18, 1990.<<http://www.nytimes.com/1990/01/18/business/market-place-georgia-pacific-expected-to-win.htm>>. Accessed January 24, 2016.

<sup>7</sup> *Ibid.*

financial means and they rejected Georgia Pacific's initial offer made in October. To counter, they then filed an antitrust suit against Georgia-Pacific. Rumors swirled that Georgia-Pacific would seek to divest itself of the Nekoosa assets once they were fully acquired.<sup>8</sup>

The fight was bitter, but Great Northern Nekoosa was unable to prevail. Georgia-Pacific acquired the holdings and then, virtually overnight, Port Edwards was no longer the headquarters of a large and vibrant company. J. Marshall Buehler, a former salesman for Nekoosa-Edwards who retired shortly after the changeover, reflected on how he would visit the mill during Georgia-Pacific's leadership. Although he loved his career, former coworkers would often comment to him that he should consider himself lucky to be retired. To them, things just were not the same with Nekoosa-Edwards no longer in charge.<sup>9</sup> But, while the employer was not ideal to some in the 1990s, the mill was still running and a part of the community.

#### *Domtar and the Closing of the Port Edwards Mill*

The Port Edwards and Nekoosa mills changed hands again in 2001 when Georgia-Pacific sold some of its holdings to Domtar, a Canadian-based paper company. The decision was made after Georgia-Pacific found itself 15 billion dollars in debt following an expensive

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<sup>8</sup> Jonathan P. Hicks, "Nekoosa Spurns \$3.1 Billion Georgia-Pacific Offer," *New York Times*, November 14, 1989. < <http://www.nytimes.com/1989/11/14/business/nekoosa-spurns-3.1-billion-georgia-pacific-offer.html>>. Accessed January 24, 2016; Hicks, "Georgia-Pacific Expected to Win."

<sup>9</sup> Interview with J. Marshall Buehler, November 15, 2014.

acquisition the previous year.<sup>10</sup> At the time, sale of four mills was the largest divestiture of assets in company history. Shares of both companies increased in value when the sale was completed and Domtar became the third-largest producer of uncoated freesheet paper in the world.<sup>11</sup>

Unfortunately, the Port Edwards mill at the time of the sale to Domtar was saddled with aging equipment. As Pete Taylor, a former employee for Stora Enso explained: “The new owners must take an objective look at the state of the mill. In some cases, the equipment and machinery have not been updated in several years.”<sup>12</sup> When faced with a choice between investing in new equipment at Port Edwards and closing the mill, Domtar first attempted a compromise. They kept the mill open but focused production on niche markets. This proved not to be a profitable, long-term solution, and so the mill was closed in 2008.<sup>13</sup>

On the day the closing of the Port Edwards mill was announced, community members

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<sup>10</sup> “Georgia-Pacific: Paper Giant to Sell Four Mills in Effort to Pay Down Debt,” *Chicago Tribune*, May 1, 2001. <[http://articles.chicagotribune.com/2001-05-01/business/0105010143\\_1\\_georgia-pacific-corp-georgia-pacific-group-domtar](http://articles.chicagotribune.com/2001-05-01/business/0105010143_1_georgia-pacific-corp-georgia-pacific-group-domtar)>. Accessed January 24, 2016.

<sup>11</sup> “Georgia-Pacific: Papermaker to Sell Four Mills to Domtar,” *Chicago Tribune*, June 05, 2001. <[http://articles.chicagotribune.com/2001-06-05/business/0106050292\\_1\\_georgia-pacific-domtar-paper-mills](http://articles.chicagotribune.com/2001-06-05/business/0106050292_1_georgia-pacific-domtar-paper-mills)>. Accessed January 24, 2016.

<sup>12</sup> Interview with Pete Taylor, November 13, 2015.

<sup>13</sup> Marlowe Embree, Eric Giordano, and Jim McClusky, *Serving Dislocated Workers from the Port Edwards Paper Mill: A Return on Investment Study* (Wausau: Wisconsin Institute for Public Policy and Service, 2014).

gathered in the high school gymnasium to show support for the employees.<sup>14</sup> Sally Cutler recalled that the mayor, school district representatives, and even descendants of the Alexander family were present.<sup>15</sup> It was a touching event, but the rally offered only a temporary comfort to those facing unemployment. People needed to come together to find another economic driver for their community. As a local teacher recalled: “The [school] staff was concerned with the potential decline of enrollment. I personally didn’t have any students whose parents lost their jobs, but I imagine many students were afraid for their future.”<sup>16</sup>

The closing of the mill meant 500 jobs would be eliminated. Unfortunate, considering government estimates in 2006 stated six percent of the jobs in the county were directly to paper manufacturing. In addition, the average pay of a mill worker at the time was fifty-four percent higher when compared to the average for all other jobs in the county.<sup>17</sup> The state responded to news of the layoff by committing resources to aid to re-train displaced workers and the local Workforce Development office contracted a firm to set up a center inside of the mill. The closure was the hardest on older individuals who were not yet ready to retire, but had failed to update their skills set over the years. It was a challenge to convince many of the people to pursue opportunities for education following the layoffs. Cutler recalled that for

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<sup>14</sup> “Local, State Leaders Pledge Aid in Port Edwards Mill Shutdown,” *La Crosse Tribune*, December 20, 2007, accessed October 26, 2015. [http://lacrossetribune.com/news/state-and-regional/wi/local-state-leaders-pledge-aid-in-port-edwards-mill-shutdown/article\\_f18f9197-9932-5394-ba19-999e7652ce88.html](http://lacrossetribune.com/news/state-and-regional/wi/local-state-leaders-pledge-aid-in-port-edwards-mill-shutdown/article_f18f9197-9932-5394-ba19-999e7652ce88.html).

<sup>15</sup> Interview with Sally Cutler, November 5, 2015.

<sup>16</sup> Email correspondence with Ben Will, November 2015.

<sup>17</sup> Dresang, Joel, “Domtar Paper Mill To Close,” *Milwaukee Journal Sentinel*, December 14, 2007, 1D-2D.

many, school was a “four letter word.”<sup>18</sup> While other paper mills existed in the region, there was a limit to the number of people they could absorb.

### *Surviving Without the Mill*

In newspaper articles, reports, and in my interviews, the closing of the mill at Port Edwards is often described as devastating and traumatic and the impact was felt beyond just Port Edwards because many of the displaced workers resided in Wisconsin Rapids and Nekoosa. According to Sally Cutler, the area in a sense was “all one community.”<sup>19</sup> The trauma also was enduring for many people. One former mill worker, for example, reported that: “I enjoyed my job in Port and I was good at it. The shut[down] of the mill took me about five years to recover from mentally but thank [G]od [I did].”<sup>20</sup> Part of the problem was that this layoff was not the first to impact Wood County, for the paper mills had been downsizing their workforces for years leading up to the closure. One area resident believed that “devastating” might be too strong a word to describe the actual Port Edwards closure. After all, she reasoned: “Since 2001, we have lost over four thousand jobs in the community, so really the closure was just a continuation of that.”<sup>21</sup>

The North Central Wisconsin Workforce Development Board commissioned an extensive survey of displaced workers six years after the mill closed. Based on a forty

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<sup>18</sup> Interview with Sally Cutler, November 5, 2015.

<sup>19</sup> Ibid.

<sup>20</sup> As quoted in Embree, et al., *Serving Dislocated Workers from the Port Edwards Paper Mill*, 29.

<sup>21</sup> Interview with an anonymous former Consolidated employee and Wisconsin Rapids resident, November 10, 2015.

percent response rate, the results showed that, for workers under the age of sixty-two, ninety percent were able to find new employment. Less than fifty percent of these people, however, were able to fully replace their previous income from the mill.<sup>22</sup> Perhaps not surprisingly, the survey also found that older workers had the most trouble in the transition. The process took longer than for younger workers and fewer than ten percent of workers over age 63 found jobs.<sup>23</sup>

Some workers were able to find employment in surrounding mills, and others entered retraining programs. The Workforce Development study actually described a rather positive outcome for the surveyed workers, but it was criticized as not being representative of all displaced employees. As one former Workforce Development person recalled: “When we presented the results, there were a great deal of people that argued that that had not been their experience at all.” The meaning, of course, was that the closing of the mill had produced major hardships for many former workers.<sup>24</sup>

Beyond the simple loss of jobs, the absence of Nekoosa-Edwards also has had other impacts on the community. One Wisconsin Rapids resident who grew up in Port Edwards and is employed by the Biron paper mill, told me that the closure had a “devastating” effect upon the town. “Port Edwards was a very tightknit community . . . . I never wanted to leave. I

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<sup>22</sup> Embree, et al., *Serving Dislocated Workers from the Port Edwards Paper Mill*, 14.

<sup>23</sup> *Ibid.*, 20.

<sup>24</sup> Interview with In courage Foundation representatives, December 7, 2015.

love the area, love the people.”<sup>25</sup> Many of the people he knew while living there have since moved away. Cost of living is another issue. As another resident noted: Although “the services are excellent here . . . the taxes are too high and we don’t have the mill to absorb some of the tax base.”<sup>26</sup> With the exception of 2012-2013, local taxes have increased every year since 2008 (Fig. 7.2).<sup>27</sup> The increase is made worse when one considers the demographics of Port Edwards. Many residents are retired or nearing retirement age and

Tax Rate Changes by Year, Port Edwards, Wisconsin

Year	Local Taxes	School District Taxes
2013-2014	+ 11.8%	-3.6%
2012-2013	-.5%	-3.0%
2011-2012	+1.2%	+6.3%
2010-2011	+1.8%	+5.9%
2009-2010	+.2%	+.6%
2008-2009	+4.6	+9.1%
2007-2008	+.8%	-9.2%

Figure 7.2. Tax Rate Changes by Year, Port Edwards. Source: Wood County Treasurer.

<sup>25</sup> Interview with Steve Nelson, November 16, 2015.

<sup>26</sup> Interview with an anonymous Port Edwards resident, October 24, 2015.

<sup>27</sup> Wood County Treasurer, *Wood County, Wisconsin*, accessed January 25, 2016. <http://www.co.wood.wi.us/Departments/Treasurer/TaxPublic/SearchTaxBill.aspx>.

likely on fixed incomes. Higher taxes could strain their budgets and force some to either move to a smaller property, or leave the community entirely.

At one point in the autumn of 2015, Port Edwards had nearly twenty-five homes for sale, a high number for a community of only 1,800 residents (Fig.7.3). Selling those properties may not be easy. One interviewee stated that he lived in his parent's property after they left the area to help pay the mortgage it could not sell. As J. Marshall Buehler told me: "If we aren't able to bring in more development, this place will become a bedroom community."<sup>28</sup> Only one store now occupies the small shopping center in the center of town. A chemical plant called ERCO still exists with a hundred employees an even larger company (or collection of smaller firms) employment opportunities that have been lost.<sup>29</sup> As one current Port Edwards resident commented to me: "It was a great community, but it's now just withering on the vine . . . and the Alexanders aren't here anymore."<sup>30</sup>

The former mill was sold in 2013 to DMI Acquisitions, an Ohio-based company that specializes in retrofitting old industrial sites. It hopes to attract business and research centers with a focus on biomass processing (Fig. 7.4). DMI hopes to start leasing the property in the

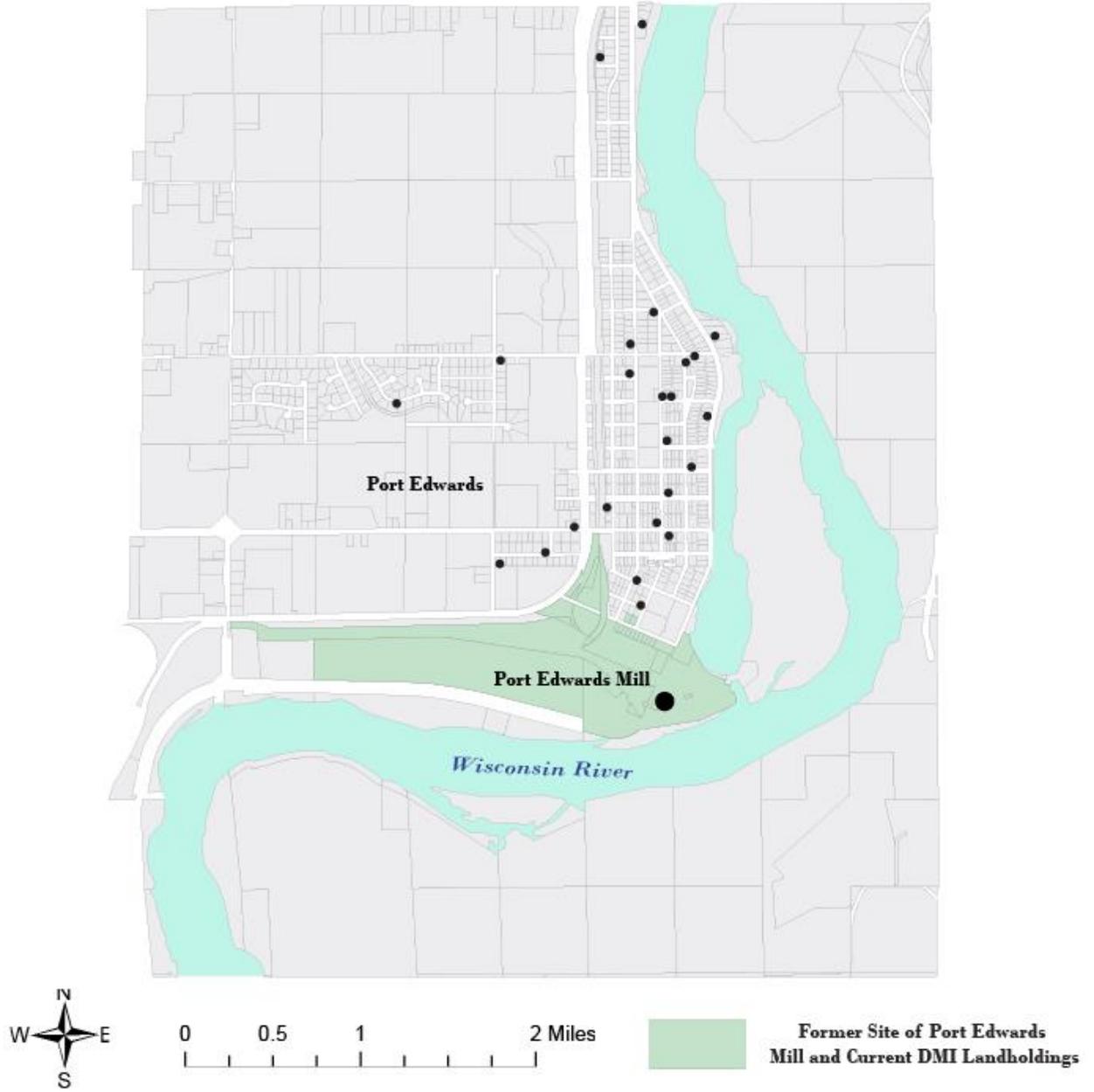
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<sup>28</sup> Interview with Marshall Buehler, November 2014.

<sup>29</sup> Karen Madden, "Erco Worldwide Proud of Community Involvement," *Wisconsin Rapids Tribune*, September 22, 2014. <<http://www.wisconsinrapidstribune.com/story/money/companies/pride/2014/09/22/erco-worldwide-community-mercury-membrane-process/16070773/>>. Accessed January 24, 2016.

<sup>30</sup> Interview with an anonymous Port Edwards, Wisconsin resident, October 24, 2015.

# Houses for Sale in Port Edwards: Oct. 29, 2015



Source: Wisconsin State Cartographer, GIS Parcel Data and Zillow

Figure 7.3. Homes for Sale in Port Edwards, October 29, 2015. Black dots represent homes for sale. Map by Ryan Weichelt.



Figure 7.4. Sign Outside the Old Paper Mill, Port Edwards, Wisconsin, September 2015. Photograph by author.

near future, but it remains to be seen if a major, long-lasting business can be attracted.<sup>31</sup>

Most people I interviewed expressed doubt that such a firm could be found for the old mill

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<sup>31</sup> Melissa Siegler, “New Port Edwards Business Park to Create 800 Jobs,” *Wisconsin Rapids Tribune*, June 15, 2015. <<http://www.wisconsinrapidtribune.com/story/news/local/2015/06/15/new-port-edwards-business-park-create-jobs/71254444/>>. Accessed January 24, 2016.

site, with one person reasoning that the costs associated with renovating a hundred-year-old industrial site may be more than new companies are willing to take on (Fig. 7.5).<sup>32</sup>



Figure 7.5. Smokestack at Former Mill, Port Edwards, 2015. This iconic structure is scheduled to be demolished. Photograph by author.

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<sup>32</sup> Interviews with multiple anonymous Wood County residents, October through November, 2015.

## *Nekoosa*

The future outlook is considerably less bleak for Nekoosa than for Port Edwards. Driving into town, one is still hit with the strong scent of the pulp. Logs are stacked high on the outskirts of the village and brought to the mill via a short rail line. Supportive businesses are also found in town, such as Nekoosa Coated Products and Nekoosa Manufacturing. “Papermakers” are still the high school mascot. Even so, all is not perfect in Nekoosa. After Domtar acquired the mill, it took one paper machine out of production in 2002, which meant a loss of 125 workers.<sup>33</sup> People are uncertain about the future, but at least for now the mill remains the town’s largest employer (Fig.7.6). Currently it employs roughly 455 people, approximately twenty percent of the entire Nekoosa population.

The culture of Nekoosa definitely has changed with the purchase of the mill by Georgia-Pacific, then Domtar, and subsequent layoffs. Shane Deffenbaugh, who grew up in Nekoosa in the 1980s and 1990s, recalled the years when good jobs at the mill were the mainstay of the town: “Everybody complained about the mill, but everyone was making a ton of money.”<sup>34</sup> He described the culture of Nekoosa at the time as “entitled.” Things are different today. Although Shane believes that Nekoosa people are not overly stressed that the

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<sup>33</sup> Joel Dressang, “Domtar Shutting Down Nekoosa Paper Machine,” *Milwaukee Journal Sentinel*, March 28, 2002.

<sup>34</sup> Interview with Shane Deffenbaugh, December 17, 2015.

mill will close, he says they are realistic and understand that Domtar is no longer the reliable source of prosperity that Nekoosa-Edwards once was.<sup>35</sup>



Figure 7.6. Sign at the Nekoosa Mill, September 2015. Photograph by author.

#### WISCONSIN RAPIDS: IN SEARCH OF A NEW IDENTITY

A visitor knows that a huge paper mill remains in operation at Wisconsin Rapids even before the mill itself comes into view. One can see smoke pumped into the air and smell is a distinctive mill odor that pervades the air. As one resident stated: “Sometimes the smell is so

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<sup>35</sup> Ibid.

powerful it will knock you down.”<sup>36</sup> Still, things have changed in the city. Over the last several years, paper has decreased in importance in the local economy and many in the community have recognized that they can no longer depend on paper (or indeed any one company), to provide high paying jobs and community support.

### *Consolidated and Stora Enso*

At the height of its success, Consolidated Papers operated six mills throughout Wisconsin, including several in the Wisconsin River valley. It was a Fortune 500 company with corporate headquarters in Wisconsin Rapids. Much like Nekoosa, Consolidated could not remain independent in the age of mergers, although it was able to hold on longer than its neighbors to the south. Eventually, the company was purchased by Stora Enso, a Finnish pulp and paper conglomerate.<sup>37</sup> Stora Enso was a highly regarded business with a history stretching back to the Middle Ages. In 1998, Stora and Enso, Europe’s two largest producers of coated papers, merged.<sup>38</sup> This was following the 1997 financial crisis in Asia, which prompted demand to drop. Many companies merged as a result, particularly in Europe. The new company then searched for additional expansion opportunities in order to be more competitive in the global market.<sup>39</sup>

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<sup>36</sup> Interview with an anonymous Wisconsin Rapids resident, October 24, 2015.

<sup>37</sup> Carolyn Koo, “Stora Enso to Purchase Consolidated Papers,” *The Street*, February 22, 2000. <<http://www.thestreet.com/story/887644/1/stora-enso-to-purchase-consolidated-papers.html>> Accessed October 30, 2015.

<sup>38</sup> “History,” *Stora Enso*, accessed January 25, 2016, <<http://www.storaenso.com/about/history>>.

<sup>39</sup> Koo, “Stora Enso to Purchase Consolidated Papers.”

As the company searched for potential new partners, officials realized that no company in Europe was left for them to acquire without risking antitrust lawsuits. North America, therefore, became an appealing site of investment: one of the largest paper markets in the world and a place where they already owned one mill.<sup>40</sup> Stora Enso's people studied several companies and paper grades. They seriously considered Consolidated, but decided instead to make an offer for the Donahue Company in early 2000. This offer was rejected.<sup>41</sup>

Meanwhile, Consolidated Papers faced an awkward situation, having no family members willing to take over the company in a time of changing economic conditions. The board of directors decided to seek out a buyer rather than attempt to grow themselves via the acquisition of other paper companies.<sup>42</sup> Working with the investment bank, Goldman Sachs, Stora Enso and other potential buyers were contacted in January 2000. Six companies expressed interest and two of them followed through with bids: Stora Enso and an unnamed American manufacturer. Stora's executives, a bit bruised from Donohue's rejection, made a strong offer of four billion dollars. It was accepted, a deal that at the time was the most expensive acquisition in industry history.<sup>43</sup>

The purchase by Stora had a number of impacts on Consolidated's mills in central Wisconsin. The new officials decreased the labor force and totally realigned mill culture.

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<sup>40</sup> Antti Koulumies, *The Assumptions Behind an Acquisition: Case Stora Enso – Consolidated Papers*, (Aalto, FI: Aalto University, 2010), 15. This single mill was in South Carolina.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid., 16.

<sup>43</sup> Antti Koulumies, *The Assumptions Behind an Acquisition*, 21.

Pete Taylor, who helped to implement the new operational style, recalled that this change was needed. The culture of welfare capitalism, specifically the policy of allowing workers to have a “job for life,” had created an overstaffing problem. Many employees had not updated their skills and were inflexible in their tasks. Rather than take initiative, workers often waited for direction from management; management, in turn, spent too much time micromanaging the workforce.<sup>44</sup>

Stora Enso sought to create a more efficient, flexible, and engaged workforce. A reduction in employee numbers actually had begun when Consolidated still owned the mill, but Stora took much of the blame. These layoffs took many workers by surprise, especially those who had worked in the mill most of their adult lives. One former employee described the trauma as follows: “I began to take an interest in what was happening at the time with the paper industry and so I could see what was coming on the horizon, but many were completely blindsided.”<sup>45</sup>

The purchase of Consolidated proved to be a mistake for Stora Enso, although this was caused by a series of factors that may have been beyond the firm’s control. The paper market declined suddenly in the years following the merger. An economic recession from 2001 to 2003 weakened demand and triggered falling prices. Stora Enso executives made efforts to seek other acquisitions, but nothing came to fruition. Despite some improvement in the industry after 2003, the company decided to divest its North American holdings in 2007.

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<sup>44</sup> Interview with Pete Taylor, November 13, 2015; Interview with John Nelson, former Consolidated employee, November 21, 2015.

<sup>45</sup> Interview with John Nelson, former Consolidated employee, November 21, 2015.

According to research by Antti Koulumies, this decision was controversial at the time amongst Stora Enso management. However, the move ultimately may have been the best for the company since the year 2008 brought an even bigger recession.<sup>46</sup>

### *Stora Enso, NewPage, and Verso*

Stora Enso sold many of the old Consolidated mills to NewPage Corporation, including the ones at Wisconsin Rapids, Stevens Point, and Biron (Fig. 7.6). NewPage, unfortunately, did not become a stable force within any of these communities. It was a recent entity itself, a creation of a private equity firm, and filed for chapter eleven bankruptcy in 2011 after consistently losing money. The company then sold the Wisconsin Rapids and the Stevens Point mills to Verso, a Tennessee-based corporation, while the mill at Biron was acquired by another company, Catalyst.<sup>47</sup>

In assessing the current state of affairs in Wisconsin Rapids, one resident explained that: “the paper industry hasn’t gone away, it is still here though it is smaller.”<sup>48</sup> Many residents, though, now believe that local paper manufacturing is no longer a stable force. As

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<sup>46</sup> Antti Koulumies, *The Assumptions Behind an Acquisition*, 21.

<sup>47</sup> Jon Schmid, “NewPage Corp. Completes Sale of Three Wisconsin Paper Mills,” *Milwaukee Journal Sentinel*, January 8, 2015. < <http://www.jsonline.com/business/newpage-corp-completes-sale-of-3-wisconsin-paper-mills-b99422553z1-287999451.html>>. Accessed January 13, 2015.

<sup>48</sup> Interview with an anonymous Wood County resident, November 10, 2015.

Steve Nelson explained: “It used to be that when you told people that you worked in the paper mill, they would get very excited; now they wonder if you will still have a job.”<sup>49</sup>

*The search for a new identity*

Today, despite misgivings about the future, paper remains an important component of the Wisconsin Rapids and Wood County economy. The mill is still the area’s largest employer and manufacturing as a whole continues as a dominant sector. What has been missing, however, starting with the sale of Consolidated and the move of corporate headquarters to Finland, was leadership. The Mead and Witter families had long been pillars of the community. George Mead, a founder of Consolidated, had served as mayor and the Mead family name still exists on many civic projects throughout the region. Like in other industrial communities, a paternalistic culture had developed in Wisconsin Rapids, whereby community business leaders were also those most heavily charged with solving community problems.<sup>50</sup>

In general, the benevolence of the Mead family meant that other Wisconsin Rapids citizens did not have to involve themselves fully in the process of community leadership. One Incourage Representative explained to me that the problem was not so much that local residents were shut out from leadership, it was that little need existed for anybody to seek out those opportunities. “Everyone had a good job at the mill, when you got a job there, [and]

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<sup>49</sup> Interview with Steve Nelson, November 16, 2015.

<sup>50</sup> Doug Easterling and Judith L. Millesen, “Diversifying Civic Leadership: What It Takes to Move from ‘New Faces’ To Adaptive Problem Solving,” *National Civic Review* 101, 2 (Summer 2012), 20-26.

you had it for life.” He also acknowledged that city residents gradually came to feel “entitled.”<sup>51</sup>



Figure 7.7. The Paper Mill When Owned by NewPage, Wisconsin Rapids. June 2014. Photograph by author.

When the mill was sold and the corporate headquarters moved overseas, new leadership was badly needed. A local community foundation known as Incourage worked to

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<sup>51</sup> Interview with Incourage Representatives, December 7, 2015.

fill this role by focusing its mission on helping residents take ownership of their future. As

Kelly Ryan, CEO of Incourage, has stated:

The problem and cry that we heard repeatedly was jobs. That we need more jobs. It's the same call we hear today in Wisconsin and across the nation, but was the problem really jobs? We began to understand that our real work was not job creation. In fact, lack of jobs was a symptom of a larger issue that needed to be addressed to foster any kind of sustainable change, and that was community culture. Though there were many benefits to having a stable industry build an economy over a century, the unintended consequences were insidious and deeply entrenched. A dependent, paternal, entitled, and insular culture was the norm in Central Wisconsin. It was certainly not an environment that would foster the kind of new thinking, creativity, and inclusion that going to be needed to re-create a new economy.<sup>52</sup>

Incourage, in partnership with other community organizations, has indeed created programs designed to instill confidence in community members and to help them get involved in civic activities. They recognize that such a culture shift may be a long process, but are hopeful for the future. One concrete action was the foundation's purchase of a downtown building that once housed the local newspaper. This purchase was intended to engage residents in community decision making, and ultimately, decide for themselves what the building's purpose might be. The idea was to foster civic engagement. When residents asked initially, "What are you going to do" with the building, Incourage representatives suggested that such a question was indicative of the larger cultural reality wherein residents had remained somewhat disconnected from the community-building process.<sup>53</sup> The process

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<sup>52</sup> Kelly Ryan, "A Celebration of American Philanthropy: Kelly Ryan's Big Bet," Speech to the Rockefeller Foundation. <<https://www.youtube.com/watch?v=I4KJbWdMUqY>>. Accessed January 15, 2016.

<sup>53</sup> Interview with Incourage representatives, December 7, 2015.

seems to be working. After several meetings, residents decided to use the space for a local brewery, offices, a culinary center, and other community spaces designed to creativity and entrepreneurial thinking. Incourage officials viewed residents' desire to be engaged as a sign that the community was indeed coming together to create a new shared vision for their future, one that embodied optimism and opportunity. While the building's uses seemed broad, their purpose is aimed at fostering creativity, risk-taking, and an entrepreneurial mindset amongst citizens.

Incourage is also working directly to support economic development within the region. Its representatives note that manufacturing is still an important part of the landscape and want the local community to be able to provide the necessary labor force for these firms. They see a problem in that community members, stung by the changes wrought by the paper industry, are not encouraging young people to pursue industrial futures. As one representative reflected: "We went to the local high school and asked students if any were considering a career in manufacturing and not one student raised their hand."<sup>54</sup>

Incourage's efforts are making an impact on the community, but they recognize that even more work is needed. Informal discussions with residents of Wisconsin Rapids indicate a mixed view of the future. One person told me that: "It seems that there isn't much coming into Wisconsin Rapids; most people drive to other places to work."<sup>55</sup> Other residents have different perspectives. One person noted that the downtown had grown since she moved to

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<sup>54</sup> Interview with Incourage representatives, December 7, 2015.

<sup>55</sup> Interview with Wisconsin Rapids resident, October, 2015.

the city fourteen years ago and that she is hopeful for the future. Another man, who had only resided in the city for less than a year, stated that, while most of the people he associates with are hopeful for the future, he understands that some people in the community are not.<sup>56</sup>

## CONCLUSION

After a century of steady growth and prosperity, the economies of Nekoosa, Port Edwards, and Wisconsin Rapids changed as a result of national and international trends in the paper industry. While paternalism and welfare capitalism in the past had contributed much to the growth of all three communities and their built environments, these same forces also had created a community culture that was dependent on them for employment and civic leadership. Today, although paper manufacture remains an important sector in the local economy, residents recognize that a new and more uncertain economic landscape exists. Indeed, some residents have become skeptical of any type of manufacturing as an avenue for economic development. George Mead, grandson to the founder former head of Consolidated Papers, stated in an interview that: “not one large company but a collection of firms” would serve as a future economic base in the region.<sup>57</sup> This seems the most likely scenario.

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<sup>56</sup> Interview with anonymous Wisconsin Rapids resident, October 24, 2015.

<sup>57</sup> Interview with George Mead and Susan Fife, November 15, 2014.

## Chapter Eight: Conclusion

This dissertation has explored the rise and decline of the paper industry in the Wisconsin River valley from the 1880s to the present day, and how it shaped three local communities. In so doing, it also has demonstrated an array of complex, often disparate forces involved in this process. Nekoosa, Port Edwards, and Wisconsin Rapids were molded simultaneously by locally based individual and group initiatives and, at another level, by national and later international economic trends.

The invention of Völter grinder was a critical event in the development of the modern paper industry. This machine not only transformed paper from an expensive to an inexpensive product, but also changed the needed raw material from cotton rags to wood pulp. Historically, paper mills in the United States had been found near urban areas in the East where they could collect the needed raw materials. As the nineteenth century progressed, rag shortages became common and prices increased. Scientists sought alternative raw materials to rags, but none was practicable until the 1870s when Völter's grinder made it possible to manufacture pulp from wood on a large scale. The new technology shifted the geography of paper production within the United States, with a new concentration in or near the large forests of the Northeast and Upper Midwest. Conveniently, these areas also had a number of rivers capable of powering production mills.

Paper mills were part of the “agro-industrialization” of the Midwest, whereby industry and agriculture mutually reinforced one another’s development.<sup>1</sup> Wisconsin’s earlier lumber economy, for example, had arisen concurrently with the state’s agricultural settlement and urbanization. People needed the timber for church, home, and barn construction, as well as for heating and cooking. So, as new settlers and their industry came into southern Wisconsin, entrepreneurs farther north wrested control of the white pine forests from indigenous peoples. One particular treaty in 1836 created the “Three Mile Strip,” whereby the Menominee forfeited a long strip of land running parallel along the Wisconsin River. This agreement opened the land between present-day Nekoosa to Wausau to lumberman and sawmill owners.

The lumber industry altered the region greatly. First came the establishment of lumber camps and sawmill towns, and then a period of aggressive harvesting and wasteful cutting that led to a depletion of the white pine by about 1890. Instead of leaving the region at that point, however, some owners sought out new opportunities. In particular, they looked to the growing paper manufacturing industry, which had found success earlier in the Fox River valley near Green Bay. This was a logical decision, especially as some of the investors possessed large tracts of depleted timber that (though no longer appropriate for lumber) could easily be harvested for wood pulp.

Natural conditions continued to make central Wisconsin an advantageous site for paper production. Still, even with all of these benefits, it took entrepreneurial capital and

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<sup>1</sup> Brian Page and Richard Walker, “From Settlement to Fordism: The Agro-Industrial Revolution in the American Midwest” *Economic Geography* 67 (1991): 281-315

vision to make the initial investments that would shape the region. The first mill in the valley was founded in 1888 on the southern edge of present-day Wisconsin Rapids and new facilities then diffused north along the river. Nekoosa, a failed sawmill town, was revived in 1892 with an investment from Thomas Nash and then thrived with the success of the Nekoosa-Edwards Paper Company. Likewise, Port Edwards may well have become a ghost town in the 1890s had Lewis Alexander not decided to invest in the site. Wisconsin Rapids, formed around two earlier sawmill settlements, might have been able to survive without the paper industry since it was the political and economic center of Wood County, but evidence suggests that it too was struggling in the wake of lumber's decline.

Several of the business leaders responsible for the initial diffusion of the local paper industry also managed to build their companies into national competitors. This required flexibility, a knowledge of the market, and (at times) a willingness to take risks. Examples of this include Consolidated's investment in coated paper technology and Nekoosa-Edward's switch from wrapping to business papers. Both Consolidated and Nekoosa grew throughout the years and acquired additional mills in the region and in other parts of the United States. But, fortunately for Wood County residents, they kept their corporate headquarters in their home cities.

With the growth and success of local companies, paper became an increasingly important driver of urban development. Nekoosa and Port Edwards, especially, were examples of company towns wherein the mill was the community centerpiece and an

important provider of worker housing. Laborers, managers, and capitalists all assisted in the process. Laborers, for example, through their willingness to unionize and fight for better wages and working conditions, pressured companies to enact measures that encouraged loyalty. These policies ushered in an era of welfare capitalism that shaped community landscapes for generations to come.

Consolidated and Nekoosa-Edwards both offered good benefits, wages, and much needed services to workers and their families. In the case of Nekoosa and Port Edwards, the paper company created an incentive for employees to construct new homes. Called the “Live Where You Work” program, it was instituted a few years after the most acrimonious strike in company history. Employees were given the choice of either a free lot on which to build a house or the right to purchase a home owned by the company at a good price. The company also provided extensive support to the local schools and constructed a series of recreational facilities for community use. Elaborate plans even existed for a park on an island in the Wisconsin River near Port Edwards and the incorporation of principles from the nationwide “garden city” movement into a town plan, but these did not come to fruition. In a parallel fashion, the Consolidated mill, together with the Mead and Witter families, contributed to the beautification of Wisconsin Rapids. They improved the land surrounding the mill, helped to underwrite riverside beautification projects, and funded schools, hospitals, and other critical community services.

The golden age of welfare capitalism began to change late in the twentieth century. Many of the paper mills throughout the state closed their doors or were purchased by nonlocal corporations. Both developments profoundly affected relationships between a mill and its community. Nekoosa, Port Edwards, and Wisconsin Rapids all experienced this fate. Georgia-Pacific purchased the Nekoosa-Edwards Paper Company in 1991 and Stora Enso purchased Consolidated in 2000. Once these events occurred, the new owners restructured the workforce, laid off employees, and reduced their involvement with community affairs. But even this was not the end of the story. These companies soon resold the mills. Domtar acquired the Nekoosa and Port Edwards mills in 2001. So far the new owners have kept the Nekoosa mill running but closed the one in Port Edwards in 2008. NewPage (2007) and, later, Verso (2015) bought the mill at Wisconsin Rapids. These companies laid off workers as well, but the mill remains active.

The loss of one mill and two corporate headquarters from 1990 to 2008, meant a forfeiture of thousands of local jobs. The end of the Nekoosa-Edwards and Consolidated ownerships also essentially ended welfare capitalism in the three cities. Not only did these places lose jobs, they also lost valuable community leadership. My interviews suggest that area residents realize that they had come to feel “entitled” after decades of prosperity in a paternalistic culture. Reliance, or perhaps overreliance had been given to the wealth and leadership of a few industrialists. Although this model fostered good communities, one that many residents are nostalgic to recall, it also cultivated a culture of dependency. Citizens were not deeply involved in municipal decisions.

Some community leaders now recognize a need to invest resources in cultural change. Incentive Community Foundation, for example, is working to build leadership and a sense of agency within local residents. This effort, together with other, similar activity in Wood County that seeks to take responsibility for the future can be seen as a parallel to what happened locally a century ago when other local entrepreneurs revived and remade the region when lumber declined. Just as global and national forces once came together to encourage paper production in the Wisconsin River valley, similar agencies now are pushing communities into the uneasy process of reinvention.

The decline of the paper industry is not limited just to the Wisconsin River valley. Many communities along the Fox River in northeastern Wisconsin also have had a similar experience, though perhaps not to the same degree. One of the more iconic companies to emerge from that valley, Kimberly-Clark, moved their headquarters from Neenah, Wisconsin, to Texas in 1985.<sup>2</sup> They still have a mill in Neenah, however, and it remains one of the town's largest employers.<sup>3</sup> Like in the Wisconsin River valley, mills began to shut down in the Fox valley in the mid-2000s. Kerwin Paper, in Appleton, closed in 2005 followed a year later by P.H. Glatfelter (a Pennsylvania company) at Neenah.<sup>4</sup> Perhaps the most notable closure was the plant at Kimberly, a village named for

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<sup>2</sup> "Historical Journey: An Interactive Timeline," *Kimberly-Clark*, accessed February 28, 2016. <http://www.kimberly-clark.com/Timeline.aspx>.

<sup>3</sup> "Largest Employers," *City of Neenah*, accessed February 28, 2016. <http://www.ci.neenah.wi.us/business/business-climate/largest-employers/>.

<sup>4</sup> "Glatfelter to Close Neenah Mill," *Milwaukee Business Journal*, February 22, 2006, accessed February 26, 2016. <http://www.bizjournals.com/milwaukee/stories/2006/02/20/daily23.html>.

the iconic Kimberly-Clark Company. This Kimberly mill had been acquired by Consolidated Papers in the late 1990s and then transferred to Stora Enso when they purchased Consolidated. After NewPage acquired the Stora Enso properties in 2007, they closed the property and 475 employees lost their jobs.<sup>5</sup>

In Winnebago County, the site of Neenah and Menasha, paper employment has dropped from 6,589 in 2002 to 4,795 in 2012. For Outagamie County, home of Appleton, the decline is from an estimated 5,000 to 9,999 employees in 2002 to an estimated 2,500-4,999 employees in 2012.<sup>6</sup> Such falling numbers, whether in central or northeastern Wisconsin, must also be viewed within context of the shrinking manufacturing base throughout the state. In 2002, Wisconsin boasted over 500,000 workers within the sector. A decade later, that number had dropped to 436,777 workers while the number of more than troubling for a state where manufacturing is the largest single sector in the

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<sup>5</sup> East Central Wisconsin Planning Commission, *Former NewPage Mill Property Redevelopment Strategy: Public Workshop Summaries, Results, and Recommendations* (Menasha, WI: East Central Regional Planning Commission, 2012), 2; “NewPage to Close Kimberly Mill,” *Milwaukee Business Journal*, July 30, 2008, accessed February 28, 2016. <http://www.bizjournals.com/milwaukee/stories/2008/07/28/daily36.html>.

<sup>6</sup> Economic Census, 2002. Table EC0231A1, generated by Katie Weichelt; using American FactFinder; accessed February 28, 2016. [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table); Economic Census, 2012. Table EC1231A1, generated by Katie Weichelt; using American FactFinder; accessed February 28, 2016. [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table).

establishments similarly declined from 9,915 in 2002 to 8,995 in 2012.<sup>7</sup> Such a trend is economy.<sup>8</sup> Some recent indices rank private sector job growth in Wisconsin at only 37<sup>th</sup> best in the nation.<sup>9</sup>

This dissertation has touched on many aspects of the paper industry in central Wisconsin, but more remains to be examined. Most notably, further research could examine the state of the industry several years into the future to better understand why some companies have been able to persist and others forced to close. In addition, research could explore if the efforts of Incourage and like-minded residents have been successful in creating more self-reliant and prosperous communities. Chapter seven briefly discussed perceptions of community members about local life before and after Nekoosa-Edwards and Consolidated sold the mills, but there is an opportunity to delve deeper through surveys and more extensive interviews. Also, through similar methods, one could

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<sup>7</sup> Economic Census, 2002. Table EC0231A1, generated by Katie Weichelt; using American FactFinder; accessed February 28, 2016.

[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table); Economic Census, 2012. Table EC1231A1, generated by Katie Weichelt; using American FactFinder; accessed February 28, 2016.

[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table).

<sup>8</sup> Economic Census, 2012. Table EC1200A1, generated by Katie Weichelt; using American FactFinder; accessed February 29, 2016.

[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_00A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_00A1&prodType=table).

<sup>9</sup> Shawn Johnson, "Report: Wisconsin's Job Growth Ranked 37<sup>th</sup> in the Nation," *Wisconsin Public Radio*, December 17, 2015, accessed March 1, 2016. <http://www.wpr.org/report-wisconsins-job-growth-ranked-37th-nation>.

inquire more into residents' perceptions of the future of their community. In terms of historical analysis, more could be discovered with regards to issues of gender, race, and class in this narrative. What tensions existed between management and labor? Amongst different labor groups? Did a gendered division of tasks exist within the mills? How did "welfare capitalism" produce, reproduce, or change gender roles? Some of these questions are complex, but they deserve further inspection nonetheless.

It is difficult to say what will happen to the communities of Port Edwards, Nekoosa, and Wisconsin Rapids. Any conclusion is problematic because place creation is a continuing process. As I write, Verso, the company that purchased the mills at Wisconsin Rapids and Stevens Point in 2015, has filed for bankruptcy. Officials were unable to pay local timber suppliers.<sup>10</sup> The company cited competition from producers in Asia and Europe for their struggles as well as a declining demand for coated papers as users turn increasingly to electronic media. As of now, however, officials say that they do not intend to lay off any workers at this time.<sup>11</sup> This is at least a temporary relief to the nearly one thousand employees at the Wisconsin Rapids mill.<sup>12</sup> Still, the future for the

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<sup>10</sup> Jonathan Anderson and Sari Lesk, "Analyst: Verso Bankruptcy Signals Dim Future," *Marshfield News Herald*, January 26, 2016. <http://www.marshfieldnewsherald.com/story/news/local/2016/01/26/verso-corp-files-bankruptcy/79335694/?from=global&sessionKey=&autologin=>; Johnathan Anderson, "Verso Halts Payments to Local Wood Suppliers," *Wisconsin Rapids Tribune*, January 25, 2016. <http://www.wisconsinrapidstribune.com/story/money/2016/01/25/verso-cuts-payments-local-wood-suppliers/79315684/>.

<sup>11</sup> Anderson and Lesk, "Analyst: Verso Bankruptcy Signals Dim Future."

<sup>12</sup> *Ibid.*

local forest products industry does not look bright, but hopefully the county can move forward and find new opportunities should the industry continue to decline.

## Bibliography

- Adams, Michelle M. Steen, Nancy Langston, and David. J. Mladenoff. "White Pine in the Northern Forests: An Ecological and Management History of White Pine on the Bad River Reservation of Wisconsin." *Environmental History* 12 (2007): 614-648.
- Anderson, Johnathan. "Verso Halts Payments to Local Wood Suppliers." *Wisconsin Rapids Tribune*, January 25, 2016.  
<http://www.wisconsinrapidstribune.com/story/money/2016/01/25/verso-cuts-payments-local-wood-suppliers/79315684/>.
- Anderson, Jonathan and Sari Lesk. "Analyst: Verso Bankruptcy Signals Dim Future." *Marshfield News Herald*. January 26, 2016.  
<http://www.marshfieldnewsherald.com/story/news/local/2016/01/26/verso-corp-files-bankruptcy/79335694/?from=global&sessionKey=&autologin=>.
- Andrikopoulos, A., J. Bronx, and E. Carvalho. "Shift-Share Analysis and the Potential for Predicting Regional Growth Patterns: Some Evidence for the Region of Quebec, Canada." *Growth and Change* 21, no. 1 (1990): 1-10.
- Bell's Twin City Directory, 1892: A Complete City Directory of Centralia*. Wausau, WI: J.R. Bellis, Jr., 1892.
- Bieder, Robert E. *Native American Communities in Wisconsin, 1600-1960: A Study of Tradition and Change*. Madison: The University of Wisconsin Press, 1995.
- Bilek, Edward M. and Paul V. Ellefson. "Employment in Minnesota's Wood-Based Industry." Department of Forest Resources, University of Minnesota, *Staff Paper Series* No. 46, September 1984.
- Borges, Marcelo J. and Susana B. Torres. "Company Towns: Concepts, Historiography, and Approaches," in *Company Towns: Labor, Space, and Power Relations Across Time and Continents*, eds. Marcelo J. Borges and Susana B. Torres, 1-40. New York: Palgrave MacMillan, 2012.
- Bowman, Francis F. *Why Wisconsin*. Madison, Wisconsin: Democrat Printing Company, 1948.

- Branch, Maurice. "The Paper Industry in the Lake States Region, 1834-1947." Ph.D. diss., University of Wisconsin-Madison, 1954.
- Brazeau, Theodore W. *Wisconsin Rapids Bridge History*. Wisconsin Rapids, WI: Bridge History Committee, 1955.
- Buehler, J. Marshall, Interview by Katie Weichelt. November 15, 2014.
- . *Looking Back: A History of Port Edwards*. Port Edwards, WI: The Village of Port Edwards, 2002.
- . *The Nekoosa Story*. Port Edwards, WI: Nekoosa Papers Inc, 1987.
- Buenker, John D. *History of Wisconsin: The Progressive Era, 1893-1914*, Vol. 4. Madison: The State Historical Society of Wisconsin, 1998.
- "Carbonic Wins Huge Contract." *Wisconsin Rapids Daily Tribune*, Vol. 14, No. 4444, January 10, 1928.
- Castree, Noel. "The Limits to Capital (1982): David Harvey," in *Key Texts in Human Geography* eds. Phil Hubbard, Rob Kitchin and Gill Valentine, 61 -70. Los Angeles, London, New Delhi, Singapore: Sage Publications, 2008.
- "Central Wis. Paper Mill Closing . . . 360 Jobs Lost." *Eau Claire Leader-Telegram*, December 8, 2010. Accessed December 12, 2011.  
[http://www.leadertelegram.com/news/daily\\_updates/article\\_76f99bfc-02fe-11e0-ba3c-001cc4c03286.html](http://www.leadertelegram.com/news/daily_updates/article_76f99bfc-02fe-11e0-ba3c-001cc4c03286.html).
- Cohen, Avi. "Technological Change as Historical Process: The Case of the U.S. Pulp and Paper Industry, 1915-1940." *Journal of Economic History* 44 (1984): 775-799.
- Collar, William E. "The Utilization of Whitney Rapids: From Sawmill to Paper Company, 1831-1908." M.A. Thesis, Wisconsin State University – La Crosse, 1967.
- "Company Tenants Are Ordered to Vacate in Thirty Days by Paper Mill." *Grand Rapids Daily Leader*, Vol. 5, No. 1585, June 26, 1919.
- "Consolidated's New Number 5, Last Word in Paper Machines Goes into Production Today." *Wisconsin Rapids Daily Tribune*, Vol. 24, No. 7541, February 7, 1938.
- "Consolidated Offer Solves Garbage Disposal Problem." *Wisconsin Rapids Daily Tribune*, Vol. 12, No. 3033, June 6, 1923.

- Content, Thomas. "Wausau Paper Being Sold to SCA." *Milwaukee Journal Sentinel*, October 13, 2015. Accessed January 3, 2016.  
<http://www.jsonline.com/business/wausau-paper-being-sold-to-sca-b99595839z1-332427802.html>.
- Crawford, Margaret. "The 'New' Company Town." *Perspecta* 30 (1999): 48-57.
- Crawford, Mary. *Building the Workingman's Paradise: The Design of American Company Towns*. New York: Verso, 1995.
- Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York and London: W.W. Norton and Company, 1991.
- Cutler, Sally. Telephone Interview by Katie Weichelt. November 5, 2015.
- Decker, A. *Grand Rapids: Descriptive of Grand Rapids, Wood County and the Wisconsin River*. Grand Rapids, 1907.
- Deffenbaugh, Shane. Interview by Katie Weichelt. December 10, 2015.
- Derleth, August. *The Wisconsin: River of a Thousand Isles*. New York and Toronto: Farrar and Rinehart Incorporated, 1942.
- Dick, Susan E. and Mandi D. Johnson. "The Smell of Money: The Pulp and Paper-Making Industry in Savannah, 1931-1947." *Georgia Historical Quarterly* 84 (2000): 308-323.
- Dressang, Joel. "Domtar Shutting Down Nekoosa Paper Machine." *Milwaukee Journal Sentinel*, March 28, 2002, 3D.
- ". "Domtar Paper Mill To Close," *Milwaukee Journal Sentinel*, December 14, 2007, 1D-2D.
- East Central Wisconsin Planning Commission. *Former NewPage Mill Property Redevelopment Strategy: Public Workshop Summaries, Results, and Recommendations*. Menasha, WI: East Central Regional Planning Commission, 2012.
- Easterling, Doug and Judith L. Millesen. "Diversifying Civic Leadership: What it Takes to Move from 'New Faces' to Adaptive Problem Solving." *National Civic Review* 101 (2012): 20-26.

- Ellis, Albert Gallatin. *Hand-Book of Stevens Point and the Upper Wisconsin: Its Character, Early Settlement, Villages, Population and General Advantages*. Stevens Point, WI: Ellis, Tracy & Swayze, Publishers, 1857.
- Embree, Marlowe, Eric Giordano, and Jim McCluskey. *Serving Dislocated Workers from the Port Edwards Paper Mill: A Return on Investment Study*. Wausau: Wisconsin Institute for Public Policy and Service, 2014.
- Engel, Dave. *The Age of Paper: Consolidation of the Water Power at Wisconsin Rapids, 1886-1904*. Wisconsin Rapids: River City Memoirs, 1986.
- . *The Fat Memoirs*. Wisconsin Rapids, WI: South Wood County Historical Corporation, 1987.
- . *River City Memoirs*. Wisconsin Rapids, WI: South Wood County Historical Corporation, 1983.
- Fones-Wolf, Elizabeth. "Industrial Recreation, the Second World War, and the Revival of Welfare Capitalism, 1934-1960." *The Business History Review* 60 (1986): 232-257.
- Fries, Robert F. *Empire in Pine: The Story of Lumbering in Wisconsin, 1830-1900*. Madison: The State Historical Society of Wisconsin, 1951.
- . "The Founding of the Lumber Industry in Wisconsin." *The Wisconsin Magazine of History* 26 (1942): 23-35.
- "George W. Mead Is Civic Leader." *Wisconsin Rapids Tribune*, Vol. 12, No. 3746, September 30, 1925.
- "Georgia-Pacific: Paper Giant to Sell Four Mills in Effort to Pay Down Debt." *Chicago Tribune*, May 1, 2001. Accessed January 24, 2016. [http://articles.chicagotribune.com/2001-05-01/business/0105010143\\_1\\_georgia-pacific-corp-georgia-pacific-group-domtar](http://articles.chicagotribune.com/2001-05-01/business/0105010143_1_georgia-pacific-corp-georgia-pacific-group-domtar).
- Georgia-Pacific: Papermaker to Sell Four Mills to Domtar," *Chicago Tribune*, June 05, 2001. Accessed January 24, 2016. [http://articles.chicagotribune.com/2001-06-05/business/0106050292\\_1\\_georgia-pacific-domtar-paper-mills](http://articles.chicagotribune.com/2001-06-05/business/0106050292_1_georgia-pacific-domtar-paper-mills).
- Gilkey, George R. "Lecture to the Northland Historical Society, 1961." Archives of the Wisconsin State Historical Society, Madison, Wisconsin.

- Glaab, Charles N. and Lawrence H. Larsen. *Factories in the Valley: Neenah-Menasha, 1870-1915*. Madison: The State Historical Society of Wisconsin, 1969.
- , "Neenah-Menasha in the 1870s: The Development of Flour Milling and Papermaking." *Wisconsin Magazine of History* 52 (1968): 19-34.
- "Glatfelter to Close Neenah Mill." *Milwaukee Business Journal*, February 22, 2006. Accessed February 26, 2016. <http://www.bizjournals.com/milwaukee/stories/2006/02/20/daily23.html>.
- Goc, Michael J. *Stewards of the Wisconsin*. Friendship, WI: New Past Press, 1993.
- Grand Rapids City Directory, 1905-1906*. Prairie du Chien, WI: Northwestern Directory Co., 1905.
- Grand Rapids City Directory, 1911*. Prairie du Chien, WI: Northwestern Directory Co., 1911.
- "Grand Rapids Has Sent Out 600 men." *Grand Rapids Daily Leader*, Vol.1, No. 1950, October 29, 1919,
- Griffin, Duane. "Wisconsin's Vegetation History and the Balancing of Nature" in *Wisconsin Land and Life*, eds. Robert C. Ostegren and Thomas R. Vale, 95-113. Madison: University of Wisconsin Press, 1997.
- Guthrie, John A. *An Economic Analysis of the Pulp and Paper Industry*. Pullman: Washington State University Press, 1972.
- Hall, Peter. *Cities of Tomorrow*, 3rd ed. Oxford: Blackwell Publishing, 2002.
- Harris, Cole. "The Historical Mind and the Practice of Geography," in *Humanistic Geography: Problems and Prospects*, eds. David Ley and Marwyn Samuels, 123-137. Chicago: Maaroufa Press, 1978.
- Harvey, David. *The Limits to Capital*. Chicago: The University of Chicago Press, 1982.
- Heinrich, Thomas. "Product Diversification in the U.S. Pulp and Paper Industry: The Case of International Paper." *Business History Review* 75 (2001): 467-505.
- Heinrich, Thomas and Bob Batchelor. *Kotex, Kleenex, Huggies: Kimberly-Clark and the Consumer Revolution in American Business*. Columbus: The Ohio State University Press, 2004.

- Herod, Andrew. "From a Geography of Labor to a Labor Geography: Labor's Spatial Fix and the Geography of Capitalism." *Antipode* 29 (1997): 1-31.
- . *Labor Geographies: Workers and the Landscapes of Capitalism*. New York and London: The Guilford Press, 2001.
- Hicks, Johnathan P. "Georgia-Pacific Expected to Win." *New York Times*, January 18, 1990. Accessed January 24, 2016.  
<http://www.nytimes.com/1990/01/18/business/market-place-georgia-pacific-expected-to-win.htm>.
- . "Nekoosa Spurns \$3.1 Billion Georgia-Pacific Offer." *New York Times*, November 14, 1989. Accessed January 24, 2016.  
<http://www.nytimes.com/1989/11/14/business/nekoosa-spurns-3.1-billion-georgia-pacific-offer.html>.
- "Historical Journey: An Interactive Timeline." *Kimberly-Clark*. Accessed February 28, 2016. <http://www.kimberly-clark.com/Timeline.aspx>.
- "History." *Stora Enso*. Accessed January 25, 2016.  
<http://www.storaenso.com/about/history>.
- "History." *Village of Combined Locks, WI*. Accessed March 3, 2014.  
<http://www.combinedlocks.org/combinedlocks/about+combined+locks/history.asp>.
- A History of the Wisconsin Paper Industry, 1848-1948*. Chicago: Howard Publishing Company, 1948.
- "Home Building Campaign for Port, Nekoosa" *Wisconsin Rapids Daily Tribune*, Vol. 15, No. 4601, July 13, 1928.
- Hudson, John C. "The Creation of Towns in Wisconsin," in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale, 197-220. Madison: University of Wisconsin Press, 1997.
- Hunter, Dard. *Papermaking: The History and Technique of an Ancient Craft*. New York: Alfred A. Knopf, 1943.
- . *Papermaking Through Eighteen Centuries*. New York: Burt Franklin, 1930.
- Encourage Representatives. Telephone Interview by Katie Weichelt. December 7, 2015.

- “iPads, China: Twin Threats to Wisconsin’s Paper Industry.” *National Public Radio*. January 06, 2013. Accessed January 6, 2016.  
<http://www.npr.org/2013/01/06/168741373/ipads-china-twin-threats-to-wisconsins-paper-industry>.
- Johnson, Shawn. “Report: Wisconsin’s Job Growth Ranked 37<sup>th</sup> in the Nation.” *Wisconsin Public Radio*, December 17, 2015. Accessed March 1, 2016.  
<http://www.wpr.org/report-wisconsins-job-growth-ranked-37th-nation>.
- Jones, George O. and Norman S. McVean. *History of Wood County*. Minneapolis: H.C. Cooper, Jr. and Company, 1923.
- Kahn, Matthew. “The Silver Lining of Rust Belt Manufacturing Decline.” *Journal of Urban Economics* 46 (1999): 360-367.
- Karges, Steven Burton. “David Clark Everest and the Marathon Paper Mills Company: A Study of a Wisconsin Entrepreneur, 1909-1931.” Ph.D. diss., University of Wisconsin-Madison, 1968.
- Karnauskas, Robert James. “The Hydrogeology of the Nepco Lake Watershed in Central Wisconsin with a Discussion of Management Implications.” M.A. thesis, University of Wisconsin-Madison, 1977.
- Kilar, Jeremy W. “Great Lakes Lumber Towns and Frontier Violence: A Comparative Study.” *Journal of Forest History* 11 (1985): 71-85.
- King, Shonda. *Evolutions of the Paper Giants: The Story of the Wisconsin River Papermakers*. Rhinelander: Explorer’s Guide Publishing, 1998.
- Klein, Alexander and Nicholas Crafts. “Making Sense of the Manufacturing Belt: Determinants of U.S. Industrial Location, 1880-1920.” *Journal of Economic Geography* 12 (2012): 775-807.
- Koo, Carolyn. “Stora Enso to Purchase Consolidated Papers.” *The Street*, February 22, 2000. Accessed October 30, 2015.  
<http://www.thestreet.com/story/887644/1/stora-enso-to-purchase-consolidated-papers.html>.
- Koulumies, Antti. *The Assumptions Behind an Acquisition: Case Stora Enso – Consolidated Papers*. Aalto, FI: Aalto University, 2010.
- Krugman, Paul. “History and Industry Location: The Case of the Manufacturing Belt.” *The American Economic Review* 81, Papers and Proceedings of the Hundred and Third Annual Meeting of the American Economic Association (1991): 80-83.

- “Labor Situation at Nekoosa-Edwards Is Nearing Danger Line.” *Grand Rapids Daily Leader*, Vol. 5, No. 1580, June 20, 1919.
- Lamaroux, Naomi R. “Entrepreneurship in the United States, 1865-1920,” in *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, eds. David S. Landes, Joel Mokyr, and William J. Baumol, 367-400. Princeton and Oxford: Princeton University Press, 2010.
- Landin, Jeff. “Paper Industry Still Strong in Wisconsin.” *Milwaukee Journal Sentinel*, June 19, 2013. Accessed September 23, 2014.  
<http://www.jsonline.com/news/opinion/paper-industry-still-strong-in-wisconsin-b9937711z1-212242941.html>.
- “Largest Employers.” *City of Neenah*. Accessed February 28, 2016.  
<http://www.ci.neenah.wi.us/business/business-climate/largest-employers/>.
- Lauck, Jon K. *The Lost Region: Toward a Revival of Midwestern History*. Iowa City: University of Iowa Press, 2013.
- Littmann, William. “Designing Obedience: The Architecture and Landscape of Welfare Capitalism, 1880-1930,” *International Labor and Working-Class History* 53 (1998): 88-114.
- “Local, State Leaders Pledge Aid in Port Edwards Mill Shutdown.” *La Crosse Tribune*, December 20, 2007. Accessed October 26, 2015.  
[http://lacrossetribune.com/news/state-and-regional/wi/local-state-leaders-pledge-aid-in-port-edwards-mill-shutdown/article\\_f18f9197-9932-5394-ba19-999e7652ce88.html](http://lacrossetribune.com/news/state-and-regional/wi/local-state-leaders-pledge-aid-in-port-edwards-mill-shutdown/article_f18f9197-9932-5394-ba19-999e7652ce88.html).
- Lockwood’s Directory of the Paper Trade*. Vol. 6. New York: Howard Lockwood, 1880.
- Lockwood’s Directory of the Paper, Stationery and Allied Trades*. Vol. 21. New York: Howard Lockwood, 1895.
- Lockwood’s Directory of the Paper, Stationery, and Allied Trades*. Vol. 31. New York: The Lockwood Trade Journal Co., 1906.
- Madden, Karen, “Erco Worldwide Proud of Community Involvement.” *Wisconsin Rapids Tribune*, September 22, 2014. Accessed January 24, 2016.  
<http://www.wisconsinrapidstribune.com/story/money/companies/pride/2014/09/22/erco-worldwide-community-mercury-membrane-process/16070773/>.

- Magee, Gary B. *Productivity and Performance in the Paper Industry: Labour, Capital, and Technology in Britain and America, 1860-1914*. Cambridge: Cambridge University Press, 1997.
- Malone, Patrick M. and Charles A. Parrott. "Greenways and the Industrial City: Parks and Promenades along the Lowell Canals." *The Journal for the Society of Industrial Archeology* 24 (1998): 19-40.
- Massey, Doreen. *Spatial Divisions of Labor: Social Structures and the Geography of Production*. New York: Methuen, 1984.
- McGaw, Judith. *Most Wonderful Machine: Mechanization and Social Change in Berkshire Paper Making, 1801-1885*. Princeton, NJ: Princeton University Press, 1987.
- Mead, George. "Reminiscence." Archives of the State Historical Society of Wisconsin, Madison, Wisconsin, 1950.
- Mead, George III and Susan Fife. Interview by Katie Weichelt. November 15, 2014.
- Meyer, David. "Midwestern Industrialization and the American Manufacturing Belt in the Nineteenth Century." *The Journal of Economic History* 49 (1989): 921-937.
- Miller, Carol D. *Niagara Falling: Globalization in a Small Town*. Lanham, Boulder, New York, Toronto, and Plymouth, UK: Lexington Books, 2007.
- Moberg, Glen. "Central Wisconsin Village Faces Financial Crisis After Closure of Paper Mill." *Wisconsin Public Radio*. June 9, 2014. Accessed July 1, 2014. <http://www.wpr.org/central-wisconsin-village-faces-financial-crisis-after-closure-paper-mill>.
- "Paper Industry Shutdowns Create Unemployment Crisis." *Wisconsin Public Radio*. February 20, 2014. Accessed July 1, 2014. <http://www.wpr.org/paper-industry-shutdowns-create-unemployment-crisis>.
- Montaba, Richard. *Fact Book: Nekoosa-Edwards Paper Company*. Chicago: Gardner, Jones, and Cowell, Inc., 1966.
- "More Junk Mail Would Help Wisconsin Paper Mills." *Today's TMJ 4*. September 15, 2011. Accessed November 29, 2011. <http://www.todaystmj4.com/news/loca/129916438.html>.

- Morser, Eric J. *Hinterland Dreams: The Political Economy of a Midwestern City*. Philadelphia: University of Pennsylvania Press, 2011.
- Mulligan, Gordon F. "Regional Analysis," in *Research Methods in Geography*, eds. Basil Gomes and John Paul Jones III, 335-353. West Sussex: Wiley-Blackwell, 2010.
- Nash, Thomas E. "Papers, 1889-1907." Archives of the Wisconsin State Historical Society, Madison, Wisconsin.
- "Nekoosa-Edwards Paper Company Records." The Archives of the Alexander House, Port Edwards, Wisconsin.
- "Nekoosa Papermakers." *Nekoosa High School*. Accessed October 21, 2011. <http://www.nekoosapapermakers.com/football>.
- Nelson, John. Telephone Interview by Katie Weichelt. November 21, 2015.
- Nelson, Steve. Telephone Interview by Katie Weichelt. November 16, 2015.
- Nesbit, Robert C. *The History of Wisconsin, Volume III: Urbanization and Industrialization, 1873-1893*. Madison: State Historical Society of Wisconsin, 1985.
- "New Block is Symbolic of City's Growth." *Wisconsin Rapids Tribune*, Vol. 12, No. 3746, September 30, 1925.
- "NewPage to Close Kimberly Mill." *Milwaukee Business Journal*, July 30, 2008. Accessed February 28, 2016. <http://www.bizjournals.com/milwaukee/stories/2008/07/28/daily36.html>.
- Norton, William. *Historical Analysis in Geography*. London and New York: Longman, 1984.
- Oden, Jack P. "Development of the Southern Pulp and Paper Industry, 1900-1970." Ph.D. diss., Mississippi State University, 1973.
- "Origins of the Southern Kraft Paper Industry, 1903-1930." *Mississippi Quarterly* 30 (1977): 565-584.
- Ohanian, Nancy Kane. *The American Pulp and Paper Industry, 1900-1940: Mill Survival, Firm Structure, and Industry Relocation*. Westport, CT: Greenwood Press, 1993.

- “One Less River to Boss: The Story of the Wisconsin River.” *Electrical World*, August 14, 1948.
- Ostergren, Robert C. “The Euro-American Settlement of Wisconsin, 1830-1920,” in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale, 137-162. Madison: University of Wisconsin Press, 1997.
- Ostergren, Robert C. and Thomas R. Vale, eds. *Wisconsin Land and Life*. Madison: University of Wisconsin Press, 1997.
- Ozanne, Robert W. *The Labor Movement in Wisconsin: A History*. Madison: Wisconsin Historical Society Press, 2011.
- Page, Brian and Richard Walker. “From Settlement to Fordism: The Agro-Industrial Revolution in the American Midwest.” *Economic Geography* 67 (1991): 281-315.
- “Paper Industry ‘Expectant’ and ‘Hopeful’- Mead.” *Wisconsin Rapids Tribune*, Vol. 25, No. 7813, December 24, 1938.
- Peterson, Jon A. “The City Beautiful Movement: Forgotten Origins and Lost Meanings,” in *Introduction to Planning History*, ed. Donald A. Krueckeberg, 40-58. New Brunswick, NJ: The Center for Urban Policy Research, 1983.
- Plummer, Paul. “Economic Geography, by the Numbers?” in *Politics and Practice in Economic Geography*, eds. Adam Tickell, Eric Sheppard, Jamie Peck, and Trevor Barnes, 199-209. Los Angeles, London, New Delhi, Singapore: Sage Publications, 2007.
- Porter, Michael E. “Clusters and the New Economics of Competition  
-----”. “Location, Competition, and Economic Development: Local Clusters in a Global Economy.” *Economic Development Quarterly* 14 (2000): 15-34.
- Post, Christopher. “Modifying Sense of Place in a Federal Company Town: Sunflower Village, Kansas, 1942-1959.” *Journal of Cultural Geography* 25, no. 2 (2008): 137-159.
- “Raise Salaries of City’s Employees.” *Grand Rapids Tribune*, Vol. 66, No. 36, February 5, 1920.
- Ranney, William F. “Pine Lumbering in Wisconsin.” *The Wisconsin Magazine of History* 19 (1935): 71-90.

- “Rapidly Progressing: Greater Grand Rapids One of the Most Prosperous Cities in the State.” *Grand Rapids Tribune*, Vol. 28, No.2, May 19, 1900.
- Rector, William. *Log Transportation in the Lake States Lumber Industry, 1840-1918*. Glendale, CA: The Arthur H. Clark Company, 1953.
- Rohe, Randall. “Lumbering: Wisconsin’s Northern Urban Frontier” in *Wisconsin Land and Life*, eds. Robert C. Ostergren and Thomas R. Vale, 221-240. Madison: University of Wisconsin Press, 1997.
- . “Settlement Patterns of Logging Camps in the Great Lakes Region.” *Journal of Cultural Geography* 6, no. 1 (1985): 79-107.
- Ryan, Kelly. “A Celebration of American Philanthropy: Kelly Ryan’s Big Bet,” Speech to the Rockefeller Foundation. Accessed January 15, 2016.  
<https://www.youtube.com/watch?v=I4KJbWdMUqY>
- Sanborn-Perris Map Co. *Grand Rapids and Centralia, 1884*. Scale 1:44. Wisconsin State Historical Society.  
<http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5231/rec/3>. Accessed October 26, 2015.
- . *Grand Rapids and Centralia, 1891*. Scale 1:600. Wisconsin State Historical Society.  
<http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5239/rec/4>. Accessed September 3, 2015.
- . *Grand Rapids and Centralia, 1895*. Scale 1:600. Wisconsin State Historical Society.  
<http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5214/rec/2>. Accessed September 3, 2015.
- . *Grand Rapids and Nekoosa, 1902*. Scale 1:600. Wisconsin State Historical Society.  
<http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/5525/rec/5>. Accessed September 3, 2015.
- . *Nekoosa, 1909*. Scale 1:600. Wisconsin State Historical Society.  
<http://content.wisconsinhistory.org/cdm/compoundobject/collection/maps/id/8661/rec/3>. Accessed September 3, 2015.

- Schein, Richard H. "Cultural Landscapes," in *Research Methods in Geography*, eds. Basil Gomes and John Paul Jones III, 222-240. West Sussex: Wiley-Blackwell, 2010.
- Schmid, John. "China Becoming Mighty Oak of World's Paper Industry." *Los Angeles Times*, December 28, 2012. Accessed October 30, 2015.  
<http://articles.latimes.com/2012/dec/28/business/la-fi-china-paper-industry-20121228>>
- , "NewPage Corp. Completes Sale of Three Wisconsin Paper Mills." *Milwaukee Journal Sentinel*, January 8, 2015. Accessed January 13, 2015.  
<http://www.jsonline.com/business/newpage-corp-completes-sale-of-3-wisconsin-paper-mills-b99422553z1-287999451.html>.
- , Interview with Jacki Lyden, "All Things Considered." *National Public Radio*, January 08, 2013. Accessed September 20, 2014. <http://npr.org>.
- Severson Jr., Robert F. "The American Manufacturing Frontier, 1870-1940." *Business History Review* 34 (1960): 356-372.
- Siegler, Melissa. "New Port Edwards Business Park to Create 800 Jobs." *Wisconsin Rapids Tribune*, June 15, 2015. Accessed January 24, 2016.  
<http://www.wisconsinrapidstribune.com/story/news/local/2015/06/15/new-port-edwards-business-park-create-jobs/71254444/>.
- Shurmer-Smith, Pamela. "The Trouble with Theory," in *Doing Cultural Geography*, ed. Pamela Shurmer-Smith, 11-19. London, Thousand Oaks, New Delhi: Sage Publications, 2002.
- Smith, David C. *History of Papermaking in the United States, 1691-1969*. New York: Lockwood Publishing Company, 1970.
- Smith, Neil. *Uneven Development: Nature, Capital and the Production of Space*. Oxford and New York: Basil Blackwell, 1984.
- Snyder, Van Vechten & Co. *Cities of Centralia & Grand Rapids*. 1878. Scale 1:144. McMillan Memorial Library, Wisconsin Rapids.  
<http://content.mpl.org/cdm/ref/collection/mcml/id/2193>. Accessed October 31, 2015.
- Standard Atlas of Wood County, Wisconsin*. Chicago: Geo. A. Ogle and Co., 1909.

- Standard Atlas of Wood County, Wisconsin*. Chicago: Geo. A. Ogle and Co., 1928.
- Storper, Michael and Richard Walker. *The Capitalist Imperative: Territory, Technology, and Growth*. Oxford and New York: Basil Blackwell, 1989.
- “Summarized Report of the Civics Committee of the City Federation of Women’s Club, Grand Rapids. April 2, 1909.” *Grand Rapids Tribune*, Vol. 35, No. 49, April 07, 1909.
- Summers, Gregory. *Consuming Nature: Environmentalism in the Fox River Valley, 1850-1950*. Lawrence: University Press of Kansas, 2006.
- Taylor, Pete. Telephone Interview by Katie Weichelt. November 13, 2015.
- Thomas, Richard. “Wisconsin Paper Industry Survives, Hardly Unscathed.” *Business North.com*, February 4, 2009. Accessed December 13, 2011.  
<http://www.businessnorth.com/viewarticle.asp?articleid=2845>.
- Toivanen, Hannes. “Learning and Corporate Strategy: The Dynamic Evolution of the Pulp and Paper.” Ph.D. diss., Georgia Institute of Technology, 2004.
- “Trouble Here May Tie up Other Mills,” *Grand Rapids Daily Leader*, Vol. 4, No. 1518, April 7, 1919.
- Urban, Roy and Max Andrea, *Consolidated Water Power Company: One Hundred Years of Water Power*. Wisconsin Rapids, WI: Consolidated Papers International, 1994.
- U.S. Census Bureau. *Manufacturers*. 1919 (Wisconsin): Table 9. Washington D.C: Government Printing Office, 1923.
- . *Report on Manufacturing Industries in the United States*. 1890 (Wisconsin): Table 6. Washington D.C.: Government Printing Office, 1895.
- . *U.S. Economic Census*. 1997. *Wisconsin: Manufacturing Geographic Area Series*. EC97M31A-WI. Washington D.C.: Government Printing Office, 1997.
- . *U.S. Economic Census*. 2002. Table EC0231A1, generated by Katie Weichelt; using American FactFinder; Accessed February 28, 2016.  
[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table).
- . *U.S. Economic Census*. 2012. Table EC1200A1, generated by Katie Weichelt; using American FactFinder; Accessed February 29, 2016.

- [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_00A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_00A1&prodType=table).
- , *U. S. Economic Census*. 2012. Table EC1231A1, generated by Katie Weichelt; using American FactFinder; Accessed February 28, 2016.  
[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2012\\_US\\_31A1&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31A1&prodType=table).
- “U.S. Printing-Writing Paper Shipments Down in August.” *PaperAge*, September 22, 2011. Accessed November 29, 2011.  
[http://www.paperage.com/2011news/09\\_22\\_2011printing\\_writing\\_afpa.html](http://www.paperage.com/2011news/09_22_2011printing_writing_afpa.html).
- Vandewalle & Associates, “The Economic Importance of the Highway 54 Realignment for Port Edwards & the Tri-cities Region: A Key to Connecting the Region, Repositioning the Paper Industry, Unleashing the Bio-Economy, and Creating Green Job Growth in central Wisconsin.” (Unpublished report: 2009).
- Versatile Nekoosa*. Port Edwards, WI: Nekoosa-Edwards Paper Company, 1966.
- Vogeler, Ingolf. *Wisconsin: A Geography*. Boulder and London: Westview Press, 1986.
- Walker, Lawrence C. *The North American Forests: Geography, Ecology, and Silviculture*. Boca Raton, London, New York, and Washington, D.C.: CRC Press, 1999.
- Walker, Richard A. “The Geography of Production,” in *A Companion to Economic Geography*, eds. Eric Sheppard and Trevor J. Barnes, 113-132. Oxford, UK: Blackwell Publishing, 2000.
- Walsh, Margaret. *The Manufacturing Frontier: Pioneer Industry in Antebellum Wisconsin, 1830-1860*. Madison: State Historical Society of Wisconsin, 1972.
- Warf, Barney. “Regional Transformation, Everyday Life, and Pacific Northwest Lumber Production.” *Annals of the Association of American Geographers* 78 (1988): 326-346.
- Weeks, Lyman Horace. *History of Paper Manufacturing in the United States, 1690-1916*. New York: Burt Franklin, 1916.
- “Welcome to Nekoosa.” *City of Nekoosa*. Accessed June 3, 2015. <http://nekoosawi.com/>.
- “What the City Offers.” *Grand Rapids Tribune*, Vol. 41, No. 1, June 10, 1914.

- Will, Benjamin. Email Correspondence with Katie Weichelt. November 09, 2015.
- Williams, Michael. *Americans and Their Forests: A Historical Geography*. Cambridge: Cambridge University Press, 1989.
- . "Clearing the Forests," in *The Making of the American Landscape*, ed. Michael Conzen, 2<sup>nd</sup> ed, 162-187. New York and London: Routledge, Taylor & Francis, 2010.
- Wisconsin Paper Council. *The State of Wisconsin's Paper Industry*. Report, Appleton: Wisconsin Paper Council, 2003.
- Wisconsin State Employment Service. *Basic Statement for Wisconsin Rapids*. Madison: Wisconsin State Employment Service, 1962.
- Wisconsin State Employment Service. *Basic Statement for Wisconsin Rapids*. Madison: Wisconsin State Employment Service, 1968.
- "The Wisconsin Story." *Milwaukee Journal Sentinel*, December 8, 2012. Accessed January 3, 2016. <http://www.jsonline.com/business/paper-industry-digital-china-wisconsin-181832171.html#timeline>.
- Wisconsin Valley Improvement Company: A Record of its Organization, its Articles of Incorporation and By-Laws, the Law Enacted for its Government. A Statement of its Purposes*. Wausau: Record-Herald Co., 1908.
- Wishart, David J. "The Selectivity of Historical Representation." *Journal of Historical Geography* 23 (1997): 111-118.
- "Wood County's Four Great Mills Big Producers." *Wisconsin Rapids Tribune*, Vol. 12, No. 3746, September 30, 1925.
- "Wood County Treasurer." *Wood County, Wisconsin*. Accessed January 25, 2016. <http://www.co.wood.wi.us/Departments/Treasurer/TaxPublic/SearchTaxBill.aspx>.
- Worster, Donald. *Rivers of Empire: Water, Aridity, and the Growth of the American West*. New York: Pantheon Books, 1985.
- Wyman, Mark. *The Wisconsin Frontier*. Bloomington and Indianapolis: Indiana University Press, 1998.
- Yawkey, Cyrus Carpenter and Aytchmonde Perin Woodson Papers, 1887-1957. Wausau Area Research Center, Wisconsin State Historical Society.

Zahavi, Gerald. "Negotiated Loyalty: Welfare Capitalism and the Shoeworkers of Endicott Johnson, 1920-1940." *The Journal of American History* 70 (1983): 602-620.

## Appendix A:

### Table of Interviewees

<b>Name</b>	<b>Position/Location</b>	<b>Method of Interview</b>	<b>Date of Interview</b>
Anonymous	Former Consolidated and Stora Enso employee; Wisconsin Rapids, Wisconsin	Phone	November 10, 2015
Anonymous residents (N=6)	Wisconsin Rapids, Port Edwards, and Nekoosa, Wisconsin	In-person	October 24, 2015
J. Marshall Buehler	Former Nekoosa-Edwards employee; resident of Port Edwards, Wisconsin	In-person	November 15, 2014
Sally Cutler	Former Communications	Phone	November 5, 2015
Shane Deffenbaugh	Former resident of Nekoosa, Wisconsin	In-person	December 17, 2015
Incourage Foundation Representatives (N=5)	Staff members for Incourage Foundation; Wisconsin Rapids, Wisconsin	Phone	December 7, 2015
John Nelson	Former Consolidated and Stora Enso employee; former resident of Port Edwards, Wisconsin	Phone	November 21, 2015
Steve Nelson	Paper industry employee, resident of Wisconsin Rapids, Wisconsin	Phone	November 16, 2015
Pete Taylor	Former Stora Enso employee; resident of Wisconsin Rapids, Wisconsin	Phone	November 13, 2015
George Mead and Susan Fife	Former CEO of Consolidated and spouse; Wisconsin Rapids, Wisconsin	In-person	November 15, 2015
Benjamin Will	Former teacher for Port Edwards School District	Email	November 09, 2015