Nationally, Americans had been making beer since the colonial era, but production took off in the mid-1800s, and the number of breweries increased around the country. After pasteurization was perfected in 1875, bottled beer became popular and beer bottling a common industry. By 1900 refrigerated railcars allowed brewers to distribute their beer widely.[44]

In Minnesota, brewing began in St. Paul, and St. Paul would dominate the state's beer production. Most St. Paul brewers were German immigrants who started their businesses soon after arriving. One of these immigrants, Anthony Yoerg, opened the first brewery in St. Paul in 1848 (a year before Minnesota became a territory). Although he initially located on the east side of downtown, in 1871, Yoerg moved his brewery to the west side bluffs at Ohio Street, two blocks south of what is Water Street today. Here he built a large stone brewery and excavated nearly a mile of caves for cooling his beer.

Determined to become a major brewer, he designed a

FIGURE 8. *Cattle pen, South St. Paul Stockyards, 1930. Photo by Peter Schawang. Minnesota Historical Society. By this time, four of the nation's five leading meat-packing companies had lcoated at the stockyards.*

steam-powered plant capable of producing 50 barrels per day. He was selling 20,000 barrels per year by 1881 and 35,000 by 1891, making him one of the state's largest brewers. Using the label "Yoerg's Cave Aged Beer," Yoerg's successors kept the business going through all the depressions and through Prohibition (1919 to 1933). Not until 1952 did the brewery close. The only remains as of 1981 were the brewery's cave and foundation at the bottom of Ohio Street.[45]

In 1853 Martin Bruggermann established what was probably the second brewery in St. Paul, in a house near the intersection of Smith and Kellogg Boulevard. After the brewery burned, he moved to Sixth and Pleasant, where he built a stone building. Then, in 1872, he moved to the west side bluffs near Wabasha Street, just 150 yards from Yoerg. For more than 25 years he made beer at this site and stored it in caves excavated into the bluff. In 1900 he sold the brewery, and in 1905 it closed. As with Yoerg's brewery, the principal remnants of Bruggermann's plant are the caves.[46]

Another brewery, called the North Mississippi Company, opened in 1853. Built on top of the bluffs near present-day Shepard Road and Drake Street in the West Seventh Street neighborhood, it was destroyed by fire. Frederick and William Banholzer reconstructed it, and made it into one of the more successful breweries in St. Paul by the 1880s. The Banholzers dug caves that extended a half-mile deep and had many chambers. But within a year after William died, in 1897, the business closed.[47]

Three more breweries opened in St. Paul in 1855, two of which would give birth to the state's largest breweries and to nationally recognized beers. Until purchased by Frederick Emmert in 1866, the City Brewery, near Eagle and Exchange Streets in Uppertown, remained a small operation. By the 1880s, however, Emmert built it into a well-known brewery capable of producing 6,000 barrels per year. He used a nearby sandstone hill for storage. Emmert died in 1889 and left the business to his sons. They had different interests, however, and sold the brewery to Theodore Hamm in 1901. Happy to be rid of a competitor, Hamm used the old brewery for storage.[48]

Hamm began his career at Phalen Creek. The creek, with its sandstone cliffs and once fresh water, became home to at least four breweries. One of the four, the Pittsburgh Brewery, started in 1860 by Andrew T. Keller, was on the east bank, at the intersection of Greenbrier and Minnehaha. Four years later Keller sold it to Hamm, who would make it into the largest brewery west of Chicago. By 1878 Hamm had boosted production from 500 barrels per year to 5,000. By 1882 the plant's output had jumped to 26,000 barrels. In 1903, after his father's death, William Hamm ran the brewery until his own death in 1931. Under William Hamm, the brewery became a national leader.[49]

Christopher Stahlman, who opened his Cave Brewery on July 5, 1855, excavated one of the most elaborate storage systems on the river. Locating his brewery on Fort Road, at the far west end of the city at that time, he excavated three levels of caves a mile deep into the sandstone bluffs. Having come to St. Paul with only a few dollars, he created what would become, from at least 1876 to 1879, the largest brewery in the state. By the mid-1880s he was producing 40,000 barrels per year but had fallen behind Hamm and others. Stahlman died of tuberculosis in 1883, and by 1894 all three sons, who had taken over the business, succumbed to it as well. As a result, the brewery went bankrupt in 1897. Another firm owned it for three years, and then the Jacob Schmidt Company–formerly the North Star Brewery–bought it in 1900.[50]

Schmidt did not found the North Star Brewery but would make it into a nationally recognized company. The North Star Brewery was the third company to begin in 1855. Two men, named Drewery and Scotten, opened it in two small buildings and used a cave at Daytons Bluff. In 1879 Reinhold Koch took control and built the company into the second largest brewery west of Chicago by the 1880s, but in 1884 Schmidt bought out Koch. Fifteen years later Schmidt changed the name to the Jacob Schmidt Brewing Company. When the plant burned in 1900, Schmidt moved to the Stahlman facility, which he completely renovated and expanded. The new brewery could produce

200,000 barrels per year. Jacob Schmidt died in 1911 and left the business to his daughter, Maria, and his son-in-law, Adolph Bremer. Bremer's brother, Otto, an executive with the National German American Bank of St. Paul, joined the company shortly after. When Adolf died in 1939, Otto ran the company until 1951 and then sold it to the Pfeiffer Brewing Company. Other breweries existed in St. Paul at various times, but those discussed above were among the most important.[51]

Minneapolis had a dozen breweries near the riverfront by the late nineteenth century. Built in 1850, John Orth's brewery was the first and was located where the old Grain Belt Brewery now stands. By 1880 Minneapolis counted four breweries. Two operated on the west side river flats, or Bohemian Flats, near the University of Minnesota's West Bank. "These two breweries," says archaeologist Scott Anfinson, "dominated the landscape of the river flats into the early twentieth century." Both employed people living in Bohemian Flats. Orth's Brewery and the Germania

Brewery were the other two breweries in Minneapolis. In 1891 the four companies merged to form the Minneapolis Brewing and Malting Company, which the next year built the Grain Belt Brewery.[52] *(Figure 9)*

Prohibition and consolidation led to a dramatic decline in the number of breweries in Minnesota. In 1900 the state had 50 fewer breweries than it did 20 years earlier, and by the start of Prohibition in 1919, only 51 breweries remained (down from the 112 in 1887). The Steffan-Kuenzel Brewery in Hastings became a casualty of Prohibition. Founded in 1885 on Ramsey Street on the levee, it operated up to 1919. The brewers who survived Prohibition did so by bottling pop and other drinks.[53]

Brewing sites are important for the local and national stories they represent. The history of brewing involves the stories of early immigrants, particularly Germans, and how their ethnic origins influenced the development of beer making. This history leads into the political and social aspects of Prohibition nationally and locally. Many German immigrants chose the Democratic Party for its stance against Prohibition. Caves that once stored beer became hideouts for illicit clubs, defying Prohibition.
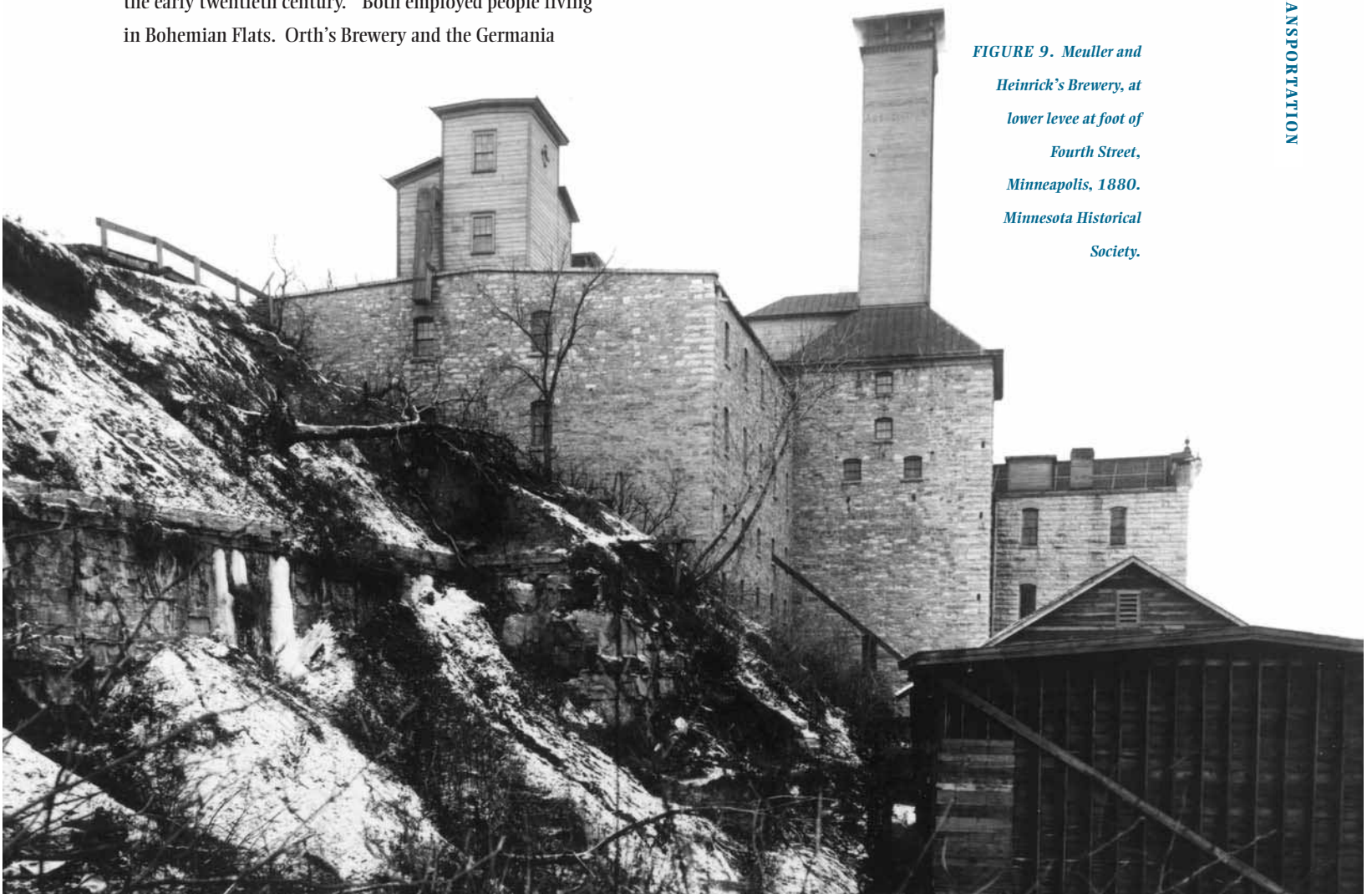

FIGURE 9. Meuller and Heinrick's Brewery, at lower levee at foot of Fourth Street, Minneapolis, 1880. Minnesota Historical Society.

Although little has been written about it, natural and human-made caves also have been used to store cheese and grow mushrooms. The cool, dark cave climate was ideal for both of these products, as well as beer.[54]

Transportation and Economic Development

Transportation modes often determined the nature and extent of business development in the MNRRA corridor and the relationship of the river's communities to the Mississippi River. Fur traders used canoes, piroques and keelboats and depended upon the Mississippi and its tributaries to receive their trade goods and take furs out. The craft traveled almost as easily above the St. Anthony Falls as below it. Fur traders located their posts near the river, to limit how far they had to carry their goods and furs. As cities in the area grew and as the area's transportation system evolved, new transportation systems replaced the river and fewer and fewer people considered the Mississippi central to their lives.

Steamboats maintained the corridor's tie to the river. Although few in number, steamboats plied the river above the falls. By the summer of 1849, an American Fur Company steamboat worked above falls. It made several trips delivering flour to the company's post upriver but also carried passengers and supplies. In May of 1850, another steamboat, the *Governor Ramsey*, completed a voyage to Sauk Rapids. Possibly on this voyage, the steamer carried settlers to Itasca Village (later Ramsey), which would establish a steamboat landing. In 1855 low water stranded the steamboat *H. M. Rice* at Anoka, and the town temporarily used it for church services.[55]

Railroads replaced steamboats more quickly above the falls than below. By 1881 steamboat navigation above the falls had become irregular, at best. This was undoubtedly because the river above the falls was often shallow and received little navigation improvement work. And other than Minneapolis, steamers operating above the falls did not have access to large ports from which to acquire and deliver

passengers and freight, which were essential if steamboats hoped to compete with railroads. While some steamboats may have paddled on the river above St. Anthony after 1881, not many did so and they did not last long.[56]

Ferries • Even after railroads expanded through the MNRRA corridor, ferries provided the primary way across the Mississippi River until bridges were built. Entrepreneurs began operating ferries at the earliest settlements. Lt. E. K. Smith's map of the Ft. Snelling area in 1837 and 1838 shows Brown's Ferry running from Camp Coldwater to Brown's grog shop across the river. In the fall of 1848 or spring of 1849, Antoine Robert, who owned the fur trade post at the mouth of the Rum River, established a rowboat ferry at Anoka. Antoine's brother, Louis Robert, later acquired the Rum River post and began running a swing

Wabasha Street Bridge opened. John Goodspeed started a ferry at Fridley by 1854, and the Truax and Anderson ferry ran from 1883 to 1887 at St. Paul Park. In the latter year, the Rock Island Railway Company built a combined railroad and pedestrian bridge over the Mississippi at St. Paul Park, ending the ferry's service.[57]

Ferries at both ends of the MNRRA corridor lasted up to the end of nineteenth century. One of the earliest and longest lasting ferries operated at Hastings. Started in 1854 by William Felton, it brought Wisconsin farmers and their produce to the growing storage and shipping facilities at Hastings. The ferry remained active until the Spiral Bridge was built in 1895. One of the last ferries in the MNRRA corridor may have been at Dayton. It is the only ferry indicated on the Mississippi River Commission map that includes Dayton, which dates to 1898. Ferries helped prolong direct contact with the river, but the increasing number of roads and railroads would begin drawing people away.[58] (Figure 10)

Roads • The U.S. government built the first wagon road through the MNRRA corridor, after Congress approved $40,000 for military roads in the Minnesota Territory in about 1850. One road, which ran from Point Douglas, at the St. Croix River's mouth, along the east bank to Fort Ripley, received $10,000. The road traveled the entire length of the MNRRA corridor. James Simpson conducted the survey for The Military Road, as most people called it, in 1851, and the federal government started construction the next year. In 1852 the builders pushed the road to Itasca Village (Ramsey). The Red River Oxcarts quickly employed it in their journey between the Twin Cities and the Red River Valley. In 1855 some 300 oxcarts passed over the road on their way to St. Paul. Other military roads constructed in the 1850s included the Mendota–Wabasha Road (St. Paul to La Crosse Road) and the Ellis and Hastings Road.[59]

The Topographical Engineers, a branch that temporarily split from the Corps of Engineers in 1831, surveyed and built the military roads. To cross streams and rivers, they

FIGURE 10. *Point Douglas Ferry, about four miles south of Hastings, 1902. Minnesota Historical Society. This was one of the earliest and longest running ferries in the MNRRA corridor.*

ferry big enough to carry a team of horses or oxen across the Rum. One of his largest customers was Borup & Oakes, who sent their Red River Oxcart supply trains across the river. On September 11, 1855, the Elm Creek and Anoka Ferry Company made its first trip.

Several well-known Minnesota pioneers received grants to run ferries in St. Paul in 1850. James M. and Isaac N. Goodhue acquired charters to run a ferry at the lower landing, and John R. Irvine won a charter to operate one from the upper landing. Daniel F. Brawley also received a charter to operate a ferry from the upper levee to West St. Paul in 1852. The ferries plied the river until 1859, when the

erected some of the first bridges in the MNRRA corridor. In 1852 they built bridges over Coon and Rice Creeks and one over the Rum River at the current location of the Main Street Bridge in Anoka. As soon as the government made the crossing site known, plans for the town began.[60] At Cottage Grove, the military road also influenced the development of the town. "Old Cottage Grove Village," states Vogel, "grew up where the Military Road crossed the trail leading from Grey Cloud Island to Stillwater."[61] The government erected the first bridge across the Vermillion River, a covered bridge, in 1856. The bridge remained in use until 1888 and was replaced in 1898.[62]

Roads and bridges began the process of taking people away from the Mississippi River. While the early roads paralleled the river, they were often far enough back that the sights and sounds of the river faded. Hotels and stores began locating along the roads, not the river. Bridges carried people over the river; no longer did they have to get down by it so they could touch and smell it.

Railroads • Railroads transformed the MNRRA corridor and its inhabitants' relationship to the Mississippi most dramatically. Railroad development in Minnesota provides a good example of the speed and coverage with which railroads expanded in the Midwest. On June 28, 1862, crowded with local dignitaries, Minnesota's the first train steamed along the first railroad from St. Paul to St. Anthony. Only a year and one-half later, on December 6, the St. Paul and Pacific reached Fridley and six days later Anoka. By the end of the Civil War, railroads had laid tracks from Minneapolis 50 miles southward toward Fairbault. By the beginning of the next decade, lines extended outward from Minneapolis some 65 miles northwest to St. Cloud and more than 125 miles to west Benson. A line begun in 1868 and completed in 1870 connected the Twin Cities and Duluth, providing another outlet to the Atlantic Ocean. Railroads made two important connections with Chicago. In 1868 the Milwaukee and St. Paul completed a line from Chicago through Prairie du Chien and southern Minnesota to the

Twin Cities, and in 1870 the Minnesota Central Railway Company opened a line also running through southern Minnesota connecting the Twin Cities with Chicago via a line through Iowa.[63]

By 1900 railroads linked the Twin Cities to much of Minnesota and most of the nation. Two transcontinental lines crossed Minnesota before 1900. On September 8, 1888, the Northern Pacific finished the first transcontinental railroad, running through Minnesota from Moorhead to the Twin Cities. In June 1893 the St. Paul, Minneapolis and Manitoba opened the second transcontinental railroad. The new railroad connected Minneapolis and St. Paul to Seattle, Great Falls, Grand Forks, and other cities.[64]

The 1895 and 1898 Mississippi River Commission maps clearly reveal the extent to which railroads had taken over lands near the river in St. Paul and Minneapolis. From Minneapolis north to Ramsey, the Northern Pacific and the Great Northern Railroads ran parallel to each other along the east side. The railroad tracks lay, for the most part, outside the MNRRA corridor. On the west side, from the mouth of Shingle Creek in north Minneapolis up to Dayton, no railroads ran near the river. Beginning in north Minneapolis, however, railroads began to converge on the milling district. They included the St. Paul and Duluth; Minneapolis, St. Paul and Sault Ste. Marie; Great Northern; Northern Pacific; and Chicago, Milwaukee, and St. Paul (short line). Large railroad yards lay on the west side just above Nicollet Island and across from the Lower Lock and Dam. The railroad lines dispersed below St. Anthony but converged again in St. Paul. The railroads crowding into St. Paul included the Chicago, Burlington & Northern; Chicago, Milwaukee & St. Paul; Chicago Great Western; and Chicago, St. Paul, Minneapolis & Omaha. Near the mouth of Phalen Creek, a huge railroad yard occupied the creek's former valley.

Downriver from St. Paul, the railroads fanned out. The Chicago Great Western Railroad crossed under the Robert Street Bridge, over the Mississippi and ran below the west side bluffs past South St. Paul, until coursing away from the river to the west above Pine Bend. The Chicago, Milwaukee,

and St. Paul and the Chicago, Burlington & Northern railroads left the railyard in downtown St. Paul, side by side, until diverging at Newport. The Chicago, Burlington & Northern continued along the east side bluff. The two railroads converged again several miles above Hastings. But opposite Hastings, the Chicago, Milwaukee, and St. Paul crossed into the city and headed downriver on the west side. The Chicago, Burlington & Northern continued down the west as well. From the Minnesota River into St. Paul and then downriver to Hastings, railroads that ran in the floodplain and near the bluffs were in what is now the MNRRA corridor. Overall, railroads altered the corridor's physical character little outside the milling district and downtown St. Paul.[65]

Railroads quickly undermined the river's importance for transportation. Towns began growing up around their rail connections rather than their tie to the river. Symbolic of this change, Fridley is named Fridley Park Station on the 1898 Mississippi River Commission map and was immediately adjacent to the Great Northern and Northern Pacific Railroad.[66]

Paul Hesterman, in "The Mississippi and St. Paul," provides the most comprehensive description of railroad expansion and its impact on the economy of a city in the MNRRA corridor. He also examines the effect of railroads on the city's landscape and its relationship to the river. Overall, Hesterman offers a model that could be used for other cities in the corridor.[67]

St. Paul, like most cities, encouraged and promoted railroad development, which hastened the river's demise as a central element in the city's success and identity. St. Paul sold bonds to subsidize early rail development. As railroads filled in the floodplain and located their tracks and stations there, warehouse and transfer businesses quickly followed. Facilities built by James J. Hill and steamboat magnate Commodore William Davidson relied on steamboat traffic, but as railroads captured the passengers and commodities once carried on steamboats, the warehouses, transfer buildings and other businesses located along the railroads had little to do with the river.

Between 1875 and 1920, St. Paul became a "Rail City." Railroads and the facilities and businesses built to accommodate them dominated riverfront development. "Rails," Hesterman asserts, "dictated industrial location, and industrial development within the river valley often had more to do with the railroads than the river."[68] The same held for commercial development. "By 1920," Hesterman concludes, "the river probably was less important to St. Paul than at any time before or since. . . . the riverfront that once had been the vibrant heart of the city had become the back alley of rail depots and rail-oriented industries, crowded by trackage, inaccessible and undesirable. Pollution made the river itself offensive to the eye and nose."[69] To varying degrees, the same can be said for many towns in the corridor.

Railroads took over the floodplain in St. Paul, because of the floodplain's low, even grade. Railroads began building into the wetland created by the mouths of Phalen Creek and Trout Brook as early as the 1860s, where nearly 200 years earlier the Dakota had landed with Hennepin and his French companions. Railroads steadily filled in the wetland and pushed the Mississippi riverbank outward. They cut back Daytons Bluff to make more room for tracks, destroying much of Carver's Cave. The lower landing became a railroad terminal, and the Union Depot was built and rebuilt in 1880, 1884 and 1915. The Minnesota Valley Railroad laid tracks in the floodplain at the upper landing and businesses began building around it. Between the upper and lower landing, the bluff bulged out toward the river, separating the two. So the railroads cut the bluff back and filled in toward the river. Other railroads built up and down the valley, filling more of the floodplain and further shaving back the bluffs.[70] *(Figure 11)*

Overall, some of the most dramatic landscape changes in the MNRRA corridor have occurred at St. Paul. By the early 1900s, railroads had already altered the old riverbed, the bluffs, and the original streams that flowed into the Mississippi. During the 1920s and 1930s, the city began developing Holman Field on Lamprey Lake, which had been

one of the river's largest backwaters in the metropolitan area. Although the field still floods during high water, the ecosystem qualities have largely disappeared. A high levee system has barred the river from the rest of its floodplain across from downtown St. Paul. The city built Shepard and Warner Roads out into the riverbed, continuing the process begun by early railroads and settlers. And St. Paul constantly supported business development in the floodplain. Public subsidies, as much as economic demand, Hesterman asserts, are responsible for the development of the St. Paul riverfront. Economic interests, he stresses, had used the city government as a tool to transform the riverfront since the city's beginnings, and not just downtown. The city, for example, persuaded the Ford Motor Company to locate above Lock and Dam No. 1 by yielding its claim to hydro-electric power to the company.[71]

The completion of Lock and Dam No. 2 at Hastings, followed by the opening of the entire nine-foot channel below St. Paul in 1940, also transformed the city's landscape. While railroads had kicked river-related activities out of the St. Paul riverfront, the 9-foot channel brought

FIGURE 11. *Railroads and low water undermined the Mississippi River as a commercial navigation route before locks and dams. Taken in 1931, this photograph captures the river immediately prior to the flooding of Pool 2. Photo by St. Paul Daily News. Minnesota Historical Society.*

them back. Large terminals, like Terminal No. 1, Red Rock and Southport, have restored St. Paul's navigation heritage. Barge fleeting and repair operations along the downtown riverbanks clearly characterize St. Paul as a river town in ways that harken back to the steamboat days.[72]

Streetcars to Cars and Trucks • Commuter trains, streetcars and trolleys began running through the MNRRA corridor in the early twentieth century, redefining the spatial relationship between work and home and between people and the river. They promoted urban and suburban expansion away from central cities and away from the river. Businesses and neighborhoods began locating along the lines.

By the early 1900s, the Twin Cities possessed "One of the nations' model streetcar systems . . . "[73] The Lower Hydro Station below St. Anthony Falls, completed in 1897, helped this happen, by providing electricity to the streetcars of the Twin City Rapid Transit Company. In 1913 a streetcar company completed tracks up to the Coon Rapids Dam, supplying workers and materials for the dam's construction. Although the cars initially ran on gas engines, by 1914 the company converted to electricity and pushed the line to Anoka. The streetcars ran regularly until about 1939. Also in 1914, the St. Paul Southern Electric Railway completed tracks to Hastings. The train ran from Hastings, through Pine Bend and Inver Grove, to St. Paul in about an hour. By the 1920s, however, cars and trucks began replacing streetcars, horses, buggies, and wagons. As World War II started, only the Twin Cities still operated their streetcars.[74]

Cars and trucks accelerated urban and suburban expansion away from the river. The Great Depression delayed the impact of automobiles, but when a new economic boom began in 1946, most households acquired cars. Automobile registrations grew from some 2,500 in 1905 to about 747,000 in 1940 and 2.4 million in 1983. After 1950 the suburbs and businesses outside the city center began to mature. Between 1920 and 1970 the urban population grew from about 840,000 to nearly two million. By 1980 an 800-square-mile outer city surrounded the pre-1920

metropolis, which had covered about 50 square miles. The metropolitan area's growing population and surging reliance on cars and trucks meant the road system had to expand dramatically. Freeway construction began in the 1950s. Once the focus of the area's residents, the river had become lost in a landscape it gave birth to. As the metropolitan population grew, houses, businesses and roads crept into more and more of the land within the MNRRA corridor. Less and less land remained or appeared natural.[75]

Bridges • As communities in the MNRRA corridor expanded on the early military roads and as railroads pushed lines through the valley, a growing number of bridges spanned the Mississippi River. Bridges changed the flow of traffic and commerce for the communities they connected and influenced the transportation patterns, demography and economy of the area.

The Mississippi River Commission maps show the nature and extent of bridges across the Mississippi by the end of the nineteenth century. Bridges followed the settlement pattern. From the Minneapolis city limits down to St. Paul, 20 bridges stitched the riverbanks together, equally divided between railroad and wagon bridges. From north to south, the wagon bridges included those at Twentieth, Plymouth, Hennepin, Tenth, Washington, Franklin, Lake, Smith (High), Wabasha and Robert. The railroad bridges served a number of different lines.

Only three bridges crossed the Mississippi below the Robert Street Bridge down to Hastings. An 1887 railroad swing bridge crossed from near Inver Grove Heights to just below Newport. This bridge also served pedestrians. The remaining two bridges jumped the river at Hastings. One was a railroad bridge and the other the famous spiral bridge.[76]

No bridges spanned the Mississippi River between the Twentieth Avenue Bridge in Minneapolis and the Ferry Street Bridge in Anoka *(Figure 12)*. As the Ferry Street Bridge is at about river mile 871.5 and the Twentieth Avenue Bridge is near river mile 855.5, no bridge was available for a distance of some 16 miles. Above Anoka, only

the ferry at Ramsey provided a way across the Mississippi.[77] People in Minneapolis and St. Paul did not have to travel far to cross the river, although going on foot, by horse or in a wagon was not so quick as today. Above or below the Twin Cities, they had a long journey, unless they lived near one of the few bridges in these reaches.

Residents of Nininger devised one of the most creative bridges. According to the *Emigrant Aid Journal* of February 10, 1858, men from the town cut out a slab of ice nearly one-half acre in size and floated it down to their crossing site, where they lodged it against opposing banks. The bridge allowed loggers to cut wood on an island near Nininger and stack it along the bank to sell to steamboats the next spring.[78]

Many bridges merit individual discussion and are National Register listed or eligible. Many are gone, like the Hastings Spiral Bridge, the original High Bridge and the first bridge over the Mississippi River, the suspension bridge erected by Minneapolis and St. Anthony in 1854. The High Bridge opened in 1888 and was replaced in 1987. The Carnegie Keystone Bridge Company delivered the original High Bridge in one million pieces, with a 388-page manual. In 1859 the Wabasha Bridge became the first to cross the Mississippi from St. Paul to Dakota County. Fortunately, not all the historic bridges are gone. The original Robert Street Bridge was completed in

1885 and replaced in 1926 by the now historic, arched, Robert Street Bridge. That same year another concrete arch bridge–the Mendota Bridge–opened. It was, at 4,119 feet, the longest concrete arch bridge in the world.[79]

Summary

One goal of this chapter was to provide the context in which businesses developed in the MNRRA corridor, rather
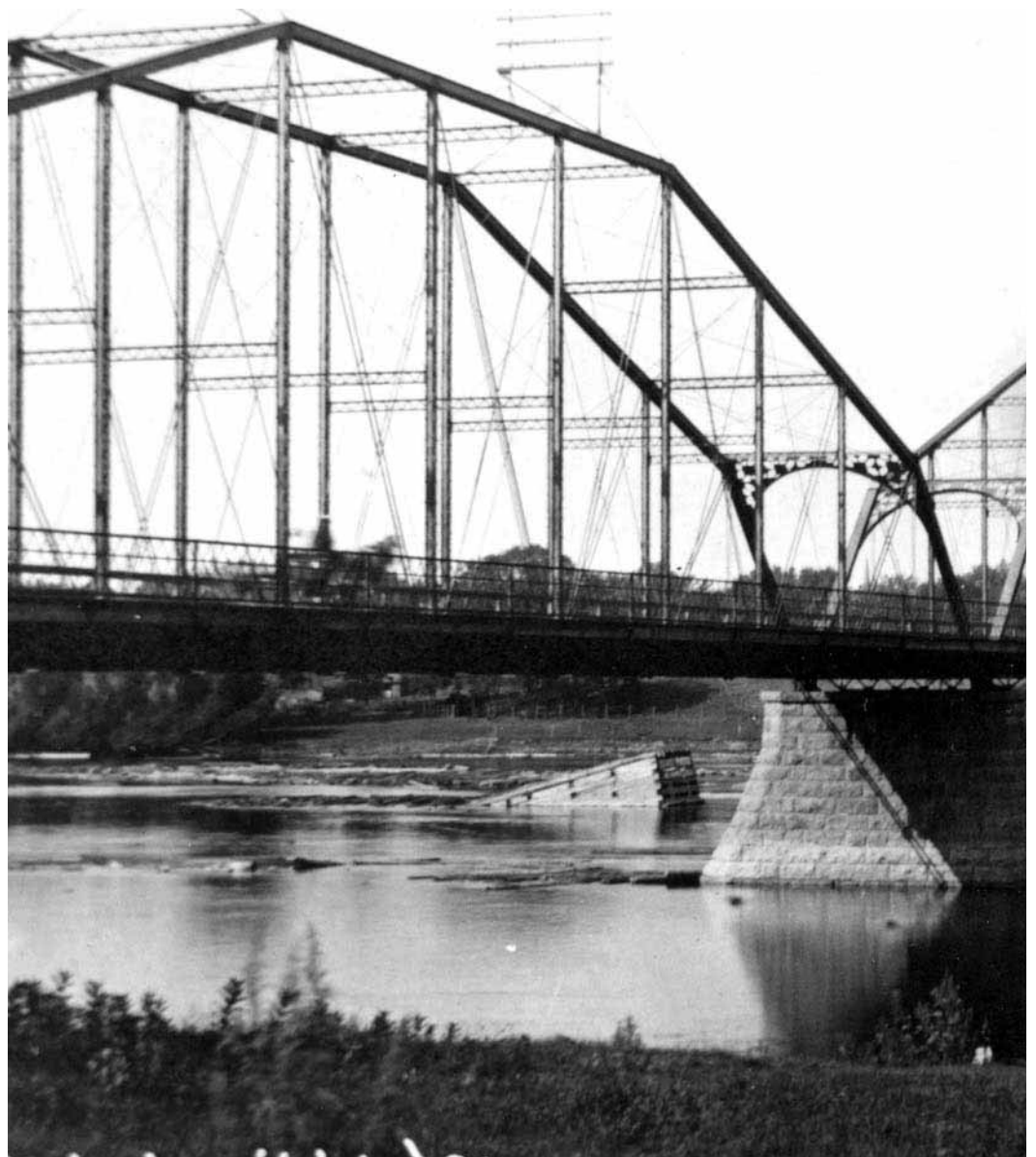
than to produce a list of all the different businesses. Another goal was to show how transportation affected the relationship of businesses and the area's residents to the river. Each new transportation method redefined that relationship. Navigation interests, railroads and road builders all transformed the river or its valley to accommodate their ends. Urban population growth, tied to these evolving transportation systems, meant that a smaller and smaller percentage of the metropolitan area's inhabitants thought about the river during their daily activities. Today, however, more and more people recognize the many amenities the Mississippi offers and are coming back to the river. They are interested in the river's history, its role in the development of the metropolitan area, and the businesses and transportation systems that underlay the area's evolution. They are looking for transportation routes that take them to the river, rather than away from it.

FIGURE 12. *Mississippi River Bridge at Anoka, Minnesota, 1905. Minnesota Historical Society. Ferries remained important longer at the MNRRA corridor's southern and northern ends, where few bridges existed.*

FIGURE 1. Urban river. Minneapolis skyline over the Mississippi River gorge.

Settlement and Urban Residential Development Along the River, 1841-1950

Patrick Nunnally • University of Minnesota

This chapter focuses on the process of urban growth in the MNRRA corridor, examining what towns began where, when and why. It discusses residential settlement patterns but does not detail the commercial and industrial patterns that formed the economic basis for population expansion and contraction.[1] This is not a history of every community, every riverfront neighborhood, along the MNRRA corridor, and it is not an academic urban history. Urban history in the MNRRA corridor is intimately tied to the history presented in foregoing chapters. Geology and geography, the Native American presence, exploration and early military objectives, navigation improvements and economic activities all played a role in determining where towns located, how fast they grew, how they related to the river and how that relation changed over time. The information presented here draws on those stories. *(Figure 1.)*

Town formation in the MNRRA corridor began soon after settlers came to the upper Mississippi valley in the early 1800s. Between 1820 and 1945 dozens of settlements grew up in the MNRRA corridor. Today, these communities can be understood as having evolved in one of three patterns: towns and cities that formed in the nineteenth century and have endured as distinct urban areas (for example, Minneapolis, St. Paul, Hastings, Anoka, and South St. Paul); nineteenth century settlements that stagnated for a time and then grew up as suburbs in the expanding metropolitan area (such as Mendota, Fridley, Champlin, and Cottage Grove); and urban areas that formed in the suburban expansion following World War II (for example, Coon Rapids and St. Paul Park).

The present municipalities in the MNRRA corridor are listed in *Table 8.1*, according to the pattern in which they formed. The first column includes cities that established a central economic and population presence in the nineteenth century (all but one, South St. Paul, pre-date the railroad era) and have maintained a distinct downtown commercial district and sense of "municipal place" throughout the twentieth century. The second column includes population centers that reached a peak of regional importance in the nineteenth century, went through a period of stagnation but retain a distinctive "municipal place" in the greater metropolitan region today. Despite their spatial and political independence today, these communities exist largely as suburbs within the larger region. The third column is the most heterogeneous collection. Generally, it includes places that achieved a substantial population and regional presence only after World War II and the subsequent suburban transformation of much of the MNRRA corridor. Most were farming areas, organized as townships. However, this grouping also includes the township of Nininger, which had a brief but memorable life as a distinct community.[2]

Table 8.1
URBAN CENTERS

Enduring Urban Centers
Anoka
Hastings
Minneapolis
St. Paul
South St. Paul

19th Century Population Centers that are now suburbs within the metropolitan area
Dayton
Champlin
Cottage Grove
Fridley
Mendota
Newport
Richfield*

Population Centers that emerged in the 20th century (some may have briefly been population centers, then declined)
Brooklyn Center
Brooklyn Park
Coon Rapids
Crystal*
Denmark Township
Grey Cloud Township
Inver Grove Heights
Lilydale
Maplewood
Mendota Heights
Nininger Township
Ravenna Township
Ramsey
Rosemount
St. Paul Park

Not in MNRRA now.

The formation and development of towns in the MNRRA corridor fits roughly into three periods, defined by transportation modes—river, railroad and automobile—and the concomitant patterns of urban settlement. During the era of river transportation, towns developed at many places throughout the corridor. Between 1841, when St. Paul was established, and 1862, when the railroad connected St. Paul and Minneapolis, there were probably more named towns than at any other time. As railroads expanded, some towns blossomed into railroad hubs and others withered when the railroads bypassed them. During the last four decades of the nineteenth century, both St. Paul and Minneapolis witnessed spectacular population leaps, as they became regional railroad centers. By the end of World War II, railroads had peaked, and automobile use, which had begun as early as the 1920s, boomed in the post-war years. This gave rise to expanded metropolitan areas that engulfed previous small towns such as Anoka, melding them to the suburban network around Minneapolis and St. Paul. A parallel development is the creation of post-war suburbs on land that had previously been agricultural.

Cities are made up of numerous communities, and St. Paul and Minneapolis have long had communities along their riverfronts. Even as the cities grew in size and area, until they merged into a modern metropolitan region, people lived in small communities along the river. Some of these, such as the Upper Levee and the West Side Flats in St. Paul and the Bohemian Flats area of Minneapolis, were neighborhoods of squatters and others living on the margins of society, in the poorest, most flood prone, and least desirable areas of the riverfront. Other neighborhoods, notably the Highwood section of St. Paul, were designed as picturesque suburbs full of curving streets and with a rail connection to the city. Finally, there are residential areas within the study corridor, such as the Macalester-Groveland/Highland Park neighborhoods in St. Paul, where development has seemingly had little to do with the river.

River Transportation Era (1820-1862)

This section describes the principal population centers during the period that the river dominated transportation and follows with a brief account of settlement patterns in the corridor outside the population centers. The relation of towns to the river varied markedly, depending on their location. Above St. Paul and especially above St. Anthony Falls, the river was not widely used for commercial navigation, although small steamboats plied the river above Minneapolis during the mid to late nineteenth century. Each community, however, depended on the river, whether to transport people, goods, or raw materials, such as lumber. Writing in 1893 about St. Anthony, Isaac Atwater could have been speaking for any community in the region prior to the mid-1860s when he stated, "it is interesting now to recall how the river then dominated the town. It was everything. Every enterprise depended for its vitality on what the river could do for it."[3]

The river transportation era in urban development began with the start of construction on Fort Snelling in 1820 and the subsequent founding of the American Fur Company post at Mendota in the 1820s. Traders erected seasonal posts at other locations in the corridor, but it was the mid-1830s before any permanent settlement took root. Prior to 1835, settlements clustered along the river were either military (Fort Snelling) or commercial (the fur post at Mendota). Commercial and military establishments brought people into a relatively confined space, but neither could be understood as cities. The Treaty of 1837 opened the east bank of the Mississippi, and within five years communities grew up at St. Paul and Cottage Grove. Urban growth received a burst of energy with the founding of St. Paul in 1841.

Settlement concentrated around Fort Snelling and St. Paul until the early 1850s, when a combination of factors led to widespread settlement throughout the corridor. The Treaties at Mendota and Traverse des Sioux in 1851 opened the west bank of the Mississippi to settlement, and the burgeoning steamboat trade brought thousands of settlers annually to Minnesota. As a result, new towns grew up at Anoka (1852), Hastings (1852) and Minneapolis (1854), as did towns that lasted for only a short while (Nininger and Pine Bend, for example). *(Figure 2.)*
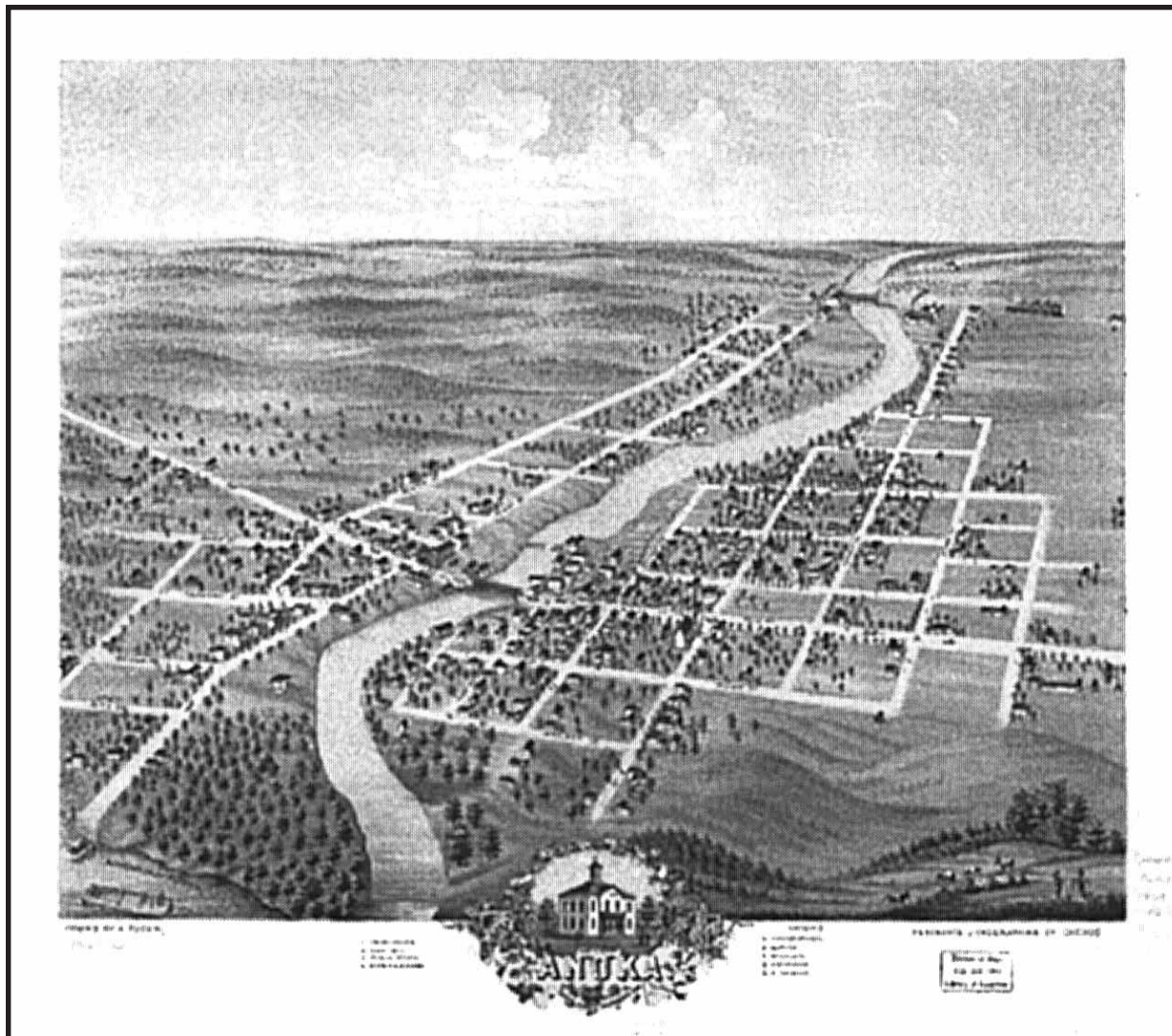

FIGURE 2. Panoramic Map of Anoka, 1869. American Memory Project, Library of Congress.

The Civil War and the Dakota Conflict of 1862 stalled new settlement in the early 1860s, but following the war, the population boomed and railroads spread across the region. The balance of the nineteenth century saw spectacular growth in short bursts within Minneapolis and St. Paul and steady growth throughout the portions of the corridor connected by railroad. Other places, such as the towns of Nininger and Pine Bend in Dakota County, were bypassed by the railroad and, as a consequence, died out by the end of the 1860s.

Throughout the river transportation period, residential settlement in concentrations that could be called urban was tightly focused at particular points along the river. St. Paul's town center ranged for several blocks on either side of the Upper and Lower Landings, but the rest of the present St. Paul riverfront was either unsettled or claimed by isolated farmers. The same pattern essentially held true upriver, with stretches of sparsely settled land separating Minneapolis and St. Anthony from upriver settlements such as Anoka and the cluster around Banfil's Tavern that would eventually become Fridley. These towns, as well as places like Hastings, remained relatively small centers during this period, established where the shore provided some natural amenity.

Much of the shoreline, according to early accounts, either was marshy and unsuitable for settlement or featured high bluffs facing the river. Places where small rivers or creeks joined the Mississippi provided natural settlement spots, as did, of course, the falls at St. Anthony. Concentrations of settlement during this period catered to the new farmers coming into the territory as well as to the lumbermen and traders. The settlements developed more or less according to the natural features of a particular location and the drive and initiative of the town's proprietors.

St. Paul can justly be called the first urban center in the MNRRA corridor. Legitimate settlement could begin only after the Dakota ceded their lands east of the Mississippi in the 1837 treaty. Some pioneers settled as early as the 1830s on sites across from the fort and as far north as the present Lake Street Bridge area. St. Paul started as a settlement just downstream from Fort Snelling, when officers in charge of that installation cleared it of non-military personnel in 1837. In 1837 and 1838 many of these refugees had settled near a marshy area just downstream from present St. Paul. This collection of domiciles was alternatively named for its topography ("Grand Marais" or Great Marsh) or for its best known inhabitant, Pierre "Pig's Eye" Parrant, a popular whiskey seller.

By 1841 more intentional settlers had joined the whiskey sellers and refugees from Fort Snelling and other settlements, and the community had moved to the bluff between the upper and lower landing. That same year, Father Lucien Galtier, a Catholic priest who had been sent from the Diocese of Dubuque to minister to the fur traders and growing community in the vicinity of Mendota, established a chapel on the bluff and named it for Saint Paul. The name stuck, and the community grew quickly and assumed regional importance as the closest landing to Fort Snelling, as well as the head of steamboat navigation on the Mississippi. When the Territory of Minnesota was established in 1849, St. Paul was one of three population centers. By the time Minnesota achieved statehood in 1858, it was chosen as the capital over the lumbering center at Stillwater and the milling and waterpower concentration at St. Anthony and Minneapolis.[4]

As St. Paul grew, settlement centered in three distinct areas, each with its own character and economic foundation. The so-called Lower Landing grew up just upstream of the marsh where Trout Creek and Phalen Creek entered the Mississippi. This area was the best natural steamboat landing in the settlement that was located outside the military reservation. The Upper Landing developed less than a mile upstream, below the current Irvine Park neighborhood. John Irvine began cutting timber for steamboats, as he and other settlers engaged in some small-scale shaping of the riverfront in order to create a levee and landing in this vicinity. The third area concentrated along the road that ran over the bluff separating the Upper and Lower Landings. This

road, which became known as Third Street when the town was platted in 1847, became the first commercial center of St. Paul. Bench Street, which snaked down the bluff, and a set of stairs connected Third Street to the Lower Landing.

There were, of course, isolated houses, farms, trading posts, and whiskey shops located throughout the valley. Residential development grew up on the bluff downstream of the Phalen/Trout Creek lowlands as well, with Lyman Dayton establishing early plats on the bluff that still bears his name. All this settlement had visible impact on the landscape, as architectural historian Larry Millett, among others, has noted, "To make room for the growing city, ravines and bottom lands were filled, hills leveled, lakes drained, streams diverted, and bluffs shaved away."[5]

St. Paul was organized as a village on November 1, 1849, and incorporated as a city on March 4, 1854.[6] As a frontier town at the head of navigation in a rapidly expanding region, St. Paul's growth was explosive. Contemporary accounts from the middle 1850s document streets swarming with people unloaded from the several steamboats a week that arrived from downriver. Would-be settlers were warned to bring camping supplies, as a room or a house was not to be had for any price in the city. Although St. Paul never became a sawmilling center like Minneapolis or

Stillwater, six sawmills grew up along the St. Paul riverfront to satisfy local needs. The economic contraction of 1857 stopped a period of tremendous growth, as it practically eliminated credit and made the already scarce hard currency more difficult to find. Industry in St. Paul during this period remained in its infancy. No railroads or associated facilities developed during this period, and St. Paul lacked the waterpower to attract industry, as at St. Anthony Falls.

The village of St. Anthony started on the east side of the river, near the sites claimed by Franklin Steele for their industrial potential, as soon as the land was opened to settlement in 1838. A store and sawmill were constructed on the east bank of the river in 1847-1848, and St. Anthony "boomed" with the establishment of the Minnesota Territory in 1849 and the opening of a suspension bridge, in 1855, to the settlement that became Minneapolis.[7] (Figure 3.)

St. Anthony was incorporated as a city on March 3, 1855, and a township was organized for the surrounding territory on May 11, 1858. The location saw a number of plats and names, however, including St. Anthony Falls Village (platted as part of Ramsey County in 1849 and a part of that county until March 4, 1856), and St. Anthony City, platted in 1848-1849 and more popularly known as "Cheevertown."[8] "Cheeverstown," or "Cheever's Landing," was named for William Cheever, a New York native gifted

FIGURE 3. Village of St. Anthony, 1851, from downstream.
Minnesota Historical Society.
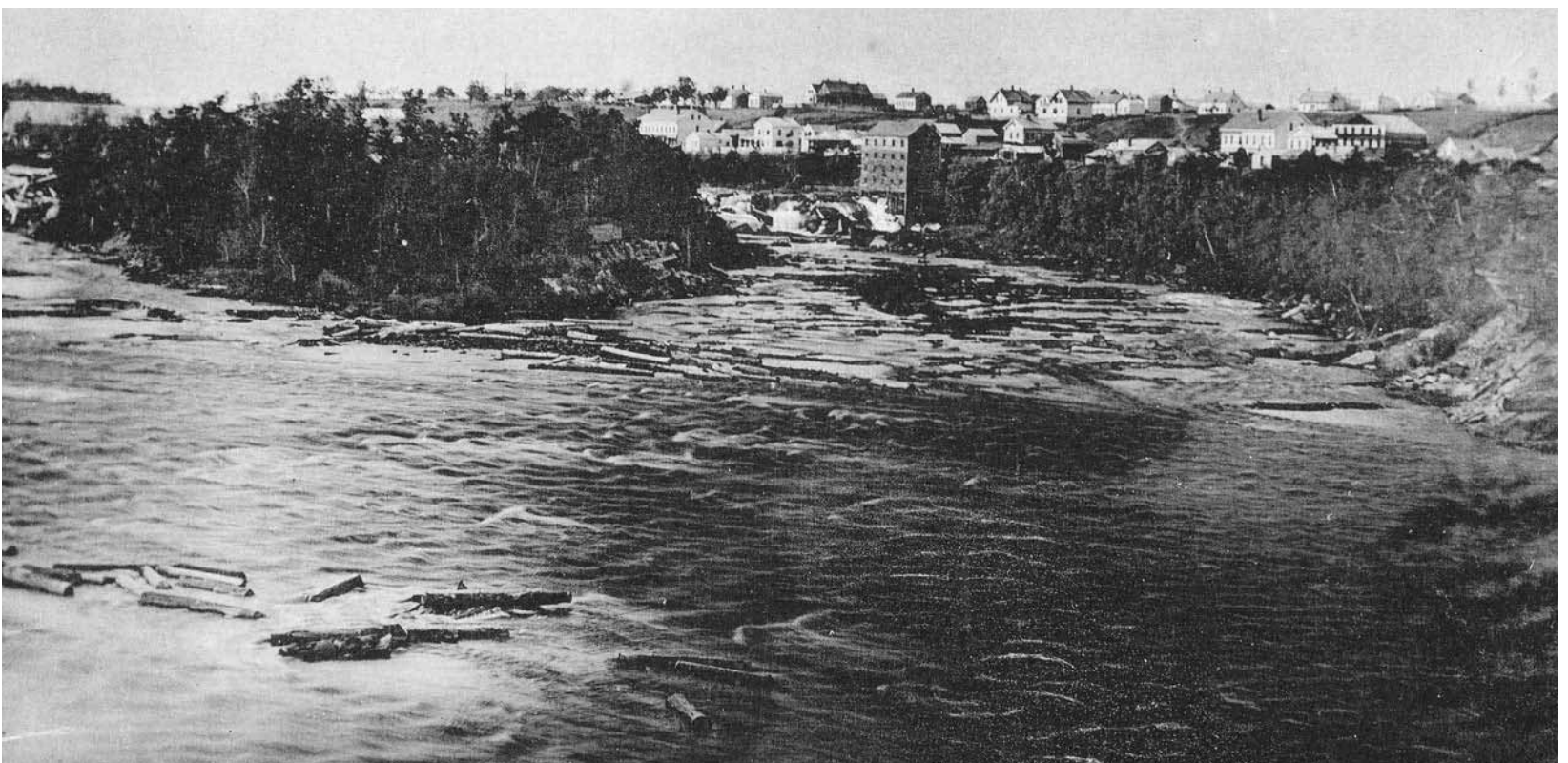
with frontier entrepreneurship and a wry sense of humor. According to Atwater, Cheever acquired land below the University of Minnesota, "where he subsequently erected a farmhouse, and built an observatory on the high bank, over the entrance of which he placed the legend, 'Pay your dime and climb.'"[9] Some settlers reached the falls by stagecoach, although some did make it up the gorge on steamboats to Cheever's Landing.[10] Throughout the 1850s tourists from the South came to the Windsor House in St. Anthony for a respite from the sultry southern summers. It is probable that at least some of these travelers on the "fashionable tour" disembarked at Cheever's Landing rather than arriving by stage from St. Paul. The place took on a different aspect in winter, when, as Atwater later remembered it, "the Mississippi, its [St. Anthony's] only medium of connection with the outside world, was a dreary, trackless barrier of ice and snow."[11]

Minneapolis was founded by Colonel John H. Stevens, who operated a ferry above St. Anthony Falls. Stevens built the first house west of the Mississippi in this area in 1849. Platting for the town began in 1854, with the town government inaugurated on July 20, 1858. The city was incorporated on March 6, 1866. Among the most notable additions to the city (it did not achieve its present spatial extent until 1927) was the village of St. Anthony on February 28, 1872. The name "Minneapolis," combining "minne" from the Dakota for "water" and the Greek word "polis" for "city," apparently first appeared in print in November 1852. Charles Hoag, the reputed originator of the name, took it to George D. Bowman, editor of the St. Anthony Express, who publicized it.[12]

The riverfront in St. Anthony and Minneapolis was a mixture of residential, industrial and commercial land use. Housing appeared on Nicollet Island as early as the 1840s. In later periods, as riverfront land became more valuable, industrial uses crowded out all residential use, except in particularly undesirable areas such as Bohemian Flats. Unless buried by later activities, very little may remain from the earliest decades of development, particularly from the residential districts that lined the river until the railroads and expanding mills pushed them out.[13]

In 1850 Henry Bailly established Hastings, even though there had been no treaty relinquishing Indian title to land west of the Mississippi. Until the treaty could be ratified by the U.S. Senate (which would not take place until 1852), there could be no legal occupancy except by licensed fur traders. Knowing the potential of this site at the falls of the Vermillion River and its juncture with the Mississippi, Bailly obtained a fur traders' license and set up a post. The area had been known as "Oliver's Grove (sometimes erroneously shortened to "Olive Grove"), because Lt. William G. Oliver had stopped here when ice forced him ashore as he ascended the river in the fall of 1819.[14]

Once settlement started, the village grew rapidly. The first year of permanent settlement was 1853, and the following year entrepreneurs started a hotel, blacksmith shop, ferry, and established a wharf on the levee for shipping farm products. After its founders drew lots, the town received its name from the middle name of Henry Hastings Sibley, one of the leading citizens of territorial Minnesota. In 1855-1856, milling of flour and lumber began, using the power from the Vermillion River. According to Neill, 1856 marked the high point in this period of rapid growth. Between the opening of navigation and July 1, 73 stone and frame houses were constructed, along with 100 temporary structures. There was certainly the population to fill these buildings; the winter 1855-1856 census counted 1,918 people in Hastings, up from 650 the year before and a twentyfold increase over the 1854 population of about 100.[15] *(Figure 4.)*

In 1851 settlers established permanent housing and other improvements at Anoka, a former fur trading post near the junction of the Mississippi and Rum Rivers. The name "anoka" apparently derives from a Dakota term for "on both sides" and refers to the settlement's location on both sides of the Rum River at its junction with the Mississippi.[16] Brothers named Peter and Francis Patoille established a trading post at the point where a 15-foot drop in the Rum necessitated a portage on early trading routes.

FIGURE 4. Hastings, 1850. Minnesota Historical Society.

In 1851 Henry M. Rice and his brother Orrin made permanent improvements, which by 1853 included a store and houses on the river's east side. A dam and sawmill soon followed, and in the mid-1850s the government built a bridge across the Rum. A flour mill was built at Anoka in 1854, and growing mill development throughout the 1860s attracted the attention of Minneapolis miller W. D. Washburn, who bought the complex around 1870.[17]

Fridley has one of the more unusual political histories of any town in the corridor. John Banfil, the first state auditor and the first postmaster in this part of the state, established a tavern near the mouth of Rice Creek around 1848. A year later, Henry M. Rice became interested in the site and began farming nearby. The area was originally designated Manomin County by the territorial legislature in 1857. In 1870 residents petitioned to be added to Anoka County as a township, retaining the name Manomin, derived from the Ojibwa term for "wild rice." It received its present name only in 1879, for Abram McCormick Fridley. It remained largely agricultural throughout this period.[18]

The town of Mendota is thought of by some as "the birthplace of Minnesota." Henry Sibley's stone house here, built in 1835, became a gathering place for politicians, artists, scientists, and adventurers. The settlement began as a commercial venture by the American Fur Company's Duncan Campbell, and became the central trading post for the region. Alexis Bailly, Sr., had charge of the post until 1834, when Sibley arrived.[19] As distinctive as Mendota's history to about 1850 is, its subsequent story is less well known. In 1866 the railroad came through town, establishing an alternative transportation mode between the Minnesota River Valley and St. Paul and, for all practical purposes, eliminating Mendota's role as a regional trade center.

Grey Cloud Township lies on the east side of the Mississippi, just south of Cottage Grove. Grey Cloud is an island named for Mahkpia-hoto-win (Grey Cloud Woman), a significant Dakota woman from the fur trade era. Her husband, Hazen Mooers, operated a trading post on the island for a time, and it has been the site of sporadic native settlement and planned cities.[20]

The city of Nininger, the site of which was in present-day Nininger Township, is one of the most celebrated mid-nineteenth century towns in Minnesota. Nininger attracted considerable attention from investors as far away as Chicago and New York City. The city was platted in 1856 and named for John Nininger, brother-in-law to Governor Alexander Ramsey and friend of the politician, author, and orator Ignatius Donnelly. Nininger and his associates "talked up" the city to the point that it had nearly 1,000 residents when incorporated in 1858. The booming community claimed seven to eight merchants, three to four blacksmiths and wagon shops, a plow factory, a sash and door factory, six saloons, three hotels, a drugstore, a physician and an unusually large assortment of lawyers and real estate dealers. By 1880, however, its population had declined to just 239, a loss attributed in part to the fact that the railroad bypassed the town and took regional growth to other cities (such as Hastings) and partly to the scarcity of hard currency on the frontier. These causes made Nininger only the most spectacular of the "boom and bust" cities in Minnesota's early years, or, as one writer put it, "The period of Nininger's founding and growth is an interesting, but not altogether unique, story."[21]

The historic settlement pattern in Denmark Township, located in Washington County at the juncture of the Mississippi and St. Croix Rivers, resembles that of Nininger in some important respects, in that both are the locations of failed early cities. The causes of their demise are substantially the same—failure to attract a rail line and thus keep up with regional transportation patterns—but the particulars are different in important ways. The settlement center for Denmark Township was Point Douglas, settled in 1839 and named for Illinois Senator Stephen A. Douglas, but not formally platted until 10 years later. The post office established at that site in July 1840 was the oldest in Minnesota outside Fort Snelling. The village was an important early regional center "at that time and for a number of years the depot where all supplies were purchased for the interior."[22] Like its downstream neighbor Hastings, Point Douglas became the location of both sawmills and gristmills, a ferry across the Mississippi River, and a hotel. As late as 1881, Point Douglas warehouses still held in excess of 100,000 bushels of grain, but the town did not develop the diverse commercial base that sustained Hastings.[23] Much of the Point Douglas site lies outside MNRRA's boundary, but archeological and historic research is necessary to determine if a portion lies within the boundary.

Railroad Era (1862-1940s)

The railroad era comes with the emergence and then dominance of the railroad as the transportation system that served the Twin Cities area. After the first railroad line in Minnesota connected St. Paul and Minneapolis in 1862, the new transportation mode quickly expanded and took over the region's economy and defined its geographic development. The impact of the railroad's coming can hardly be overstated. It changed both form and function of particular spaces. St. Paul's Lowertown, for example, transformed from a wealthy residential neighborhood to the city's warehouse area, as the Lower Landing entered its prime period as a transfer point for goods onto rail cars headed for the prairies. Likewise, railroads filled the valley of Trout and Phalen Creeks to raise the rail bed out of the floodplain and afford trains an easier ascent up the slope north of the river.

As Nininger, bypassed by the railroad, withered and slowly died off as a population center, the rail transportation to Chicago spurred the 1886 creation of South St. Paul as a stockyard town. In fact, the story of South St. Paul may be seen as a microcosm of this period's developments. Although located on the Mississippi, the river was a secondary factor in the city's development and transportation network. Cattle

came in and meat went out by rail. Meat processors did, however, employ the river to carry away animal wastes.

At the beginning of the railroad era, the population distribution within the corridor was centered in the cities of Minneapolis and St. Paul. Minneapolis in 1865 was home to approximately 4,700 people, while St. Paul's population stood at approximately 13,000.[24] The railroad era saw these two cities grow explosively, in a series of "booms" followed by periods of relative stability. Between 1865 and 1880, Minneapolis grew from 4,700 to 47,000, while St. Paul's population tripled to more than 41,000. By 1900, St. Paul had quadrupled again to 163,000, while Minneapolis had grown even faster to 202,000.[25]

With the establishment of railroads, land uses along urban riverfronts changed dramatically, as industrial and commercial uses replaced residential land uses. In part, this was a matter of economics: riverfront land became too valuable for housing. In part, it was a matter of aesthetics: riverfront land was too close to dangerous and dirty industrial developments for all but the very poorest inhabitants. And, in part, the transition was a measure of the growing centralization of regional transportation patterns on the railroad. By the turn of the century, river navigation (other than timber) had all but ceased, and railroads were carrying passengers and freight from Minneapolis and St. Paul to destinations all over the region.

In addition to altering land use patterns in existing urban areas, the development of rail networks throughout Minnesota served to centralize the population. Hamlets off the rail alignment withered, disappeared or moved to more favorable locations on the new lines. Moreover, the development of shops and other ancillary functions in some cities and towns guaranteed a certain level of employment and economic development. The result was the elimination of numerous small hamlets along the river and the concentration of population and economic resources in fewer places.

Within the city of Minneapolis, river-oriented residential development concentrated in three areas and emerged at different times. The "Gateway Residential Complex" at the

west end of the Hennepin Avenue Bridge grew up with the emergence of Minneapolis in the 1850s.[26] It was moved out by the 1880s, as railroads and other industrial land uses came to dominate the riverfront at the falls. Joseph Stipanovich has written that Poles lived along the riverfront in northeast Minneapolis and that residential districts emerged along the river in north Minneapolis, as workers moved close to their places of employment in the sawmills.[27]

The most romanticized community along the riverfront in Minneapolis was "Bohemian Flats," located on the river bottom flats below the University of Minnesota West Bank campus *(Figure 6, following page)*. The flats community emerged in the 1880s and existed until the city cleared the land of residences in the early 1930s. Many in this neighborhood subsisted on wages earned at nearby breweries, liberally supplemented by gathering lumber and logs that had washed over the falls from the dozens of sawmills upstream *(Figure 5)*. According to Millett, a skilled gatherer could pull in as much as 300 cords of wood in a good year.

Although termed "bohemian," in fact, people of many nationalities lived in the small collection of wooden houses

FIGURE 5. *Gathering wood at Bohemian Flats, 1887. Minnesota Historical Society.*
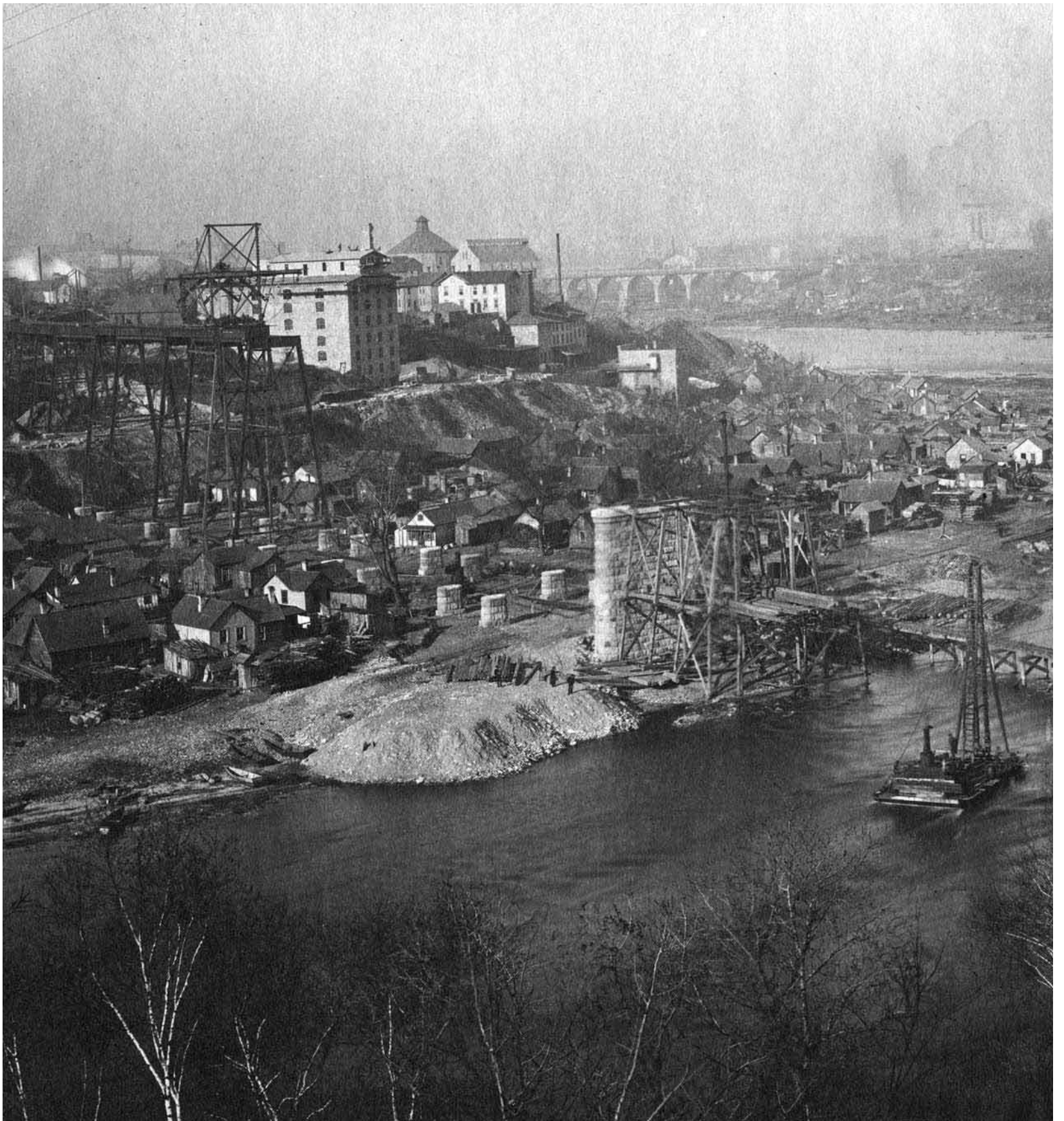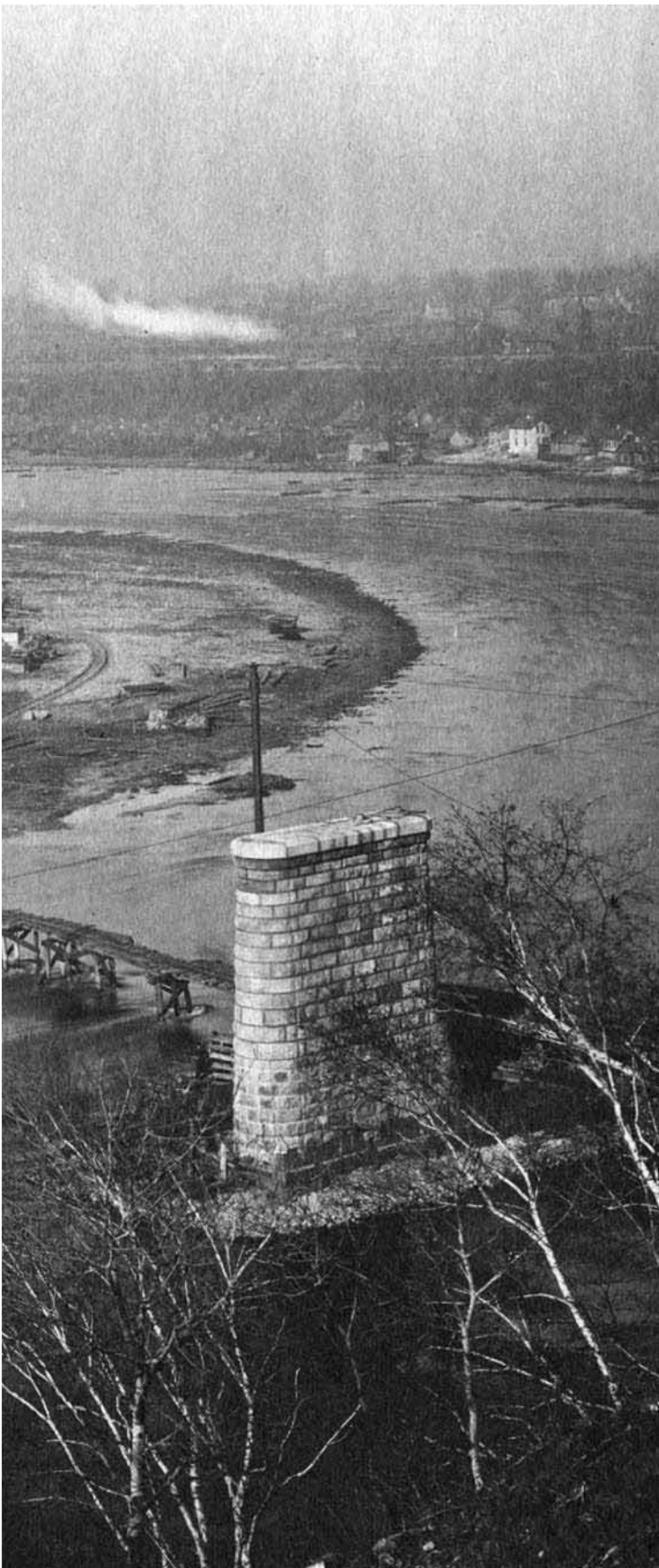
along dirt streets running parallel to the river. Regular spring floods kept investment in larger buildings to a minimum, although the flats still boasted a church, a store and other nonresidential buildings. The St. Anthony Water Power Company owned the land at Bohemian Flats and in the 1880s rented house lots for $12 per year.[28]

With 1,200 people by 1900, Bohemian Flats probably ranked as the largest river flats settlement in the MNRRA corridor, including the Italian neighborhood on the Upper Levee in St. Paul and the community of, first, Jewish and, later, Latin American residents on St. Paul's West Side. All these communities shared a common history and spatial arrangement. Home to the poorest and most recent of the area's immigrant populations, they typically featured small wooden houses, board fences, cows, some stores, saloons, perhaps a brick apartment building (where investors felt the floods would not harm them) and quite often a church. The river flats settlements grew most rapidly during the regional population and economic boom of the 1880s. By and large, these settlements disappeared with various urban renewal schemes after World War II. Minneapolis cleared most of Bohemian Flats during the 1930s, when it began plans for a municipal barge docking facility on the site. Not until 1963, however, did the last resident vacate the flats, allowing it to become a coal terminal.[29]

The railroad period saw a mixed pattern of residential development away from the downtown center in Minneapolis. For the most part, however, the riverfront upstream from St. Anthony Falls was industrialized by the 1890s.[30] Rising land prices pushed out even prosperous owners with large houses. Immediately around the falls, the land use conversion was total. Nicollet Island became the site of fashionable homes beginning in the 1870s, but gradually the island became separated into distinct industrial, commercial, and residential zones. Industrial development completely replaced the large houses along the bluffs on the river's west side, just below the falls, by the 1880s.[31]

FIGURE 6. Bohemian Flats, 1880. Minnesota Historical Society.

Further downstream from the falls, residential development assumed a middle class look. Beginning in the 1880s, at the suggestion of the renowned landscape architect H.W.S. Cleveland, the Minneapolis Park Board began buying tracts of land along the river between Riverside Park (near the present University of Minnesota West Bank campus) and Minnehaha Park to the south.[32] The presence of parkland, coupled with the topographical pattern that put the river at the bottom of a 100-foot gorge, helped create an attractive neighborhood. This area, comprising the present Seward, Longfellow, and Cedar-Riverside neighborhoods on the west side of the river, remains poorly understood in terms of its precise historical development.

A number of distinct river communities also developed within St. Paul during the late nineteenth and early twentieth centuries. The Upper Levee and West Side Flats both solidified and expanded during this period, as earlier scattered settlement saw a large population influx in the 1880s *(Figure 7).*[33] Both of these communities originated as squatter settlements on land unattractive to anyone who could afford to live elsewhere. In contrast, the Donnelley atlas of 1892 shows platted subdivisions in the Highwood area, with curving streets indicating either a steep bluff or an intent for a picturesque suburban enclave. Although full development of Highwood would only come after World War II, its origins as a settlement began as a railroad-era amenity suburb that took advantage of the views offered from the bluffs south of downtown St. Paul and from the Daytons Bluff neighborhood.[34] Farther north along the river in St. Paul, near the border with Minneapolis, the Merriam Park neighborhood became established. Like Highwood and Reserve Township immediately to the south, Merriam Park was annexed by the city in 1887, bringing St. Paul approximately to its current spatial extent. Reserve Township, currently the St. Paul neighborhoods of Macalester-Groveland and Highland Park, was organized in 1858 but remained largely farmland until the 1950s.[35]

Writing in 1875, St. Paul historian J. Fletcher Williams summarized St. Paul's evolving relation to the
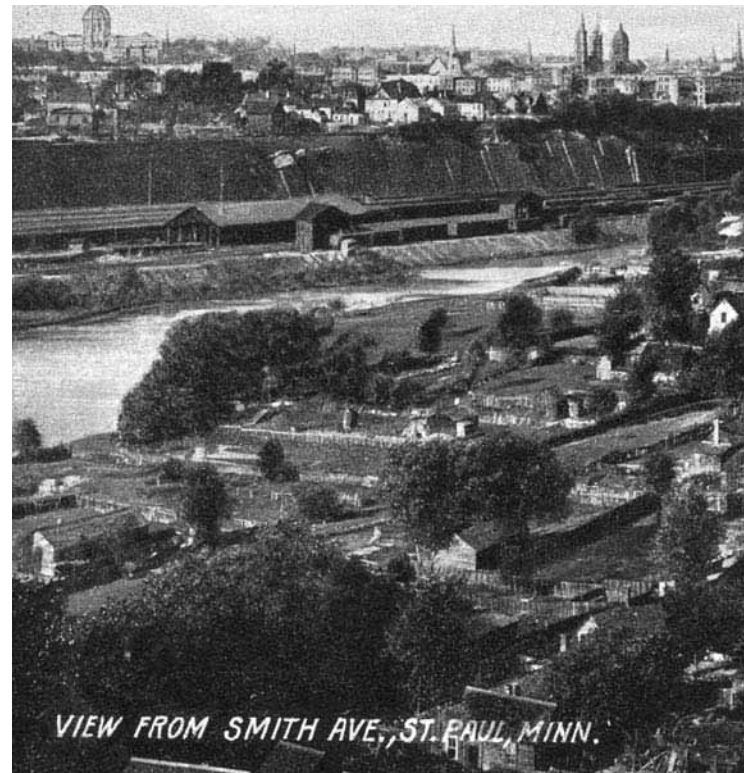

FIGURE 7. *Little Italy on the Upper Levee, St. Paul, 1908.* **Minnesota Historical Society.**

river: "of late years, the opening of navigation has ceased to be of any importance or interest. Our railroads have changed all that." St. Paul early established a rail connection to the Minnesota River valley and from there to the opening wheat fields of the Red River Valley and the Dakotas.[36] This period saw other changes in St. Paul's relation to the river as well. Dr. Justus Ohage purchased Harriet Island (government lot 6) from 20 landowners and conveyed it to the city in 1900 for public recreation. At Harriet Island's opening on June 9, 1900, the 40-acre island had paths, two pavilions, and a bathhouse. In 1929 the island and its facilities were transferred to the St. Paul Parks Department, and subsequent work on the island by Depression-era public relief crews included the construction of the existing pavilion, designed by St. Paul's city architect Clarence W. Wigington.[37]

Atlases of Minneapolis and St. Paul, which began to be published more systematically in the 1880s, give a sometimes-misleading picture of residential growth during this period. Often riverfront areas are shown as platted, when in fact housing was not built until much later. For example, Crosby Farm, located on the floodplain below present-day Highland Park in St. Paul, was platted in 10-acre lots early in the twentieth century, although the farm had very little non-farm development at the time it was made part of the city's park system in the 1950s.[38]

During the railroad era, land use and residential patterns became more economically and socially stratified. Industry took over much riverfront, particularly near the downtowns of St. Paul and Minneapolis. With industry came noise, disagreeable smells, and danger, to add to the seasonal threat from floods. Historian Larry Millett describes the resulting class separation:

> The hierarchy of altitude was especially strong in the Twin Cities in the late nineteenth century. While the rich resided in their mansions on Summit Hill in St. Paul and Lowry Hill in Minneapolis, the poorest Twin Citians were tucked away (out of sight and mind) in deep holes like Swede Hollow or on the floodplains below the river bluffs. Isolated from the city by barriers of language, culture, and geography, these enclaves were often identified with a particular ethnic group, although most were actually quite diverse in their makeup.[39]

Historical geographers David Lanegran and Paul Donald Hesterman argue that the river assumed a double character to area residents during this period. For the wealthy, who could afford to move uphill away from the grime and danger, the river became an aesthetic amenity, with river views a large part of the attractiveness of places such as St. Paul's Summit Avenue. Yet areas close to the river grew unattractive and became the home of the city's poorest residents. Enclaves such as Nicollet Island in Minneapolis, where an upper middle class community flourished in the midst of the chaos of the St. Anthony Falls industrial area, seemed the exception to the rule. The relative isolation of the island, perched on a limestone shelf out of the reach of all but the highest floodwaters, may have contributed to its anomalous position.[40]

Outside the major cities of St. Paul and Minneapolis, several fairly distinctive patterns began to emerge. Some locations did not adapt to the new transportation system and declined during this period. Some places that had early assumed regional prominence retained some importance but began to be overshadowed by Minneapolis and St. Paul. Hastings serves as a prime example of this pattern. Other places, such as Richfield (which once bordered on the river) and Newport, assumed a distinctive importance in relation to the central cities, often as vacation spots. Yet other cities, such as the industrial town of South St. Paul, emerged during this period as a direct response to the new railroad transportation pattern.

Edward Duffield Neill's History of Dakota County and the City of Hastings (1881) provides a vivid sketch of

Hastings at that point in its history. Hastings certainly impressed Neill (or whoever was actually conducting the research on the town; see endnote 2), as it had attained a population of some 4,000 within three decades of its establishment. The city had an air of enduring permanence; as the writer noted, "It appears to the eye as if having been endowed with perpetual prosperity and as if having always existed in the same form as today . . . it is a type of western achievement."[41] Impressive though that achievement may have been, the writer felt that it could have been greater: "It is scarcely doubtful, that that city (Hastings) would have had a much greater growth without them (railroads)."[42] Thus, within 50 years of the first permanent American settlement in the MNRRA corridor, new transportation systems were creating "winners" and "losers" among the region's communities as they vied for prominence.

Some places in the MNRRA corridor that grew up during the last third of the nineteenth century achieved their greatest visibility as satellites of the larger cities. Richfield, a farming township that had been established in 1858 with the rest of the corridor west of the river, became a tourist attraction in the 1880s. Hotels, landscaped gardens, a new railroad depot (the "Princess Depot") and pleasure drives all lined the vicinity of the river near its junction with Minnehaha Creek. Now part of the city of Minneapolis, the area surrounding Minnehaha Falls became a formally designated park in 1885.[43] There was a different impetus for growth in what is now the community of Newport. Originally the site of a mission to the Dakota (1837-42), a railway village called Red Rock grew up there in the 1860s. In 1869 the village became the site of summer religious revivals held by the Red Rock Camp Meeting Association, an affiliate of the Methodist Episcopal Church. Red Rock derived its name from a five-foot-long red rock, painted with stripes and venerated by the Dakota during their residence in the area. The rock was formerly on the bank of the river; it was moved in the early twentieth century to a point near the railroad station.[44]

Railroads, by allowing the rapid transport of freshly-cut meat, made South St. Paul one of the winners. Alpheus Beede Stickney of St. Paul formed the Minnesota and Northwestern Railroad to establish a line between St. Paul and Iowa, which would then connect to lines running to Chicago. When the line opened in 1885, the trip between St. Paul and Chicago was reduced to 13 hours, 30 minutes. The railroad and the river location just downstream from St. Paul were an important part of the marketing of "South Park," as the residential development was initially called. Dakota County gave land for industry, particularly car shops for the railroad. With James J. Hill as one of his backers, Stickney incorporated the St. Paul Union Stockyards on June 30, 1886, with the stockyards to be built on 260 swampy riverfront acres that needed to be filled before construction could take place. Separating from West St. Paul Township, South St. Paul was formed in 1887 and saw a period of rapid growth in the 1890s, as its stockyards expanded to include meat processing and slaughterhouses.[45]

The Modern River

Automobiles increasingly defined the urban and suburban landscape after World War II. Since the general end date for this study is about 1950, this era is not examined in depth. The central purpose of this study has been to provide the context for sites that could merit inclusion in the National Register. Unless sites are of exceptional significance, they must be older than 50 years to be listed on the Register. This means that most properties constructed after the early 1950s are not yet eligible.[46] Nevertheless, a few comments are in order. *(Figure 8.)*

After World War II, the fabric of urban settlement in the river corridor underwent significant change, as the combination of growing population and developing regional highway systems pushed population rapidly away from the central cities. This development, popularly characterized as "sprawl," was responsible for the conversion of farm country in places such as Coon Rapids into acres of suburban development. At the same time, the residential pattern that Lanegran and Martin call "suburban in city" filled in the

Highwood and Highland Park sections of St. Paul, completing the residential urban growth within the city limits of the area's largest cities.[47]

Urban development in the MNRRA corridor represents many processes. Where cities began, how quickly and fully they developed, and their relation to the river varied in important ways. Some cities began as river towns, some as railroad towns and others as suburban communities. Some feature all three types of development. The MNRRA corridor's communities possess sites and structures that represent each era, each type of growth. These sites offer an opportunity to educate residents and visitors about the area's urban development.

Geology, geography, Native American history, the decisions of explorers and traders, and the focus on a variety of economic activities all played a role in how the MNRRA corridor's cities formed and grew. St. Anthony Falls and the gorge downstream helped make Minneapolis the nation's leading flour and timber milling center and dictated that St.

Paul become the effective head of navigation until the 1960s. Native American occupation of lands east and west of the river determined where and how fast settlers moved into the area. Zebulon Pike's 1805 decision to acquire the Fort Snelling reservation determined urban development in and around the reserve for decades, and the federal government still occupies lands acquired by Pike. Early settlement along the river and the river's nearly level, floodplain grade drew railroads. The railroads then began altering the processes of urban development, as the streetcar and automobile would do subsequently.

The Twin Cities metropolitan area is the largest urban center between Chicago and Denver. Urban development in the metropolitan river corridor is significant not only regionally but nationally. The history of industrialization, transportation, settlement and evolving economies is indicative of the Area's uniqueness and illustrative of broader regional and national processes.

FIGURE 1. *Contemplating the river. Wingdams below Nininger, Minn., 1891. Photo by Henry P. Bosse. Nininger lies just above Hastings, on the west side of the Mississippi River.*

Novel and Familiar Places

The Dakota warriors who beached their canoes at the mouth of Phalen Creek, below Daytons Bluff, in 1680, added another story to a deeply storied place. They landed in the shadow of ancient Native American burials on the bluff above and just upstream of the future village site of Kaposia, which their descendants would inhabit over a century later. Their French captives heralded the coming of Europeans, the impending transformation of the river and the addition of many more stories. Neither the Dakota nor the French could have imagined the fill, buildings, mills, railroad yards, and roads that would obliterate Phalen Creek.

Hundreds of places that harbor stories as rich and deep lie throughout the MNRRA corridor. When identified, preserved and interpreted, they possess the power to evoke a sense of romance and adventure, disgust and regret, amazement and community pride. They are places with the ability to teach children and adults about how the environment, landscape and economy of the place in which they live or are just visiting came to be, about what has been lost and what has been gained. They are places that define the identity of many communities within the MNRRA corridor. This study has identified many such places, but many others remain to be discovered and have their stories told.

Mis-Placed

People care most about places they can relate to. Unfortunately, too many people have forgotten what their connection to historic sites within the corridor is, or have not had the opportunity to learn about them. Some people may be new residents, from some other city, state or country. Or, the people who had the direct connection may have passed away long ago. The more historically distant a place or event is, the harder people may find it to connect to that place. They cannot feel the sense of place people who once lived there felt. In many cases direct connection is no longer possible. No jobs for log drivers remain. The water-powered flour and timber mills are gone, as are the Dakota villages, the natural river and the natural falls. People today cannot imagine the anticipation and excitement generated by the arrival of the first steamboat at Hastings or St. Paul or Anoka in the 1850s. (Granted, the more ancient a place is, the more romantic or mysterious many people find it.) The challenge today is to recover a sense of place, a sense of continuity. The evaluation, preservation and interpretation of historic sites and places offer a way to meet this challenge.

Recovering a Sense of Place

For residents of the Twin Cities metropolitan area, the MNRRA corridor is like a big, old house. It has many familiar rooms that they visit often and know intimately. Other

rooms they do not know as well. Some contain deep closets that they have never explored. Some hide old trunks, treasure chests, that they have yet to open. Each one reveals more about the people who have lived in the house. The smells each one emits, the texture of old clothes, the sight of tattered pictures of people they know, though much younger, and people whose names and faces are a mystery give them a deeper appreciation of the place they call home. The sounds of an old record (if they can find a place to play it) bring alive the voices and culture of another time. Their place is more than they knew it to be, and they value it more. By their association with the contents of each trunk, they are more than they thought they were.

The MNRRA corridor holds places with stories that can evoke all the senses. Imagine the sights and sounds of the glacial River Warren as it plummeted over its limestone bed in St. Paul some 12,000 years ago. People can see that limestone strewn along the valley floor or hanging at the bluff tops through much of the valley below St. Anthony Falls. They can walk up and touch it. They can crumble in their hands the fragile St. Peter Sandstone that underlies the limestone and allowed the falls to retreat. They may not want to imagine the smell of a river so rancid a person would bury her nose in her coat when passing by. Yet by remembering, they may commit themselves to making the Mississippi River cleaner and healthier. Try to imagine the river "free from everything that would render it impure, either to the sight or taste," as Stephen Long described it in 1817.[1]

People can learn to appreciate what a place meant to someone long ago, and in doing so discover that a place holds a richer and deeper meaning than they had thought. David Glassberg, in his article "Public History and the Study of Memory," suggests that "By and large tourists look for novelty in a landscape, what is not back home, whereas local residents look at the landscape as a web of memory sites and social interactions."[2] Historic sites and landscapes in the MNRRA corridor possess the novelty to reward tourists for leaving their armchairs and the continuity to ground residents new and old.

Glassberg contends that "History offers ways . . . to orient oneself in the environment." Different types of historic sites, he says, "connect stories of past events to a particular present environment."[3] He uses environment in the broadest sense, meaning one's surroundings. For people sitting on the riverbank anywhere along the corridor, the environment they see is far different from that which existed one hundred years ago *(Figure 1)*. Residents and visitors are surprised to learn that their predecessors could wade across the Mississippi during low water. The idea of a steamboat with a draft of only 24 inches grinding on a gravel bar near St. Paul or Zebulon Pike walking his boats up the shallow, frigid, October river above St. Anthony Falls seems farfetched. They see the river rise during floods, but they do not comprehend how the dams keep it from falling to its natural low-water stage. People have forgotten why navigation boosters pressed so hard to change the river. And they may not understand what has been lost and what has been gained. Understanding historic sites and their historical contexts is not just about neat places; it is about understanding how we got to where we are today.

Place stories reveal how the area's relationship to the river has changed over the centuries. As the relationship between the Mississippi River and its inhabitants evolved, people treated it differently, and their concern for how they treated it changed. To the Dakota, the river was a highway and a source of natural resources, which they did not take for granted. The river and places along it (the Red Rock and St. Anthony Falls, for example) possessed spirits they prayed to. Steamboat pilots offered their own prayers to a river they believed had superhighway potential, if adequately transformed. Lumber and flour millers valued the river as a transportation route and for the waterpower offered, and not just at St. Anthony Falls but throughout the corridor. Transforming the river's physical and ecological character was unquestionably good to them. To railroad builders, the river valley offered a level grade but little more. People began turning their backs to the river. It became a convenient gutter for their mounting quantities of personal and

industrial wastes. As people fouled the river, they tried to get even farther away. The beaches and bathhouses at Harriet Island closed. Few could stand the stench assaulting them if they tried to boat on the river, and some found it difficult to drive near it. To the residents of Little Italy, the West Side, Bohemian Flats and other floodplain communities, the polluted river meant cheap land. They stayed by it, weaving new stories. When Locks and Dams 1 and 2 stopped the pollution from flowing away, St. Paul became the first city on the Mississippi River to build a sewage treatment plant (on the village site of Kaposia). As the water has improved, people have turned to face the river again. A new view of the river is evolving, and the river's history is playing an important role.

Glassberg believes that the river's history can help "residents and visitors alike to see what ordinarily cannot be seen: both memories attached to places and the larger social and economic processes that shaped how the places were made."[4] Here Glassberg is referring to the historic context of a place. Because it would be impossible for this study to detail the individual history of each historically important place, the focus has been on the historic contexts within which many places in the MNRRA corridor gain their historical significance. The Mississippi River we see, hear, touch, smell and taste (many Twin Cities residents drink river water from their taps) is defined by past social and economic processes and by the people caught up in those processes. This is true of the land along the river as well.

This historic resources study reveals the great variety and depth of historic places within the corridor. It is just a beginning. Communicating the stories of those places to the corridor's visitors and residents in a way that helps them connect to the river is an important and challenging task. Identifying and preserving important historic sites and places so that the National Park Service and others can interpret them is equally important and challenging. As Congress found and as this study has reinforced, the MNRRA corridor holds many "nationally significant" historical and cultural resources. Because of their significance,

Congress declared that "There is a national interest in the preservation, protection, and enhancement of these resources for the benefit of the people of the United States."[5] Through research, management and protection of historic resources, and with interpretation, the National Park Service can help MNRRA communities better celebrate their unique and common heritage and share that heritage with regional, national and even international audiences.
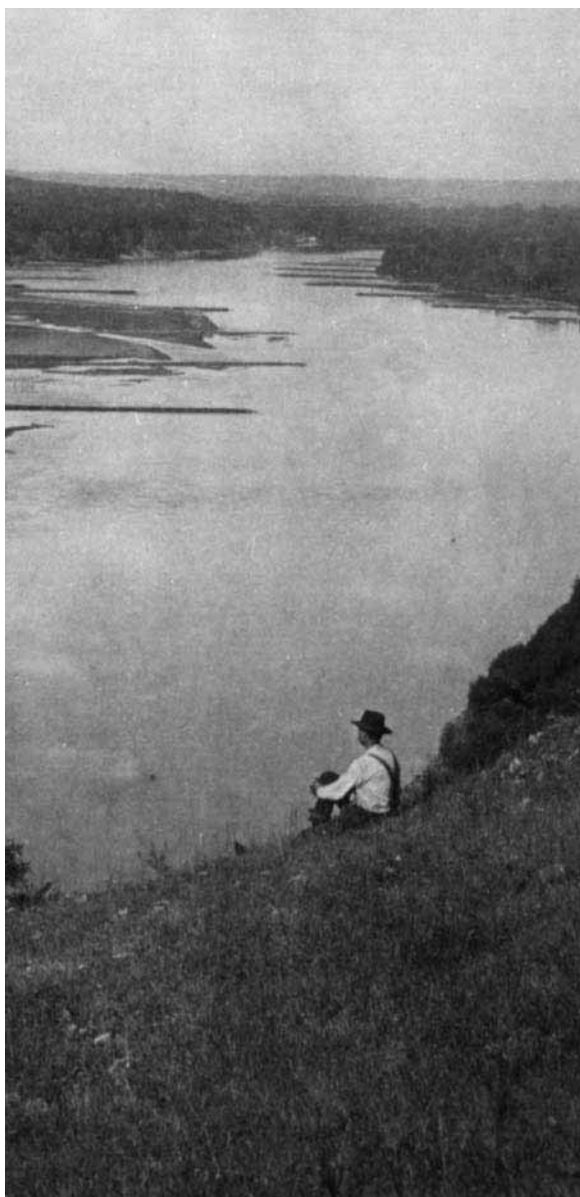

FIGURE 2. Detail, Wingdams below Nininger, Minn., 1891. By Henry P. Bosse. St. Paul District, Corps of Engineers.

Selected Bibliography

Government Documents

City of St. Paul Records. Permit Applications. St. Paul City Hall.

U. S. Congress, House. Congressional Record. Vol. 36, pt. 3, 1903.

U.S. Army, Corps of Engineers. *Annual Reports of the Chief of Engineers.* Washington, D.C.: Government Printing Office, 1876-1940.

War Department, Office of the Chief of Engineers. Circular No. 14, April 4, 1905. National Archives and Records Administration, Record Group 77, Entry 103, Box 1408, F 58362, vol. 36, pt. 3, (1903).

U.S. Congress, House. *Survey of Upper Mississippi River.* 39th Congress, 2d sess. Ex. Doc. No. 58.

U.S. Congress, House. *Survey of the Upper Mississippi.* 40th Cong. 2d sess. Exec. Doc. No. 247.

U.S. Congress. House. *Mississippi River between Missouri River and St. Paul, Minn.* 59th Cong., 2nd sess., H. Doc. 341.

U.S. Congress, House. *Use of Surplus Water Flowing over Government Dam in Mississippi River between St. Paul and Minneapolis, Minn.* 60th Cong., 1st sess., Doc. No. 218..

U.S. Congress, House. *Mississippi River, St. Paul to Minneapolis, Minn.* 61st Cong., 2d sess., H. Doc. 741.

U.S. Congress, House. "An Act To authorize the Great Northern Development Company to construct a dam across the Mississippi River from a point in Hennepin County to a point in Anoka County, Minnesota." 61st Cong., 3rd sess., Chapter 12.

U.S. Congress, House. *Laws of the United States Relating to the Improvement of Rivers and Harbors.* 62nd Cong., 3d sess., Doc. No. 1491, vol. 1 (Washington, D.C.: Government Printing Office, 1913). How many volumes? Ask Jean Schmidt.

U.S. Congress, House, Laws of the United States Relating to the Improvement of Rivers and Harbors, v. 2, 62nd Cong., 3d sess., Doc. No. 1491, (Washington, D.C.: Government Printing Office, 1913), p. 704.

U.S. Congress, House. *Mississippi River from Minneapolis to Lake Pepin. Report from the Chief of Engineers on Preliminary Examination and Survey of Mississippi River from Minneapolis to Lake Pepin, with a View to Improvement by the Construction of Locks and Dams.* 69th Cong. 2d sess., Document No. 583.

Section 701.(a) Findings, Public Law 100-696, November 18, 1988, 102 Stat 4599, Title VII - Mississippi National River and Recreation Area.

Mississippi River Commission (MRC). "Detail Map of the Upper Mississippi River from Minneapolis, Minnesota, to Lake Itasca, in Seventy-Eight Sheets, from Surveys 1898- 1904."

Mississippi River Commission (MRC), "Detail Map of the Upper Mississippi River from the Mouth of the Ohio River to Minneapolis, Minnesota, in Eighty-Nine Sheets."

Mississippi River Coordinating Commission and National Park Service, Comprehensive Management Plan, (May 1995).

Newspapers

Anoka County Union Herald
Minneapolis Tribune
St. Paul Pioneer Press
Upper Mississippi River Bulletin

Books, Articles & Manuscripts

Adams, John S. and Barbara J. VanDrasek. *Minneapolis-St. Paul: People, Place, and Public Life.* Minneapolis, Minnesota: University of Minnesota Press, 1993.

Anfinson, John O. "The Secret History of the Mississippi's Earliest Locks and Dams." *Minnesota History* 54:6 (Summer 1995):254-67.

_____. *Henry Bosse's Views of the Upper Mississippi River.* St. Paul, Minnesota: St. Paul District, Corps of Engineer, March 1996. 28 pp.

Anfinson, Scott F. "Archaeology of the Central Minneapolis Riverfront." *The Minnesota Archaeologist*, 48:1-2 and 49:1-2 (1989 and 1990).

Anderson, Gary Clayton. *Kinsmen of Another Kind, Dakota-White Relations in the Upper Mississippi Valley, 1650-1862.* Lincoln: University of Nebraska Press, 1984; St. Paul: Minnesota Historical Society, 1997.

Atwater, Isaac, Ed. *History of the City of Minneapolis.* New York: Munsell & Co., 1893.

Babcock, Willoughby M. Jr. "Sioux Villages in Minnesota prior to 1837." *Minnesota Archaeologist* 12 (October, 1945): 126-46.

Balaban, Nancy H. and Howard C. Hobbs, Eds. *Geologic Atlas of Dakota County, Minnesota.* St. Paul: University of Minnesota, Minnesota Geological Survey, 1990.

Barns, William D. "Oliver Hudson Kelley and the Genesis of the Grange: A Reappraisal." *Agricultural History* 41 (July 1967): 229-42.

Barry, E. J. "Water Transportation and Grain Marketing." In *American Cooperation,* 1961 Washington DC: American Institute for Cooperation, 1961, pp. 365-67.

Birk, Douglas A. "Grey Cloud: An Archaeological Approach." *The Minnesota Archaeologist* 32 (1973): 1-2.

Bleed, Peter. *The Archaeology of Petaga Point: The Preceramic Component.* Minnesota Prehistoric Archaeology Series. St. Paul: Minnesota Historical Society, 1969.

Blegen, Theodore. *Minnesota, A History of the State.* Minneapolis: University of Minnesota Press, 1975, 1963.

Borchert, John et. al. *Legacy of Minneapolis: Preservation Amid Change.* Bloomington, Minnesota: Voyageur, 1983.

Braemen, John, Robert H. Bremner, and David Brody, Eds. *Change and Continuity in Twentieth Century America: The 1920's.* Columbus: Ohio State University Press, 1968.

Brick, Greg. "St. Paul Underground–What Happened to Fountain Cave–the Real Birthplace of St. Paul?" *Ramsey County History* 29:4 (Winter, 1995): 4-15

Brueggermann, Gary J. "Beer Capital of the State -- St. Paul's Historic Family Breweries." *Ramsey County History* 16:2 (1981): 3-15.

Buck, Solon J. *A Study of Agricultural Organization and Its Political, Economic and Social Manifestations, 1870-1880.* Cambridge: Harvard University Press, 1933.

Burnley, Charles T. "Case of the Vanishing Historic Site or What Happened to Carver's Cave?" *Ramsey County History* 4:2 (Fall, 1967): 8-12.

Carroll, Jane. "Dams and Damages: The Ojibway, the United States, and the Mississippi Headwaters Reservoirs." *Minnesota History* (Spring, 1990): 2-15.

Case, John H. "Historical Notes of Grey Cloud Island and Its Vicinity." *Minnesota Historical Society Collections* v. 15 (1915): 371-378.

Clark, Clifford E. Jr., Ed. *Minnesota in a Century of Change: The State and Its People Since 1900.* St. Paul: Minnesota Historical Society Press, 1989.

Clayton, L. *Pleistocene Geology of the Superior Region.* Wisconsin, Information Circular No. 46 (Madison: Wisconsin Geological and Natural History Survey, 1984).

Clements, Kendrick A. "Herbert Hoover and Conservation," *American Historical Review* 89 (February 1984): 67-88.

Cooper, John Milton Jr. *Pivotal Decades: The United States, 1900-1920.* New York: W.W. Norton & Company, 1990.

Cooper, W. S. "The history of the upper Mississippi River in late Wisconsin and postglacial time." *Minnesota Geological Survey Bulletin* 26 (1935). 116 pp.

Cronon, William. *Nature's Metropolis: Chicago and the Great West.* New York: W. W. Norton & Company, 1991.

Curtice, David L. *Curtice's Revised Atlas of the City of St. Paul.* St. Paul, Minnesota: H.M. Smyth Printing Co., 1908.

Daly, Capt. "Nate" [Nathan]. *Tracks and Trails: Incidents in the Life of a Minnesota Pioneer.* Walker, Minnesota: the Cass County Pioneer, 1931.

Dixon, Frank Haigh. *A Traffic History of the Mississippi River System.* National Waterways Commission. Document No. 11 (Washington: Government Printing Office, 1909).

Dobney, Frederick J. *River Engineers of the Middle Mississippi: A History of the St. Louis District, U.S. Army Corps of Engineers.* Washington, D.C.: U.S. Government Printing Office, 1978.

Dodd, Donald B. and Dodd, Wynelle S. *Historical Statistics of the United States, 1790-1970. The Midwest.* The University of Alabama Press, 1973.

Donnelley, Reuben H. *Donnelley's Atlas of the City of St. Paul, Minnesota.* 2 vols. Chicago: The Corporation, 1892.

Federal Writers' Project, Works Progress Administration, Minnesota. *The Bohemian Flats.* St. Paul, Minnesota: Minnesota Historical Society,1986; first published Minneapolis: University of Minnesota Press, 1941.

"Flooding and Untimely Thaws Test Contractors' Mettle on River Job," *Construction Bulletin* (March 6, 1952):36-41.

Folwell, William Watts. *A History of Minnesota.* 4 vols. 1. Rev. Ed. St. Paul: Minnesota Historical Society, 1956-69; third printing, 1979.

Franks, C. L. "Inland Waterways Advocate, Col. George C. Lambert, Dies: Among Pioneers to Back Channel in Upper Mississippi." *Upper Mississippi River Bulletin* 3:3 (March 1934): 1.

Gates, Charles M., Ed. *Five Fur Traders of the Northwest.* Minnesota Historical Society Press, 1965.

Gibbon, Guy E. *The Sheffield Site: An Oneota Site on the St. Croix River.* Minnesota Prehistoric Archaeology Series No. 11 St. Paul: Minnesota Historical Society, 1973.

Gibbon, Guy, and C. A. H. Caine. "The Middle to Late Woodland Transition in Eastern Minnesota." *Midcontinental Journal of Archaeology* 5:1 (1980):57-72.

Glassberg, David. "Public History and the Study of Memory." *The Public Historian* 18:2 (Spring 1996): 7-23.

Goodrich, Albert M. *History of Anoka County and the Towns of Champlin and Dayton in Hennepin County, Minnesota.* Minneapolis: Hennepin Publishing Co., 1905. Reprinted by Anoka Bicentennial Commission, 1976.

Goth, Dorothy Ed., *St. Paul Park's Heritage: A History of Saint Paul Park on The Mississippi, 1887-1895.* Cottage Grove, Minnesota: Inky Fingers Press, 1985.

Guelcher, Leslie A. *The History of Nininger . . . More Than Just a Dream."* Stillwater, Minnesota: Croixside Press, 1982.

Hall, Steve. *Fort Snelling: Colossus of the Wilderness.* St. Paul: Minnesota Historical Society Press, 1987.

Haller, Lisa, Ivelise Brasch, Gary Phelps, and Bill Wolston. "Crossings." *Over the Years* 31:1 (Dakota County Historical Society, September 1991):1-25.

Hartsough, Mildred. *From Canoe to Steel Barge.* Minneapolis: University of Minnesota Press, 1934.

Hays, Samuel. *Conservation and the Gospel of Efficiency: the Progressive Conservation Movement, 1890-1920.* Cambridge, Mass.: Harvard University Press, 1959.

Havighurst, Walter. *Upper Mississippi, A Wilderness Saga.* New York: Farrar, & Rinehart; New York: J. J. Little and Ives Company, 1944.

Hennepin, Louis. *Father Louis Hennepin's Description of Louisiana, Newly Discovered to the Southwest of New France by Order of the King.* Minneapolis: The University of Minnesota Press, 1938.

Hesterman, Paul Donald. "The Mississippi and St. Paul: Change is a Constant for River and the City that Shaped It." *Ramsey County History* 21:1 (1986): 3-22.

Hill, Alberta Kirchner. "Out With the Fleet on the Upper Mississippi, 1898-1917." *Minnesota History* (September, 1961): 283-97.

Holmquist, June Drenning, Ed. *They Chose Minnesota: A Survey of the State's Ethnic Groups.* St. Paul, Minnesota: Minnesota Historical Society Press, 1981.

Hoops, Richard. *A River of Grain: the Evolution of Commercial Navigation on the Upper Mississippi River.* Madison: University of Wisconsin-Madison, College of Agricultural and Life Sciences Research Report, R3584.

Hoover, Herbert. "The Improvement of Our Mid-West Waterways." *The Annals of the American Academy* 135 (January 1928):15-24.

Hull-Walski, Deborah A. and Frank Walski. "There's Trouble a-Brewin': The Brewing and Bottling Industries at Harpers Ferry, West Virginia." *Historical Archaeology* (1994): 106-21.

Jenks, A. E. "Minnesota's Brown's Valley Man and Associated Burial Artifacts." *Memoirs of the American Anthropological Association.* No. 49 (1937).

Jensen, John O. "Gently Down the Stream: An Inquiry into the History of Transportation on the Northern Mississippi River and the Potential for Submerged Cultural Resources," *Wisconsin Archeologist* 73:1-2 (March-June, 1992): 61-110.

Johnson, Elden and P. S. Taylor. Spring Lake Archeology: The Lee Mill Cave. Science Bulletin No. 3, part 2. St. Paul, Minnesota: The Science Museum of the St. Paul Institute, 1956.

_____. Spring Lake Archeology: The Sorg Site. Science Bulletin No. 3, part 3 St. Paul, Minnesota: The Science Museum of the St. Paul Institute, 1959.

_____. The Prehistoric Peoples of Minnesota. Minnesota Prehistoric Archaeology Series No. 3. St. Paul: Minnesota Historical Society, 1988; revised third edition.

Johnson, Elden, Ed. *Aspects of Upper Great Lakes Anthropology: Papers in Honor of Lloyd A. Wilford.* Minnesota Prehistoric Archaeology Series. No. 11 St. Paul: Minnesota Historical Society, 1974.

Johnson, Leland. *Engineers on the Twin Rivers: A History of the Nashville District.* Nashville: U.S. Army Engineer District, Nashville, 1978.

Kane, Lucile M. "Rivalry for a River, the Twin Cities and the Mississippi." *Minnesota History* 37:8 (December, 1961): 309-23.

_____. *The Falls of St. Anthony: The Waterfall that Built Minneapolis.* St. Paul: Minnesota Historical Society Press, 1987; originally published as *The Waterfall that Built a City: The Falls of St. Anthony in Minneapolis*, 1966.

Kane, Lucile M., June D. Holmquist, and Carolyn Gilman, Eds. *The Northern Expeditions of Stephen H. Long, the Journals of 1817 and 1823 and Related Documents.* St. Paul: Minnesota Historical Society Press, 1978.

Kane, Lucile M. and Alan Ominsky. *Twin Cities: A Pictorial History of Saint Paul and Minneapolis.* St. Paul: Minnesota Historical Society Press, 1983.

Keating, William H. *Narrative of an Expedition to the Source of the St. Peter's River, Lake Winnepeek, Lake of the Woods, &c, Performed in the Year 1823 by the Order of the Hon. J. C. Calhoun, Secretary of War, under the Command of Stephen H. Long, U.S.T.E.*, 2 vols. Minneapolis: Ross and Haines, 1959.

Keegan, W. F. Ed. Emergent Horticultural Economies of the Eastern Woodlands. Center for Archaeological Investigations, Occasional Paper No. 7 Carbondale: Southern Illinois University, 1987.

Keen, K. L. and L. C. K. Shane. "A Continuous Record of Holocene Eolian Activity and Vegetation Change at Lake Ann, East-Central Minnesota." *Geological Society of America Bulletin* 102 (1990):1646-1657.

Kerwin, Jerome G. *Federal Water-Power Legislation.* New York: Columbia University Press, 1926.

Knox, James C. and D. M. Mickelson, Eds. *Late Quaternary Environments of Wisconsin.* Madison: Wisconsin Geological and Natural History Survey, 1974.

Kunz, Virginia Brainard. *The Mississippi and St. Paul, A short history of the city's 150-year love affair with its river.* St. Paul, Minnesota: The Ramsey County Historical Society, 1987.

Lass, William E. *Minnesota, A History.* New York: W. W. Norton & Co., 1998; 1st edition 1977.

Leverett, Frank. "Moraines and Shorelines of the Lake Superior Basin." United States Geological Survey Professional Paper (1929). 72 pp.

Leverett, Frank and Frederick W. Sardeson. "Surface formations and agricultural conditions of the south half on Minnesota." *Minnesota Geological Survey Bulletin* 14. Minneapolis: University of Minnesota, 1919.

Martin, Judith A. and David Lanegran. *Where We Live: The Residential Districts of Minneapolis and Saint Paul.* Minneapolis, Minnesota: Published by the University of Minnesota Press in association with the Center for Urban and Regional Affairs, University of Minnesota, 1983.

Martin, L. *The physical geography of Wisconsin.* Wisconsin Geological and Natural History Survey Bulletin 36 Madison, Wisconsin, 1932; second edition.

McGee, W. J. "The Conservation of Natural Resources," *Proceedings of the Mississippi Valley Historical Association for the Year 1909-1910*, 3 (Cedar Rapids, Iowa, 1911): 361-379.

Merchant, Carolyn, Ed. *Major Problems in American Environmental History.* Lexington, Massachusetts: D.C. Heath and Company, 1993.

Merrick, George Byron. *Old Times on the Upper Mississippi: The Recollections of a Steamboat Pilot from 1854 to 1863.* St. Paul: Minnesota Historical Society Press, 1987.

Merritt, Raymond H. *Creativity, Conflict & Controversy: A History of the St. Paul District, U.S. Army Corps of Engineers.* Washington: U.S. Government Printing Office, 1979.

_____. *The Corps, the Environment, and the Upper Mississippi River Basin.* Washington: U.S. Government Printing Office, 1984.

Meyer, Roy W. *History of the Santee Sioux: United States Indian Policy on Trial.* Lincoln: University of Nebraska Press, 1967; reprinted 1980.

Michlovic, Michael G. "The Archaeology of the Canning Site." *Minnesota Archaeologist* 45:1 (1986): 3-36.

Millett, Larry. *Lost Twin Cities.* St. Paul, Minnesota: Minnesota Historical Society Press, 1992.

Mitchell, Barbara A. Hemisphere Field Services, Inc., "A History of the St. Paul Municipal Grain Elevator and Sack House." Prepared for the MNRRA as part of the Historic Resources Study.

Minnesota Geological Survey. *Field trip guidebook for the Upper Mississippi Valley: Minnesota, Iowa, and Wisconsin.* Guidebook Series No. 15. St. Paul: University of Minnesota, 1987.

Mooers, H. D. and J. D. Lehr. A Terrestrial Record of Laurentide Ice Sheet Reorganization during Heinrich Events. (In press).

Morlan, Robert L. *Political Prairie Fire – The Nonpartisan League, 1915-1922.* Minneapolis: University of Minnesota Press, 1955.

Mott, Mildred. "The Relationship of Historic Indian Tribes to Archaeological Manifestations in Iowa." *Iowa Journal of History and Politics* 36:3 (1938):227-314.

Mullin, Francis. "The St. Anthony Falls Navigation Project." *Proceedings of the American Society of Civil Engineers* 89:CO1 (March , 1963): 1-18.

Myers, William Starr Ed. *The State Papers and Other Public Writings of Herbert Hoover.* 2 vols. Garden City, N. Y.: Doubleday, Doran & company, inc., 1934.

Neill, Edward D. Rev. *History of Hennepin County and the City of Minneapolis, Including Explorers and Pioneers of Minnesota, and Outlines of the History of Minnesota, by J. Fletcher Williams.* Minneapolis, Minnesota: North Star Publishing Company, 1881.

_____. *History of Ramsey County and the City of St. Paul.* Minneapolis, Minnesota: North Star Publishing, 1881.

_____. *History of Dakota County and the City of Hastings.* Minneapolis, Minnesota: North Star Publishing, 1881.

_____. *History of the Upper Mississippi Valley.* Minneapolis, Minnesota: North Star Publishing, 1881.

_____. "St. Paul and Its Environs." *Minnesota History* 30 (1940):204-219.

Nelson, Martin. "Nine-Foot Channel Extension Above St. Anthony Falls." *The Minnesota Engineer* (June 1960): 6-9.

Parker, John., Ed. *The Journals of Jonathan Carver and Related Documents, 1766-1770.* St. Paul, Minnesota: Minnesota Historical Society Press, 1976.

Paxson, Frederic L. "Railroads of the Old Northwest, before the Civil War." *Transactions of the Wisconsin Academy of Sciences*, Arts and Letters 17 (1914): 243-74.

Petersen, William J. "Captains and Cargoes of Early Upper Mississippi Steamboats." *Wisconsin Magazine of History* 13 (1929-30): 224-40.

_____. *Steamboating on the Upper Mississippi.* Iowa City, Iowa: The State Historical Society of Iowa, 1968.

Pike Zebulon. *Sources of the Mississippi and the Western Louisiana Territory.* Ann Arbor, Michigan: University Microfilms, Inc.1966; from Zebulon Pike, *An Account of Expeditions to the Sources of the Mississippi*, Philadelphia, Pennsylvania: C. & A. Conrad, & Co., 1810.

Pinchot, Gifford. *The Fight for Conservation.* Seattle, University of Washington Press 1967; New York: Doubleday, Page & company, 1910.

Porter, S. C., Ed. *The Late Pleistocene.* Minneapolis: University of Minnesota Press, 1983.

Upper Mississippi River Improvement Association. *Proceedings of the Upper Mississippi River Improvement Association Convention.* 1902-1917.

Prosser, Richard S. *Rails to the North Star.* Minneapolis, Minnesota: Dillon Press, 1966.

Quick, Herbert. *American Inland Waterways, Their Relation to Railway Transportation and to the National Welfare; Their Creation, Restoration and Maintenance.* New York: C. P. Putnam's Sons, 1909.

Refsell, Oscar N. "The Farmers' Elevator Movement I.." *Journal of Political Economy* 21 (November 1914): 872-895.

Salisbury, Robert S. *William Windom, Apostle of Positive Government.* New York: University Press of America, 1993.

Saloutos, Theodore. "The Rise of the Equity Cooperative Exchange." *The Mississippi Valley Historical Review* 32:1 (June 1945): 31-62.

Sardeson, Frederick W. "Fossils in the St. Peter Sandstone." *Minnesota Academy of Natural Sciences Bulletin* 3 (1892).

_____. *Minneapolis-St. Paul Folio.* Geological Atlas of the United States, Folio 201 Washington, D.C.: U.S. Geological Survey, 1916.

Scarpino, Philip V. *Great River: An Environmental History of the Upper Mississippi, 1890-1950.* Columbia: University of Missouri Press, 1985.

Schlesier, K. H., Ed. *Plains Indians, A.D. 500-1500: The Archaeological Past of Historic Groups.* Norman: University of Oklahoma Press, 1994.

Shideler, James H. *Farm Crisis, 1919-23.* Los Angeles: University of California Press, 1957.

Schonberger, Harold B. *Transportation to the Seaboard: The Communication Revolution and American Foreign Policy, 1860-1900.* Westport, Connecticut: Greenwood Publishing Corporation, 1971.

Shallat, Todd. *Structures in the Stream, Water, Science, and the Rise of the U.S. Army Corps of Engineers.* Austin: University of Texas, 1994.

Shay, C. T. *The Itasca Bison Kill Site: An Ecological Analysis.* St. Paul: Minnesota Historical Society, 1971.

Shippee, Lester. "Steamboating on the Upper Mississippi after the Civil War: A Mississippi Magnate." *Mississippi Valley Historical Review* 6:4 (March 1920): 470-502.

Sims, P. K. and G. B. Morey, Eds. *Geology of Minnesota: A Centennial Volume.* Minnesota Geological Survey. St. Paul: University of Minnesota, 1972.

Smalley, E. V. "The Deep Waterways Problem." *Forum* XIX (Aug. 1895): 746-752.

Snow, Franklin. "Waterways as Highways." *North American Review* 227 (May 1929): 592-98.

Spector, Janet D. *What this awl means: feminist archaeology at a Wahpeton Dakota village.* St. Paul : Minnesota Historical Society Press, 1993.

Stipanovich, Joseph. *City of Lakes: An Illustrated History of Minneapolis.* Woodland Hills, California: Windsor Publications, 1982.

Swain, Donald C. *Federal Conservation Policy, 1921-1933.* Berkeley and Los Angeles: University of California Press, 1963.

Swanson, Lynn and Gary N. Meyer, Eds. *Geologic Atlas of Washington County, Minnesota.* Minnesota Geological Survey. St. Paul: University of Minnesota, 1990.

Tester, John R. *Minnesota's Natural Heritage, An Ecological Perspective.* Minneapolis: University of Minnesota Press, 1995.

Turekian, K. K. Ed. *Late Cenozoic glacial ages.* New Haven, Connecticut: Yale University Press, 1971.

Tweet, Roald. "A History of Navigation Improvements on the Rock Island Rapids: The Background of Locks and Dam 15." Rock Island, Illinois: U.S. Army, Corps of Engineers, Rock Island District, April 1980. 15pp.

_____. *History of Transportation on the Upper Mississippi & Illinois Rivers.* Washington: U.S. Government Printing Office, 1983.

_____. *A History of the Rock Island District, U.S. Army, Corps of Engineers, 1866-1983.* Washington: U.S. Government Printing Office, 1984.

Upham, Warren. *The Glacial Lake Agassiz.* Geological Society of America Monograph 25 Washington: Government Printing Office, 1895.

_____. "Kaposia, Indian Town; Once Stood on Site of St. Paul's Depot, Archaeological Finds." *St. Paul Pioneer Press,* (August 12, 1919), Sec. 2, p. 12.

Wedel, Mildred M. "Peering at the Ioway Indians Through the Mist of Time: 1630 - circa 1700." *Journal of the Iowa Archaeological Society* 33 (1986):1-74.

Wiebe, Robert H. *The Search for Order, 1877-1920.* New York: Hill and Wang, 1967.

Wilford, Lloyd A. "The La Moille Rock Shelter." *The Minnesota Archaeologist* 19:2 (1954):17-24.

Williams, J. Fletcher. *A History of the City of Saint Paul to 1875.* St. Paul: Minnesota Historical Society Press, 1983; first published in 1876 by the Minnesota Historical Society as volume 4 of the Collections of the Minnesota Historical Society.

Winchell, Newton H. *Geology of Minnesota: Minnesota.* Geological and Natural History Survey, Final Report, 6 vols. Minneapolis, Minnesota: Johnson, Smith & Harrison, state printers, 1884-1901.

Wirth, Theodore. *Minneapolis park system, 1883-1944: retrospective glimpses into the history of the Board of Park Commissioners of Minneapolis, Minnesota, and the city's park, parkway and playground system.* Presented at the annual meeting of the Board of Park Commissioners, July 16, 1945. Minneapolis, Minnesota: Minneapolis, Board of Park Commissioners, 1945.

Wonziak, John S. Ed. *Historic Lifestyles in the Upper Mississippi River Valley.* New York: University Press of America, 1983.

Woods, Thomas A. *Knights of the Plow: Oliver Kelly and the Origins of the Grange in Republican Ideology.* Ames: Iowa State University Press, 1991.

Wright, Herbert E. Jr., Ed. *Late Quaternary Environments of the United States.* 2 vols. Minneapolis: University of Minnesota Press, 1983.

_____ "History of the Mississippi River below St. Paul." In *Pleistocene evolution of the Upper Mississippi Valley.* Minnesota Geological Survey. St. Paul: University of Minnesota, 1985.

Zumberge, J. H. "The lakes of Minnesota: Their origin and classification." *Minnesota Geological Survey Bulletin* 35. Minneapolis: University of Minnesota Press, 1952.

Unpublished Materials

Beckjord, Walter C., Ralph M. Davies, and Lester H. Gatsby. "A Study of Proposed Water Power Development at U. S. Lock and Dam No. 1, Mississippi River between St. Paul and Minneapolis." Thesis, University of Minnesota, Minneapolis, 1909.

Brunet, Patrick James. "The Corps of Engineers and Navigation Improvement on the Channel of the Upper Mississippi River to 1939." Masters thesis, University of Texas, Austin, 1977.

Conard, Rebecca. "The Conservation Movement in Iowa, 1857-1942." National Register of Historic Places Multiple Property Documentation Form, Iowa State Historic Preservation Office, 1991.

Dobbs, Clark A. "Oneota Settlement Patterns in the Blue Earth River Valley." Ph.D. dissertation, University of Minnesota, Minneapolis, 1984.

_____. "Outline of Historic Contexts for the Prehistoric Period (Ca. 12,000 B.P. - A.D. 1700)." Minnesota History in Sites and Structures: A Comprehensive Planning Series. Reports of Investigation No. 37. Prepared for the Minnesota State Historic Preservation Office, St. Paul. Minneapolis: Institute for Minnesota Archaeology, 1988.

_____. "Historic Context Outlines: The Contact Period Contexts (Ca. 1630 A.D. - 1820 A.D.)," Minnesota History in Sites and Structures: A Comprehensive Planning Series. Reports of Investigation No. 37. Prepared for the Minnesota State Historic Preservation Office, St. Paul. Minneapolis: Institute for Minnesota Archaeology, 1988.

Dobbs Clark A. and H. D. Mooers. A phase I archaeological and geomorphological study of Lake Pepin and the upper reaches of Navigation Pool 4. Upper Mississippi River, Institute for Minnesota Archaeology. Reports of Investigations No. 44. Prepared for the St. Paul District, U.S. Army Corps of Engineers, 1991.

Florin, Frank. "Late Paleo-Indians of Minnesota and Vegetation Changes from 10,500-8,000 BP." 2 vols. Master's thesis, University of Minnesota, Minneapolis, 1996.

Gillund, Leslie Randels. "Coon Rapids, a fine city by a dam site: history of Coon Rapids, Minnesota, 1849-1984." Minnesota Historical Society Collections.

Gjerde, Jon. "Historical Resources Evaluation, St. Paul District Locks and Dams on the Mississippi River and Two Structures at St. Anthony Falls." Unpublished Report. St. Paul, Minnesota: St. Paul District, Corps of Engineers, September 1983.

Glewwe, Lois. *South St. Paul Centennial, 1887-1987.* South St. Paul (?): Dakota County Historical Society, 1987.

_____. *A The History of Inver Grove Heights, Minnesota's Treasure, 1858-1990.* City of Inver Grove Heights, 1990.

Heritage Education Project. "The Grey Cloud Lime Kiln." Heritage Site File. Cottage Grove and Newport, Minnesota, nd.

Hesterman, Paul Donald. *Interests, Values, and Public Policy for an Urban River: A History of Development Along the Mississippi River in Saint Paul, Minnesota.* Ph.D. dissertation, University of Minnesota, Minneapolis,1985.

Higginbottom, D. K. "An Inventory of Fluted Projectile Points from Minnesota." A paper presented at the 54th Annual Plains Conference, Iowa City, Iowa, 1996.

Hoffman, B. W. and J. E. Myster. Data Recovery Investigation of the St. Croix River Access Site, 21WA49: A Multicomponent Woodland and Archaic Habitation Site. 2 vols. St. Paul: Archaeology Department, Minnesota Historical Society, 1993.

Hybben, Robert and Jeffrey Hess. "Historic American Engineering Record, Equity Cooperative Exchange Grain Elevator Complex." Unpublished documents prepared for the City of St. Paul. December 1989.

Jalbert, A., David F. Overstreet, and John D. Richards. Cultural Resources Inventory of the Upper Mississippi River, St. Anthony Falls to Pool 10, Wisconsin, Iowa, and Minnesota. Reports of Investigations No. 384. Milwaukee, Wisconsin: Great Lakes Archaeological Research Center, Inc., 1996. Prepared for the U. S. Army Corps of Engineers, St. Paul District.

James, Jean. "The history of Ramsey / researched, written and published as a Bicentennial project in 1976." [City of Ramsey, Minnesota, (1976)]. Minnesota Historical Society Collections.

Jenson, P. S. "The Bremer Village and Mound Site." Masters thesis, Department of Anthropology, University of Minnesota, Minneapolis, 1959.

Jevne, George W. and William D. Timperley. "Study of Proposed Water Power Development at U.S. Lock and Dam No. 1, Mississippi River Between St. Paul and Minneapolis." Thesis, University of Minnesota, Minneapolis, 1910.

Malik, R., and K. Bakken. Archaeological Data Recovery at the Bradbury Brook Site, 21ML42, Mille Lacs County, Minnesota. St. Paul: Archaeology Department, Minnesota Historical Society, 1993. Prepared for the Minnesota Department of Transportation, St. Paul.

Mallam, R. C. The Iowa Effigy Mound Manifestation: An Interpretative Model. Report No. 9, Office of the State Archaeologist, Iowa City, 1976.

Matsch, C. L. "Pleistocene geology of the St. Paul Park and Prescott quadrangles." M.S. thesis, University of Minnesota, Minneapolis, 1962.

Minnesota State Historic Preservation Office, "Historic Context: Early Agriculture and River Settlement (1840-1870)." (nd).

Minnesota State Historic Preservation Office, "Historic Context: Railroads and Agricultural Development (1870 - 1940)." (nd).

Mooers, H. D. "Quaternary history and ice dynamics of the St. Croix phase of Late Wisconsin glaciation, central Minnesota." Ph.D. dissertation, University of Minnesota, Minneapolis, 1988.

Perkl, B. E. "King Coulee (21WB56): A Stratified, Multi-Component Site on Lake Pepin, Wabasha County, Minnesota." Master's thesis, University of Minnesota, Minneapolis, 1996.

Pross, Edward L. "A History of Rivers and Harbors Bills, 1866-1933," Ph.D. dissertation, Ohio State University, 1938.

Reynolds, Susan Pommering. "Dakota County Multiple Resource Nomination (Draft)." June 1979.

St. Anthony Falls Historic District. National Register of Historic Places, National Register of Historic Places Inventory - Nomination Form, Approved 1971.

St. Anthony Falls Historic District. National Register of Historic Places, National Register of Historic Places Inventory - Nomination Form, Continuation Sheet.

"St. Paul Union Stockyards, Centennial Year 1886-1986." Minnesota Historical Society Collections (1986).

Shane, O. C. "Radiocarbon Assays of Bone from the Browns Valley Skeleton." Final report to the Minnesota Historical Society for contract 90-C2443 (1991).

Vogel, Robert C. "Cottage Grove History: A Palimpsest." Heritage Education Project, Advisory Committee on Historic Preservation, City of Cottage Grove, 1997.

Walters, John. "A History of Harriet Island." Unpublished typescript, Division of Archives and Manuscripts, Minnesota Historical Society, St. Paul.

Withrow, Randy E., Elden Johnson, and Mary Whelan. The Schilling Site (21WA1), Cottage Grove, Minnesota. Prepared for the Advisory Committee on Historic Preservation, Cottage Grove, Minnesota, 1987.

Zellie, Carole. *The Mississippi and St. Paul: A Planning Study of Interpretive Potentials.* Unpublished report prepared for the Ramsey County Historical Society and the National Endowment for the Humanities, 1988.

_____. "Hastings' Historic Contexts, Final Report." Submitted to the Hastings Heritage Preservation Commission and the City of Hastings. Landscape Research, July 31, 1993.

Archival Collections and Sources

Coon Rapids Dam, Visitor Center, historical files.
Minnesota Historical Society Collections.
Minnesota State Historic Preservation Office files.
National Archives and Records Administration, Record Group 77.
St. Paul District, Corps of Engineers, historical files.

Personal Communication

Anfinson Scott F. Personal Communication. Minnesota Historical Society (April 2000).

McGuire, Charles. Personal communication, Mississippi National River and Recreation Area, (Spring 2000).

Wiggins, David. Personal Communication, St. Anthony Falls Heritage Zone, Minnesota Historical Society (April 2000).

Endnotes

Preface

1 *Father Louis Hennepin's Description of Louisiana, Newly Discovered to the Southwest of New France by Order of the King*, Translated from the original by Marion E. Cross, with an introduction by Grace Lee Nute. (Published for the Minnesota Society of Colonial Dames of America, The University of Minnesota Press, 1938), pp. 90, 94, 104, 114, 117; William Watts Folwell, *A History of Minnesota*, vol. 1, (St. Paul: Minnesota Historical Society, 1956, third printing 1979), pp. 27-30; William Lass, *Minnesota, A History*, pp. 59-60.

2 Section 701.(a) Findings, Public Law 100-696, November 18, 1988, 102 Stat 4599, Title VII - Mississippi National River and Recreation Area.

3 Mississippi River Coordinating Commission and National Park Service, *Comprehensive Management Plan*, (May 1995), pp. 7-9.

4 "Railroads, Power Dam Figure in Coon Rapids Early History," *Anoka County Union Centennial*, September, 1965, Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*, September, 1965.

5 Lucile M. Kane, *The Falls of St. Anthony: The Waterfall that Built Minneapolis*, (St. Paul: Minnesota Historical Society Press, 1987; originally published as *The Waterfall that Built a City: The Falls of St. Anthony in Minneapolis*, 1966), uses this as her title for Chapter 1, see p. 1.

Chapter 1

1 Newton H. Winchell, *Geology of Minnesota: Minnesota Geological and Natural History Survey, Final Report*, v. 2, (Minneapolis, Minnesota: Johnson, Smith & Harrison, state printers, 1888).

2 Warren Upham, *The Glacial Lake Agassiz*, Geological Society of America Monograph 25, 658 (Washington: Government Printing Office, 1896).

3 Frank Leverett and Frederick W. Sardeson, "Surface formations and agricultural conditions of the south half of Minnesota," *Minnesota Geological Survey Bulletin* 14, (Minneapolis: University of Minnesota, 1919).

4 Frank Leverett, "Moraines and Shorelines of the Lake Superior Basin," United States Geological Survey Professional Paper, (1929), 72 pp.

5 Frederick W. Sardeson, "Fossils in the St. Peter Sandstone," *Minnesota Academy of Natural Sciences Bulletin*, v. 3, (1892), pp. 318-19.

6 Frederick W. Sardeson, *Minneapolis-St. Paul Folio: U. S. Geological Survey Atlas, Folio 201*, (1916).

7 M. Stuvier, "Evidence for variation of atmospheric C-14 content in the late Quaternary," in K. K. Turekian, ed., *Late Cenozoic glacial ages* (New Haven, Connecticut: Yale University Press, 1971), pp. 57-70.

8 W. S. Cooper, "The history of the upper Mississippi River in late Wisconsin and postglacial time," *Minnesota Geological Survey Bulletin* 26, (1935), 116 pp.

9 H. C. Hobbs, "Quaternary geology of southeastern Minnesota," in *Field trip guidebook for the Upper Mississippi Valley: Minnesota, Iowa, and Wisconsin*, Minnesota Geological Survey, Guidebook Series No. 15, (St. Paul: University of Minnesota, 1987), p. 161.

10 C. L. Matsch, "Pleistocene geology of the St. Paul Park and Prescott quadrangles," (M.S. thesis, University of Minnesota, Minneapolis, 1962).

11 J. H. Mossler, "Bedrock geology," Plate 2 in N. H. Balaban and H. C. Hobbs, eds., *Geologic Atlas of Dakota County*, County Atlas Series C-6, Minnesota Geological Survey, (St. Paul: University of Minnesota, 1990).

12 R. V. Ruhe and L. M. Gould, "Glacial geology of the Dakota County area," *Minnesota Geological Society of America Bulletin*, v. 65, (1954) pp. 769-92.

13 L. Martin, *The physical geography of Wisconsin*, Wisconsin Geological and Natural History Survey Bulletin 36, (Madison, 1932, second edition), 608 pp.

14 Herbert E. Wright, Jr., "History of the Mississippi River below St. Paul," in *Pleistocene evolution of the Upper Mississippi Valley*, Minnesota Geological Survey, University of Minnesota, St. Paul (1985).

15 James C. Knox and W. C. Johnson, "Late Quaternary alluviation in the Driftless Area of southwestern Wisconsin," in James C. Knox and D. M. Mickelson, eds., *Late Quaternary Environments of Wisconsin* (Madison: Wisconsin Geological and Natural History Survey, 1974), pp. 134-62.

16 Herbert E. Wright, Jr., "Quaternary History of Minnesota," in P. K. Sims, and G. B. Morey, eds., *Geology of Minnesota: A Centennial Volume*, Minnesota Geological Survey, (St. Paul: University of Minnesota, 1972), pp. 515-47.

17 D. M. Mickelson, Lee Clayton, D. S. Fullerton, and H. W. Borns, Jr., "The Late Wisconsin glacial record of the Laurentide Ice Sheet in the United States," in S. C. Porter, ed., *The Late Pleistocene*, vol. 2, pp. 3-37, (Minneapolis: University of Minnesota Press, 1983).

18 H. D. Mooers, "Quaternary history and ice dynamics of the St. Croix phase of Late Wisconsin glaciation, central Minnesota," (Ph.D. dissertation, University of Minnesota, Minneapolis, 1988).

19 H. D. Mooers, and J. D. Lehr, *A terrestrial record of Laurentide Ice Sheet reorganization during Heinrich events*, (In press).

20 L. Clayton, *Pleistocene Geology of the Superior Region, Wisconsin*, Information Circular No. 46, (Madison: Wisconsin Geological and Natural History Survey, 1984).

21 G. N. Meyer, R. W. Baker, and C. J. Patterson, "Surficial geology," Plate 3 in L. Swanson, and G. N. Meyer, eds., *Geologic Atlas of Washington County, County Atlas Series C-5*, Minnesota Geological Survey (St. Paul: University of Minnesota, 1990).

22 J. H. Zumberge, *The lakes of Minnesota: Their origin and classification. Bulletin 35, Minnesota Geological Survey*, (Minneapolis: University of Minnesota Press, 1952).

23 Ibid.

24 J. C. Knox, "Response of river systems to Holocene climates," in Herbert E. Wright, Jr., ed., *Late Quaternary Environments of the United States*, Vol. 1 (Minneapolis: University of Minnesota Press, 1983), pp. 26-41.

25 Clark A. Dobbs and H. D. Mooers, *A phase I archaeological and geomorphological study of Lake Pepin and the upper reaches of Navigation Pool 4, Upper Mississippi River, Institute for Minnesota Archaeology*, Reports of Investigations No. 44, Prepared for the St. Paul District, U.S. Army Corps of Engineers (1991).

26 Mississippi River Commission (MRC), "Detail Map of the Upper Mississippi River from the Mouth of the Ohio River to Minneapolis, Minnesota, in Eighty-Nine Sheets."

Chapter 2

1 This discussion is structured using historic contexts for the precontact and early contact periods developed for the Minnesota State Historic Preservation Office. Unless otherwise noted, information presented here has been drawn from these contexts and other important sources on regional Native American history. Clark A. Dobbs, "Outline of Historic Contexts for the Prehistoric Period (Ca. 12,000 B.P. - A.D. 1700)," a document in the series *Minnesota History in Sites and Structures: A Comprehensive Planning Series*. Reports of Investigation No. 37, prepared for the Minnesota State Historic Preservation Office, St. Paul (Minneapolis: Institute for Minnesota Archaeology, 1988); Clark A. Dobbs, "Historic Context Outlines: The Contact Period Contexts (Ca. 1630 A.D. - 1820 A.D.)," a document in the series *Minnesota History in Sites and Structures: A Comprehensive Planning Series*, Reports of Investigation No. 37, prepared for the Minnesota State Historic Preservation Office, St. Paul

(Minneapolis: Institute for Minnesota Archaeology, 1988); Elden Johnson, *The Prehistoric Peoples of Minnesota*, Minnesota Prehistoric Archaeology Series No. 3 (St. Paul: Minnesota Historical Society, 1988; revised 3rd edition); A. Jalbert, David F. Overstreet, and John D. Richards, Cultural Resources Inventory of the Upper Mississippi River, St. Anthony Falls to Pool 10, Wisconsin, Iowa, and Minnesota, Reports of Investigations No. 384 (Milwaukee, Wisconsin: Great Lakes Archaeological Research Center, Inc., 1996), prepared for the U. S. Army Corps of Engineers, St. Paul District.

2 T. Webb, III, E. J. Cushing, and Herb E. Wright, Jr., "Holocene Changes in the Vegetation of the Midwest," in H. E. Wright, Jr., ed., *Late Quaternary Environments of the United States, Volume 2: The Holocene* (Minneapolis: University of Minnesota Press, 1983), pp. 142-65.

3 Precontact history is generally measured in years before present (B.P.) rather than in calendar years. In this system, "present" is set at 1950.

4 "Projectile point" is a term used to classify arrowheads, darts, or spearheads generally fashioned out of stone, but sometimes out of wood, bone, or copper. Because projectile point forms differed over time and space, archaeologists can use them to date and distinguish between archaeological cultures. Often, especially during the earliest periods of Native American history, projectile points are the means archaeologists have to accomplish these aims.

5 D. K. Higginbottom, "An Inventory of Fluted Projectile Points from Minnesota," a paper presented at the 54th Annual Plains Conference, Iowa City, Iowa, 1996.

6 J. Steinbring, "The Preceramic Archaeology of Northern Minnesota," in Elden Johnson, ed., *Aspects of Upper Great Lakes Anthropology: Papers in Honor of Lloyd A. Wilford*, Minnesota Prehistoric Archaeology Series, No. 11 (St. Paul: Minnesota Historical Society, 1974), pp. 64-73.

7 A. E. Jenks, "Minnesota's Brown's Valley Man and Associated Burial Artifacts," *Memoirs of the American Anthropological Association* No. 49 (1937); R. Malik and K. Bakken, "Archaeological Data Recovery at the Bradbury Brook Site, 21ML42, Mille Lacs County, Minnesota," (St. Paul: Archaeology Department, Minnesota Historical Society, 1993), prepared for the Minnesota Department of Transportation, St. Paul.

8 O. C. Shane, "Radiocarbon Assays of Bone from the Browns Valley Skeleton," final report to the Minnesota Historical Society for contract 90-C2443 (1991); Malik and Bakken, "Bradbury Brook Site."

9 Frank Florin, "Late Paleo-Indians of Minnesota and Vegetation Changes from 10,500-8,000 BP," 2 vols. (Master's thesis, University of Minnesota, Minneapolis, 1996).

10 Ibid, p. 191.

11 Carole Zellie, *The Mississippi and St. Paul: A Planning Study of Interpretive Potentials*, prepared for the Ramsey County Historical Society (1988).

12 K. L. Keen, L. C. K. Shane, "A Continuous Record of Holocene Eolian Activity and Vegetation Change at Lake Ann, East-Central Minnesota," *Geological Society of America Bulletin* 102 (1990):1646-1657.

13 C. T. Shay, *The Itasca Bison Kill Site: An Ecological Analysis* (St. Paul: Minnesota Historical Society, (1971); Michael G. Michlovic, "The Archaeology of the Canning Site," *Minnesota Archaeologist* 45:1 (1986): 3-36.

14 P. Bleed, *The Archaeology of Petaga Point: The Preceramic Component*, Minnesota Prehistoric Archaeology Series (St. Paul: Minnesota Historical Society, 1969).

15 B. W. Hoffman and J. E. Myster, *Data Recovery Investigation of the St. Croix River Access Site, 21WA49: A Multicomponent Woodland and Archaic Habitation Site*, 2 vols. (St. Paul: Archaeology Department, Minnesota Historical Society, 1993).

16 Elden Johnson and P. S. Taylor, *Spring Lake Archeology: The Lee Mill Cave*, Science Bulletin No. 3, part 2, (St. Paul, Minnesota: The Science Museum of the St. Paul Institute, 1956).

17 B. E. Perkl, "King Coulee (21WB56): A Stratified, Multi-Component Site on Lake Pepin, Wabasha County, Minnesota," (Master's thesis, University of Minnesota, Minneapolis, 1996).

18 Johnson and Taylor, *Spring Lake Archeology*.

19 The advent of pottery provides archaeologists with a new means of dating and distinguishing between archaeological cultures. As with projectile points, the form, composition, and decoration of pottery vary over time and space.

20 Lloyd A. Wilford, "The La Moille Rock Shelter," *The Minnesota Archaeologist* 19:2 (1954):17-24.

21 Randy E. Withrow, Elden Johnson, and Mary Whelan, *The Schilling Site (21WA1), Cottage Grove, Minnesota* (prepared for the Advisory Committee on Historic Preservation, Cottage Grove, Minnesota, 1987).

22 Elden Johnson, *Spring Lake Archeology: The Sorg Site*, Science Bulletin No. 3, part 3, (St. Paul, Minnesota: The Science Museum of the St. Paul Institute, 1959).

23 Guy Gibbon, and C. A. H. Caine, "The Middle to Late Woodland Transition in Eastern Minnesota," *Midcontinental Journal of Archaeology* 5:1 (1980):57-72.

24 C. M. Arzigian, "The Emergence of Horticultural Economies in Southwestern Wisconsin," in W. F. Keegan, ed., *Emergent Horticultural Economies of the Eastern Woodlands*, Center for Archaeological Investigations, Occasional Paper No. 7, (Carbondale: Southern Illinois University, 1987), pp. 217-42,

25 Gibbon and Caine, "The Middle to Late Woodland."

26 R. C. Mallam, *The Iowa Effigy Mound Manifestation: An Interpretative Model*, Report No. 9, Office of the State Archaeologist, Iowa City (1976).

27 Johnson, *The Sorg Site*; P. S. Jenson, "The Bremer Village and Mound Site," (Master's thesis, University of Minnesota, Minneapolis, 1959).

28 Guy E. Gibbon, *The Sheffield Site: An Oneota Site on the St. Croix River*, Minnesota Prehistoric Archaeology Series No. 11, (St. Paul: Minnesota Historical Society, 1973).

29 Mildred M. Wedel, "Peering at the Ioway Indians Through the Mist of Time: 1630 - circa 1700," *Journal of the Iowa Archaeological Society* 33 (1986):1-74.

30 Mildred Mott, "The Relationship of Historic Indian Tribes to Archaeological Manifestations in Iowa," *Iowa Journal of History and Politics* 36:3 (1938):227-314; Clark A. Dobbs, "Oneota Settlement Patterns in the Blue Earth River Valley," (Ph.D. dissertation, University of Minnesota, Minneapolis, 1984).

31 Roy W. Meyer, *History of the Santee Sioux: United States Indian Policy on Trial* (Lincoln: University of Nebraska Press, 1967).

32 Janet D. Spector, *What this awl means: feminist archaeology at a Wahpeton Dakota village* (St. Paul: Minnesota Historical Society Press, 1993).

Chapter 3

1 William Watts Folwell, *A History of Minnesota*, vol. 1, (St. Paul: Minnesota Historical Society, 1956, third printing 1979), pp. 1, 4-7; William Lass, *Minnesota, A History*, (New York: W. W. Norton & Co., 1998; 1st edition 1977), p. 56.

2 Folwell, *Minnesota*, p. 13; Lass, *Minnesota, A History*, pp. 56-57.

3 Folwell, *Minnesota*, pp. 16-18. The new governor-general of New France, Louis de Baude, comte de Frontenac, "the greatest figure in Canadian history," would send Marquette and Joliet off on their journey. Folwell, *Minnesota*, p. 19; Lass, *Minnesota, A History*, p. 58.

4 Folwell, *Minnesota*, pp. 22-23; Lass, *Minnesota, A History*, pp. 58-59.

5 Louis Hennepin, *Father Louis Hennepin's Description of Louisiana, Newly Discovered to the Southwest of New France by Order of the King,* (Minneapolis: The University of Minnesota Press, 1938), pp. 94, 104; Folwell, *Minnesota*, pp. 27-29.

6 Hennepin, *Description of Louisiana*, pp. 90, 114, 117; Folwell, *Minnesota*, p. 30.

7 Folwell, *Minnesota*, p. 30; Lass, *Minnesota, A History*, pp. 59-60.

8 Hennepin, *Description of Louisiana*, p. 117.

9 Ibid., p. 118.

10 Folwell, *Minnesota*, pp. 37-39.

11 Gary Clayton Anderson, *Kinsmen of Another Kind, Dakota-White Relations in the Upper Mississippi Valley, 1650-1862,* (Lincoln: University of Nebraska Press, 1984), p. 23.

12 Folwell, *Minnesota*, pp. 36-41; Lass, *Minnesota, A History*, p. 60.

13 Folwell, *Minnesota*, pp. 44-52; Lass, *Minnesota, A History*, pp. 63, 65.

14 Lass, *Minnesota*, A History, p. 41.

15 Anderson, *Kinsmen*, pp. 23-25.

16 Anderson, *Kinsmen*, pp. 26-27; problems with the Chippewa stories of taking away the woodlands from the Dakota, pp. 47-48; on the myth of the Sioux defeat, see p. 48.

17 Ibid., p. 53.

18 Ibid., pp. 25-26.

19 Lass, *Minnesota, A History*, p. 43.

20 Anderson, *Kinsmen*, pp. 66-67; Folwell, *Minnesota*, p. 53; John Parker, ed., *The Journals of Jonathan Carver and Related Documents, 1766-1770,* (St. Paul, Minnesota: Minnesota Historical Society Press, 1976), pp. 8-9.

21 Lass, *Minnesota*, A History, p. 71.

22 Parker, *Carver*, pp. 90-91.

23 Ibid., pp. 92-94.

24 Ibid., pp. 115-17, 120.

25 Ibid., pp. 117-18.

26 Only a short time before, he says, the Chippewa had sent a belt and beaver blanket seeking peace. Ibid., p. 116.

27 Anderson, *Kinsmen*, p. 73.

28 Peter Pond, "The Narrative of Peter Pond," in Charles M. Gates, ed., *Five Fur Traders of the Northwest* (Minnesota Historical Society Press, 1965), pp. 44-46; on Carver's goals, see Parker, *Carver*, pp. 7-15.

29 Pond, "Narrative," pp. 47-50; Anderson, *Kinsmen*, pp. 63-64.

30 Folwell, *Minnesota*, pp. 67-68.

31 Lass, *Minnesota, A History*, p. 82; Anderson, *Kinsmen*, p. 79; Roy W. Meyer, *History of the Santee Sioux: United States Indian Policy on Trial,* (Lincoln: University of Nebraska Press, 1967; reprinted 1980), p. 24.

32 Zebulon Pike, *Sources of the Mississippi and the Western Louisiana Territory,* (Ann Arbor, Michigan: University Microfilms, Inc., 1966; from Zebulon Pike, *An Account of Expeditions to the Sources of the Mississippi*, Philadelphia, Pennsylvania: C. & A. Conrad, & Co., 1810), pp. 1, 14, 22-24.

33 Ibid., pp. 23-24.

34 Ibid., pp. 24-26; Meyer, *Santee*, pp. 25-26; Anderson, *Kinsmen*, p. 80. Le Fils de Pinchow or Pinichon was the leader of a village up the Minnesota River that had once been headed by Wabasha. Wabasha had left this village to go to the Mississippi River. Meyer, *Santee*, p. 25.

35 Pike, *Sources of the Mississippi*, p. 24.

36 Ibid., pp. 29-30; quote p. 30.

37 Ibid., pp. 30, 93-94; quote p. 93.

38 Ibid., p. 28.

39 Ibid., p. 93; see pp. 92-93 for full statement.

40 Anderson, *Kinsmen*, pp. 84-85.

41 Anderson, *Kinsmen*, pp. 87-91; Lass, *Minnesota, A History*, p. 83.

42 On page 79, Anderson, *Kinsmen*, says that the tribe "had undergone considerable change over the two decades since Ainse's visit." Then, on page 81, he says that overall the eastern Sioux population and lifestyle remained essentially the same between the time of Pond and Ainse and Pike. This captures the dilemma many Native American historians faced. They had to acknowledge that important changes occurred as a result of European and American expansion, and yet, important parts of the Native American way of life stayed the same.

43 Pond, "Narrative," pp. 44, 56.

44 Pond, "Narrative," p. 56; Anderson, *Kinsmen*, p. 79.

45 Anderson, *Kinsmen*, quote p. 81, see pp. 80-81.

46 Lass, *Minnesota, A History*, p. 84.

47 Anderson, Kinsmen, pp. 92-95.

48 The account of Long's effort to beat Pike comes from William H. Keating's narrative of Long's 1823 expedition. See William H. Keating, *Narrative of an Expedition to the Source of the St. Peter's River, Lake Winnepeek, Lake of the Woods, &c, Performed in the Year 1823 by the Order of the Hon. J. C. Calhoun, Secretary of War, under the Command of Stephen H. Long, U.S.T.E.,* p. 297.

49 Lucile M. Kane, June D. Holmquist, and Carolyn Gilman, edited, *The Northern Expeditions of Stephen H. Long, the Journals of 1817 and 1823 and Related Documents*, (St. Paul: Minnesota Historical Society Press, 1978), p. 66.

50 Keating, *Narrative*, pp. 297-98.

51 Kane, *Northern Expeditions*, pp. 65-67; quote p. 66.

52 Ibid., p. 67.

53 Kane, *Northern Expeditions*, pp. 67-68, 69. For an account of what happened to Carver's Cave, see Charles T. Burnley, "Case of the Vanishing Historic Site or What Happened to Carver's Cave?" Ramsey County History 4:2 (Fall, 1967):8-12.

54 Keating, *Narrative*, p. 300.

55 Kane, Northern Expeditions, pp. 68-69, quote, p. 68. For an in-depth history of Fountain Cave, see Greg Brick, "St. Paul Underground–What Happened to Fountain Cave–the Real Birthplace of St. Paul?" *Ramsey County History* 29:4 (Winter, 1995):4-15.

56 Anderson, *Kinsmen*, pp. 95-96, see footnote 68 on O'Fallon's account.

57 Ibid., pp. 96-98.

58 Anderson, *Kinsmen*, pp. 99, 101-02; Lass, *Minnesota, A History*, p. 84; Folwell, *Minnesota*, p. 140.

59 Folwell, *Minnesota*, pp. 138-40; Lass, *Minnesota, A History*, p. 86; Steve Hall, *Fort Snelling: Colossus of the Wilderness*, (St. Paul: Minnesota Historical Society Press, 1987).

60 Anderson, *Kinsmen*, p. 101.

61 Ibid., pp. 103-04.

62 Keating, *Narrative*, pp. 302-03.

63 Anderson, *Kinsmen*, p. 106 ; Gary Clayton Anderson, *Little Crow, Spokesman for the Sioux*, (St. Paul: Minnesota Historical Society Press, 1986), p. 27.

64 Anderson, *Little Crow*, pp. 25-26; Willoughby M. Babcock, Jr., "Sioux Villages in Minnesota prior to 1837," *Minnesota Archaeologist* 12 (October, 1945):136.

65 Anderson, *Kinsmen*, pp. 107-10, 130; Idem., *Little Crow*, p. 29.

66 Quoted in Anderson, *Kinsmen*, p. 128.

67 Anderson, *Kinsmen*, Chapter 7; Babcock, "Sioux Villages," p. 137.

68 Anderson, *Kinsmen*, pp. 155, 158.

69 Ibid., pp. 159-60, 162, 165-66, 174-76.

70 Babcock, "Sioux Villages," p. 137, argues that those who say Kaposia moved after the 1837 treaty are wrong. "Taliaferro's list of 1834," he insists, "shows this chief [Wakinyantanka] as head of the Kaposia band, 'West of the Mississippi and 9 miles below Fort Snelling.'" Furthermore, he contends, "The Taliaferro list of 1834, however, reinforced by his similar locating of the band on his manuscript map of 1835, prove conclusively that the removal took place prior to 1834." Although he writes after Babcock, Anderson, *Little Crow*, pp. 30, 32, suggests that Little Crow III (Wakinyantanka or Big Thunder) moved Kaposia across the river in 1838 as a result of the 1837 treaty.

71 Anderson, *Little Crow*, p. 56.

72 Anderson, *Kinsmen*, pp. 180-82; 184-87; Idem., *Little Crow*, pp. 60-61.

73 Anderson, *Little Crow*, p. 61.

74 Ibid., p. 62.

75 Anderson, *Little Crow*, pp. 61-63 ; Idem., *Kinsmen*, pp. 187-89.

76 Anderson, *Kinsmen*, p. 189; Idem., *Little Crow*, p. 64.

77 Anderson, *Little Crow*, pp. 65, 66; Idem., *Kinsmen*, pp. 189-90.

78 Anderson, *Little Crow*, pp. 66-67; Idem., *Kinsmen*, pp. 192-94.

79 Anderson, *Little Crow*, pp. 69-75.

Chapter 4

1 David A. Lanegran and Anne Mosher-Sheridan, "The European Settlement of the Upper Mississippi River Valley: Cairo, Illinois, to Lake Itasca, Minnesota–1540 to 1860," in John S. Wozniak ed., *Historic Lifestyles in the Upper Mississippi River Valley*, (New York: University Press of America, 1983), pp. 23-25; Tweet, *A History of the Rock Island District, U.S. Army, Corps of Engineers, 1866-1983*, (Washington: U.S. Government Printing Office, 1984), p. 39; William J. Petersen, *Steamboating on the Upper Mississippi*, (Iowa City: The State Historical Society of Iowa, 1968), pp. 206-09, 209, 246; William J. Petersen, "Captains and Cargoes of Early Upper Mississippi Steamboats," *Wisconsin Magazine of History* 13 (1929_30):227-

32; Mildred Hartsough, *From Canoe to Steel Barge*, (Minneapolis: University of Minnesota Press, 1934), pp. 65-66; Roald Tweet, "A History of Navigation Improvements on the Rock Island Rapids," (Rock Island District, U.S. Army Corps of Engineers, April 1980):2; John O. Jensen, "Gently Down the Stream: An Inquiry into the History of Transportation on the Northern Mississippi River and the Potential for Submerged Cultural Resources," *Wisconsin Archeologist* 73:1-2 (March-June, 1992):71, says that only about 20 boats were operating above Galena before 1847. Military supplies and furs would dominate the much smaller steamboat trade above Galena.

2 George Byron Merrick, *Old Times on the Upper Mississippi: The Recollections of a Steamboat Pilot from 1854 to 1863*, Appendix B, Opening of Navigation at St. Paul, 1844-1862, (St. Paul: Minnesota Historical Society Press, 1987), p. 295. Merrick lists the number or arrivals and the number of boats at St. Paul for each of these years. His figures for arrivals differ slightly from those of Dixon in Table 2.1. He lists 99 boats counting for 965 arrivals in 1857 and 62 boats as accounting for the 1,090 arrivals in 1858.

3 Hartsough, *Canoe*, p. 103.

4 Ibid., pp. 101-2.

5 Merrick, *Old Times*, p. 162, says that "From 1852 to 1857 there were not boats enough to carry the people who were flocking into the newly-opened farmers' and lumbermans' paradise."

6 Roald Tweet, *History of Transportation on the Upper Mississippi & Illinois Rivers*, (Washington: U.S. Government Printing Office, 1983), 21-22; Petersen, "Captains and Cargoes," 228, 234-38; Hartsough, *Canoe*, 74-75. Some easterners came to take the "fashionable tour." Arriving in St. Louis or at other railheads on the river's east bank, these excursionists traveled upstream, sometimes to St. Anthony Falls, imbibing the river's beauty (see the above references). Walter Havighurst, *Upper Mississippi, A Wilderness Saga*, (New York: Farrar & Rinehart; New York: J. J. Little and Ives Company, 1944), p. 166; Hartsough, *Canoe*, pp. 106-7.

7 Tweet, "History of Transportation on the Upper Mississippi and Illinois Rivers," p. 22.

8 Frederick J. Dobney, *River Engineers of the Middle Mississippi: A History of the St. Louis District, U.S. Army Corps of Engineers*, (Washington, D.C.: U.S. Government Printing Office, 1978), p. 33.

9 Donald B. Dodd and Wynelle S. Dodd, Historical Statistics of the United States, 1790-1970. Vol. II The Midwest, (The University of Alabama Press, 1973), pp. 2, 10, 22, 46.

10 Petersen, "Captains," p. 235; Tweet, "History of Transportation on the Upper Mississippi and Illinois Rivers," pp. 21-22.

11 Todd Shallat, *Structures in the Stream, Water, Science, and the Rise of the U.S. Army Corps of Engineers*, (Austin: University of Texas, 1994), p. 141.

12 Pike, *Sources of the Mississippi*, p. 24; Keating, *Narrative of an Expedition*, p. 297.

13 Havighurst, *A Wilderness Saga*, p. 249; Merrick, Old Times, p. 232.

14 U.S. Army, Corps of Engineers, *Annual Report of the Chief of Engineers, 1872*, (Washington, D.C.: Government Printing Office, 1876-1940), p. 309. Annual Report, 1881, p. 2746.

15 *Annual Report, 1877*, p. 528.

16 Merrick, *Old Times*, p. 15.

17 Ibid., pp. 18-19, 29-30.

18 Ibid., p. 35.

19 Ibid., pp. xii-xiii, 35, 80, 83, 240.

20 Ibid., pp. 93, 95.

21 Merrick, *Old Times*, p. 100; Havighurst, *A Wilderness Saga*, p. 158, says that early steamboating was "a triumph of men more than machines," and, p. 159, that "piloting was not so much a trade as a miracle."

22 Capt. "Nate" [Nathan] Daly, *Tracks and Trails: Incidents in the Life of a Minnesota Pioneer*, (Walker, Minnesota: Cass County Pioneer, 1931), p. 18. Havighurst, A Wilderness Saga, p. 161.

23 Shortly after the glaciers withdrew from southern Minnesota some 10,000 years ago, St. Anthony Falls stretched across the river valley near downtown St. Paul. A thick limestone mantle formed the riverbed. Just below this mantle lay a soft sandstone layer. As water and ice eroded the sandstone out from underneath the limestone at the edge of the falls, the limestone broke off in large slabs, and the falls receded.

24 Edward L. Pross, "A History of Rivers and Harbors Appropriation Bills, 1866-1933," Ph.D. dissertation, Ohio State University, 1938, p. 44.

25 U.S. Congress, House, Laws of the United States Relating to the Improvement of Rivers and Harbors, vol. 1, 62nd Cong., 3d sess., Doc. No. 1491, (Washington, D.C.: Government Printing Office, 1913), pp. 152-53.

26 Raymond Merritt, *Creativity, Conflict & Controversy: A History of the St. Paul District, U.S. Army Corps of Engineers*, (Washington: U.S. Government Printing Office, 1979); Roald Tweet, *A History of Rock Island District*, (Washington: U.S. Government Printing Office, 1984), pp. 67-68; Duties for the middle Mississippi stayed with the Office of Western Improvements in Cincinnati until 1873, when St. Louis became the new office for the middle river; see Dobney, *River Engineers*, pp. 44-45.

27 *Annual Report*, 1867, p. 262.

28 U.S. Congress, House, "Survey of Upper Mississippi River," 39th Congress, 2d sess., House Ex. Doc. No. 58, pp. 17-18.

29 Ibid., p. 18.

30 *Annual Report*, 1875, Part 2, Vol. 2, Appendix CC, "Reports on Transportation Routes to the Seaboard," p. 455.

31 U.S. Congress, House, "Survey of Upper Mississippi River, Letter from the Secretary of War in answer to a resolution of the House, of December 20, 1866, transmitting report of the Chief of Engineers, with General Warren's report of the surveys of the Upper Mississippi river and its tributaries," 39th Congress, 2d Session, Ex. Doc. No. 58, p. 5.

32 John O. Anfinson, "The Secret History of the Mississippi's Earliest Locks and Dams," *Minnesota History* 54:6 (Summer 1995):254-67.

33 *Annual Report*, 1867, p. 260.

34 House Ex. Doc. No. 58, "Survey of Upper Mississippi River," p. 25.

35 Ibid., p. 27.

36 Frank Haigh Dixon, *A Traffic History of the Mississippi River System*, National Waterways Commission, Document No. 11, (Washington: Government Printing Office, 1909), pp. 29-30; Frederic L. Paxson, "Railroads of the Old Northwest, before the Civil War, *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 17 (1914):257-60, 269-71. William Cronon, *Nature's Metropolis: Chicago and the Great West*, (New York: W. W. Norton & Company, 1991), p. 296, says that the first railroad to reach the Mississippi River was the Chicago, Alton and St. Louis in 1852-53. However, Paxson, whom he cites, shows that the railroad completed tracks from Alton to Springfield, Illinois, in 1852, and then from Springfield to Chicago, via a roundabout route, in 1853, but did not have the line in operation until 1854. Gary F. Browne, "The Railroads: Terminals and Nexus Points in the Upper Mississippi Valley," (in John S. Wozniak ed., *Historic Lifestyles in the Upper Mississippi River Valley*, (New York: University Press of America, 1983), p. 84, says the first railroad reached the Mississippi River at

Rock Island on February 22, 1854. Petersen, *Steamboating*, p. 298, also recognizes the railroad at Rock Island as the first to reach the river.

37 Frederic Paxson, *American Frontier, 1763-1893*, (Chicago: The Riverside Press, 1924), p. 517.

38 Contrary to most histories that follow Dixon, *A Traffic History*, p. 48, in saying that there were thirteen bridges across the Mississippi River by 1880, Patrick Brunet, "The Corps of Engineers and Navigation Improvements on the Channel of Upper Mississippi River to 1939," Master's Thesis, (Austin, University of Texas, 1977), p. 46, says that there were fourteen bridges across the river by 1877, and he lists them.

39 Lester Shippee, "Steamboating on the Upper Mississippi after the Civil War: A Mississippi Magnate," *Mississippi Valley Historical Review* 6:4 (March 1920):496; Dixon, *A Traffic History*, p. 49; Hartsough, *Canoe*, pp. 84-85, 91.

40 Hartsough, *Canoe*, pp. 196-97, 199; Tweet, *History of Transportation*, 38-39.

41 Hartsough, *Canoe*, pp. 197, 203.

42 Solon J. Buck, *Granger Movement, A Study of Agricultural Organization and Its Political, Economic and Social Manifestations, 1870-1880*, (Cambridge: Harvard University Press, 1933), pp. 40-42; William D. Barns, "Oliver Hudson Kelley and the Genesis of the Grange: A Reappraisal," *Agricultural History* 41 (July 1967):229-30. Throughout his article (pp. 229-42), Barns addresses three issues concerning Kelley. First, did Kelley get the idea for the Grange on his trip through the South? Second, was the idea of the Grange really his? And, did Kelley want to make the Grange into the radical organization it became during the early 1870s, or did events force the Grange that way? Barns credits Kelley with founding the Grange, recognizing the role of others, particularly of Miss Carrie Hall, Kelley's niece. Barns also argues that Kelley came away from his southern trip with the idea for the Grange, and that Kelley had a more radical organization in mind from the outset than Buck and other historians admit. Thomas A. Woods, *Knights of the Plow: Oliver Kelley and the Origins of the Grange in Republican Ideology*, (Ames: Iowa State University Press, 1991), Chapters 7 and 8, supports and greatly expands on Barns' argument that Kelley actively pushed economic and political solutions and/or tacitly approved while others did so.

43 Buck, *Granger Movement*, p. 108.

44 Ibid., pp. 108-9.

45 Woods, *Knights*, pp. 138-39.

46 Harold B. Schonberger, *Transportation to the Seaboard: The Communication Revolution and American Foreign Policy, 1860-1900*, (Westport, Connecticut: Greenwood Publishing Corporation, 1971), p. 21.

47 Ibid., p. 22.

48 *St. Louis Democrat*, May 14 and 15, 1873.

49 Woods, *Knights*, p. 141.

50 Blegen, *Minnesota, A History of the State*, (Minneapolis: University of Minnesota Press, 1975, 1963), p. 290.

51 Ibid., p. 293. While still in his twenties, Donnelly had become Minnesota's lieutenant governor. He moved on to represent Minnesota in the U.S. House for 6 years as a Republican. But in 1868, he quarreled with Minnesota's senior Republican leader, Alexander Ramsey, and failed to get reelected.

52 Woods, *Knights*, pp. 148, 151-52, 155; Schonberger, *Transportation to the Seaboard*, pp. ix-xix, 3-30; Robert S. Salisbury, *William Windom, Apostle of Positive Government*, (New York: University Press of America, 1993), pp. 123-24.

53 Salisbury, *William Windom*, p. 113.

54 The Senate also considered a warning from Republican President Ulysses Grant. Well aware of the agrarian unrest, he had warned the Senate that, "this

issue would inevitably be forced on the Exec. branch, . . . [and] suggested that the Congress study the problem and find a solution." Windom, *Select Committee*, p. 7; Schonberger, *Transportation to the Seaboard*, p. 29.

55 Windom, *Select Committee*, p. 243.

56 Ibid., p. 213.

57 Ibid., p. 243; The Select Committee recommended a depth of 5 feet at low water for St. Paul to St. Louis. p. 213.

58 Ibid., p. 211.

59 In 1872, Captain J. Throckmorton argued that while wing dams would probably not work for the upper river, closing dams would. *Annual Report*, 1872, pp. 309-10.

60 *Annual Report*, *1875*, p. 302. The *Caffrey* may have done some work with closing dams earlier. In his report for the 1871 season, Captain Wm. Hillhouse reported that the *Caffrey's* work had included 1,600 feet of wing dams. He does not provide a location for this work and there is no mention of it in later reports, however. *Annual Report* 1872, p. 310.

61 Before 1906, the important problem of the arrangement was largely left to the judgment of local engineers. As cited in U. S. Congress, House, *Letter from the Secretary of War, Transmitting, with a Letter from the Chief of Engineers, Report of Estimate for Six-Foot Channel in the Mississippi River between the Missouri River and St. Paul, Minn.*, 59th Cong., 2nd sess., H. Doc. No. 341, pp. 14-15:
> the rule has been to place them, in straight reaches, five-sevenths of the proposed channel width apart; in curved reaches, one-half on the concave sides and the full width on the convex sides. Assistant Engineer W.A. Thompson gives a rule which is better adapted to the present project (the 6-foot channel), in which he places the dams in straight reaches the full channel width apart, increasing the space 25 per cent on the convex side and diminishing it 25 per cent on the concave side, depending on the degree of curvature. Wings should be pointed upstream at the following angles: 105N to 110N, in straight reaches, 100N to 102N in concave, 90N to 100N in convex, and they should be so located where practicable, that their axes prolonged would meet in the center of the channel.

62 For wing dams, the suggested proportion of brush to rock was two to one, although where the current was strong, the ratio might increase to a ratio of three or four portions of brush for every one of rock. H. Doc. No. 341, p. 14; *Annual Report*, *1879*, p. 111, see figures 1, 2, and 3 and Plate 3.

63 Alberta Kirchner Hill, "Out With the Fleet," *Minnesota History*, (1961):286.

64 Hill, "Out With the Fleet," p. 291.

65 *Annual Report*, *1880*, p. 1495.

66 *Annual Report*, *1895*, pp. 2103-04; *Annual Report*, *1869*, p. 237; *Annual Report*, *1901*, p. 2309; Raymond H. Merritt, *The Corps, the Environment, and the Upper Mississippi River Basin*, (Washington: U.S. Government Printing Office, 1984), p. 1; Merritt, *Creativity*, pp. 68-74; Jane Carroll, "Dams and Damages: The Ojibway, the United States, and the Mississippi Headwaters Reservoirs," *Minnesota History*, (Spring, 1990):4-5.

67 Lucile M. Kane, "Rivalry for a River: the Twin Cities and the Mississippi," *Minnesota History* 37:8 (December 1961):309-23. 310-11.

68 Ibid., pp. 310-12.

69 Ibid., p. 311.

70 Merritt, *Creativity*, 140; Lucile M. Kane, *The Falls of St. Anthony: The Waterfall that Built Minneapolis*, (St. Paul: Minnesota Historical Society Press, 1987), pp. 92-93; Kane, "Rivalry," pp. 311-12; Kane adds that during these years Meeker had sought to get the required completion date extended. This also caused some delay.

71 U.S. Congress, House, *Survey of the Upper Mississippi River*, Exec. Doc. 58, 39th Cong., 2d sess., p. 46; Kane, *St. Anthony*, pp. 92-93; Kane, "Rivalry," p. 312.

72 H. Exec. Doc. 58, pp. 45-46.

73 Kane, *St. Anthony*, p. 93.

74 House Ex. Doc. 58, p. 45.

75 Ibid., p. 47.

76 Anfinson, "Secret History," *Minnesota History* 54:6 (Summer 1995):254-67.

77 *Annual Reports*, *1867*, pp. 259, 262; *Laws of the United States*, pp., 155-56; H. Exec. Doc. 58, pp. 30, 50-52. In his next report to the Chief of Engineers, Warren stated that new surveys showed that the Corps would have to build a second lock and dam, locating it near the mouth of Minnehaha Creek, about one-half mile below Lock and Dam No. 1; see U.S. Congress, House, *Survey of the Upper Mississippi River*, Exec. Doc. 247, 40th Cong., 2d sess., p. 9.

78 Kane, "Rivalry," pp. 312-15, quote from p. 315; Kane, *St. Anthony*, p. 94.

79 Kane, "Rivalry," p. 316.

80 Ibid. The St. Paul businessmen included William E. McNair, Eugene M. Wilson, William S. King, Edward Murphy, and Isaac Atwater. Meeker, Kane says, retained some shares of the company for himself, as did his friends.

81 Ibid., pp. 318-19. Opponents to the amendment included waterpower magnates William D. Washburn and Richard Chute. Allied with them were sawmill operators and boom company operators William W. Eastman, John Martin, Sumner W. Farnham, James A. Lovejoy, and Joel B. Bassett. Support for the project came from the company's stockholders, navigation boosters and city business leaders. Kane, *St. Anthony*, p. 96, points out that the state never transferred the grant to the company.

82 Kane, "Rivalry," pp. 319-320; Kane, *St. Anthony*, p. 96. In 1869, a tunnel from the toe of the falls to Nicollet Island collapsed just below the island. Due to the collapse of this tunnel, St. Anthony Falls was in danger of eroding away. The Corps of Engineers was working on a project to save the falls.

83 Kane, "Rivalry," p. 322, suggests that the federal government recognized its obligation for improving navigation in 1873 by authorizing $25,000 for the project. Merritt, *Creativity*, p. 141, says that "When it appeared that the Mississippi River Improvement and Manufacturing Company would not be able to resolve its internal conflicts, Congress decided to give the project over to the Corps of Engineers." Neither author discusses who pushed Congress to authorize the project.

84 *Annual Report*, *1873*, p. 411; *Annual Report*, *1874*, p. 287.

85 Merritt, *Creativity*, p. 141.

86 *Annual Report*, *1891*, p. 2154; Mackenzie, *Annual Report*, *1890*, p. 2034, reported that the Corps had completed several examinations of the area over the last year, "in company with the Minneapolis representatives of the river interests."

87 *Annual Report*, *1890*, p. 2034; *Annual Report*, *1892*, pp. 1780-81. In June and July of 1891, Mackenzie carried out even more "accurate surveys" of most of the river from the Minneapolis steamboat warehouse to the Short Line bridge below Meeker Island and of select areas down to the Minnesota River; see *Annual Report*, *1891*, p. 2154.

88 *Annual Report*, *1894*, pp. 1682-83; U.S. Congress, Senate, "Construction of Locks and Dams in the Mississippi River," 53d Cong., 2d sess., Exec. Doc. No. 109, pp. 7-8.

89 U.S. Congress, House, *Laws of the United States Relating to the Improvement of Rivers and Harbors*, vol. 2, 62nd Cong., 3d sess., Doc. No. 1491, (Washington, D.C.: Government Printing Office, 1913), p. 704. Kane, *St. Anthony*, p. 175, says "Deprived of the navigation facilities they coveted, per-

suasive Minneapolitans continued to urge the federal government to act. United States army engineers responded in 1894 by announcing plans for two locks and dams . . . ." This misplaces the authority for authorizing the project with the Corps instead of Congress and makes the Corps a proactive proponent of the project, which she does not demonstrate they were. Granted, Mackenzie repeatedly called for locks and dams. Kane jumps to the construction of Lock and Dam 2, without discussing who made the final push for the project.

90 *Annual Report, 1908*, pp. 530, 1649-50; *Annual Report, 1907*, pp. 1578-79.

91 Major Francis R. Shunk to Minneapolis Mayor J. C. Haynes, February 17, 1909. St. Paul District records, St. Paul, Minnesota.

Chapter 5

1 Grain traffic through the Des Moines Rapids Canal and at St. Louis during the late nineteenth century illustrates the decline of the freight trade on the upper river. In 1879 and 1880 over two million bushels of grain passed through the canal, but it only registered 400,000 bushels at the end of the decade and less than 56,000 bushels after 1895. See Frank H. Dixon, *A Traffic History of the Mississippi River System*, National Waterways Commission, Document No. 11 (Washington, D.C.: Government Printing Office, 1909), p. 51.

2 *Annual Reports*, 1892-1909.

3 Philip V. Scarpino, *Great River: An Environmental History of the Upper Mississippi, 1890-1950* (Columbia: University of Missouri Press, 1985), p. 37, says that towns along the river formed the Upper Mississippi River Improvement Association due to the loss of timber-related businesses. They hoped that by reviving the river they could revive their sinking economies.

4 Upper Mississippi River Improvement Association, *Proceedings of the Upper Mississippi River Improvement Association Convention Held at Quincy, Illinois, November 12-13, 1902* (Quincy, Illinois, n.d.), pp. 6, 8-9.

5 Ibid., p. 73.

6 Gilbert C. Fite, "The Farmer's Dilemma, 1919-1929," in John Braemen, Robert H. Bremner, and David Brody, ed., *Change and Continuity in Twentieth Century America: The 1920's* (Columbus: Ohio State University Press, 1968), p. 67; James H. Shideler, *Farm Crisis*, 1919-23 (Los Angeles: University of California Press, 1957), p. 4.

7 Upper Mississippi River Improvement Association, Proceedings of the Upper Mississippi River Improvement Association held in Minneapolis, Minn., October 10 and 11, 1906 (Quincy, Illinois: McMein Printing Company), p. 69.

8 Ibid., pp. 66-68.

9 Samuel Hays, *Conservation and the Gospel of Efficiency: the Progressive Conservation Movement, 1890-1920* (Cambridge, Mass.: Harvard University Press, 1959); Rebecca Conard, "The Conservation Movement in Iowa, 1857-1942," National Register of Historic Places Multiple Property Documentation Form, Iowa State Historic Preservation Office (1991), E-2-6; W. J. McGee, "The Conservation of Natural Resources," *Proceedings of the Mississippi Valley Historical Association for the Year 1909-1910*, 3 (Cedar Rapids, Iowa, 1911), pp. 361-79; Gifford Pinchot, *The Fight for Conservation* (Seattle: University of Washington Press, 1967; New York: Doubleday, Page & Company, 1910); Carolyn Merchant, ed., *Major Problems in Environmental History* (Lexington, Massachusetts, 1993), Chaps. 9-11; Kendrick A. Clements, "Herbert Hoover and Conservation," *American Historical Review* 89 (February 1984):85-86.

10 Pross, "Appropriation Bills," p. 139. On railroads having reduced their rates as far as possible see E. V. Smalley, "The Deep Waterways Problem," *Forum*, XIX (Aug., 1895):746-52.

11 Hays, *Conservation*, p. 91.

12 Ibid., pp. 91-92.

13 Ibid., p. 92.

14 McGee, "Our Great River," p. 8576.

15 Hays, *Conservation*, pp. 92-94.

16 *UMRIA Proceedings*, 1907, p. 16.

17 Ibid., pp. 16, 80.

18 Ibid., p. 79.

19 Ibid., p. 77; letter read to the convention from Captain J. F. Ellison, secretary of the National Rivers and Harbors Congress.

20 Pross, "Appropriation Bills," pp. 131-32.

21 McGee, "Our Great River," *World's Work* (February 13, 1907), p. 8577.

22 Robert H. Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967); John Milton Cooper, Jr., *Pivotal Decades: The United States, 1900-1920* (New York: W. W. Norton & Company, 1990).

23 Hays, *Conservation*, p. 2.

24 Hays, *Conservation*, p. 114.

25 Jerome G. Kerwin, *Federal Water-Power Legislation* (New York: Columbia University Press, 1926), pp. 8-11, 82-83, 111-25.

26 War Department, Office of the Chief of Engineers, Circular No. 14, April 4, 1905, National Archives and Records Administration, Record Group 77, Entry 103, Box 1408, F 58362, pp. 2-3; *Congressional Record*, 1903, Vol. 36, pt. 3, p. 3072; Kerwin, *Water-Power*, p. 79.

27 War Department, Circular No. 14, p. 3; Kerwin, *Water-Power*, pp. 82-84.

28 *Congressional Record*, 1903, pp. 3071-72. A Representative from Alabama argued that the charges were reasonable, while Representative Theodore Burton of Ohio argued that they were minimal. Burton defended the President's veto, arguing that it gave an extremely valuable resource to a small group of individuals for their exclusive use. Without a set policy, he cautioned, Congress would appear to engage in favoritism to those who received grants. See p. 3072.

29 In 1904, at Hales Bar on the Tennessee River, Congress required the Corps to build the lock but made the Chattanooga Tennessee River Power Company pay for the dam. The company received the power at no charge and won a 99-year lease. In 1905, the Keokuk and Hamilton Water Power Company obtained a grant to build a power dam on the upper Mississippi River at Keokuk, Iowa. Here, the Corps determined that the Des Moines Rapids canal served navigation needs and the company had to build the dam and lock at its own expense. Leland Johnson, *Engineers on the Twin Rivers: A History of the Nashville District Corps of Engineers, United States Army* (Nashville, Tennessee: U.S. Army Engineer District, Nashville, 1978), pp. 163-64; Scarpino, *Great River*, pp. 23-24. W. L. Marshall, the Chief of Engineers, may have recommended that the Corps build all of Lock and Dam No. 1 to avoid problems that arose over agreements at sites like these.

30 Kerwin, *Water-Power*, pp. 111-14; Kerwin, p. 117, says that Roosevelt, in his 1908 veto of a project on the Rainy River, in Minnesota, admitted that "There is a sharp conflict of judgement as to whether this general act empowers the War Department to fix a charge and set a time limit. All grounds for such doubts," he contended, "should be removed henceforth by the insertion in every act granting such a permit of words adequate to show that a time limit and a charge to be paid to the Government are among the interests of the United States which should be protected through conditions and stipulations to be approved either by the War Department, or, as I think would be

preferable, by the Interior Department." Hays, *Conservation*, pp. 117-19.

31 Scarpino, *Great River*, p. 62; Hays, *Conservation*, p. 90-91, 100.

32 Hays, *Conservation*, pp. 90, 102-03.

33 McGee, "Our Great River," pp. 8580-83.

34 Ibid., p. 8579.

35 Scarpino, *Great River*, p. 22.

36 Kane, *St. Anthony Falls*, pp. 134, 151, 154. Why the Twin Cities changed their position on the project deserves much more research.

36 U.S. Congress, House, *Use of Surplus Water Flowing over Government Dam in Mississippi River between St. Paul and Minneapolis, Minn.*, 60th Cong., 1st sess., Doc. No. 218, pp. 2, 6. Mackenzie, after serving as the Rock Island District Engineer from 1879 to 1895, became the Chief of Engineers on January 23, 1904. The commissioners were Major W. V. Judson from the Corps of Engineers, J. E. Woodwell from the Treasury Department, and Major Amos W. Kimball from the Quartermaster Corps.

37 Ibid., p. 3. While the head at this site varied from 10.2 feet at low water to 4.0 feet at high stages, the high stages lasted longer than usual, due to the Minnesota River, which entered the Mississippi about two miles downstream and backed water up to Lock and Dam No. 1.

38 Ibid., pp. 218, 4-6.

39 Merritt, *Creativity*, p. 142. Merritt argues that Minneapolis and St. Paul officials haggled over the placement of Lock and Dam No. 1 and that high water hampered its start. "Business interests in Minneapolis and St. Paul," he contends, "used the delay to press for a larger dam that would generate electrical power." He does not say who these interests were.

40 *Laws of the United States*, v. 2, 1343; *Annual Report, 1909*, p. 561.

41 U.S. Congress, House, *Mississippi River, St. Paul to Minneapolis, Minn.*, 61st Cong., 2d sess., H. Doc. 741, p. 5. The board proposed using flash-boards–wooden boards attached to the dam's surface–to raise the height of Dam No. 2 to provide for a 6-foot channel. At Lock and Dam No. 1, they proposed raising the height of the dam by one foot and adding an auxiliary lock below Lock and Dam No. 1 for extreme low-water situations. The Board of Engineers for Rivers and Harbors concurred with the first recommendation but disagreed with the second. Rather than building another lock, it suggested that the Corps lower the already completed floor by the necessary depth; see pp. 5, 14.

42 Ibid., pp. 5-6. Placing the dam farther upstream would have required a lower dam because of the new Pillsbury-Washburn hydroelectric station and dam at Lower St. Anthony Falls. They decided against building it farther downstream because it would have flooded the Minnehaha Creek gorge, which, the board noted, was "one of the natural attractions of the city of Minneapolis."

43 Ibid., p. 6.

44 Major Francis R. Shunk to Minneapolis Mayor J. C. Haynes, February 17, 1909, St. Paul District records, St. Paul, Minnesota.

45 Ibid.

46 *Minneapolis Tribune*, June 9, 1909, p. 1; H. Doc. 741, p. 5. Representatives from the University of Minnesota had met a party from St. Paul and Minneapolis at Lock and Dam No. 1 the day before. At this encounter, the two cities learned of the University's interest in the hydroelectric power of the high dam.

47 *Minneapolis Tribune*, June 9, 1909, p. 1.

48 *St. Paul Pioneer Press*, June 10, 1909, p. 4.

49 *Minneapolis Tribune*, June 10, 1909, p. 2; *St. Paul Pioneer Press*, June 10, 1909, p. 4; H. Doc. 741, p. 5.

50 H. Doc. 741, p. 8; *St. Paul Pioneer Press*, June 10, 1909, p. 4; Kane, "Rivalry," p. 321.

51 H. Doc., 741, p. 8.

52 Ibid., pp. 8-9.

53 Ibid., p. 7.

54 Ibid., p. 8. In contrast to this position by the board, the *Minneapolis Tribune*, June 10, 1909, p. 4, reported that those present at the June 9 public meeting voted to go on record as favoring the building of the high dam, whether accomplished by the state, the cities or a private interest.

55 H. Doc. 741, pp. 8-9, 12-13. The board eliminated the State of Minnesota from consideration because it believed that the state's constitution was not likely to be amended to allow it to engage in such a project. The Minneapolis resolution included hydropower for the University of Minnesota.

56 Ibid., p. 3.

57 Ibid., pp. 3-4. Hays, *Conservation*, p. 114, presents information that would explain Marshall's decision. Hays relates that when some members of the Inland Waterways Commission suggested that private parties pay the cost of the hydropower portion of a navigation dam, "the Corps of Engineers and many in Congress objected that this would give rise to conflicts in operation and administration . . . ." As a result, Hays says, the commission decided that the federal government would pay the construction costs and lease the power. The question at Lock and Dam No. 1 was not simply whether the government would pay all or part of the cost to make hydroelectric power possible. The fact that the Engineers had completed much of the authorized navigation project put the Corps in the position of redoing the project specifically to accommodate hydropower development. See Hays, pp. 109 and 215, for General Mackenzie's position on this issue.

58 H. Doc. 741, p. 3.

59 Merritt, *Creativity*, p. 144; Merritt, p. 145, adds that while Shunk recognized that the Corps had no authority to develop hydropower, he believed that this "was just a case of legislative oversight . . . ." Given the debate over the government's role in hydroelectric power development, it was not simply a matter of legislative oversight but of national disagreement over federal hydropower development.

60 Shunk to Haynes, February 17, 1909.

61 Merritt, *Creativity*, pp. 144-45.

62 River and Harbor Act, June 25, 1910, *Laws of the United States*, v. 2, pp. 1419-20; *Annual Report, 1910*, pp. 1799-1800.

63 River and Harbor Act, July 25, 1912, *Laws of the United States*, v. 2, pp. 1564-65.

64 Hays, *Conservation*, pp. 102-10.

65 Ibid., pp. 108-12.

66 Ibid., pp. 109-14. In 1917 Congress approved Newlands' bill, but many changes called for in the bill had already been made, undermining its significance. See also Donald C. Swain, *Federal Conservation Policy, 1921-1933* (Berkeley and Los Angeles: University of California Press, 1963), p. 98.

67 As noted earlier, Congress, in the River and Harbor Act of 1910, *Laws of the United States*, v. 2, pp. 1419-20, provided for "reasonable compensation" from a hydroelectric power lease at Lock and Dam No. 1; *Annual Report, 1910*, pp. 1799-1800.

68 Hays, *Conservation*, p. 119.

69 Scarpino, *Great River*, p. 65.

70 Hays, *Conservation*, pp. 115-21. Hays says that the 1920 act represented a compromise between conservationists and their opponents. While it permitted hydroelectric power development, it separated water power from other water-related development. This essentially ended hopes for the multiple-purpose approach for over a decade. Swain, *Federal Conservation Policy*, pp. 111-21, notes that the act also created a Federal Power Commission (FPC) and formalized federal regulation of hydroelectric power development. The act gave the FPC jurisdiction over all water power sites on navigable streams, the authority to grant 50-year licenses and to regulate electrical rates and services. "Most important," Swain, p. 113, argues, "the commission received authority to require that projects be planned in accordance with a 'comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial uses . . . .'" Swain criticizes the commission, however, for being ineffective.

71 Merritt, *Creativity*, p. 146. Hydroelectric power development at Lock and Dam No. 1 became the Federal Power Commission's Project No. 362.

72 George W. Jevne and William D. Timperley, "Study of Proposed Water Power Development at U.S. Lock and Dam No. 1, Mississippi River Between St. Paul and Minneapolis," (Thesis, University of Minnesota, 1910), p. 1; Jon Gjerde, "Historical Resources Evaluation, St. Paul District Locks and Dams on the Mississippi River and Two Structures at St. Anthony Falls, unpublished, for St. Paul District, Corps of Engineers," (September 1983), p. 84.

73 Walter C. Beckjord, Ralph M. Davies, Lester H. Gatsby, "A Study of Proposed Water Power Development at U. S. Lock and Dam No. 1, Mississippi River between St. Paul and Minneapolis," (Thesis, University of Minnesota, 1909), pp. 1-2. This thesis and the previous one by Jevne and Timperley were written as the University of Minnesota was considering how it might use the hydroelectric power generated at a high dam.

74 Kane, "Rivalry," p. 322.

75 Shunk to Haynes, February 17, 1909; U.S. Congress, House, "Survey of the Upper Mississippi River," Exec. Doc. 247, 40th Cong., 2d sess., p. 9.

76 Twin Cities businesses had taken a greater interest in freight rates as railroads had begun to raise their rates. "Under the spur of increasing railroad freight rates, there has developed amongst the business men of the Twin Cities in the past few months a real interest in the revival of river traffic." This may refer to the fact that the decision in the Indiana Rate Case was to take effect in 1925. U.S. Congress, House, *Mississippi River from Minneapolis to Lake Pepin. Report from the Chief of Engineers on Preliminary Examination and Survey of Mississippi River from Minneapolis to Lake Pepin, with a View to Improvement by the Construction of Locks and Dams*, 69th Cong., 2d sess., Doc. No. 583, p. 19.

77 Ibid., p. 19.

78 Ibid., p. 17.

79 Ibid., pp. 14-15.

80 Ibid., p. 14.

81 Ibid.

82 Ibid., pp. 14-15.

83 Ibid., pp. 23, 48.

84 Merritt, *Creativity*, p. 195; Richard Hoops, *A River of Grain: the Evolution of Commercial Navigation on the Upper Mississippi River* (Madison: University of Wisconsin-Madison, College of Agricultural and Life Sciences Research Report, R3584, n.d.), pp. 56-57.

85 Herbert Quick, *American Inland Waterways, Their Relation to Railway Transportation and to the National Welfare; Their Creation, Restoration and Maintenance* (New York, 1909), p. 77. The 1920s farm crisis made farm organizations and farm equipment manufacturers some of the strongest supporters of navigation improvements during this decade.

86 Roald Tweet, *History of Transportation*, p. 77; Herbert Hoover, "The Improvement of Our Mid-West Waterways," *The Annals of the American Academy* 135 (January 1928), pp. 15-24; Idem., "Address at Louisville, Kentucky, October 23, 1929, in celebration of the Completion of the Nine-foot Channel of the Ohio River. . . .", William Starr Myers, ed., *The State Papers and Other Public Writings of Herbert Hoover*, vol. 1 (Garden City, N. Y.: Doubleday, Doran & Company, Inc., 1934), pp. 116-22; Franklin Snow, "Waterways as Highways," *North American Review* 227 (May 1929):592.

87 Public Service Commission of Indiana Et Al. v. Atchison, Topeka & Santa Fe Railway Company, *Interstate Commerce Commission Reports, Decisions of the Interstate Commerce Commission of the United States*, v. 66, no. 11388, (January to March, 1922), 520, 512-22; ibid., v. 88, no. 11388, (February to April, 1924), 709-24; ibid., v. 88, no. 13671, 728-42.

88 Ibid., v. 66, no. 11388, p. 522.

89 *St. Paul Pioneer Press*, "An Inland Empire's Need," (May 12, 1928).

90 Hoops, "A River of Grain," argues that a small clique of men pushed the 9-foot channel project through and that it was a pork barrel project. One must consider his argument carefully, but he underestimates the power, depth and expanse of the movement. Given the great interest and popular support for this project, it transcended simple pork barrel projects.

91 Kane, *St. Anthony*, pp. 154, 174-76; Clarence Buedning, "A Review of the Construction of the St. Anthony Falls Project," (St. Paul District, Records: 1962); Francis Mullin, "The St. Anthony Falls Navigation Project," *Proceedings of the American Society of Civil Engineers* 89:CO1 (March, 1963):1-18; Martin Nelson, "Nine-Foot Channel Extension Above St. Anthony Falls," *The Minnesota Engineer* (June, 1960):6-9; "Flooding and Untimely Thaws Test Contractors' Mettle on River Job," *Construction Bulletin* (March 6, 1952):36-41.

92 Letter from H. M. Byllesby & Company, Insurance Exchange Building, Chicago, Illinois, from William de la Barre, written at the Minneapolis, Genl. Electric Office, Hennepin Parks, Coon Rapids Dam, historic files.

93 "Railroads, Power Dam Figure in Coon Rapids Early History," *Anoka County Union Centennial*, September, 1965, Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*, September, 1965.

94 Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*, November 26, 1913. The article had originally been printed in the *Minneapolis Tribune*. See U.S. Congress, House, "An Act To authorize the Great Northern Development Company to construct a dam across the Mississippi River from a point in Hennepin County to a point in Anoka County, Minnesota," 61st Cong., 3rd sess., Chapter 12, p. 893. The act specifically stated that the company had to build the dam and power plant in accordance with the Water Power acts of June 21, 1906, and June 23, 1910.

95 Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*, November 26, 1913.

96 Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*, December 17, 1913.

97 "Railroads, Power Dam Figure in Coon Rapids Early History," *Anoka County Union Centennial*, September, 1965, Hennepin Parks, Coon Rapids Dam, historic files, *Anoka County Union Herald*.

98 Ibid.

Chapter 6

1 Scott F. Anfinson, "Archaeology of the Central Minneapolis Waterfront, Part 1: Historical Overview and Archaeological Potentials," *The Minnesota Archaeologist* 48:1-2, (1989):17-20.

2 Ibid., p. 19.

3 Anfinson, "Archaeology," p. 19; Kane, *St. Anthony*, p. 2; Dave Wiggins, St. Anthony Falls Heritage Zone, personal communication (April 27, 2000).

4 Hennepin, *Description of Louisiana*, p. 117.

5 Stephen H. Long, *Voyage in a Six-Oared Skiff to the Falls of Saint Anthony in 1817 by Major Stephen H. Long, Topographical Engineer, United States Army*, Collections of the Minnesota Historical Society, vol. II (St. Paul, Minnesota: Minnesota Historical Society, 1889 (facsimile copy printed 1997)), pp. 37-40; Kane, *St. Anthony*, pp. 2-3; in footnote 5, p. 197, she says there are many versions of this story and lists some.

6 Henry Rowe Schoolcraft, *Travels through the Northwestern Regions of the United States* (Ann Arbor, Michigan: University Microfilms, Inc., p. 291, from Henry Rowe Schoolcraft, *Narrative Journal of Travels through the Northwestern Regions of the United States Extending from Detroit through the Great Chain of American Lakes, to the Sources of the Mississippi River, Performed as a Member of the Expedition under Governor Cass, in the Year 1820* (Albany, New York: E. & E. Hosford, 1821).

7 Anfinson, "Archaeology," pp. 19-20; see Figure 5, p. 21.

8 Kane, *St. Anthony*, p. 3.

9 Long, *Voyage*, pp. 35-36. Long acknowledged that he did not have an instrument to measure the fall exactly.

10 Kane, *St. Anthony*, p. 2.

11 Pike, *Sources of the Mississippi*, pp. 92-93.

12 Kane, *St. Anthony*, p. 9.

13 Ibid., quotes pp. 2, 3, and 4 respectively.

14 Carole Zellie, "The Voice of Nature, Geographic Features and Landscape Change at St. Anthony Falls," A report prepared for the Saint Anthony Falls Heritage Board, by Landscape Research, St. Paul, Minnesota, October 1989, p. 8; Dave Wiggins (St. Anthony Falls Heritage Zone) suggests that the trees on Spirit Island were cedar rather than oak. Personal communication (April 27, 2000).

15 Schoolcraft, *Travels*, p. 289; Zellie, "Voice of Nature," p. 9.

16 Schoolcraft, *Travels*, p. 290.

17 Zellie, "Voice of Nature," pp. 8-9.

18 "The Journal of James E. Colhoun, 1823," published in *The Northern Expeditions of Stephen H. Long, The Journals of 1817 and 1823 and Related Documents*, ed. by Lucile M. Kane, June D. Holmquist, and Carolyn Gilman, (St. Paul: Minnesota Historical Society Press, 1978), p. 284.

19 G. C. Beltrami, *A Pilgrimage in America, Leading to the Discovery of the Sources of the Mississippi and Bloody Rivers; with a Description of the Whole Course of the Former, and of the Ohio* (Chicago: Quadrangle Books, Inc., 1962; first edition published in London, England, 1828), pp. 204-05.

20 Beltrami, *Pilgrimage*, p. 205.

21 Kane, *St. Anthony*, p. 3.

22 Ibid., p. 3.

23 Zellie, "Voice of Nature," p. 10.

24 George W. Featherstonaugh, *A Canoe Voyage up the Minnay Sotor, with an Account of the Lead and Copper Deposits in Wisconsin; of the Gold Region in the Cherokee Country; and Sketches of Popular Manners* (St. Paul: Minnesota Historical Society, 1970; first published by Richard Bentley in London, England, 1847), pp. 253-54.

25 Featherstonaugh, *Canoe Voyage*, p. 254.

26 Long, *Voyage*, p. 34.

27 Ibid., p. 35.

28 Zellie, "Voice of Nature," p. 11.

29 Kane, *St. Anthony*, pp. 9, 12.

30 Ibid., p. 13.

31 Ibid., pp. 13-14.

32 Ibid., pp. 15-16.

33 Ibid., pp. 16-19, quote p. 17.

34 Ibid., p. 18.

35 Ibid.

36 Ibid.

37 Ibid., pp. 26-27.

38 Ibid., pp. 31-32.

39 Ibid., p. 32.

40 Anderson, *Kinsmen*, pp. 184-89.

41 Kane, *St. Anthony*, pp. 34-38.

42 Ibid., pp. 37, 42, 50-51.

43 Ibid., pp. 42, 44, 49. Sanford was the son-in-law of fur trade magnate Pierre Chouteau. Gebhard was a banker and importer, and Davis was a merchant. See p. 25.

44 Ibid., pp. 43, 44.

45 Ibid., pp. 44-49, 52-53.

46 Ibid., pp. 49-54, 57. The company lengthened the canal to 600 feet in the mid-1860s and to 950 feet in the mid-1890s. It created a head of about 35 feet, and ". . .this waterpower distribution system turned a six-block river-front strip into the country's most densely industrialized, direct-drive water-power district." See National Register Continuation Sheet, p. 8-4.

47 Kane, *St. Anthony*, p. 53; Wiggins, personal communication (April 27, 2000), suggests that the date construction began on the east side tunnel was 1867, not 1866. The cave did serve some purpose. From 1875 to 1883, Mannesseh P. Pettingill used part of the tunnel and cave to bring tourists in on flatboats. See Kane, *St. Anthony*, p. 86.

48 Kane, *St. Anthony*, pp. 57, 58, 106.

49 Ibid., p. 71.

50 Ibid., p. 72.

51 *Minneapolis Tribune*, November 20, 1876.

52 Kane, *St. Anthony*, p. 81.

53 Ibid., pp. 106, 107; Scott Anfinson, personal communication (April 2000), provided the information regarding the new dam.

54 Anfinson, "Archaeology," pp. 26, 28; Kane, *St. Anthony*, pp. 107-08, 122.

55 Kane, *St. Anthony*, pp. 108, 115, 125.

56 Ibid., pp. 27, 32.

57 Dodd and Dodd, *Historical Statistics*, pp. 24-25; Solon J. Buck, *Granger Movement*, pp. 28-34. Kane, *St. Anthony*, p. 100, uses the following figures: Minnesota wheat harvest was 17.7 million bushels in 1869 and 39.4 million in 1880.

58 Anfinson, "Archaeology," p. 24; Kane, *St. Anthony*, pp. 59, 99-101.

59 Kane, *St. Anthony*, pp. 104-05.

60 Dodd and Dodd, *Historical Statistics*, pp. 24-25.

61 Kane, *St. Anthony*, p. 102.

62 Ibid., pp. 101-03.

63 Ibid., p. 104.

64 Ibid., p. 101; see Cronon, *Nature's Metropolis*, chapter 3 for a detailed discussion of Chicago's grain marketing system.

65 Kane, *St. Anthony*, p. 105.

66 Ibid., p. 99.

67 Ibid., pp. 98-99, 113.

68 St. Anthony Falls Historic District (SAF), National Register of Historic Places, National Register Nomination Continuation Form, p. 8-8; Kane, *St. Anthony*, pp. 86, 104, 123.

69 Kane, *St. Anthony*, pp. 86, 87, 116, 123, 147.

70 Ibid., pp. 98-99; SAF, National Register Nomination Continuation Form, pp. 8-6 to 8-7.

71 Kane, *St. Anthony*, pp. 115, 150-51, 172-73; SAF, National Register Nomination Continuation Form, p. 8-7.

72 Kane, *St. Anthony*, pp. 134-37.

73 Ibid., pp. 140-41.

74 Scarpino, *Great River*, p. 22.

75 Kane, *St. Anthony*, p. 154.

76 Ibid., pp. 117, 149, 152-57, 165, 171-72; quotes p. 154. The Corps of Engineers removed the lower dam when it built the Lower St. Anthony Lock and Dam in the early 1950s, and the station collapsed in 1987, after the river undermined its foundation. The outline of the old dam was clearly visible after the pool behind the lock and dam drained due to the station's collapse.

77 Ibid., pp. 108-10.

78 Ibid., pp. 110-11; see also pp. 59-60.

79 Anfinson, *Archaeology*, p. 29; SAF, National Register Nomination Continuation Form, pp. 7-3, 8-7, 8-9; Kane, *St. Anthony*, p. 173.

Chapter 7

1 Some mills lay just outside the MNRRA corridor's boundaries, but they are still critical to the corridor's history. Their activities helped define the economic development of those communities. Even mills not on the river relied on the Mississippi to receive logs. Although the sawmills at Anoka were on the Rum River, a short distance upstream from its mouth and just outside the boundaries of the MNRRA corridor, they deserve consideration, since Anoka's early economy was so tied to milling. The same is true for mills on the Vermillion River in Hastings.

2 J. Fletcher Williams, *A History of the City of Saint Paul to 1875*, (St. Paul: Minnesota Historical Society Press, 1983; first published in 1876 by the

Minnesota Historical Society as Volume 4 of the Collections of the Minnesota Historical Society), pp. 144, 281; Leslie A. Guelcher, *The History of Nininger . . . More Than Just a Dream*," (Stillwater, Minnesota: Croixside Press, 1982), pp. 85-88. Brooklyn township split into Brooklyn Center and Crystal Lake in 1860.

3 Jean James, "The history of Ramsey/researched, written and published as a Bicentennial project in 1976," [City of Ramsey, Minnesota, (1976)], Minnesota Historical Society Collections, p. 54.

4 Albert M. Goodrich, *History of Anoka County and the Towns of Champlin and Dayton in Hennepin County, Minnesota*, (Minneapolis: Hennepin Publishing Co., 1905; reprinted by Anoka Bicentennial Commission, 1976), pp. 123-25; see p. 124 for a photo of the mill.

5 Goodrich, *History of Anoka County*, p. 60.

6 Mississippi River Commission (MRC), "Detail Map of the Upper Mississippi River from Minneapolis, Minnesota, to Lake Itasca, in Seventy-Eight Sheets, from Surveys 1898-1904, Chart Numbers 202 (1898), 201 (1898); Mississippi River Commission (MRC), "Detail Map of the Upper Mississippi River from the Mouth of the Ohio River to Minneapolis, Minnesota, in Eighty-Nine Sheets, Chart No. 189 (1895). There are no chart numbers 190-200. Numbers 189 and 201 adjoin each other.

7 MRC Chart No.189 (1895).

8 Paul Hesterman, "The Mississippi and St. Paul: Change is a Constant for River and the City that Shaped It," *Ramsey County History* 21:1 (1986):13; Williams, *A History of Saint Paul*, pp. 144, 281, footnote pp. 385-86, and p. 433. See quote from the *Pioneer*, November 28, on p. 281, about the steam-powered mill.

9 Zellie, "Hastings' Historic Contexts," submitted to the Hastings Heritage Preservation Commission and the City of Hastings, Landscape Research (July 31, 1993), pp. 15-16; for a short description of various mills see pp. 12-13; John R. Tester, *Minnesota's Natural Heritage, An Ecological Perspective*, (Minneapolis: University of Minnesota Press, 1995), p. 70, says that the Big Woods once covered some two million acres south and west of the Twin Cities.

10 Hesterman, "The Mississippi and St. Paul," p. 14; MRC Chart No. 189, 1895.

11 Leslie Randels Gillund, "Coon Rapids, a fine city by a dam site: history of Coon Rapids, Minnesota, 1849-1984," *Minnesota Historical Society Collections*, quote p. 7, see pp. 7-8.

12 Rev. Edward D. Neill, *History of Hennepin County and the City of Minneapolis, Including Explorers and Pioneers of Minnesota, and Outlines of the History of Minnesota, by J. Fletcher Williams*, (Minneapolis: North Star Publishing Company, 1881), pp. 278-79. Other than his initial reference, Neill provides no further information on the location of these brickyards. MRC Chart No. 189, 1895, shows a brickyard on the east side near the Minneapolis city limits and a clay pit just south of the city limits on the east side. These could be related to the brickyards Neill mentions. Hesterman, "The Mississippi and St. Paul," p. 13; Zellie, "Hastings' Historic Contexts," p. 16.

13 Heritage Education Project, "The Grey Cloud Lime Kiln," Heritage Site File, Cottage Grove and Newport, Minnesota, nd., p. 1.

14 Ibid., pp. 1-2.

15 Minnesota State Historic Preservation Office, "Historic Context: Early Agriculture and River Settlement (1840-1870)," (nd). I found nothing on sorghum milling in the MNRRA corridor.

16 Minnesota State Historic Preservation Office, "Historic Context: Railroads and Agricultural Development (1870 - 1940)," (nd).

17 Zellie, "Hastings' Historic Contexts," p. 11, says that Fairbault was the first to plant wheat but does not say when. Williams, *A History of Saint Paul*, p. 38, notes that Fairbault had a post one to two miles above St. Paul when Pike ascended the river in 1805. Dodd and Dodd, *Historical Statistics*, pp. 24-25; Buck, *Granger Movement*, pp. 28-34. Kane, *St. Anthony*, p. 100, uses the following figures: Minnesota wheat harvest was 17.7 million bushels in 1869 and 39.4 mil-

lion in 1880. Zellie, "Hastings' Historic Contexts," pp. 11-12; Reynolds, "Dakota County Multiple Resource Nomination (Draft, June 1979)," p. 3H.

18 Goodrich, *History of Anoka County*, pp. 29-30, 35, 58, 107-08.

19 Goodrich, *History of Anoka County*, pp. 108-10; Zellie, "Hastings' Historic Contexts," p. 14.

20 Robert C. Vogel, "Cottage Grove History: A Palimpsest," Heritage Education Project, Advisory Committee on Historic Preservation, City of Cottage Grove, 1997. pp. 2-3.

21 Vogel, "Cottage Grove History," p. 3.

22 Zellie, "Hastings' Historic Contexts," p. 11.

23 Ibid., pp. 11, 13.

24 MRC Chart Nos. 185-89, 201-05 (1895 and 1898).

25 Goodrich, *History of Anoka County*, pp. 65, 68, 73.

26 Neill, *Hennepin County*, p. 304; Lucile M. Kane and Alan Ominsky, *Twin Cities: A Pictorial History of Saint Paul and Minneapolis*, (St. Paul: Minnesota Historical Society Press, 1983), p. 56.

27 Neill, *Hennepin County*, pp. 279, 301, 304; Goodrich, *History of Anoka County*, pp. 172-73; Zellie, "Hastings' Historic Contexts," pp. 12-13; Guelcher, *Nininger*, p. 89. On Banfil, see Williams, *A History of Saint Paul*, p. 160. The mill on Rice Creek appears on MRC Chart No. 201 (1898).

28 Goodrich, *History of Anoka County*, p. 126.

29 D. Jerome Tewton, "The Business of Agriculture," in Clifford E. Clark, Jr., ed., *Minnesota in a Century of Change: The State and Its People Since 1900*, (St. Paul: Minnesota Historical Society Press, 1989), p. 267.

30 Ibid., p. 268.

31 Robert Hybben and Jeffrey Hess, "Historic American Engineering Record, Equity Cooperative Exchange Grain Elevator Complex," unpublished documents prepared for the City of St. Paul, (December 1989), pp. 4-5. This document was prepared at the direction of the City of St. Paul but never officially submitted to the Historic American Engineering Record.

32 Theodore Saloutos, "The Rise of the Equity Cooperative Exchange," *The Mississippi Valley Historical Review* 32:1 (June 1945):31-62; C. L. Franks, "Inland Waterways Advocate, Col. George C. Lambert, Dies: Among Pioneers to Back Channel in Upper Mississippi," *Upper Mississippi River Bulletin* 3:3 (March 1934):1; David L. Nass, "The Rural Experience," in Clark, ed., *Minnesota in a Century of Change*, p. 143.

33 E. J. Barry, "Water Transportation and Grain Marketing," in *American Cooperation*, 1961 (Washington DC: American Institute for Cooperation, 1961), pp. 365-366. See also "How the Nine Foot Channel was Built," *Upper Mississippi River Bulletin* 8 (November 1939): 4. Barbara A. Mitchell, Hemisphere Field Services, Inc., "A History of the St. Paul Municipal Grain Elevator and Sack House," prepared for the MNRRA as part of the Historic Resources Study.

34 Application for Permit, City of St. Paul. August 14, 1951, number 31833; February 18, 1955, 10802; May 13, 1955, 12891; December 22, 1955, 32805, 32806, 32807, 31808; June 1, 1956, 32804; October 24, 1956, 421824, at St. Paul City Hall.

35 Application for Permit, City of St. Paul. May 15, 1958, number 76407.

36 Robert L. Morlan, *Political Prairie Fire – The Nonpartisan League*, 1915-1922, (Minneapolis: University of Minnesota Press, 1955), p. 361. See also Oscar N. Refsell, "The Farmers' Elevator Movement I," *Journal of Political Economy* 21(November 1914): 872-873.

37 "St. Paul Union Stockyards, Centennial Year 1886-1986," *Minnesota Historical Society Collections* (1986), no page numbers.

38 "St. Paul Union Stockyards, Centennial Year 1886-1986," *Minnesota Historical Society Collections*; Reynolds, "Dakota County Multiple Resource Nomination (Draft)," p. 5H.

39 Tewton, "The Business of Agriculture," p. 275.

40 "St. Paul Union Stockyards, Centennial Year 1886-1986," *Minnesota Historical Society Collections*.

41 Kirk Jeffrey, "The Major Manufacturers: From Food and Forest Products to High Technology," in Clark, ed., *Minnesota in a Century of Change*, p. 225. Hormel, located in Austin, Minnesota, was the largest producer in the state by 1920.

42 Tewton, "The Business of Agriculture," pp. 275-76; Charles McGuire, personal communication, Mississippi National River and Recreation Area, (Spring 2000).

43 Gary J. Brueggermann, "Beer Capital of the State – St. Paul's Historic Family Breweries," *Ramsey County History* 16:2 (1981):3; Scott F. Anfinson, "Archaeology of the Central Minneapolis Riverfront," *The Minnesota Archaeologist*, vol. 49:1-2 (1990):41; Zellie, "Hastings' Historic Contexts," p. 13.

44 Deborah A. Hull-Walski and Frank Walski, "There's Trouble a-Brewin': The Brewing and Bottling Industries at Harpers Ferry, West Virginia," *Historical Archaeology* (1994):106; Jeffrey, "The Major Manufacturers," p. 226.

45 Brueggermann, "Beer Capital of the State," pp. 4-5.

46 Ibid., pp. 6-7.

47 Ibid., pp. 7-9.

48 Ibid., p. 9.

49 Ibid., pp. 12-13.

50 Ibid., p. 10, has a good description of the caves. The caves still exist under West Seventh Street.

51 Ibid., pp. 10-11.

52 Scott F. Anfinson, "Archaeology," p. 41.

53 Jeffrey, "The Major Manufacturers," pp. 226, 239; Zellie, "Hastings' Historic Contexts," p. 14; Brueggermann, "Beer Capital of the State," p. 11; John E. Haynes, "Reformers, Radicals, and Conservatives," in Clark, ed., *Minnesota in a Century of Change*, p. 367.

54 Virginia Brainard Kunz, *The Mississippi and St. Paul, A short history of the city's 150-year love affair with its river*, (St. Paul, Minnesota: The Ramsey County Historical Society, 1987), p. 40.

55 Because the falls was the head of navigation, pioneers settling above the falls had a difficult time getting supplies. Initially, they had to buy their goods in the town of St. Anthony. To get there, they sometimes tied some logs together and floated down. They followed Indian trails on their return trip. Neill, *Hennepin*, p. 298. Goodrich, *History of Anoka County*, p. 42; James, "The history of Ramsey," p. 9. James says the settlers arrived in June of 1850. She shows a photo of some type of working boat with the following caption: "A steamboat coming into the harbor at Itasca Village." Goodrich, *History of Anoka County*, p. 68.

56 Neill provides contradictory reports on steamboat traffic above St. Anthony. When talking about the history of "Brooklyn," he claims that the Mississippi was navigable there and that "small steamers ply up and down." Yet when discussing Champlin, he writes that "At one time, steamboats plied on the river, landing at Champlin . . . " but, he adds, "the river is not navigated regularly at the present time." Neill, *Hennepin*, pp. 285, 300.

57 Nancy and Robert Goodman, "Joseph R. Brown, Adventurer on the Minnesota Frontier, 1820-1849," (Rochester, Minnesota: Lone Oak Press, Ltd., 1996), p. 159. Goodrich, *History of Anoka County*, pp. 38, 43, 46-47, 49, 63,

71. The present-day Robert Street Bridge in St. Paul is named for Louis Robert. Neill, *Hennepin*, p. 299, says that a Joseph Holt began operating a ferry at Champlin in 1855. Either this is a second ferry that began operating between Anoka and Champlin or Holt owned the Elm Creek and Anoka Ferry Company. Williams, *A History of St. Paul*, pp. 237, 322. He says the bridge opened in 1858, whereas Lisa Haller, Ivelise Brasch, Gary Phelps, and Bill Wolston, "*Crossings,*" Over the Years, 31:1 (Dakota County Historical Society, September 1991):5, say the bridge opened in 1859. Dorothy Goth, ed., *St. Paul Park's Heritage: A History of Saint Paul Park on The Mississippi, 1887-1895*, (Cottage Grove, Minnesota: Inky Fingers Press, 1985), p. 56.

58 Zellie, "Hastings' Historic Contexts," p. 21.

59 Gillund, "Coon Rapids," p. 3; James, "The history of Ramsey," p. 10; Goodrich, *History of Anoka County*, p. 51; Zellie, "Hastings' Historic Contexts," p. 22.

60 Goodrich, *History of Anoka County*, p. 51.

61 Vogel, "Cottage Grove History," p. 3. The Henry House, built in 1854 on a military road, is still standing and is listed on the National Register. See Vogel, "Cottage Grove History," p. 2.

62 Zellie, Hastings' Historic Contexts, p. 23. Lois A Glewwe, *The History of Inver Grove Heights, Minnesota's Treasure, 1858-1990*, (City of Inver Grove Heights, 1990), p. 204, mentions that a military road was built from Hastings to St. Paul was "graded through as early as 1855 by the military crews of Captain William Dodd." She says it became known as the St. Paul to Hastings Road.

63 Richard S. Prosser, *Rails to the North Star*, (Minneapolis, Minnesota: Dillon Press, 1966), pp. 8-12, 17; Gillund, "Coon Rapids," p. 4. The St. Paul and Pacific succeeded the Minnesota and Pacific, which had built the first line from St. Paul to St. Anthony in 1862. See Gillund, "Coon Rapids," p. 4.

64 Prosser, *Rails*, pp.17, 35.

65 MRC Chart Nos. 185-89, 201-05 (1895 and 1898).

66 MRC Chart No. 201, 1898.

67 Hesterman, "The Mississippi and St. Paul."

68 Hesterman, "The Mississippi and St. Paul," pp. 9, 14; MRC Chart Nos. 186-89. On Hastings, see Zellie, "Hastings' Historic Contexts," pp. 21, 22. Other than railyards at the city's center, she says, p. 24, "the Milwaukee Railroad Depot (1884) is among the best evidence of the early transportation context."

69 Hesterman, "The Mississippi and St. Paul," p. 10.

70 Hesterman, "The Mississippi and St. Paul," pp. 4-5, 10.

71 Ibid., pp. 6, 9, 12, 14.

72 Ibid., pp. 6, 10.

73 John R. Borchert, "The Network of Urban Centers," in *Minnesota in a Century of Change*, p. 69.

74 Borchert, "The Network of Urban Centers," pp. 69-70; Baerwald, "Forces at Work on the Landscape," in *Minnesota in a Century of Change*, pp. 23-24; Gillund, "Coon Rapids," p. 12; Zellie, "Hastings' Historic Contexts," pp. 21-22.

75 Borchert, "The Network of Urban Centers," pp. 71, 84, 86-87; Baerwald, "Forces at Work on the Landscape," p. 20.

76 Goth, ed., *St. Paul Park's Heritage*, p. 56.

77 Minnesota Department of Natural Resources, Metro Area River Guide: A guide to boating the Mississippi, St. Croix and Minnesota rivers," 1994, provides the river miles for the river above St. Anthony Falls as well as below.

78 Guelcher, *Nininger*, p. 85.

79 Kane, *St. Anthony*, p. 40; Haller, et al., "Crossings," pp. 4-9, 20-21; the entire issue is about bridges.

Chapter 8

1 The literature on the history of the Twin Cities is voluminous and much of it addresses, however indirectly, the physical growth of the cities. Not all, however, directly address residential growth, particularly the ordinary development of neighborhoods, developers' plats, and other staples of land use change. The following texts have been most useful to the present study, and should be considered the source of specific information, unless otherwise noted. John Borchert, et al., *Legacy of Minneapolis: Preservation Amid Change* (Bloomington, Minnesota: Voyageur, 1983); Paul Donald Hesterman, *Interests, Values, and Public Policy for an Urban River: A History of Development Along the Mississippi River in Saint Paul, Minnesota* (Ph.D. dissertation, University of Minnesota, Minneapolis, 1985); Hesterman, "The Mississippi and St. Paul: Change is a Constant for River and the City that Shaped It," *Ramsey County History* 21:1 (1986): 3-22; June Drenning Holmquist, ed., *They Chose Minnesota: A Survey of the State's Ethnic Groups* (St. Paul, Minnesota: Minnesota Historical Society Press, 1981); David Lanegran, "The Neighborhood River," in Carole Zellie, *The Mississippi and St. Paul: A Planning Study of Interpretive Potentials* (unpublished report submitted to the Ramsey County Historical Society and the National Endowment for the Humanities, 1988), pp. 37-102; Judith A. Martin and David Lanegran, *Where We Live: The Residential Districts of Minneapolis and Saint Paul* (Minneapolis, Minnesota: Published by the University of Minnesota Press in association with the Center for Urban and Regional Affairs, University of Minnesota, 1983); Larry, Millett, *Lost Twin Cities* (St. Paul, Minnesota: Minnesota Historical Society Press, 1992); Edward Duffield Neill, "St. Paul and Its Environs," *Minnesota History* v. 30 (1940):204-19; Warren Upham, *Minnesota Geographic Names, Their Origin and Historic Significance* (St. Paul, 1969; reprint edition); J. Fletcher Williams, *A History of the City of St. Paul to 1875* (St. Paul, 1876; reprint, Minnesota Historical Society Press, 1983).

A special notation must be made of the work of the Presbyterian minister Edward Duffield Neill. Neill was surely the most prolific early historian of the state, being listed as a principal author of dozens of books on a variety of subjects. Four of these have been basic to the research undertaken for this study: *History of Hennepin County and the City of Minneapolis* (Minneapolis, Minnesota: North Star Publishing, 1881), *History of the Upper Mississippi Valley* (North Star Publishing, 1881), *History of Dakota County and the City of Hastings* (Minneapolis, Minnesota: North Star Publishing, 1881), and *History of Ramsey County and the City of St. Paul* (Minneapolis, Minnesota: North Star Publishing, 1881). The similarities between these volumes extend beyond their titles and publication dates. Each volume, compiled by George E. Warner and Charles M. Foote, has a nearly identical Table of Contents. Neill contributed the first essay "Explorers and Pioneers of Minnesota," and J. Fletcher Williams followed with a year-by-year compilation of significant facts in the state's history between 1858 and 1881. The following chapters varied slightly from volume to volume but typically included an account of the Civil War record of men from that county, a brief summary of the county's leading lawyers, its chief events, and other notations. The bulk of each volume, though, and the sections most directly important for this study, are the detailed descriptions of the establishment and early settlement of the cities and townships ("towns" in the late nineteenth century usage) of each county. A great deal of the settlement story for this area, at least until around 1880, is contained in these chapters.

The limitations of these books as analytical history or the "full story" are obvious. For example, women hardly appear at all; there is an implicitly "Manifest Destiny" ideology to the books that treats Native Americans as obstacles to "civilization," and, once conquered, as objects of nostalgia. Town settlements are treated as heroic narratives of commercial enterprises and progressions of industrial development. This is not the place to discuss the reasons for these patterns and biases, nor has there been time to conduct investigations that would correct and enhance the pictures they depict. Their use in the present study should be understood as sources of important detail on one version of the past and the Euro-American settlement of the MNRRA corridor

2 Some explanation of this typology is in order. The historical and geographical literature defining towns, cities, population centers, etc., is large and complex. For the purposes of this study, a population center is considered as a group of dwellings clustered more tightly than the surrounding agricultural residence pattern and usually focusing on some non-residential establishment, perhaps a school, church, or post office, but often a commercial establishment such as a store or tavern. "Urban Centers" are understood as those places with

a sufficient concentration of commercial enterprises to result in a degree of specialization and perhaps spatial ordering into a "commercial district" or "downtown."

Research for this study clearly indicates that the relative importance of a particular population center changed dramatically over time and in relation to other centers. For example, Nininger, now a semi-urban enclave between St. Paul and Hastings, was once a substantial center with a population of over 1,000. By contrast, the present municipality of Coon Rapids did not exist until 1952, when the Village of Coon Rapids was formed from Anoka Township. The present study is intended to be more descriptive than analytical; therefore, the categories have been developed as a rudimentary attempt to sort out the dominant population threads throughout the region during the study period.

3 Isaac, Atwater, ed., *History of the City of Minneapolis* (New York: Munsell & Co., 1893), p. 69.

4 Neill, *History of Ramsey County*, p. 296.

5 Millett, *Lost Twin Cities*, p. 10.

6 Upham, *Minnesota Geographic Names*, p. 439.

7 Borchert, *Legacy*, pp. 8-9.

8 Upham, *Minnesota Geographic Names*, p. 226.

9 Atwater, *City of Minneapolis*, p. 29.

10 Joseph Stipanovich, *City of Lakes: An Illustrated History of Minneapolis* (Woodland Hills, California: Windsor Publications, 1982), p. 8.

11 Atwater, *City of Minneapolis*, p. 29.

12 Upham, *Minnesota Geographic Names*, p. 223.

13 Scott F. Anfinson, "Archaeology of the Central Minneapolis Riverfront, vol. 1: Historical Overview and Archaeological Potentials," *The Minnesota Archaeologist* 48:1-2 (1989).

14 Neill, *History of Dakota County*, pp. 209, 265; Upham, *Minnesota Geographic Names*, p. 165.

15 Neill, *History of Dakota County*, pp. 265-77.

16 Upham, *Minnesota Geographic Names*, p. 22, cites the authority of Professor A. W. Williamson for this derivation.

17 Neill, *History of the Upper Mississippi Valley*, pp. 222-30.

18 Upham, *Minnesota Geographic Names*, p. 23; Neill, *History of the Upper Mississippi Valley*, p. 275.

19 Accounts of Mendota are well known. See standard histories of the state: Folwell, *A History of Minnesota*, and Blegen, *Minnesota*; also, Anderson, *Kinsmen*.

20 Upham, *Minnesota Geographic Names*, p. 572; John H. Case, "Historical Notes of Grey Cloud Island and Its Vicinity," *Minnesota Historical Society Collections* vol. 15, pp. 371-78.

21 Upham, *Minnesota Geographic Names*, p. 166; Neill, *History of Dakota County*, pp. 440-43; Leslie A. Guelcher, *The History of Nininger . . . More Than Just a Dream* (Stillwater, Minnesota: Croixside Press, 1982), p. 57.

22 Neill, *History of Washington County*, pp. 355-56; Upham, *Minnesota Geographic Names*, p. 568.

23 Neill, *History of Washington County*, pp. 353-57.

24 Millett, *Lost Twin Cities*, p. 49.

25 Ibid., pp. 49, 107.

26 Anfinson, "Archaeology," p. 50.

27 Stipanovich, *City of Lakes*, pp. 232, 243.

28 Millett, *Lost Twin Cities*; see also Federal Writers' Project, Works Progress Administration, *The Bohemian Flats* (St. Paul, 1986; originally published 1941).

29 Millett, *Lost Twin Cities*, p. 83.

30 Borchert, *Legacy*.

31 Anfinson, "Archaeology."

32 Theodore Wirth, *Minneapolis Park System, 1883-1944: retrospective glimpses into the history of the Board of Park Commissioners of Minneapolis, Minnesota, and the city's park, parkway and playground system*, presented at the annual meeting of the Board of Park Commissioners, July 16, 1945, (Minneapolis, Minnesota: Minneapolis, Board of Park Commissioners, 1945).

33 Lanegran, "The Neighborhood River," pp. 37-102.

34 Martin and Lanegran, *Where We Live*; Rueben H. Donnelley, *Donnelley's Atlas of the City of St. Paul, Minnesota* (Chicago: The Corporation, 1892); Upham, Minnesota Geographic Names, p. 437.

35 Upham, *Minnesota Geographic Names*, pp. 437-39.

36 Williams, *City of St. Paul*, pp. 260, 414.

37 John Walters, "A History of Harriet Island," unpublished typescript, Division of Archives and Manuscripts, Minnesota Historical Society, St. Paul.

38 David L. Curtice, *Curtice's Revised Atlas of the City of St. Paul*, (St. Paul, Minnesota: H. M. Smyth Printing Co., 1908).

39 Millett, *Lost Twin Cities*, p. 82.

40 Lanegran, "Neighborhood River," and Hesterman, "The Mississippi and St. Paul."

41 Neill, *History of Dakota County*, p. 296.

42 Ibid., p. 214.

43 Wirth, *Minneapolis Park System*.

44 Upham, *Minnesota Geographic Names*, p. 568.

45 Lois Glewwe, *South St. Paul Centennial, 1887-1987*, (South St. Paul (?): Dakota County Historical Society, 1987).

46 See, for discussions of more recent historical and geographical trends, Hesterman, *Interests, Values, and Public Policy*; Borchert, "The Network of Urban Centers," pp. 55-99; John S. Adams and Barbara J. VanDrasek, *Minneapolis-St. Paul: People, Place, and Public Life*, (Minneapolis, Minnesota: University of Minnesota Press, 1993).

47 Martin and Lanegran, *Where We Live*.

Epilogue

1 Lucile M. Kane, June D. Holmquist, and Carolyn Gilman, edited, *The Northern Expeditions of Stephen H. Long, the Journals of 1817 and 1823 and Related Documents*, (St. Paul: Minnesota Historical Society Press, 1978), p. 66.

2 David Glassberg, "Public History and the Study of Memory," *The Public Historian*, 18:2 (Spring 1996):19-20.

3 Ibid., p. 17.

4 Ibid., p. 21.

5 Section 701.(a) Findings, Public Law 100-696, November 18, 1988, 102 Stat 4599, Title VII - Mississippi National River and Recreation Area.