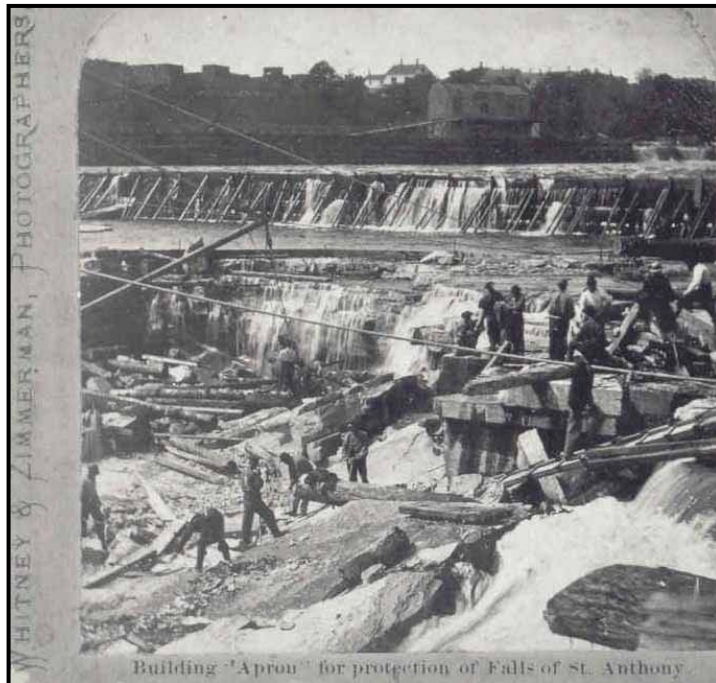


MILL RUINS PARK RESEARCH STUDY

West Side Waterpower Canal Expansion (1866-1867)



Prepared for
Minneapolis Park and Recreation Board
3800 Bryant Avenue South
Minneapolis, Minnesota 55409-1029

Prepared by
Hess, Roise and Company, Historical Consultants
Marjorie Pearson, Ph.D., Principal Investigator
Penny A. Petersen
Nathan Weaver Olson
The Foster House, 100 North First Street,
Minneapolis, Minnesota 55401

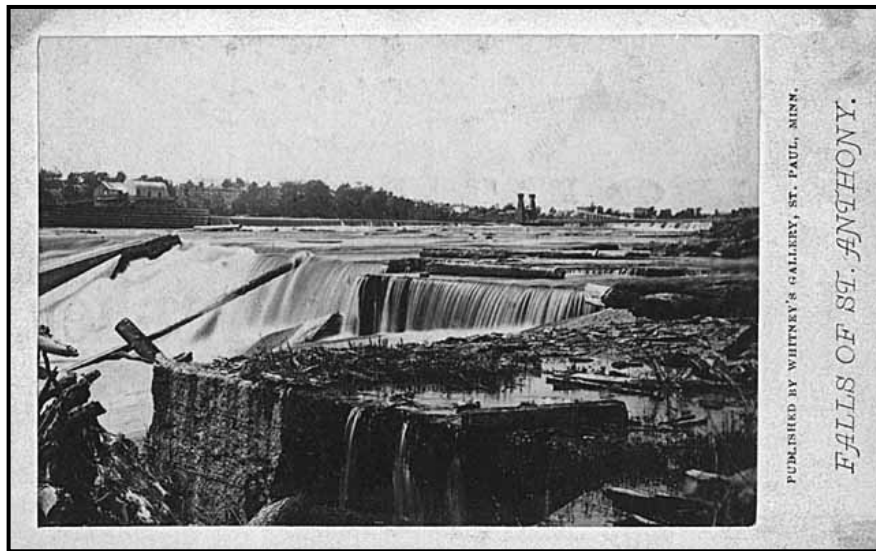
With curriculum program by
Dawn Peterson
Ann Ericson

May 2003

West Side Waterpower Canal Expansion (1866-1867)

The Construction of the Expanded West Side Waterpower Canal

The initial success of the waterpower canal led to increased demands for water power. But the canal also started eroding the falls and the riverbank itself. Consequently, the Minneapolis Mill Company embarked on two related projects in 1866.



Saint Anthony Falls ca. 1865 (Charles Alfred Zimmerman, Minnesota Historical Society)

Lucile Kane described the work:

In 1866 it moved to halt the erosion, engaging Franklin Cook, a civil engineer, to construct over the falls in the west channel a timbered water slide, called an 'apron.' This inclined plane was designed to ease the river's flow to a point below the caldron where its force would be harmless.

As dozens of workmen hammered timbers into place, spectators realized that the mammoth apron would further tame the cataract.¹

The impact of the work was lamented in the *Saint Paul Press*: "Pay your respects soon to old St. Anthony: Part of his rock sides are as dry as a drum head. Soon the heavy plunge of the amber Mississippi will be heard no more around the mills. Frank Cook and his assistant engineers will

¹ Lucile M. Kane, *The Falls of St. Anthony: The Waterfall That Built Minneapolis* (Saint Paul: Minnesota Historical Society Press, 1966; reprint 1987), 63.

stifle the voice of nature with wooden aprons, and the water power company alone reign supreme.”²

After the apron was completed, the work was described:

Another great engineering project . . . was the construction of an ‘apron’ close against the lower perpendicular fall, as a measure of safety to the dam and mills. The limestone rock constituting the bed of the river rests on a deep strata of sand stone, and the continuous plunge of so great a volume of water against so yielding a substance, in time wears it away, and cuts out the portion underlying the rock, forming a low cavern of considerable extent; so that the limestone above remains suspended only by its adhesive power. In process of time this power is overcome by the weight of water rushing over it, or, receiving a sudden jar from a plunging log, drops off in masses of hundreds of tons in weight. . . .

One of a series of aprons has been built. It is situated just below the dry dam, and at the end of the mill platform. In shape it is that of a broad triangle lying upon its side, its base being placed against the rock over which the water pours, and having a height equal to the height of the fall. It is constructed of massive timber, is 400 feet long, 150 feet wide, and 20 feet deep from the base at the fall up to the level above. One million two hundred thousand feet of the largest hewn timber, was used in the construction of this apron; it is built in framework style, the apertures being filled with broken stone, making a solid immovable mass, and over the broad slanting upper surface of the structure is a close covering of twelve inch plank. It entirely cuts off the fall of water; down its slanting surface the Mississippi rushes with the speed of a race horse, and gain the natural level below, flows on to the gulf. Thirty thousand dollars were expended on this work, and four months of hard labor.³

The apron was short-lived, as massive flooding in June 1867 carried thousands of logs from booms further upstream and shattered the apron timbers.⁴

The other project of 1866 was the extension of the waterpower canal. The *Minneapolis Chronicle* explained: “The Minneapolis Water Power Company deserve the thanks and good will of this community, for the liberal manner in which they offer inducements to capitalists to make improvements here. They are extending the capabilities of their water power with all possible speed. The work is progressing finely.”⁵

The *Saint Paul Press* described the canal: “Working is being driven rapidly onward. The massive walls of the canal already enclose the spacious trench from Cataract street to the steep bluff

² *Saint Paul Press*, September 21, 1866, 4.

³ *Saint Paul Press*, January 26, 1867, 1.

⁴ Kane, 64.

⁵ *Minneapolis Chronicle*, September 1, 1866, 3.

below. The heavy explosions in the limestone beds, near Cataract street, startle the visitor in short intervals, and so with powder and levers and the busy hands of man the work goes bravely on. The great walls of the canal run close up to the mill of Perkins, Crocker & Co. This fine piece of engineering will be the glory of the Falls and of Minneapolis.”⁶

In January 1867, the same newspaper gave a more detailed account:

So great had been the demand for new mill sites, and so loudly knocked hundreds of thousands of dollars at the doors of the company for admittance, for the purpose of improved investments, that an extension of the canal was decided upon, and five hundred additional feet of canal contracted to be opened, running down the bank of the river, thus throwing open the lots on either side of the excavation, as sites for manufactories of all kinds.

Four months were consumed on the work, and during the month of December last, the coffer dam at the head of the excavation was partially removed, and the water of the Mississippi, with the aid of science, hastened through the flumes of three enormous mills, and again set in motion the looms and spindles of the woolen machinery, and gave impulse to the huge stones of two new flour mills.

The masonry of the new canal extension, is of the most massive character. Great blocks of limestone hewn from the solid bed of the canal and from the quarry further down the stream, constitute its walls, which in their narrowest portions are six feet in thickness. The width of the canal between the walls is 55 feet, and its depth, (corresponding with that of the older section,) is 14 feet. Opposite each mill site are gates tapping the canal, and affording the most compete water power known. The sites along the river side of the canal have with but a single exception been sold, while of those on the inland side, a few have been taken. . . . The cost of this canal extension was \$35,000.⁷

The Workers on the Canal Extension and the Apron

Numbers, ethnicity, wages

Several hundred workers toiled for four months to construct the canal extension and the apron, but information on specific workers is not available. Unlike those in the earlier project, most seem not to have worked directly for the Minneapolis Mill Company. Instead the company contracted for the work, and the contractors hired the workers. There are no surviving records of whom the contractors hired. The Minneapolis Mill Company ledgers listed a number of specialties: J. Barker, labor for canal gate; H. C. Butler of Butler and Campbell, blacksmithing; Franklin Cook, engineering; A. Kelly, powder houses (for storing blasting powder used in the canal excavation); Paul D. Morrison, lumber; S. D. Parker, for building bridge, Andrew

⁶ *Saint Paul Press*, September 21, 1866, 4

⁷ *Saint Paul Press*, January 26, 1867.

McCausland, contractor. Other names listed without specifics may have been the contractors who hired the unskilled laborers. They included George Campbell, R. W. Elder, W. Folsom, R. D. Langdon, W. W. Parker, C. W. Patterson, C. H. Pettit, Simeon Prescott, and R. G. Shuler.⁸

Demographically, the composition of the workforce had not changed significantly during the course of ten years, although the city itself was becoming more ethnically diverse. The *Minneapolis Chronicle* cited “Finns, Swedes and Norwegians, Germans, Swiss, Bohemians, Hungarians, Poles, Russians, Danes, Italians, Ancient Britains [sic], Frenchmen, Manxmen, and for ought we know Spanish, Portugese and others from different nations of the old world.” This article continues: “It is almost requisite that businessmen here, should speak half a dozen different languages. The idea has been advocated by some that the German and French languages and studies should be taught in common with English branches, in all our public schools... Many of the merchants in the State are obliged to have clerks who can talk different tongues.”⁹ Because some of the workers did not speak English as their first language, someone within the work crew would have to be able to convey the work instructions to them in their own language. Probably on the Falls site, the Old Stock Americans, Scots, and Irishmen were joined by Scandinavian immigrant laborers, especially Norwegians and Swedes. By this time, the Irish workers would have been a combination of newly arrived immigrants and children of earlier Irish immigrants.¹⁰

⁸ These names are taken from Northern States Power Company, Accounting Records of Predecessor Companies, Minneapolis Mill Company 1865-1872, Ledger “A,” 142.G5.6 F-1 Box 8, Manuscript Collections, Minnesota Historical Society. George Campbell was listed as a raftsmen in 1857. Andrew McCausland is listed as a contractor in the 1869 *Directory of the City of Minneapolis* (Minneapolis: Tribune Printing Company, 1869). The 1867 *Merwin’s Directory of Minneapolis and St. Anthony* (Minneapolis: Heman Merwin, 1867) lists C. W. Patterson as a carpenter, C. H. Pettit as proprietor of C. H. Pettit Hardware on Bridge Square, R. G. Shuler as a millwright, and R. B. Langdon as a contractor and builder. Although the mill company listed his name as R. D. Langdon, this likely refers to Robert Bruce Langdon, who was born in Vermont in 1826, and was involved in the construction of railroads, canals and bridges according to *Minnesota Biographies 1655-1912* (Saint Paul: Minnesota Historical Society, 1912). This same source states that Curtis Hussey Pettit was born in Ohio in 1833, came to Minneapolis in 1855, and was engaged in lumbering, flour, and several other large businesses.

We might speculate on whether canal workers remained in the same line of work or changed jobs later. Brenda Ueland wrote about her father Andreas: “In Minneapolis, from time to time, he worked as a day-laborer, digging the Washington Avenue sewer and he studied law at night. Six years after his arrival [from Norway in 1870] he started to practice law. He was twenty-four ...” Andreas, in a letter to his mother back in Norway wrote: “When I now look back over the six years I have been here many things are recalled which have been far from agreeable. I can see myself six years ago, arriving in Minneapolis with twenty dollars, not knowing a soul and unable to make myself understood, then out to hard work, sometimes on farms, sometimes in city sewers, then ill in a hospital, then to school, then out on farms again ...” From *Clara Ueland of Minnesota* ([Minneapolis]: Robert Rossiter, ca. 1867), 20-21. After practicing law, Andreas Ueland became a judge. Ueland was certainly atypical, but some day laborers probably did acquire more skills that allowed them to earn better wages. Ueland’s loneliness, unfamiliarity with English, and experiences as a migrant laborer would have been common to many of the workers at Saint Anthony Falls.

⁹ *Minneapolis Chronicle*, August 4, 1866, 2.

¹⁰ Unskilled labor would have been a likely job for a new immigrant who did not speak much English. The 1870 federal census for Minneapolis and Saint Anthony lists many laborers who were born in Sweden, Norway, and Ireland, as well as a few from Germany and France. We cannot directly identify these individuals as canal workers, but it is likely that some of them would have worked at the Falls. The contractors needed workers and the laborers needed to work.

The city was growing quickly in the aftermath of the Civil War and experiencing labor shortages. “Builders, manufacturers, farmers, and all others are complaining of a great scarcity of labor. They say it is entirely impossible to get enough laborers at any price. As high as two and three dollars have been paid for common laborers, and from three to five dollars per day for mechanics.” The same issue noted that plasterers were getting as much as \$4.75 per day. Skilled workers commanded higher wages.¹¹ At the canal site, these would be the stone masons or stonewrights, carpenters, bricklayers, those responsible for blasting, and teamsters. The blacksmiths would have maintained horseshoes for work horses on the site, as well as fabricated iron fittings. As in 1857-1858, workers were expected to work 10 hours per day, 6 days per week, but not all workers worked 6 days.

Cost of living

As in 1857, local newspapers published the prices for food commodities, although these were for large quantities applicable to a hotel, boarding house, or private household with room for food storage. The Minneapolis Retail Market listed prices for butter, eggs, cheese, lard, pork, ham, bush beans, potatoes, flour, honey, dried apples, dried peaches, sugar, granulated, powdered, and brown, two kinds of coffee, and three kinds of tea. Some newspaper advertisements stated the prices for other kinds of merchandise.¹²

Cash and currency were becoming more available in the city, so workers were paid directly rather than on account. Coins, ranging from pennies to denominations of one to five dollars, would have been preferred. Paper money would have been in the form of bank notes, issued by local banks, such as the First National Bank that constructed a building at Nicollet and Washington in 1867.

Workers’ Housing and Transportation

Workers continued to live close to the work site, on both sides of the river, but within walking distance, mostly in boarding houses. The number of boarding houses had increased along with the population. In the boarding house, the worker would pay for the cost of a room, probably still shared with others during this period, and meals, usually by the week. The better paid worker would also have the option of living in a hotel, where he might eat most of his meals. The

¹¹ *Minneapolis Chronicle*, August 17, 1866, 3. To get an idea of what that present-day equivalents are of 1866-1867 dollars, we consulted the Columbia Journalism Review Dollar Conversion Calculator at www.cjr.org Using the CJR Dollar conversion, an 1866 dollar would be the same as \$11.24 in 2002 dollars, an 1867 dollar would be the same as \$12.05 in 2002 dollars, so common laborers would be earning between \$22.48 and \$33.72; mechanics would earn between \$33.72 and \$56.20; plasterers \$53.39 per day.

¹² A yearly subscription to the *Chronicle* (a daily) was \$10 per year if mailed or \$12 if delivered by carrier. The weekly edition could be had for \$2 per year or 25 cents per week. Bleached shirting fabric, “very good [quality],” was offered at 15 cents per yard in the *Chronicle*, November 16, 1866. It would take about two yards of cloth for a man’s shirt. Knit hoods sold for 50 cents at Fletcher’s store according to the *Chronicle*, December 4, 1866. The *Chronicle*, January 10, 1867, carried an advertisement from Gray Brothers for diaries from 50 cents to \$4 each. In 1866, a Green Bay, Wisconsin, barber was charging 25 cents for a shave, but his customers expected to pay ten cents, Scott Derks, ed., *The Value of a Dollar: Prices and Incomes in the United States, 1860-1989*, (Detroit: Gale Research, Inc., 1994), 54.

number of restaurants and saloons had also increased. The average worker would not have been able to buy a house, which might have cost between \$1,800 and \$5,000.¹³

Marital status and ages

Based on an examination of census records during this period, it can be determined that at least two-thirds of the male workers in Minneapolis and Saint Anthony were single and white and in their 20s and 30s. There is no reliable way to determine which laborers listed in the 1870 census worked on the Minneapolis Mill Company canals at any particular time. Census takers asked what people did for a living, not where they worked. A common laborer might work steadily for one employer, or he might work for several employers over the course of a year. Because the mill company relied on contractors to hire workers during the 1866-1867 expansion period, we know very little about the individual workers. Unskilled laborers tended to be young as the work was physically demanding. They were often unmarried because their low wages could not support a family.

The wives listed in census records were often described as “at home” or “keeping house.” But they might take in laundry or run a boarding house. Most single women of this period, unless sufficiently educated to work as a teacher, might be working in a boarding house, saloon, or restaurant, or living with a family as a domestic servant.¹⁴

Work conditions

Work conditions and equipment remained similar to the earlier period. Unskilled laborers performed the vast majority of the work, using such rudimentary machinery as wedges, pulleys, levers, picks, and shovels. Horses and other work animals were used to pull heavy loads. The use of blasting powder would have lessened the physical effort of excavation. Steam shovels and similar powered devices had yet to be invented. As might be imagined, this work was dirty and often dangerous. Without present-day safety glasses, hard hats, or other safety equipment, workers could be injured by falling debris, blasting powder, or accidents with their tools. Without antibiotics, even a small wound could become infected and lead to permanent injury or death.¹⁵

The overall work was directed by Franklin Cook, the engineer, while contractors supervised the work crews. On-site amenities were rudimentary.

¹³ *Minneapolis Chronicle*, October 11, 1866, advertised houses for sale from \$1,800 to \$5,000.

¹⁴ *Minneapolis Chronicle*, July 21, 1866, carried a fairly long article that complained of the great scarcity of female labor, causing their wages to jump to between \$3 and \$5 per week and “to do light house work at that.” This wage either included their room and board, or they lived at home with other family members. As in the 1857 -1858 era, these women earned (roughly) in a week what an unskilled or semi -skilled man earned in a day

¹⁵ Penicillin, the first important antibiotic, was not discovered until 1928.

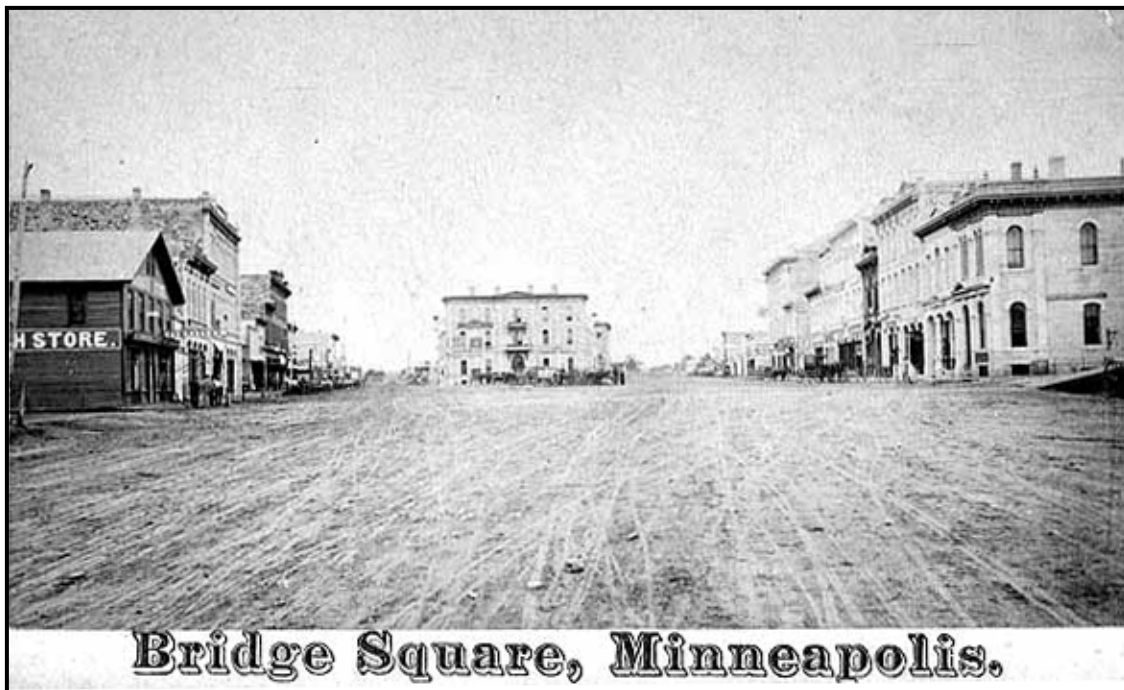
Neighborhood conditions

By 1866, Minneapolis had advanced in physical size and population, even though it was not to be incorporated as a city until the following year. One firsthand account by Charles Woods, an aspiring attorney, presents a vivid picture:

After two weeks stay in the rapidly growing town, I will give you some of my impressions in regard to it. . . . The population of this place and St. Anthony—which are practically one, being connected by a Suspension Bridge over the Mississippi—is at present about 11,000.

The town presents a most decidedly unfinished appearance in consequence of the buildings and other improvements now in progress. It is a common refrain that not less than 1,000 buildings will be erected here the present season. . . . At all events, the town is advancing as fast as capital enterprise & industry can push it.¹⁶

Bridge Square was still the center of government, business, and commerce on the west side of the river. Shops selling groceries and dry goods were close by. Shoemakers and tailors were also in this area. Main Street was still the center of commerce on the east side in Saint Anthony.¹⁷



Bridge Square, ca. 1867 (Edwin D. Harvey, Minnesota Historical Society)

¹⁶ Charles Henry Woods, "A Letter from Minneapolis," *Hennepin History* 50 (Winter 1990-91): 24.

¹⁷ *Merwin's Directory*.

There were no central utilities or infrastructure. Water was drawn from wells or from the Mississippi River, or collected in cisterns from rainwater runoff. There was no municipal sanitation system. Backyard privies served buildings and houses. (A privy was similar to an outhouse, but was a more permanent structure. The pit was lined with wood or brick and cleaned out periodically.) A 1994 archaeological study in the vicinity of North First Street (now the site of the Federal Reserve Bank building) reveals that the inhabitants used the privies for their designated purpose as well as the disposal of all manner of other debris such as broken crockery, kitchen waste, discarded clothing or toys. This study found evidence of several intestinal parasites such as tapeworm and roundworm, noting that such infestations were common in the nineteenth century. “The effects of intestinal parasites range from the moderate loss of blood and nutrients to disability and even death. Because they are extremely wide-spread, it is estimated that these creatures have caused greater damage to humans than more dramatic bacterial and viral diseases.”¹⁸ The lack of a formal sewer system that kept wastewater away from the drinking water supply facilitated the spread of these parasites. Alderman George Brackett first proposed the Minneapolis sewer system in 1869, with the start of construction two years later when the main Washington Avenue sewer was built.¹⁹ However, it would many years before all of Minneapolis was connected to municipal sewer lines. As late as 1934, researcher Calvin Schmid found that more than seven percent of Minneapolis dwellings lacked indoor plumbing.²⁰

Indoor lighting was by candles or kerosene (coal oil) lamps. Gas lighting was introduced in 1870, initially for street lighting. The high cost of gas kept it from general use until the late 1870s, when improvements to the manufacturing process lowered the price.²¹

Churches and schools

The number of churches had increased. Woods noted, “There are ten Protestant churches in running order this side of the river.” The 1867 Minneapolis City Directory lists two Congregational, three Baptist, one Episcopal, two Presbyterian, one Society of Friends, one Universalist, and one Methodist Episcopal. All of these would have served the Old Stock Americans and Canadian, Scots, and Irish Protestant immigrants. However, the establishment of a German Methodist Episcopal church and two Lutheran churches suggests the increasing ethnic diversity of the town. Saint Anthony had fewer churches: one Episcopal, one Congregational, one Presbyterian, one Universalist, two Methodist Episcopal, one of which had a German congregation, and the only Catholic church, Saint Anthony of Padua.²²

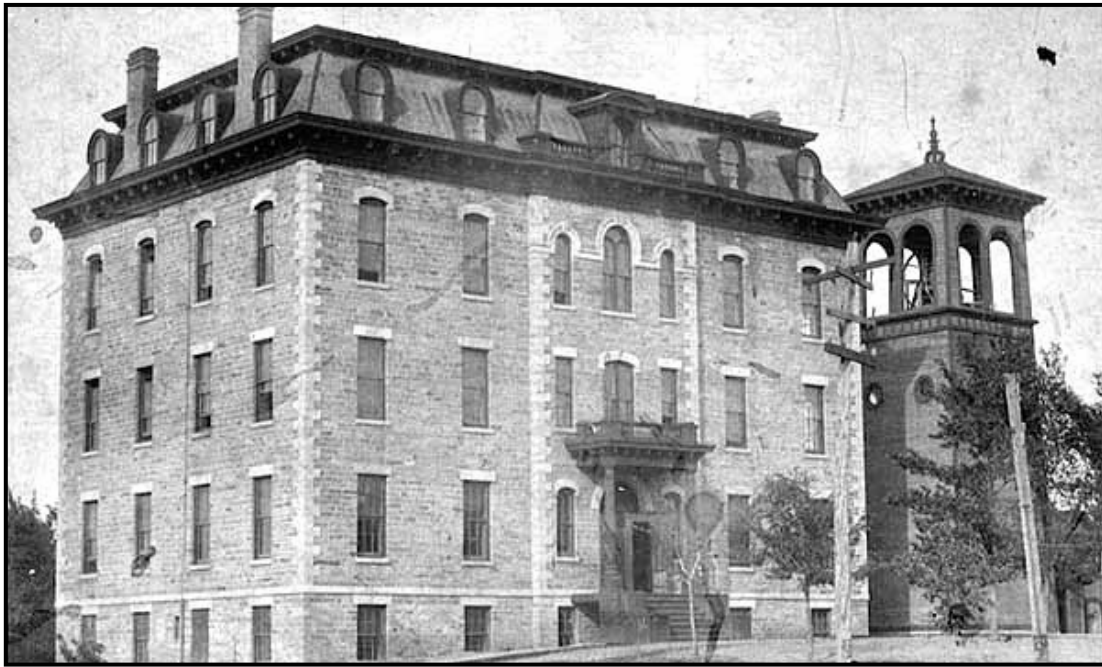
¹⁸ John P. McCarthy and Jeanne A. Ward, “Archaeological Investigations at the Bridgehead Site, Minneapolis, Minnesota, The 1994 Season, vol. 2, Site Area B: Residential and Commercial Occupations in the Vicinity of 1st Street North: Working Life in an Emerging Industrial District,” 54-55, prepared by the Institute for Minnesota Archaeology, October 1996. This study also cited the presence of tapeworm eggs, noting that, “This is the first discovery of these parasites from an archaeological context in North America.” (55). Tapeworms are believed to have been brought to North America by Scandinavian immigrants

¹⁹ Horace B. Hudson, ed., *A Half Century of Minneapolis* (Minneapolis: Hudson Publishing Company, 1908), 481.

²⁰ Schmid, 275.

²¹ Marion Daniel Shutter, *History of Minneapolis: Gateway to the Northwest* (Chicago and Minneapolis: S. J. Clarke Publishing Company, 1923), 1:160-163.

²² Woods, 25; *Merwin's Directory*.



Washington School, ca. 1875 (Minnesota Historical Society)

The Union School, the one public school in Minneapolis, had burned in 1865. The Washington School in the same location on Third Avenue South between Fourth and Fifth Streets replaced it. The first Saint Anthony public school had been established in 1849 and was at Second Street near Pine Street [Second Avenue SE] Another public school, which served as the University of Minnesota, was built in 1851 on what is now Richard Chute Square, but few if any college-level courses were taught there. This building burned in 1864. The Second Ward School was built the same year on University Avenue between Sixth and Seventh Avenues NE. In 1865, the Saint Anthony School Board acquired land on the site the present-day Eastgate shopping center and completed the school building there in 1867. This school, which had a number of different names over the years, finally became known as Winthrop School in 1878 and offered grades one through eleven.²³

These early schools served pupils ranging in age from 6 to 16 (in primary school, grammar school, and high school). Universal education was a goal but not a given, and it is not clear how many children of workers would have gone to school. Even when they attended, it was often only for short periods. Education for children between the ages of 8 and 16 was not made compulsory until 1885. Even then they only had to attend school for twelve weeks of the year. Census records indicate if children of a household had attended school during the previous year. Their names are accompanied by the notation “attends school” or “at school.”²⁴

²³ Penny A. Petersen, *Hiding in Plain Sight: Minneapolis' First Neighborhood* (Minneapolis: Marcy-Holmes Neighborhood Association/NRP, 1999), 25-26.

²⁴ Larry Millett, *Lost Twin Cities* (Saint Paul: Minnesota Historical Society Press, 1992), 84-85; Petersen, 25.

Recreational activities

It is likely that activities like horseracing and card playing remained popular with workers. Baseball had come to Nininger, Minnesota, in 1857, and by 1865 Minneapolis and Saint Paul teams were playing against each other. Undoubtedly baseball soon became an amateur sport too. Ice skating seems to have been a frequent recreation in the winter time.²⁵

Woodman's Hall had been joined by Harrison's Hall, built in 1862-1863, at Nicollet and Washington, and the Pence Opera House at Hennepin and Second Street in 1867. These facilities provided space for lectures, concerts, and other performances.²⁶

Advertisements in the *Minneapolis Chronicle* suggest that other less enlightening activities were available for amusement. A "candy gift sale" seemed to be a sort of raffle where a person bought a 75 cent-ticket that purchased a pound of candy and offered the chance at a "\$50 greenback." Those concerned about the future could visit Madame Dupree, a fortuneteller operating at the American House. Her terms were \$1 for ladies, \$2 for gentlemen; phrenological examinations were made for an extra charge of \$1.²⁷

Ideally, boarding houses might provide social activities in the evenings like reading, singing, and games. For those who could read there were newspapers such as the *Saint Anthony Express*, the *Daily Falls Evening News*, the *State Atlas*, the *Minneapolis Chronicle* and the *Minneapolis Tribune*, which began publication in 1867.

One newspaper account describes the edifying activities provided to the workers around the falls: "The four thousand working men around the Falls of St. Anthony, have comforts, conveniences, and luxuries seldom bestowed to an industrious hard working community; but with all, they require, and should have, libraries, lectures, lyceums, and intellectual food generally, to improve their already well stored minds. The evenings will soon be of sufficient length to enjoy all the intellectual treats that can be given. There is nothing like the improvement of the mind."²⁸

²⁵ Cecil O. Monroe, "The Rise of Baseball in Minnesota," *Minnesota History* 19 (1938): 162-163. The *Minneapolis Chronicle*, December 12, 1866, noted that the Union Skating Park would open to the public on December 12 and offer skating, warming rooms, oysters, pies, cakes, and fruits. Season tickets cost \$5 for men, \$3 for women, \$2 for children under 12, and a single admission was 25 cents. Union Skating Park was probably located on the Minneapolis side of the river.

²⁶ George E. Warner and Charles M. Foote, *History of Hennepin County and the City of Minneapolis* (Minneapolis: North Star Publishing Co., Inc., 1881), 497-498; Millett, 58-59, 86-87.

²⁷ *Minneapolis Chronicle*, December 15, 1866, December 16, 1866.

²⁸ *Minneapolis Chronicle*, August 11, 1866, 2.

BIBLIOGRAPHY

Published sources

Atwater, Isaac, ed. *History of Minneapolis, Minnesota*. New York: Munsell and Company, 1893.

Beaudry, Mary C., and Stephen A. Mrozowski, eds. *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. 1, *Life at the Boarding Houses, A Preliminary Report*. Boston: Division of Cultural Resources, North Atlantic Regional Office, National Park Service, U.S. Dept. of the Interior, 1987.

_____. *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. 3, *The Boarding House System as a Way of Life*. Boston: Division of Cultural Resources, North Atlantic Regional Office, National Park Service, U.S. Dept. of the Interior, 1989.

Derks, Scott, ed. *The Value of a Dollar: Prices and Incomes in the United States, 1860-1989*. Detroit: Gale Research, Inc, 1994.

Directory of the City of Minneapolis, August 1, 1869. Minneapolis: Tribune Printing Company, 1869.

Holcombe, Major R.I., and William H. Bingham, eds. *Compendium of History and Biography of Minneapolis and Hennepin County*. Chicago: H. Taylor and Co., 1914.

Hudson, Horace B., ed. *A Half Century of Minneapolis*. Minneapolis: Hudson Publishing Company, 1908.

Kane, Lucile M. *The Falls of St. Anthony: The Waterfall That Built Minneapolis*. Saint Paul: Minnesota Historical Society Press, 1966; reprint 1987.

Merwin's Directory of Minneapolis and St. Anthony 1867. Minneapolis: Heman Merwin, 1867.

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

Minneapolis City Directory, 1865-66. Minneapolis: E. P. Shaw, 1865.

Petersen, Penny A. *Hiding in Plain Sight: Minneapolis' First Neighborhood*. Minneapolis: Marcy-Holmes Neighborhood Association/NRP, 1999.

Schmid, Calvin F. *Social Saga of Two Cities: An Ecological and Statistical Study of Social Trends in Minneapolis and St. Paul*. Minneapolis: Minneapolis Council of Social Agencies, Bureau of Social Research, 1937.

Shutter, Marion Daniel. *History of Minneapolis: Gateway to the Northwest*. Chicago and Minneapolis: S.J. Clarke Publishing Company, 1923.

Ueland, Brenda. *Clara Ueland of Minnesota*. [Minneapolis]: Robert Rossiter, ca. 1967.

Upham, Warren, ed. *Minnesota Biographies, 1655-1912*. Saint Paul: Minnesota Historical Society, 1912.

Warner, George E., and Charles M. Foote, eds. *History of Hennepin County and the City of Minneapolis*. Minneapolis: North Star Publishing Co., Inc., 1881.

Woods, Charles Henry. "A Letter from Minneapolis," *Hennepin History* 50 (Winter 1990-91): 23-26.

Unpublished Sources

Columbia Journalism Review Conversion Calculator at www.cjr.org

McCarthy, John P. and Jeanne A. Ward. "Archaeological Investigations at the Bridgehead Site, Minneapolis, Minnesota, The 1994 Season. Vol. 2, Site Area B: Residential and Commercial Occupations in the Vicinity of 1st Street North: Working Life in an Emerging Industrial District." Prepared by the Institute for Minnesota Archaeology, October 1996.

"The Minneapolis Public Schools 1851-2000, A History of Past and Present Schools and Sites." Poster in the Minneapolis Public Library, Special Collections.

Northern States Power Company, Accounting Records of Predecessor Companies. Manuscript Collections, Minnesota Historical Society.

United States Federal Census of 1870 for Minneapolis and Saint Anthony. Available at Minnesota Historical Society.

Newspapers

Minneapolis Chronicle, 1866.

Saint Paul Press, 1866, 1867.