# 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.

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OF

RIVER

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):22732; 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 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 nicce. 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 tactily 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 Missing 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, "Dama 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 onehalf 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. Brenner, 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 flashboards-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 Ninefoot 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 riverfront strip into the country's most densely industrialized, direct-drive waterpower 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 steampowered 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 accended 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 devel opment 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 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, 10415, (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.